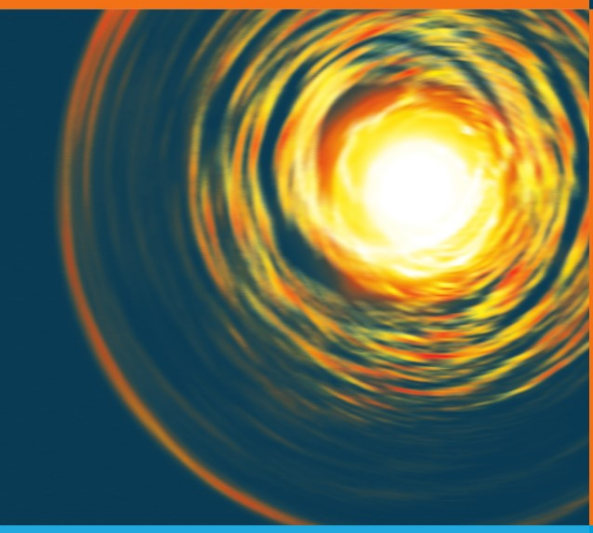

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Globalization of Professional Services

Forewords by Heinz-Paul Bonn and Som Mittal

Springer

Globalization of Professional Services

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Editors

Globalization of Professional Services

Innovative Strategies, Successful Processes, Inspired Talent Management, and First-Hand Experiences

Springer

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Foreword by BITKOM

In the name of BITKOM it is my pleasure to congratulate the authors and editors of this new handbook on "Globalization of Professional Services." Creating a good environment for doing business is BITKOM's highest priority. Education and the training of today's and tomorrow's specialists are at the core of BITKOM's agenda; this requires building bridges between the academia and corporates, between providers and customers, and between the West and the East.

The structure of this book and the selection of contributions perfectly reflect this collaborative approach of all stakeholders working in the realm of information technology and telecommunications.

There could not be a better time for this book. The role of professional services within the IT industry has both changed in its structure and at the same time continuously increases its relevance. What only 10 years ago was nothing more than an idea, a globally distributed delivery model has today entered the mainstream of professional services.

For a long time, BITKOM has now been an active promoter of the Indo-German ICT Conferences held annually in Cologne and as part of the NASSCOM India Leadership Forum (NILF) in Mumbai. We have been one of the first ICT organizations in Europe to actively seek a partnership between Indian and German IT & BPO industry players. The win-win situations created can serve as a role model for new and even stronger relationships between national bodies.

I personally enjoy the interactions with my Indian counterparts and the dedication shown to make globally distributed service delivery work successfully to the benefit of our clients. On behalf of BITKOM, I hereby extend my warmest invitation to our next Indo-German ICT Conference in Cologne and Mumbai.

March 2012

Heinz-Paul Bonn
Vice President BITKOM, Germany

Foreword by NASSCOM

While economists predict this as the decade of uncertainty and possible fundamental changes to the world order, the impact of technology and business processes not just as an enabler but as a fundamental driver for transformation is witnessing rapid adoption.

Worldwide technology products and services related spend is growing at around 4 % annually, with emerging verticals and emerging geographies, in addition to USA, driving growth. Growth in global sourcing is outpacing technology spending driven by fundamental drivers of cost competitiveness, faster time to market, access to specialized talent, and transformation imperatives.

Global sourcing is also witnessing rapid changes with reduction in deal sizes, emergence of small and medium customers, mergers and acquisitions, and alternate business models. Business outcome is the new normal for global sourcing as opposed to just cost savings. India has today emerged as the leading global sourcing hub wherein Indian service providers and multinational and in-house centers of global companies are offering the entire value chain of IT, BPO, and engineering services. The maturity of the Indian service provider is evident from their focus on innovation, domain skills, global delivery model, and operational excellence.

In this context, NASSCOM is very happy to work together with our counterpart BITKOM in Germany on the successful series of Indo-German ICT Conferences held annually in Cologne and as part of our flagship NASSCOM India Leadership Forum (NILF) in Mumbai. The idea to this book was born during the 2011 Indo-German ICT Conference; many of the book's authors are active members of this growing global professional services community. The title "Globalization of Professional Services" aptly describes the challenges that our industry faces as well as the opportunities for a path to success.

Today, already 33 out of the top 100 international ICT services firms have their origins and corporate headquarters in India. The trend is growing. For NASSCOM as a body representing professional services firms in India, globalization is at the heart of everything we do. For many years, we have successfully worked together with our friends at BITKOM in Germany to bring the Western front offices and

Indian back offices together for successful global collaboration, just like this book brings together key researchers and successful practitioners from the West and East.

And at the end, the results of these efforts will benefit the clients of our member companies.

I hope you enjoy this book and look forward to seeing you at one of our next conferences!

March 2012

Som Mittal
President NASSCOM, India

Preface

On a Friday evening in June 2011 in the "Brauhaus Früh," one of Cologne's most traditional breweries in a corner table usually occupied by local "Colognians" unwinding after a long working week, the idea for this handbook was finally born.

On this summer evening, a group of people from India, the UK, the USA, Germany, and a few other countries was having a few beers, sitting together, and discussing the repercussions of globalization for professional services firms. This select group consisted of close business partners and in some cases also long-term friends, brought together by the seventh BITKOM/NASSCOM Indo-German ICT Conference 2011. They shared a common fascination for the seemingly indefinite opportunities that globalization continues to bring to their chosen profession. If there is a powerful picture for the potential and the added value of globalization to professional services, it was the spirit of that night in Cologne. People from different and economically as well as culturally highly diverse nationalities discussed and celebrated a more and more interconnected world with fewer and fewer boundaries for global professional services firms and their educated and internationally minded workforce.

During the following days, we played with the idea of bringing together different perspectives and experiences about the globalization of professional services in a handbook. And as we rethought it some weeks later and started to approach colleagues and friends in our network, we were truly impressed by the positive feedback and the readiness to contribute thought-leadership papers, sharing both personal experiences and corporate strategies. The basic inspiration for the book, however, comes from our research in the field of professional services and the many years of personal experience of consulting and advisory practice in a global environment.

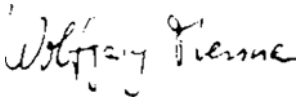
One year after the night in the "Brauhaus Früh," the book is now published and launched. We are now even more confident that putting a strong research focus on professional services and applying a global perspective was a useful undertaking. Perhaps most importantly, including the practitioners' experiences enabled us to examine how professional services have undergone a strategic transformation and

to predict how it will continue to change and adapt to the new world order demanding a truly global service delivery model.

Globalization affects professional services firms just as much and just as fast as product firms, but during our research and professional work, we found that the effects of globalization on professional services firms were—so far—not yet discussed in great detail in any book. We have tried to bridge this gap with our handbook and we sincerely hope you will find it useful.

March 2012





Ulrich Bäumer Peter Kreutter Wolfgang Messner

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This book would not have been possible without the great support of many well-wishers and supporters, who have contributed in small and large ways to turn an idea into reality. It was in many ways a professional collaborative effort, involving 42 international authors from all over the globe. In particular and first of all we want to thank all the dedicated practitioners and academics who have spent a considerable amount of time putting together chapters for this handbook. We have had many fascinating discussions about professional services, outsourcing, and offshoring.

The idea for this book developed around the series of Indo-German ICT Conferences that we organize annually together with NASSCOM and BITKOM, the IT bodies of India and Germany. And hence we would like to thank both BITKOM and NASSCOM for initiating these conferences and working together with us. Heinz-Paul Bonn, Vice President of BITKOM (Germany) and Som Mittal, President NASSCOM (India) are deep believers in globalized services and strong supporters of these initiatives and ideas. The ICT conferences would not have been possible without the strong and enduring support of the City of Cologne with its open and international mind-set.

We would especially like to thank our firms, institutions, and colleagues for supporting our activities in many ways.

Osborne Clarke and its international network provided an extensive and in-depth insight, extending from the legal perspective to business models and technology.

WHU – Otto Beisheim School of Management, allowed us to access its global research network. The WHU campus in Vallendar with its inspiring international and open-minded atmosphere became a second home for the three of us in the final phases of the book.

GloBus Research was founded by one of us (Wolfgang Messner) to bring a fresh approach to advisory services and executive education in services sourcing, intercultural collaboration, and investment decisions. The company's experience and expertise proved invaluable in shaping the topics of this handbook.

When we agreed to publish this work through Springer, we were very fortunate to have Ralf Gerstner as our senior editor. We are indebted to him for his pragmatic support and for pushing us for consistency and clarity. Lakshmi Mohan and

Radhika Mohan, both law students at the Universities of Cologne and Bonn have shouldered some of the hard work in the background.

Finally, we owe an incalculable debt to our respective life partners, Ayuska Motha, Simone Kreutter, and Pratibha Messner, for their unyielding support and endurance as we marched through this and many other joint projects.

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Responding Strategically to Fundamental Changes in Professional Services: Aim and Scope of the Book

Ulrich Bäumer, Peter Kreutter, and Wolfgang Messner

1 Introduction

Over the last decades, industrialized economies have shown an increasing tendency to structurally change from manufacturing-oriented societies to services economies. The field of professional services continues to be at the core of this development.

Services are generally described as being invisible, intangible, and non-storable; they require simultaneous production and consumption. Professional services industries can be defined as industries in which the added value for the client is delivered through services and is based on professional expertise of people, rather than the sale of physical and manufactured products. This implies a high fixed-to-variable cost ratio, which in turn puts pressure on the management to sell quickly and consistently. Examples of such professional services include those of accountants, strategy and management consultants, providers of IT related services, law firms, and engineering firms.

In the past, both in sales and delivery, services had a strong local and national focus. Professional services were very likely to be customized from country to country in order to cater for local needs and local legal requirements. This has now changed dramatically and the forces of globalization have hit the services frontier.

Already in the early 1970s, strategy and management consultancy firms opened new offices in then "emerging" Central-European markets. Law firms began to set

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up a global presence. Similarly, IT consulting and outsourcing firms went global in the 1990s. However, in most cases, the globalization-pull was driven by the client demanding the chosen service provider to follow in overseas expansions. Regional sales offices and local delivery hubs were set up, which were often only loosely linked to the sister companies in other countries.

Only very recently, the next wave of globalization emerged on the horizon. Highly integrated business and delivery models around the globe became the status quo in clients' businesses and strategies. Serving such clients on a global level requires today's professional services firms to adopt a structural change from local to distributed global sales and delivery. Earlier, sales and production in services were both intrinsically linked and positioned in the same regional spot. Today, new technologies and offshore models allow and even demand splitting both these two pillars for the first time in history.

In order to continue on their path of success, professional services firms must therefore strive to understand these global critical shifts; they are shaping their business today and driving it into the future. They need to develop innovative strategies and new organizational designs for enhancing coordination, increasing the standardization of delivery quality, and successfully managing their professional workforce while maintaining a customer focus.

This book brings together the views and ideas of international business practitioners, academics, and market researchers. It provides professional services firms and their clients alike with a sound foundation for responding strategically to the fundamental global changes and turning them into business advantage. In short, it is an attempt to provide a holistic perspective of why and how to successfully globalize the professional services firm.

2 The Book's Structure

The book is structured into four main parts:

- Part I: Winning Strategies and Innovative Ideas
- Part II: Successful Processes for Realization
- Part III: Inspired Talent Management
- Part IV: Experiences and Case Studies

2.1 Winning Strategies and Innovative Ideas

Part I lays the book's foundation and discusses core strategies behind the globalization moves; the major paradigms and ideas relevant to understanding the "why" of professional services globalization are introduced.

The first article in this section, *Consolidation Patterns in the IT Outsourcing Market—Past, Present, and Future* by Katharina Grimme and Peter Kreutter, takes the IT outsourcing industry's evolution in Germany as an example and describes its

shift from an emerging industry to a mature market witnessing massive consolidation. This is not only a case in point for the opening up of regional markets, but also shows the depth and importance of local roots in the professional services industry. G. Shainesh, Zeeshan Sultan, and Jürgen Weigand then address the opportunities emerging from this opening up in their contribution titled *Market Entry and Expansion Strategies of Indian IT Firms into the European IT Outsourcing Industry*. Under pressure from a lack of growth potential in the already deeply penetrated Anglo-Saxon markets, successful entry into the "old world" of Central Europe is a strategic necessity for the Indian firms to keep pushing the high growth rates of the past into the future. There are, however, far-reaching implications for the business model and the initial value proposition of Indian firms.

Klaus-Dieter Gronwald discusses the issue of *Global Sourcing—Shifting the Focus from Cost Saving to a Strategic Setup*. He offers a critical experience-based view on offshoring and outsourcing failures at the beginning of the twenty-first century and their impact on future global sourcing strategies. To solve those challenges, he presents the concept of "outsourcing of global sourcing" as part of a service provider's delivery model. This model may give India once again a competitive advantage in the professional services market. The need for *Strategically Organizing for Innovation in Global Sourcing* is highlighted in the chapter by Wolfgang Messner. Assuming that bottom-up innovation in offshore delivery factories can be incentivized, he addresses the challenge to interweave the offshore IT innovation process between client and offshore service provider. Enabling innovation also has a cultural aspect and is not only the provider's responsibility. It just as much requires the involvement of and commitment by the client corporation, which should—in its very own interest—develop and establish processes and metrics for incentivizing and managing bottom-up innovation from their offshore delivery team.

Two chapters with a particular focus on the strategic positioning of firms round up the first part. Lars Theobaldt and Peter Vervest offer innovative ideas on *Making Business Smart: How to Position for Business as a Service*. Starting with a new type of customer, which is no longer a single company but rather a node in a web of networks, they argue that to provide winning ICT services to such customers will prove a formidable challenge for today's incumbent operators. Finally, structural change in an industry naturally goes along with M&A activities. Using the example of the Germany Engineering industry, Sören Bleßmann and Albert H. Savelberg describe in *Taking an Active M&A Role in the Consolidation of the Engineering Sector* how strategic acquisitions shape a local market and how a potential seller might benefit from this trend.

2.2 Successful Processes for Realization

While the book's first part is focused on the "why", the second part is structured around the question of "how" to establish successful processes in global professional services delivery.

The chapter on *Balancing Industrialisation and Business Complexities* by Thomas Reuner is a starting point to understand the evolutionary path of the ICT sector towards an era of industrialized products and services. Service providers and client organizations alike do not dispute this transformation, but find the pace of this unprecedented change and the extent of the transformation of the IT value chain rather blurry. The chapter therefore suggests organizational changes, such as the capability-driven IT organization, and calls upon the service providers to communicate their value proposition more succinctly. *Industrialization Lessons for the European Banking IT* by Samarth Shekhar looks at what financial services institutions can learn from other industries in terms of industrialization. Faced with a second crisis in 3 years, the banking industry is under severe pressure. In the need to raise capital, survive stress tests, and re-evaluate their portfolio of businesses, bank COOs and CIOs are expected to offer solutions to the problem. Facing a trade-off, they will cut costs while at the same time ensuring delivery of change-the-bank programs and sustaining run-the-bank quality and service levels. Such far-reaching cost reductions are only possible when employing a new paradigm of service production. Successful industrialization, partnering, and sourcing approaches with leading banks and financial services firms in continental Europe are among the measures discussed.

When talking about new paradigms and new frontiers in production models, it was lean thinking, which not only reshaped the automotive industry but many other manufacturing industries as well. Adam Bujak, Wailton Carvalho, and Rangaraj Sriramulu concentrate on how such lean thinking can be employed for services industries in their chapter *Lean Management and Operations in the Global Professional Services Industry*. They focus, in particular, on the critical success factors for implementing lean thinking and the measures required to sustain continuous improvement culture in the long run. Moreover, they offer insights into achieving an effective and sustainable organizational change through structured implementation.

Globalizing professional service firms leads to a distributed workforce and keeping talent, expertise, and experience connected is essential. Oscar Berg and Philip Rosenthal highlight in the chapter *Transforming into a Networked Organization to Empower a Distributed Workforce* that there is more to making the transforming to a networked organization than rolling out new social business software tools.

To newly develop or re-design process models has to be at the core of any chapter on "how" to globalize professional services. Nevertheless, when doing business across borders, all firms have to comply with different national legal settings. In the chapter *Legal Frameworks for IT Outsourcing and Global Sourcing: A Comparative Approach from the Indian, Anglo/American and German Legal Perspective,* Ulrich Bäumer, and Prashant Mara take the legal perspective and show how concerns, such as data confidentiality and security issues, have emphasized the need for businesses to take considerable care when dealing with cross-border transactions. As offshoring always involves companies from two jurisdictions, a sound knowledge of different legal regimes is required; the article highlights these differences with respect to the Indian, Anglo-American, and German law.

Now turning to the client side, *Service Analytics—Leveraging Data across Enterprise Boundaries for Competitive Advantage* by Hansjörg Fromm, Francois Habryn, and Gerhard Satzger focuses on the co-creation of value between providers and customers; it explains how to leverage knowledge, skills, and resources of both partners from a systems point of view. The authors describe the nature of service analytics, provide a typology of its approaches, and illustrate its potential via two application scenarios: customer intimacy as well as demand and inventory analytics. Wendelin Frei, Oliver Koeth, Joseph Kronfli, and Andreas Schlueter examine the direct interaction with the client in the chapter *Customer's Power and its Implications for Business and IT Integration*. They discuss the current status and future developments for IT departments; with respect to future developments, they concentrate on the role of mobile technology and how it shapes the customer experience.

2.3 Inspired Talent Management

In the professional services industry, people are at the core of everything—they are the product and the means of production at the same time. Therefore it is not only the "why" and the "how" that matter when going global as a professional services firm, but the "who" is just about as important. To attract, to develop, and to keep talent are more critical than ever given the demographic and employee-market related challenges in many countries.

Clas Neumann starts this part with describing *Successful People Strategies for Innovation in Global Delivery and Virtual Teams*. The talent base is important in the process of generating innovation as a lot of "hidden" innovation happens in the underlying processes. As much as the global firm needs global processes and a set of standardized policies and common values, it is by far not sufficient. A global people strategy includes local values and true participation. Swati Jain and Richard Lobo argue in *Diversity and Inclusion—A Business Imperative in Global Professional Services* that diversity in global teams is a success factor rather than a problem and that it is important to recognize the value of a diverse talent pool. Differences translate to creativity, innovation, flexibility, better adaptation to a changing environment, and enhanced understanding of customer requirements. Workplaces that explicitly celebrate differences encourage employees to draw fully on their individual potential contributing to organizational success.

Understanding and actively managing diversity are anything but trivial. Culture appears to be the most neglected and underestimated source of challenge in global professional services, but once cultural differences are recognized and understood, there is a better chance of building bridges across cultural gaps instead of seeking to achieve feigned homogeneity. In the chapter *Advancing Competencies for Intercultural Collaboration in Distributed Service Delivery,* Wolfgang Messner and Norbert Schäfer introduce ICCA™ (Intercultural Communication and Collaboration Appraisal) as a psychometric diagnostic framework to develop key intercultural

competencies. At its core, it looks at the areas in which one's environment is "different" from the culture one is going to work with.

The scarcity of global talent has led to many organizations pro-actively recognizing, retaining, and developing women. In *Emerging Economy—Emerging Talent*, Shachi Irde and Madhuvanthi Ravi provide arguments and highlight business benefits from having considerable number of women employees in the workforce. India does not only need to the change its organizational policies, but also needs to go through a societal change in attitudes and perceptions to help bridge the talent gap.

2.4 Experiences and Case Studies

The fourth part of the book offers experiences and case studies of "why", "how", and with "whom" to successfully build a globalized professional services firm.

The chapter by Som Mittal and Ameet Nivsarkar *Emerging Markets from an Indian Perspective: Focus on Germanic Countries* takes a macro perspective. In the quest to unravel "emerging markets" for the Indian IT and BPO industry and to power the next round of industry growth, they analyze not only the status quo but also the experiences and the potential of a mutual cooperation between geographies. Carsten Hentrich and Sascha Schwarz drill deeper into the firm level and describe the *Transformation Journey from Offshore Service Provider to Global Innovator* at Infosys. Essential and distinct strategic transformational waves led Infosys at certain stages to reinvent its business model and set directions for the future. The current strategic transformation takes place with a focus on the European market.

Following these experiences on the macro and on the firm level, Frank Schabel and Andreas Stiehler turn to the *Departments in Transition: How Businesses Organize their Knowledge Work*. Based on results from their empirical study, the two authors describe how departments with a high proportion of knowledge workers (i.e., IT, R&D, and F&A) differ with regard to process maturity, technological affinity, and the degree of networking between employees. It becomes clear that differences in the mode of organization have a huge impact on the efficiency of the teams to accomplish their core responsibilities.

The final article *Internationalizing the Departments for Devices and Accessories of Communications Technology Company* is provided by Marit Loewer and Holger Neinhaus. Taking a leading communications technology firm as an example, they show how organizational change in a service-intensive field can be planned, transformation be initiated, and integrated processes be implemented. They underline the importance of trained staff and the need to change employees' mind-sets in order to define new processes and anchor sustainable change in the company. The difference, and the big challenge in successfully managing professional services in general and in particular when globalizing them, is around the people factor.

3 Conclusion

The developments highlighted in this book accentuate the future demands on today's professional services firm in a radically global environment. Global changes advance ahead of day-to-day practices. Professional skills are no longer enough to cope with ambiguity caused by radical change; they need to be complemented with visionary business leadership and cross-cultural managerial skills.

Implementing a global strategy in professional services thus requires a careful orchestration of strategic changes with day-to-day tasks. Moving too swiftly can upset the balance, but moving too slowly can possibly undermine the firm's global competitiveness. With this handbook, we provide the strategic and operational foundation for professional service providers and clients to bridge this dichotomy together.

Part I
Winning Strategies and Innovative Ideas

Consolidation Patterns in the IT Outsourcing Market: Past, Present, and Future

Katharina Grimme and Peter Kreutter

Abstract The IT services industry has already changed fundamentally over the last 20 years and we will most likely see even more structural change in the next 20 years. In our article, we look into the past and—using the example of Germany—examine in a case history the consolidation path on a local level in the industry's early years. The discussion of more present trends is then based on a snapshot of major strategic acquisitions on a global level in recent years. Here we argue that consolidation in IT outsourcing and services is going to become a global game. As such, it developed in two partly consecutive, partly parallel streams. The first stream of take-over activities focussed on building up or expanding the services offerings in the firms' product portfolios. Services expansion moves at that time targeted to develop higher margin business compared to commodity hardware, secure direct access to the client bases and thus to expand market share. The second stream concentrated on cross-silo expansion strategies. The objective is to be able to address customers in a holistic way with combined hardware, software, and IT services capabilities. To conclude, we present four major trends, relevant from our point of view, to guide an IT outsourcing provider's strategic positioning for the future.

1 Introduction

Over the last 20 years, the IT services industry has changed fundamentally. Firms like EDS, which once pioneered the IT services revolution, have been taken over. Local European heroes like T-Systems or Capgemini went through difficult times

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and are still far from having reached a safe harbour. Indian firms, like Infosys or TCS, started on a small scale with low-cost labour offerings to Anglo-Saxon countries and now capture market shares in all major IT markets (see Bäumer et al. 2010). However, as hard- and software giants like Hewlett-Packard swallow service providers, European markets become more and more mature and the cheap labour value proposition of offshore vendors loses its attractiveness in the IT outsourcing industry.

We will most likely see more structural change in the next 20 years. In the following, we present some industry history and—using the example of Germany—examine the rules according to which the IT outsourcing industry has consolidated in its early years. Based on the discussion of current market and industry trends, we discuss four major trends that we perceive as relevant to guide an IT outsourcing provider's strategic positioning for the future.

2 The Past: Consolidation Patterns in the IT Outsourcing Industry in Germany Between 1990 and 2005

When Daimler-Benz AG founded its services division Debis Daimler-Benz InterServices AG on July 1st, 1990, it established a new, fourth business line. In contrast to Daimler-Benz's existing businesses, which belonged to the automotive, manufacturing, and high technology sector, Debis was launched to take advantage of the increasing demand for services (see Debis 2000). Debis itself was multi-divisionally organized to serve heterogeneous markets such as leasing, telecommunications, and information technology. The goals were quite ambitious at the time: Manfred Gentz, Debis' designated CEO, aimed at setting up one of the largest service companies in the world and Daimler-Benz CEO Edzard Reuter expected a threefold increase in turnover in the foreseeable future. Debis Systemhaus, the Debis division set up to exploit Daimler's in-house information technology know-how in the external market, became a crucial part of the Debis success story.

Much more important in this context, however, is the fact that the formation of Debis Systemhaus marked the start of the IT outsourcing industry in Germany. In other regions, such as the USA or UK, the roots of the IT outsourcing industry can be traced back to the early 1970s. Especially in the USA, it showed a strong expansion from the mid-1980s onwards. When IBM signed a 10-year USD 250 m contract with Eastman Kodak in 1989, the landmark transaction demonstrated how far the industry already had developed in the USA (see Lacity and Hirschheim 1993). Revenue figures of the six leading IT outsourcing companies in the USA were already beyond the billion-dollar mark in 1990.

The situation in Germany at that time was completely different. Of course, there were companies offering services, which can be interpreted in a broader sense as what is defined as IT outsourcing nowadays. Nevertheless, often those services were marginal add-ons to existing hardware, software, and system integration

businesses. An IT journalist concluded after one of the first market studies in 1992: *"The IT outsourcing industry in Germany is still in its infancy!"*

But the industry grew fast. Given the huge success of Debis, several large German companies started to develop similar strategies. Deutsche Telekom took over Computer Service Magdeburg, a formerly state-owned computing centre in 1992. It was re-branded to DeTeCSM (Deutsche Telekom Computer Service Management GmbH) and served as platform on which Deutsche Telekom was to build its IT outsourcing business, at the beginning largely by integrating its existing internal data centre infrastructure. Also in 1992, Siemens created Sietec Consulting aimed at developing project and outsourcing business, not only for SNI (Siemens Nixdorf Informationssysteme) but for non-SNI systems, too. In contrast to the Debis rationale, where internal back-office know-how was bundled and offered to the external market, the Siemens move followed a different path, given SNI was the largest computer producer in Europe at that time.

The growth phase continued and was even strengthened in the years following 1994 with IT outsourcing remaining at the forefront of growth industries in Germany. Many German blue chip companies developed their IT departments into new business divisions [see for such early developments in the USA, Soden (1972)]. Even companies active in more traditional industries, like construction and steel, were seeking to take advantage of the emerging IT outsourcing industry. For instance, Hochtief launched Hochtief Software AG, which despite its name delivered IT outsourcing services, too. Similarly, steel giant Thyssen established Thyssen Informatik in 1994 by carving out its Thyssen Stahl AG's data centre employees, assets, and know-how. Based in the Rhine-Ruhr region, one of the strongest economic areas in Germany, and equipped with Thyssen's premier brand, the new company soon established a good position in the industry and entered into an aggressive growth path under the guidance of its CEO Peter Chylla. When having had the chance to interview Peter Chylla on his personal experience, his analysis of the competitive situation in the industry at that time is highly interesting: *"When recalling those days, I remember that despite EDS, Debis and IBM already having some strong footprints in the market, our company was driven by the entrepreneurial spirit to explore and capture the opportunities in an emerging industry. The well-known Thyssen brand along with a 'local neighbour' touch became a valuable starting point and key differentiator in the market. The know-how and economies of scale achieved through our internal business were the proof of concept, that we were able to handle those tasks reliably and in a professional manner."* (Chylla 2007).

The need for a "local touch" seemed to be identified from newly arriving UScompanies. In contrast, e.g., to IBM and Hewlett-Packard, which could look back on decades of presence in Germany and were considered "the guys from Stuttgart and Böblingen," companies like EDS or Computer Sciences Corp. had to overcome a "cowboys from Texas image" as a seasoned Chief Information Officer of a German bank stated. Among others, it may have been for this reason that Computer Science Corp. acquired in late 1994 a majority share in Ploenzke AG, despite having sealed an IT outsourcing contract with Ford, Cologne, earlier that

year and being successful in Germany already. In fact, in the industry and among clients it was "Ploenzke" rather than CSC, which became the dominant part in the newly established brand CSC Ploenzke AG for many years.

Entering a 10-year agreement with Gothaer Versicherungen, IBM was the first to reach the "mega-deal" mark of DM 1 billion (about EUR 0.5 billion) total contract volume in Germany. It was the largest deal IBM had signed in Europe until then. From an IBM perspective the deal, moreover, underlined the result of its decision to transform itself towards becoming more a service company, thereby reducing the former dominance of its hard- and software leg. As IBM's German CEO Bernhard Dorn concluded in an interview in mid-1995, he saw the transformation in general finalized, since becoming the leading IT outsourcing company in Germany only 2 years after starting its operations.

As with the success of Debis in the early years, the successful entry and expansion of IBM motivated new entry as well as put pressure on incumbents (e.g., Siemens) for further strategic moves. While initially being departed from diversifying its SNI hardware business, Siemens decided in 1995 to reorganize and scale-up the existing IT outsourcing activities by integrating large parts of its internal support function "Rechen- und Kommunikationsdienste." Siemens Business Services was created as the new legal entity in October 1995 and the expectations were articulated as to leapfrog Debis and to become a leading European IT services player within 5 years (see Pierre Audoin Consultants 1999).

By the turn of the century, most important actors in international IT outsourcing were now active in Germany, with followers like Atos Origin and Logica having entered in 1999 and 2000, respectively. But from 2000, despite the bright predictions made for a rising demand in IT outsourcing over the next years, a change in industrial dynamics became apparent. Over the following years, a wave of concentration, consolidation, and repositioning set in (see Venkatraman 1997 for an academic perspective). First, ThyssenKrupp Information Services (TKIS, formerly Thyssen Informatik) bought Hightech International Services (HiServ) from its parent company Aventis. The transaction was well received by the industry analyst-side because TKIS expanded its non-ThyssenKrupp business significantly in volume as well as paved the way for cultivating a new customer industry: pharmaceuticals. Moreover, it brought TKIS close to the top-ten ranks in German IT outsourcing. The really important point, however, was the clarity with which TKIS pointed out the need for further large-scale acquisitions to succeed in the industry.

A second transaction in 2000 reverberated the industry even more strongly. Deutsche Telekom acquired a majority share in Debis Systemhaus, effectively taking over the entire company since the deal included the obligation to acquire DaimlerChrysler's remaining minority share in the future. In terms of industry impact, the Debis acquisition was a "game changer" and immediately turned the pecking order upside down.

Also smaller players became acquisition targets (see Kroker 2003). HochTief put its HochTief Software on sale in autumn 2001. Officially for reasons of a stronger concentration on core competencies, the industry magazine Computerwoche saw

doubts regarding the further growth perspective to be the more likely reason for the sell-off. Capgemini absorbed Hochtief Software and was being awarded an additional outsourcing contract with Hochtief AG. Systematics, which entered the industry only 3 years before with notable success, became a victim of its own growth strategy. When having acquired competitor MSH in 2000, the plan was to finance the deal via issuing new equity in the stock market shortly after. But with a deteriorating stock market, the placement scheduled in autumn 2000 was revoked. As the capital market environment in 2001 became even more hostile, the financing gap forced Systematics to look itself for a strong partner. EDS took the opportunity to expand its IT outsourcing business in Germany and to close up to leading T-Systems and IBM via a Systematics take-over.

Shortly afterwards, the Düsseldorf-based technology and defense conglomerate Rheinmetall restructured its portfolio under pressure from the US investor Guy Wyser-Pratte, famous for its aggressiveness. Rheinmetall Informationssysteme (RIS) GmbH was one of Rheinmetall's portfolio companies to be divested and was auctioned in autumn 2002. RIS had specific SAP know-how and a strong focus on the German SMEs, which was seen as one of the fastest growing segments in IT outsourcing. Many competitors saw those two factors as a highly attractive complement or extension for their existing business, and participated aggressively in the auction. IBM won the contest outbidding EDS, ThyssenKrupp's Triaton (formerly TKIS), and others. The sale of RIS was the starting point of an additional take-over wave, during which even larger players like Triaton or Volkswagen's gedas came up for sale (see Grimme and Kreutter 2006).

The widespread interest in an acquisition of those firms came from two directions. First, incumbents like CSC or Capgemini saw the opportunity to significantly improve their position in the German market. A second group of potential buyers aimed at entering the industry instead of expanding an already existing position. There were still a few large IT outsourcing companies throughout the world, which had a strong presence in other global regions but have not arrived in Germany with their IT outsourcing businesses yet. As Germany was the largest single market for IT outsourcing in continental Europe at that time, a presence was important for strategic reasons (see Stiehler 2007). Recognizing the difficulties many companies had to ramp up operations from scratch in Germany, they were seeking acquisitions to build a beachhead, relatively large and with a well-established brand. US-based Affiliated Computer Services (ACS) and India-based Tata Consultancy Services (TCS) were the two most prominent companies belonging to this group and which were also reported as participating in the action of TKIS (see Middelmann and Helmes 2005). The fact that TKIS was acquired by Hewlett-Packard and gedas by T-Systems illustrates the end point of the first consolidation wave (see Schlaberg and Kreutter 2005).

To sum up the consolidation patterns in the past, we see the development in Germany as anecdotal evidence for basic evolutionary patterns. What started out as a predominantly local business model with a strong presence of local players changed radically over the years. By the end of 2006, many national markets mirrored more or less the overall global landscape in the industry. Many local players, in particular captives, had been taken over (see Corbett 2004).

The rankings for Germany found global firms like IBM, Hewlett-Packard, Capgemini, and Accenture in leading positions. As the industry moved from a growth industry with double digit growth rates to a mature industry, in which we see growth rates below the five per cent level, the consolidation pressure increased and worked at a global level (see Pierre Audoin Consultants 2005).

3 The Present: The Shift Towards a Global Consolidation Game

Already in 2002 there were signs that consolidation in IT outsourcing and services would become a global game. As such, it developed in two partly consecutive, partly parallel streams. The first stream of take-over activities focused on building up or expanding the services offerings in the firms' product portfolios. Services expansion moves at that time targeted to develop higher margin business compared to commodity hardware, secure direct access to the client bases, and thus to expand market share.

This was a new type of deal as takeovers previously often took place "in the same silo," e.g., Hewlett-Packard taking over Compaq to expand its position in the PC market. In 2002, IBM took over PwC in an acquisition worth USD 3.5 billion, adding 30,000 PwC employees to IBM's workforce. The deal gave additional weight to IBM's services business and was the culmination of Lou Gerstner's strategy to reposition IBM after its close-to-bankruptcy situation in the mid-1990s.

Hewlett-Packard made its mega services deal 6 years later than IBM, when acquiring EDS in a deal worth USD 13.9 billion in 2008. EDS gave Hewlett-Packard the scale it needed to challenge IBM Global Services for tier one infrastructure outsourcing deals. Hewlett-Packard and EDS seemed to have a good vertical fit, with Hewlett-Packard Services strong in manufacturing and telecoms, and EDS in government and financial services. Both suppliers' strongest suit was infrastructure outsourcing and joining forces was seen as one way to fight price pressure from offshore delivery and the increasing efficiency of IT equipment. The larger scale of the joint unit should allow squeezing as much as possible out of IT operating costs and provide a platform for stronger cross-selling of Hewlett-Packard hardware. The merger made Hewlett-Packard and EDS rank as the second largest player in the Western European IT services market with combined 2007 services revenue of EUR 11.5 billion, according to rankings from Pierre Audoin Consultants (2008), giving it a market share of 7.5 %.

Competitors followed the same strategy. Dell took over Perot Systems in 2009. Dell paid USD 3.9 billion to make Perot Systems Dell's services unit, initiating a focus on enterprise services and weathering sluggish hardware sales. Xerox seeks to transform itself from a technology into a high-end enterprise services company through the acquisition of ACS. Beyond its traditional business, the Xerox/ACS company model opened for Xerox the option to participate in two additional markets: business process outsourcing (BPO) and information

technology outsourcing (ITO). While the company's long-term opportunity grew considerably through that move, the competitive landscape also intensified. Xerox found itself in competitive situations for IT services with vendors like IBM and Accenture that previously partnered with Xerox as a reliable and steady partner on the technology side. This, of course, created danger on Xerox revenue stream in this field. But for long-term survival, the ACS deal was a chance that Xerox had to take.

As argued, such deals put massive pressure on so-called "local heroes," in many cases large European IT services players with a strong foothold in one or two European countries, but often lacking real international presence or offshore delivery capabilities [see for the Indian IT industry (PricewaterhouseCoopers 2011)]. Capgemini, when acquiring the US-based but in fact more Indian IT firm Kanbay in 2006, was among the few European firms to early develop a strong offshore profile.

Firms like Atos Origin, Siemens Business Services, T-Systems, and others failed to undertake such forward-looking strategic moves. Often being reported to be in merger talks, nothing really happened. It lasted until 2010 before Atos Origin made a move, when Siemens was once again looking for a partner for its long-term struggling IT services division Siemens IT Solutions and Services (SIS). Undoubtedly, the Atos/SIS merger created a new big European IT services firm, being better positioned when it came to winning larger infrastructure deals against other large providers such as CSC or T-Systems. Furthermore, from a regional perspective, SIS and Atos Origin complemented one another: SIS is strong in Germany, UK, and Scandinavia, whereas Atos has a strong market presence in France and the Benelux countries. From a capabilities perspective, Atos Origin has strong competencies in the BPO segment and particularly in the field of transaction processing, which is of major importance in the financial services industry. In addition, SIS can compensate Atos Origin's lack of footprint in the automotive industry. However, the new Atos still has limited footprint in the Americas and in APAC (especially in the emerging BRIC markets). Further acquisitions will have to follow with a view to closing such gaps.

In general, however, firms of this size can be seen as having a strategic "stuck in the middle" position. They are too large to position themselves in local niche markets. They are too large and too "old world focused" in terms of workforce to be attractive for one of the remaining hardware players or some of the Indian firms, which want to grow. On the other hand, they are too small either; too small to enter—what we call—the "cross-silo game" which IBM and Hewlett-Packard are already playing for a couple of years; and this forms the second consolidation stream we see at present.

In a cross-silo expansion strategy, the objective is to be able to address customers in a holistic way with combined hardware, software, and IT services capabilities. Again IBM and Hewlett-Packard, the "Big 2," are the strategic frontrunners. Beyond and complementary to their services expansion strategy, they have more recently invested massively into acquisitions in the software field. IBM has made some 15 acquisitions in 2010 and 2011, with the majority of those focused on expanding or supporting its software group, which has been identified as main component of growth for the company. Acquisition examples include: Clarity

Systems, PSS Systems, Q1 Labs, DemandTec, and i2. IBM, Hewlett-Packard, and others see systems software, middleware, and application management software being at the core of a large enterprise's IT architecture. Owning this strategic position is perceived as creating a long-term customer relationship and thus stable access to enterprises' IT spending, i.e., maintenance and license fees. Moreover, as most IT decisions in other areas are closely linked to this core, cross-selling options for instance in the low-margin, high-competitive hardware business are likely to arise. This trend puts massive pressure on and enforces the need not only for repositioning for IT outsourcing and services firms but also for large software vendors like Oracle, SAP, and Software AG.

They might be too small for cross-silo strategies, but already at the top of the software silo. How can the future look like for them? Is there a future for them at all? We think there is!

4 The Future: Creative Destruction and Intelligent Partnerships in Value Creation Networks

Consolidation in an industry is a clear sign for its increasing maturity (see Nelson 1994). Market shares are stable and most often the strategic positions in the industry are relatively fixed. Changing this situation in the current environment is very difficult. Yet, history shows that discontinuities and radical changes often wipe out such strategic advantages of large incumbents within a few years. For firms willing to dare far-reaching moves beyond the current status quo, this can open-up new growth potential and the chance to position themselves successfully in newly emerging markets and fields of business. In the following, we will discuss four major trends, which from our point of view have the potential to reshape today's markets.

4.1 Service as a Software

In the discussion about low-cost labour in offshore countries and wage arbitrage across the globe, one important thing is often forgotten. The greatest leap forward in manufacturing industries some 120 years ago was not made by making labour cheaper but by using technology to replace manual work. In this sense, we think that there is an opportunity especially for European companies to turn their current weaknesses into future strength. Given the demographic shifts towards an aging society and a lack of young talents, automation and codification of services into software solutions can become a game changer. Let us illustrate this. Some 15 years ago, every PC got its updates through a service engineer, who brought CDs or even still disks to every single workplace. Nowadays software and its updates are delivered automatically and centralized. Let us just use a simple example: When already today consumer products like an iPhone use speech recognition Siri to

deliver "services" to the user, how big would the potential be for fully automated and speech-recognition driven helpdesks? In the business environment, we see BPO providers at the forefront of establishing highly automated transaction processing services, such as accounts payables or travel and expense management processing with minimal involvement of manual tasks. We are confident that when thinking creatively into this direction many more services can be turned into software.

4.2 New Services Revolution

Of course, automation can replace manual work and human presence, but typically only to a certain degree. For the remaining services, in which service delivery by a human workforce might even create an added value, new services can be developed in order to leverage the potential of new technologies. Looking again at the consumer side, billions of tutorials on Youtube show how easy-to-understand services can look like. When your iPhone allows to "Facetime" with your counterpart, why don't you as a firm offer real-time face-to-face technical support services via web solutions? In such a scenario, a services company might offer personalized services at higher price for situations in which fast reaction time and direct contact to the service partner is important for the client. Just think of the CEO in a client firm having problems with the laptop abroad. The CIO usually does not care much about the cost to solve this problem in a timely manner. To offer personalized high-end concierge "help desks" on a 24-7 basis for this target group can be one example of new services offerings with attractive price points and higher margins. Naturally, smaller and more flexible players are better equipped to develop and deliver such 'niche solutions'. Once established, there is also the chance that large competitors buy such services for their own portfolio on a white label basis.

4.3 Cloud as the Underlying Infrastructure

For the above-mentioned two trends there is one thing for sure: Open and flexible technology infrastructure is the key. What will the infrastructure model of the future look like? We think that cloud will become the basic underlying infrastructure and cloud-related services belong without a doubt to the future growth drivers in the ICT market (see Pierre Audoin Consultants 2011). Therefore, it is imperative for every services supplier to address this topic. As these services will gradually replace traditional delivery concepts, they represent one growing segment within a limited market rather than a completely new market. Nevertheless, the challenges to implement cloud are huge and offer new opportunities for all types of players, but only if they are fast in transforming their organization towards the new models (see Rossbach and Welz 2011)

T-Systems, for example, is now leveraging its position as an integral part of Deutsche Telekom. The combination of IT and telecoms services represents a major

USP and forms the basis for the company's strategy for "net-centric cloud systems", i.e., flexible, ICT sourcing solutions for dynamic markets, comprising platforms and applications delivered as services via the network.

4.4 Intelligent Partnerships in Value Creation Networks

As these trends will gather pace and as the traditional services industry matures, a re-assessment of existing partnerships and the alliance ecosystem will take place (see Pierre Audoin Consultants 2012). We see lots of opportunity for firms of all sizes and backgrounds to position themselves in an intelligent way in the emerging Value Creation Networks (VCNs). The future VCNs are hierarchical, but flexible networks, organized towards the solution of specific need of particular client clusters. To prepare for a strong position in the cloud computing era, a number of service providers start to position as "aggregators" (or "brokers") for end-to-end services which are procured and integrated from multiple providers. The focus is here on the provision of business-oriented (but not technology-oriented) services that are aligned to (and measured on) business objectives. Essential in this approach are the ability to effectively integrate technology and services from multiple vendors, effective risk management, and risk sharing models, based on a commonly agreed governance model and SLAs. Players with strong IT infrastructure capability but also transformation skills will be well positioned to assume such a role.

With this development, we predict for the future a strong focus on the development of a comprehensive partner ecosystem, including providers of technology, software, public cloud services, and process consulting. This will be not a traditional supplier–buyer relationship, but a multi-dimensional partnership including the development of joint (exclusive and differentiating) solutions within the ecosystem. Similarly, the relationship models (and contracts) will have multiple dimensions and pricing models and need to become more flexible, based on business outcomes and/or project success.

5 Conclusion

What impact will these trends and developments have on the industry structure and consolidation patterns? We expect a mixed picture, with large players expanding further to reach global footprint and cross-silo coverage, establishing comprehensive service portfolios with a focus on the provision of IT infrastructures. But, we also see significant growth opportunities for smaller, locally/regionally focused or specialist service providers, for example servicing the specific needs of certain industry sectors. This is in response to a higher degree of differentiation (or modularization) of application and platform architectures able to offer customized and highly specialist types of services and differing service levels. Industry and business process know-how coupled with software development and

automation skills will be key assets turning such players into valuable partners (or indeed acquisitions targets) for the large global players.

For local or regional players in a country like Germany, we see an opportunity (at least in the medium term) in the provision of local "trusted," private, or hybrid (public/private) cloud concepts adapted to the regulatory environment and customer demands (for security and availability) in their local markets.

The opportunities for IT service providers are many; however, the future will favour those that are ready and able to quickly and flexibly adapt their business models, portfolios, and skills in line with a highly dynamic environment.

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Market Entry and Expansion Strategies of Indian IT Firms into the European IT Outsourcing Industry

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Abstract The success story written by Indian IT and technology companies in the past years has no doubt been impressive. While 10 years ago companies such as Infosys, Wipro, Tata Consultancy Services, or HCL were hardly known even to industry insiders, they have now evolved into important and highly visible players in the global IT sector. However, the high growth rates as well as the profit margins of the past are expected to come under increasing pressure. In other words, a new burst of growth is needed to extend the success story of the past. Expanding their foray into the European territory requires these firms to develop technological maturity and capabilities that are more advanced in terms of developing business relations in the European region. Moreover, regional expansion into the DACH region—the Germanic countries Germany (D), Austria (A), and Switzerland (CH)—will require these firms to identify new growth engines. Although Indian IT providers, e.g., Tata Consultancy Services, have been on the ground in Germany for 20 years with their own subsidiaries, they still lack the presence of global players such as IBM and Accenture or local heroes such as T-Systems. This chapter aims to look at the degree of regional adaptation of the Indian IT players especially in the non-Anglo-Saxon regions.

1 Introduction

The growth of software services exports in the late 1990s was driven by the massive demand for programming resources to fix the Y2K problem (or the Millennium bug) which related to digital documentation and data storage situations resulting from the practice of abbreviating a four-digit year to two digits). India's software

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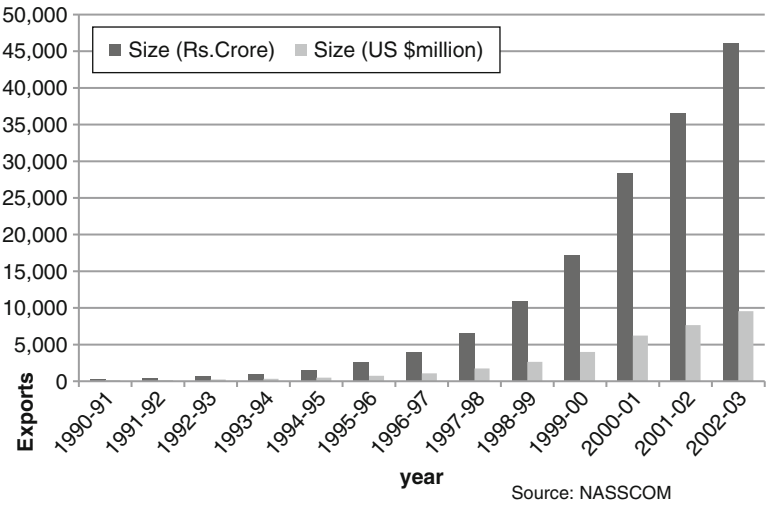

Fig. 1 India's software exports: the inflection point

services industry leveraged this opportunity to grow rapidly into new areas including customized software development, systems integration, business process outsourcing (BPO), and even software product development (Fig. 1). The IT and software services and BPO industry generated total revenues of US$88.1 billion in the year 2010–2011 with exports accounting for US$59 billion. The industry's share of Global IT outsourcing and BPO market is 55 %, but over 60 % of its revenue is accounted by North America and Europe accounts for about 25 %.

Several European firms were initially attracted by Indian IT companies who could handle the Y2K problem at a reasonable cost. The low cost but good quality option attracted firms to open their order books while it helped Indian firms establish a beachhead in Europe. The Indian software services companies had traditionally enjoyed strong growth in the USA and UK. These markets were often targeted by the Indian firms due to comparative ease of doing business on account of familiarity with English language and business culture. At the same time, these markets provided large volumes. NASSCOM President Som Mittal once coined the term "low hanging fruits" for this early success of Indian IT firms in the American and British markets. In recent years, these markets are becoming relatively saturated; the original cost advantages have been reduced while capital market expectations regarding growth rates and profitability of the Indian companies remained the same or became even higher (see Fuchs 2005).

While Indian IT providers have spanned their operations globally across varied industries, their clientele primarily belong to the Anglo-Saxon background. European countries represent their own set of complexities with respect to language, culture, and business dynamics. Flourishing from primarily a transaction-based approach in the Anglo-Saxon, English-speaking domain, Indian IT players have found themselves adapting to a more relationship-oriented architecture in Europe.

In Europe, the UK and Germany remain as the prime drivers of growth. Germany represents 20 % of the total ICT volume with a turnover of Euro 128 billion in 2009 out of the European Union Information and Communication market (see Germany Trade and Invest in 2011). Indian IT providers have been fairly successful in exploiting the potential of the UK market space due to compatibility on the language front as well as cultural assimilation. However, the Germanic markets pose challenges for these IT providers as the business culture is highly relationship oriented that demands a strong local sales force orientation in order to generate business.

Although Indian IT providers—as demonstrated by Tata Consultancy Services—have been on the ground in Germany for 20 years with their own subsidiaries, they became visible on the market only towards the end of the 1990s (see Baeumer et al. 2010).

The economic slowdown in the USA and many parts of USA makes the Germanic countries a central growth market for software firms. In a study executed jointly with PricewaterhouseCoopers, NASSCOM considers it one of the three "emerging markets" for Indian IT providers (see NASSCOM 2010). The Germanic countries, with a market worth more than US$176 billion for IT in 2010, are the third-largest IT sales market in the world, after the USA and Japan.

Indian offshore providers have started committing more resources into their European operations over the last couple of years in order to expand their presence in these relatively unexplored territories. However, success has been limited so far and significant business opportunities have not been fully exploited despite their capabilities. Global players such as IBM and Accenture or local heroes such as T-Systems still dominate the German IT market (see Hoffmann 2010).

In order to get a better understanding of the market opportunities, existing challenges, and future potential, we address the expansion efforts of Indian Offshore Providers in the light of resource-based view (RBV) (see Barney 1991) and dynamic capabilities theory (see Teece et al. 1997; Eisenhardt and Martin 2000).

2 European Exposure and Germanic Countries: High Hurdles

Uli Holdenried, CEO of Hewlett Packard in Germany, described Germany as the "most competitive IT market in Europe" (Holdenried 2008). He referred both to strong local brands such as Deutsche Telekom's T-Systems and Siemens Business Services but as well to a specific market structure, in which large IT subsidiaries of manufacturing companies dominated the demand side with their huge in-house capacities (see (Grimme et al. 2006). The in-house capabilities precluded the need for outsourcing and often resulted in limited potential for software services firms to generate large-scale business.

Many Indian providers, attracted by the huge market potential, have established their subsidiaries in the Germanic countries with the hope to generate sales for their IT services. However, these Germanic countries tend to possess their unique

complexities. Culture and relationship serve as the prime deciding factors for a firm's success in these regions. It is highly imperative to recognize the importance of building commitment via relationships as the Indian offshore providers were chiefly engaged in transaction-based model prior to European exposure.

Taking into account the two modes of entry (i.e., organic versus inorganic), Indian firms need to analyze and evaluate their capabilities for the European/non-English specific countries in order to tap into these markets. The lack of sufficient organic growth prompted many of them to adopt strategic growth through acquisitions during 2002–2004 (see Westhoff et al. 2007). However, despite great expectations and aggressive statements neither extreme organic growth nor many acquisitions did take place.

3 Changing Times

Over the last 2 years the situation has changed dramatically. Firms have started to outsource on a larger scale and even engage in new offshore projects to address the issue of shortage of talent in the home country and expand to foreign locations in search of qualified talent at a reduced cost. According to a survey by the Association of German Engineers (VDI, Verband Deutscher Ingenieure), there were about 60,300 vacancies for engineers nationwide. In contrast, only 40,000 engineering students graduate from universities every year. External services providers can bridge this gap, which is bound to widen in view of demographic developments, and can be tapped by the Indian players. They have access to a large pool of Indian graduates with excellent mathematical–analytical training. According to the figures published by the All India Council for Technical Education (AICTE), more than 400,000 students graduate from engineering colleges in India every year.

An encouraging trend is that large firms are increasingly utilizing outsourcing to reduce cost. Examples include the German energy giant E.ON, which outsourced its IT to HP and T-Systems (see Hromadko and Grontzki 2010) and BASF which entered into an offshore agreement with Mahindra Satyam (see Pütter 2010).

Such strategic moves have an inherent logic, which is backed with results from academic studies. Based on a study of the impact of shortage of highly skilled technical talent in the USA, Manning et al. (2008) argued that firms can access equally qualified talent for lower costs in developing nations, thereby influencing the firms' decision on offshoring innovation activities to these countries. Such studies emphasize on knowledge acquisition beyond national boundaries to overcome shortage of technical labor in a particular country.

4 Getting Up to Speed

While there existed a learning curve on both sides, the clients and the Indian vendors, building up the pace needs further understanding of the European and DACH countries. Firms that are engaged in offshoring have realized that talent and

innovative capabilities are not bound to a single location but can be accessed globally by implementing the right strategy (see Capgemini 2009). We see three interrelated aspects as crucial for further success.

- Strong native sales force
- Access to onshore production facilities
- Strong cultural alignment over the entire value chain

In the following sections, we will discuss necessary measures from our point of view based on some theoretical arguments and concepts.

4.1 Strong Native Sales Force

It is critical for the Indian software vendors to develop sales capabilities which are built on local market knowledge and personal connections. From a RBV (Barney 1991) and dynamic capabilities perspective (Teece et al. 1997), it can be argued that Indian firms do possess the resources and capabilities in order to employ such a strategy on a global level. However, they are constrained due to their lack of experience in the non-English-speaking regions of Europe. Additionally, industries in this region are far more mature; therefore, the vendor's evolving capabilities to service and provide high-end solutions are highly critical for their success.

Many Indian offshore providers bring expats from various geographies to lead their European sales team. For example, in Germany mid-size firms or GmbHs have dominated the majority of the German economy and have relied more on personal relationships and ethnic ties (see Srilata et al. 2009). This is in contrast to the primary transaction-based model adopted by Indian firms. Although a global sales force comes with a huge experience, it is important to note that in order to operate in the Germanic regions, local sales force and sales force representatives need to be employed to gain market access. These individuals possess a higher degree of local relationship building capabilities facilitating quicker entry into the market.

Developing a local sales force helps these services providers to influence the buying behavior of their European clients and their motivation for the purchases. The environment factors with respect to an organization's buying behavior, such as physical, economic, legal, technological, political, and socio-cultural environments, play a crucial role in Europe (see Shainesh 2004). Socio-cultural, political, economic, and technological environment need to be considered as a top priority while assigning a sales force in the region. Additionally, European clientele are more focused in developing long-term strategic partnerships and executives need to cater to such specificity upon transacting.

Indian firms have so far been successful in appointing domestic German top tier management. For example, five out of the seven Indian offshore providers have appointed a German top-level management (i.e., Wipro, Infosys, Tata Consultancy Services, Genpact, and Patni) (see NASSCOM-BITKOM 2010). However, it is

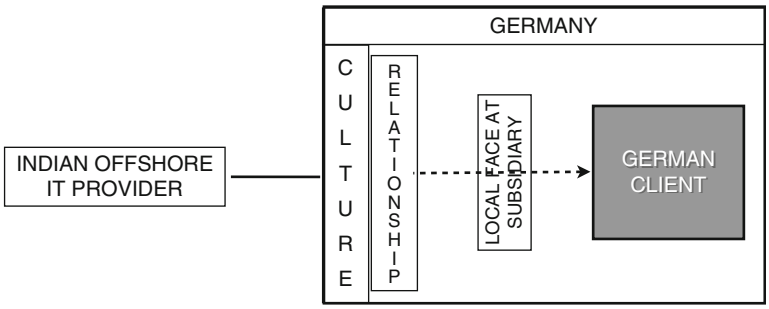

Fig. 2 Localization of the sales force

necessary for these firms to build a domestic mid-level workforce so as to better leverage their existing capabilities. Figure 2 gives a short insight into the aforementioned scenario.

4.2 Access to Onshore Production Facility

Upon entering the European arena, it becomes essential for Indian offshore providers to realize the fact that they need to intensify the degree of their onsite production capabilities. European firms need to assimilate "the European connection" with their vendors and not merely indulge in a transaction-based agreement. Therefore, with respect to the Germanic countries, adoption of a nearshore/onshore establishment will play a vital role due to the cultural complexity and relationship building characteristics of these locations.

In addition, each European country comes with its own set of cultural baggage that the Indian IT firms have to take this into consideration. It is necessary for these Indian IT providers to understand the importance of setting up their respective data centers in the European countries as these are the basic requirements for the provision of cloud computing services. For example, the takeover of a Citibank data center in Germany by Wipro in 2010 was an initial step towards such a strategy. The data center would help Wipro provide infrastructure management solutions to clients in several locations within Europe (see Ribeiro 2010).

4.3 Strong Cultural Alignment Over the Entire Value Chain

Although the Indian offshore providers have shown their compatibility with respect to providing services in the Anglo-Saxon economies, it is important for these firms to finetune their strategies in the European environment. The prime challenge is to mitigate not only the cultural barrier but also the dissimilarity in language across all European regions. Prior experience with the Anglo-Saxon economies has helped

Fig. 3 Interplay between sales, culture, and production

the Indian vendors acquire knowledge and capabilities, thereby building their services offering as well as their reputation. Adding to the existing hurdles is the establishment of a strong local leadership that not only is able to connect to the clients but also acts as a flux to communicate effectively the morals of the parent company.

5 Conclusion

Indian offshore providers need to rectify and exploit distinctive capabilities that will help them develop long-term relationships with their European clients. Research in this domain is rather slim from a German perspective and there is an opportunity to further develop this research theme. Although prior research has been conducted with respect to growth strategies (see Pasanen 2007) of firms, the Germanic countries demand advanced skill set with respect to both language and cultural conformity. It is therefore imperative for Indian vendors to understand the interplay between sales force alignment, onshore production facility, and the domestic culture (Fig. 3).

Taking into account the aforementioned arguments, it can be seen that Indian offshore providers have been making inroads into the European countries and targeting Germanic locations due to their sheer market potential. In line with the offshoring trend, the entry of Indian firms into the German market further escalates this phenomenon, as majority of the work generated by these firms in Europe would be transferred back to the corporate headquarters, providing them with significant cost savings. But, in turn, this would require these providers to invest heavily in learning capabilities with respect to soft skills (see Beil et al. 2009).

Therefore, the identification of the "soft skills," beyond the core competencies framework upon entering the European IT market, is a domain that needs to be further researched which would help reveal unique market dynamics pertaining to

the region. In our view, the future research agenda with respect to this domain can be broken down into three overarching themes/questions:

- How relevant is it for the Indian offshore providers to understand the soft skills factor in order to operate in Germanic countries?
- What is the degree to which these Indian offshore providers need to set up their onshore production facilities?
- What degree of flexibility are the Indian offshore providers willing to show with respect to adapting to culturally dissimilar location?

In conclusion, it can be stated that the Indian offshore IT providers are in their growth phase in a mature European environment. Besides the availability of resources and capabilities, the proposed future research agenda would help understand the evolving capabilities of these providers and expansion of their asset base into culturally dissimilar markets.

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Global Sourcing: Shifting the Focus from Cost Saving to a Strategic Set-up

Klaus-Dieter Gronwald

Abstract The common understanding of global sourcing as a procurement centric task of companies to resolve shortage of talents in the context of established offshoring and outsourcing models will be reviewed for product sourcing and service sourcing separately. Understanding offshoring as a location-specific delivery model and outsourcing, on the other hand, having significant impact on the governance, delivery system and the companies' organisation (onsite or offshore), global sourcing is seen as a combination of both. Discussing various offshoring and outsourcing failures at the beginning of the twenty-first century has impact on future global sourcing strategies. As a result, we will introduce the concept of "outsourcing of global sourcing" as part of a service provider's delivery model. Indian service providers have developed a unique system of education, processes and tool-based delivery systems which are mostly standardised across the industry. High attrition in the industry requires a focus on knowledge retention rather than people retention. This attrition and rotation of highly skilled and experienced talents enables small start-ups now to inherit the principles and processes of the big ones and implement global sourcing as business model for SMEs worldwide. This gives once again India a competitive advantage in the professional services market.

1 Introduction

There have been various definitions in the literature of offshoring, outsourcing and global sourcing, changing over the period of time. We will therefore restrict the discussion on papers published 2008 or later. Only in the recent years, India-based service providers have matured as global service providers while companies have become more outsourcing ready. Global sourcing as a procurement model has been

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discussed in various ways during the last couple of years with a clear focus on impact on the companies' organisation. This article introduces a new concept of outsourcing of global sourcing passing it to the service provider as part of their delivery model focused on India-based service providers who are best suited for this concept as a result of their cultural, organisational and business model.

2 Offshoring and Outsourcing

Although there has been quite a common understanding among various authors about the distinction between offshoring and outsourcing, in daily business they are often used "almost as synonyms" (Ågerfalk and Fitzgerald 2008). In order to be more precise, offshoring is linked to location, while outsourcing is about governance (see Davis et al. 2004) or ownership (see Miroudot et al. 2009). In other words, offshoring does not require an external service provider, while outsourcing can be done anywhere. In-house offshoring, without the involvement of an external service provider, *captive* centres, is dominating shared services still. According to these definitions, there is no difference between offshore and nearshore, both are the same: delivering services from a foreign country.

The selection criteria for the location of an offshore centre are linked to costs, logistics, availability of resources, taxes, legal restrictions, political stability, etc., but they do not have impact on the governance or delivery model needed for running an offshore centre; the same rules apply to any location. Outsourcing, on the other hand, does have significant impact on the governance, delivery system and the firm's organisation (onsite or captive). Thus, the basic question when it comes to sourcing models is not so much *where*, but *what, why* and *how*.

There are some observations which are misleading the discussion about the right souring model inside a firm and between a firm as a customer and an outsourcing vendor.

- Many sourcing discussions still are about nearshore versus offshore, although there is no difference between them. Both represent one and the same sourcing model: a location outside the firm's premises in a foreign country (but not necessarily outside the firm's boundaries) (see Miroudot et al. 2009).
- Many research and statistics do not make any difference between *what* to offshore or outsource, "service functions" like IT and administration (cost factors) or "product functions" like R&D, engineering services, innovation or product development. But, this distinction has a significant impact on the right decision when it comes to outsourcing.
- According to Peeters et al. (2010), cost savings have been the main arguments for offshoring and outsourcing decisions on vendor and on customer's side with offshoring into low-cost countries and outsourcing discussions about labour arbitrage and rate cards. This implicitly suggests that service functions would be the major offshoring/outsourcing components traditionally and product

functions have come into the discussion only recently. It is just the opposite. Although less than 10 % of the companies were going offshore until 1998–1999, two functions have been dominating since the beginning: IT as cost factor, and innovation services (R&D, engineering, product design) as production factors (see Manning et al. 2008; Peeters et al. 2010). Innovation services were the leading offshored services between around 1993 and 1996. Between 1998 and 2000, when the offshoring wave started on a larger scale, IT became the dominating offshored service, but still followed by innovation services. I will focus on those two principal services, one a service function and other a product function for further discussions.

3 The Offshoring Learning Curve and Outsourcing Readiness

Between 2000 and 2009, IT was the fastest growing offshored service, expanding from 10 % to more than 45 % of companies with 40 % outsourced in 2000 and 70 % in 2009. While 50 % of the companies in UK and the USA already outsourced their services in 2000, less than 10 % did it in Germany. In 2009, almost 70 % of the companies in the UK, the USA, Germany, and Scandinavia were outsourcing their services (see Peeters et al. 2010).

Many companies went through an expensive outsourcing learning curve until around 2005 when most offshored captive or outsourced services were run as staff augmentation in a factory model with rate cards and where moving to cheap countries was dominating. Landis et al. (2005) observed significant differences between the matured product outsourcing and the outsourcing of service functions, like IT. This study is based on 25 large enterprises representing an outsourcing contract value of £26bn: "62 per cent realised that their outsourced IT required more management effort than expected, 57 per cent said they could not release internal resources for other projects, leading to larger than anticipated management overheads, 52 per cent ranked cost-related issues as the main risks, 81 per cent had limited or no transparency to a supplier's pricing and cost structure, resulting in increased chances of paying additional costs, 48 per cent did not have a standardised methodology to evaluate the business case for outsourcing." Savvas (2005), referring to Landis et al. (2005).

My personal experiences during these years suggest that many of those companies were neither outsourcing nor offshoring ready and especially the large Indian services providers were not really ready for the global services market. Even today there are some general cultural flaws where Indian vendors do not meet the expectations of their meanwhile matured customers and prospects: the lack of strong programme managers, the tendency of being reactive and not proactive as demanded these days and a lack of predictability based on a different work style (a significant challenge in countries such as Germany); and many "managed services" projects are still staff augmentation based, "people centric" not "team centric".

The key message from the study that managing outsourcing partners (or offshore centres) can increase internal costs more than that will be compensated by cost savings through outsourcing and offshoring can be extrapolated to multivendor environments and global sourcing strategies. The move from global sourcing as a procurement task to a vendor-specific delivery model will be discussed below in Sect. 5.

4 Talent Development: The India Differentiator

Indian outsourcing service providers (meanwhile large and small ones) have some significant cultural advantages for incorporating global sourcing as a delivery model with respect to other countries. Here *where* and *to whom* to outsource play an important role. India has become the global hub for R&D and innovation in engineering and IT services, not because it has better, cheaper or got more resources than the rest of the world, but because Indian enterprises develop their talents in a different manner and so perform better. When it comes to the discussion about the number of engineering graduates in India compared to the rest of the world, there is often the argument from outside India that "only 25% of graduates are ready for work" (McKinsey). Indian companies, on the other hand, realised long ago that 0 % of the graduates are ready, especially in the IT industry. The large Indian enterprises have virtually become universities, employing hundreds of faculty (see Wadhwa 2008) and up to 15,000 students per year, which is 1 % of applicants as average industry standard. Since 2010, more and more top US graduates are applying at top Indian vendors due to the quality of postgraduate education. Most Indian vendors are members of the "American Society for Training & Development" (ASTD), the world's largest professional association dedicated to industry training and development. Mahindra Satyam won the 2007 Global Best Awards for their education from ASTD as first non-US company. All top Indian companies have been among the top 20 each year.

Attrition is high during the first 2–3 years in this field, but this has turned out to have more advantages than disadvantages for India's services industry, including the small ones. Since the education standard is generally high and standardised between the companies, they end up training not just for themselves, but for the entire industry. With a team-oriented working culture, the focus of the system has to be more on "knowledge retention" than "people retention", one important factor to establish global sourcing delivery models.

Global enterprises outside India have started to adopt this model and apply it for other emerging countries like Mexico and Romania (see Manning et al. 2008).

5 Outsourcing of Global Sourcing: A Delivery Model

The shortage of science and engineering talents in most industry nations has become main motivator for companies chasing these resources on a global scale. Germany alone has a shortage of around 35,000 engineers (Erdmann et al. 2009).

Today there are three main drivers for outsourcing and offshoring to countries such as India: cost savings, flexible capacity and gaining access to new technology (innovation) for both product and service sourcing. This defined "global sourcing of talent" (Manning et al. 2008) as procurement task which led to the current common understanding of being a company and not service provider driven activity. This model has an even greater impact on internal company organisations with the danger of failure (in service sourcing) than the previously offshoring adventures from 2003. Quoting Contractor et al. (2010): "...global strategy amounts to...the optimal disaggregation or slicing of the firm's value chain into as many constituent pieces as organizationally and economically feasible, followed by...decisions as how each slice should be allocated geographically ('offshoring') and organizationally ('outsourcing')". Miroudot et al. (2009) call this the process of "creative destruction" and associate it with outsourcing. They refer to the book "Capitalism, Socialism and Democracy" by Joseph Schumpeter, who introduced this term in 1942. It describes the process of transformation of an economy that accomplishes radical innovation.

While this concept has been established successfully as product sourcing in the automotive and aerospace industry which has integrated tier1 and tier2 suppliers into their value chain over a couple of decades, adopting this simply to services functions, like IT, will not work as proven already. There are examples of automotive companies which have done exactly that: replicate their product sourcing concept and outsource their IT services to many (50 plus) small- and medium-sized dependent-independent local service providers, many of them working on premise or very close to the company over the last decades. Offshoring these is impossible. Therefore, vendor consolidation programmes have been initiated and some began using Indian service providers as tier1 suppliers (frontend) with the intention to have the local providers working as tier2 through the Indian front end, passing the sourcing tasks to the Indian vendor on a global scale.

We therefore introduce global sourcing as part of the service providers' delivery model (outsource global sourcing). Due to their homogenous training system across the services industry, resulting in similar centralised competency and delivery organisations with the same underlying quality and process systems (CMM5, Six Sigma, Lean, etc.), and similar tool support, Indian service providers are best prepared for this model.

Backbone is what has been evolved over the last 10–15 years as "global delivery model", used by all of the major Indian providers, and expanded into an "advanced shared competency delivery model" as a competency-based delivery model which integrates support, maintenance and project execution. The fundamental concept is to provide services using virtualised delivery centres across the globe with a standard platform of tools and processes leveraging industry best practices. The model is capable of handling dynamics in work volume, and provides committed year-on-year productivity gains. It serves the major market demands of global sourcing: cost savings, flexible capacity and gaining access to new technology with a dedicated customer facing team and virtually zero bench, and is based on the principle of "knowledge retention" accepting attrition as part of the process.

Global sourcing is an organisational concept, not a technical problem. It is a delivery organisation based on centralised competency towers as pillars: industry, processes, and technology, with standardised governance, service delivery, knowledge management/retention and issue resolution processes. A strong tool support for service level management, productivity management, demand management (demand planning, demand execution), capacity management, etc., is mandatory.

Landis et al. (2005) recommended that companies should replicate the service provider's principles, models, and organisation and insource again. That did not happen obviously. Establishing these concepts needs significant investments over a long period of time. Offshoring into a captive centre would require similar investments. Since service factors (IT) are cost factors, this would just increase the costs, unless the captive centres are converted to profit centres, which turns them into (half-) outsourcing provider. Most of those attempts failed, and that include opening the captive services to the market and turning it into a full service provider. Many of them have offshored and outsourced significant parts to Indian service providers in order to stay competitive.

For a professional service provider, these services are their core business, and that enables them to make these investments with a clear ROI: another good reason to pass global sourcing and delivery to a professional (Indian) service provider.

6 Global Sourcing as Delivery Business Model for a Small Indian Start-Up Company

The well-established Indian system of company training and education with a high attrition rate enables start-ups to build on systems and experienced resources from global service providers and incorporate those high standards into their delivery models and focus successfully on the global SME market (25–1,000 employees) which is difficult to access for the large global players. Suyati Technologies is based in Kochi in the state of Kerala at the far south corner of India. They have created a global sourcing delivery model they call "Dedicated Global Team" (Mukund 2010) offering global sourcing as a delivery service. They will hire dedicated teams in India or anywhere else in the world based on customer requirements as Suyati's full employees for product sourcing, services or consulting. The key is to hire and retain talent by supporting the team with excellent processes, infrastructure, technical, HR and administrative services like any other large service provider.

7 Conclusion

With a clear understanding of offshoring and outsourcing and its historical development in the industry, global sourcing strategies as a procurement sourcing model have no significant differences to common staff augmentation models, only

focusing more on talent than cheap resources. Implementing these as part of advanced delivery models of global service providers will take the risks from and pass advantages to the company. We could show that the India-based system is best suited due to educational, cultural and organisational principles. Even the high attrition could be used as advantage in a homogeneous environment for helping even small start-ups enabling them to develop high-quality standard delivery models which give them access to the global SME market. The reality looks a little different. Although the discussed advanced delivery models and infrastructures are in place, they have not been fully understood and executed. Many procurement managers, on the one side, and delivery managers, on the other side, have staff augmentation mindsets and many managed services project still are hidden staff augmentation projects. Discussing the next step of outsourcing global sourcing and incorporating it into the delivery models of service providers might help them to achieve finally globalisation of professional services.

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Strategically Organising for Innovation in Global Sourcing

Wolfgang Messner

Abstract Over the past decade, delivering professional services from offshore locations in low factor-cost countries has emerged as a strong and convincing element of the service portfolio offered by multinational providers and firms of Indian origin alike. Many client companies have achieved substantial cost savings through offshoring and by industrialising their IT development and maintenance. The question is: what comes next? Where do the next improvements and savings come from? Bottom-up innovation in offshore delivery factories can be incentivised, controlled and the results used to implement delivery improvements leading to additional cost savings or new business for the client. Managing this offshore IT innovation process is, however, not the sole responsibility of the offshore service provider. It also contains a cultural aspect and requires the involvement of and commitment by the client corporation, which needs to develop and establish processes and metrics around incentivising and managing bottom-up innovation from their offshore delivery team.

1 Introduction

Innovation is an elusive and often misunderstood term. In the 1960s and 1970s, competitive advantage was generated by making products cheaper, whereas in the 1980s and 1990s, it was about making things better. In the new millennium, the paradigm is to make better things. Innovation thus transcends mere technology improvements, new applications or better processes; instead, it is a balanced interplay of all these elements and has become a fundamental strategic goal of companies. It is about using knowledge to create, adapt and manage disruptive change with the idea of creating new business opportunities or improving the

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cost ratio. In short, innovation is the sparking idea (invention) plus its commercial monetisation (see Freeman and Suete 1997; Grant 2010).

Comparing this definition of innovation with how it is being understood by service providers and in many publications, one notices a frequent overuse or even misuse of innovation as a buzzword; one such example is: "More than ever, offshoring is about sourcing the talent needed to sustain the innovation engine of a company. According to a new study [...], providers of outsourcing services are increasingly performing work such as new product development (NPD), research and development (R&D), engineering, and knowledge-intensive analytical services – all of which would have been considered too proprietary or close to the core as recently as a few years ago." (Couto et al. 2007, p 3). Naturally, analysing customer data and drawing conclusions require human intelligence and out-of-the-box thinking much more than fixing bugs in applications or capturing credit card applications; however, it does not quite fit the term innovation as understood by the field of strategic management.

As a trend fuelled by attempts to come out of a recession, companies are placing increased faith in technology for innovation (see Messner 2010, p 40–50). At the same time, companies are outsourcing or offshoring more and more parts of their application development and maintenance landscape to reap in cost savings. Managing outsourced innovation is often termed as an emerging issue in sourcing strategy (see Oshri et al. 2009, p 142, 150–55) and it is recommended to be explored during the provider evaluation process (see Cohen and Young 2006, p 179–181; Messner 2010, p 104–131). How does this work together? Can you organise for innovation, and how do you spark, incentivise and manage outsourced innovation?

When seeking innovation from offshore service providers, organisations primarily look at driving productivity enhancements to improve delivery efficiency and finally lower the costs. In short, something that takes x effort in year n, should only take a fraction of x effort in year $n + 1$; in addition to these savings in effort, it should come in better quality. This is referred to as *service innovation*. Second, they expect their providers to be positioned not only as technical experts, but also as functional business gurus, continuously suggesting new ideas that drive business outcomes to hitherto unknown heights. This is called *business innovation*.

2 Analysis of Status Quo

Providers have recognised the importance of innovation as differentiators in the marketplace. For instance, Capgemini's CEO Paul Hermelin boldly proclaimed innovation as one of the company's key differentiators: "We can't avoid the industrialization challenge [...]. We have to add something different, which will be based on customer intimacy and innovation." (Garrahan 2011). Nonetheless, many companies appear rather unhappy about the kind of innovation they receive from their service providers; 38 % of the clients express concern about the lack of innovation and/or continuous service improvements in their outsourced IT projects (see Matzke and McCarthy 2009).

2.1 Client Perspective

Underlying this complaint of a lack of clear innovation focus are some common mistakes client corporations do when entering into an outsourcing or offshoring contract.

First, they typically fail to define their innovation objectives, assuming that the provider knows their business and the unique context of their needs and wants. Needless to say that such unvoiced assumptions are rarely met by the provider.

Second, they often contract the right outsourcing deal with the wrong provider, making another set of assumptions about the provider's innovation capabilities. Many providers have clearly defined star industry verticals and services in which they see their maximum growth and future profitability. That is where they focus their innovation efforts and, at the same time, they treat the rest of the business as cash cows. Most offshore providers grow their business in a linear way, i.e., by adding and selling more resources. Innovation, in the short term and with these perspectives, may produce efficiency gains and bring down the resource numbers on a specific account. In the medium or long term, of course, this promises to increase the business, but providers are mainly interested in doing so in areas where they have identified their strategic growth. Possibly, with another more carefully selected provider, the outsourcing deal might have worked and generated innovative improvement in the course of the project.

Third, innovation does not happen but needs to be managed. Many clients fail to see the need to invest in a mutually beneficial relationship with the service provider, and believe that after signing the outsourcing contract it is now sufficient to monitor standard service-related SLAs and KPIs. They squeeze for more and more cost reductions, thereby inevitably forcing the provider to take shortcuts to stay in business. They do not understand the need to put in time and effort to manage innovation (see MacCormack and Forbath 2008), work together with the provider for maximum performance, and align the incentives and metrics of the outsourcing contract with their own internal objectives.

2.2 Provider Perspective

Leading offshore service providers have gained maturity in shared services, the utilisation of a distributed delivery framework and are currently addressing the challenges of intercultural collaboration while extending their customer base outside their traditional US/UK market.

Innovation, however, has so far enjoyed a less prominent role. Many research labs in India for Intel, Microsoft, SAP or other Western companies are considered the best among the best within their parent organisation—but only for solving pre-determined problems on a pre-defined path; conceptualising the problem happens in the West. People in India use the same computers, broadband

connections, programming languages and databases as people in Silicon Valley. Many start-ups in Silicon Valley were formed by Indians, and they play a leading role in IT innovation outside India. But why is India heralded as an IT powerhouse and yet IT innovation does not happen in India? It could simply be a function of economic maturity. In India's IT and BPO industry, the past 10 years have seen an average CAGR in direct employees of 25 %, namely from 230,000 in 1999 to 2.2 million in 2009 (based on NASSCOM data; see Messner 2010, p 22); and by 2011 the number of direct employees has risen again to 2.5 million. This has caused an immense pressure on the education system, which manages to increase its output of engineering students by a mere 4 % annually and has simply been unable to keep up with the industry's demand. While many compromises on formal educational requirements and soft skills had to be made in order to fill positions, the situation has also created a need for good middle managers to guide their less qualified junior colleagues on their path towards working independently and in good quality (see Messner 2009, p 78–82). These middle managers are offered good salaries, clearly steering the career path towards people management rather than technical specialists, functional experts or innovators. As a result, there are only very few PhD or even MSc candidates in engineering or technical disciplines in India, but many holders of MBA degrees. Indian employees generally think that research is, if not their cup of tea, certainly not their way to prosperity. But as Indian service providers or subsidiaries of multinational providers become larger, their linear growth in terms of adding new headcount will naturally slow down. The pressure to innovate, rather than to execute, will increase. However, this still is a few years ahead, as for Indian employees it is the here and now that counts—and it would make sense for providers and clients alike to accept this as a given and build upon it, and perhaps even to turn it into a strength.

From an organisational and capabilities point of view, the Indian IT industry is currently expanding on at least two innovative service approaches: mutualisation and solution accelerators.

Sharing resources and interchanging them across clients is an evolving non-linear growth approach sometimes referred to as *mutualisation*. It helps to build more experienced resources and provides stronger services at lower costs. In the past offshore service providers used to offer this shared service approach for commoditised and lower service layers. Today, they are moving towards leveraging mutualisation across higher levels of domain expertise. The benefits of enabling innovation by gaining a richer work experience and upgrading skills usually outweigh the concerns over intellectual property loss; notwithstanding, corporations are advised to keep a close vigil on what their offshore team is doing for other clients.

Offshore service providers are currently investing heavily in vertical offerings consisting of pre-developed software that can be used across clients as *solution accelerators* to industrialise the software development process. For certain business support processes, one to two third of the code can be reused with such solution accelerators. With this concept of non-linear growth, offshore service providers counter the competition and cost pressures while providing tangible benefits to clients in terms of functional best practice expertise, time-to-market and quality improvements which can be seen as bottom-up innovation.

Initially, a corporation's offshoring intentions are usually driven by a desire for minimising factor costs. Over a period of time, the industrialisation and quality improvements associated with offshoring to global delivery factories may bring about a realisation that even innovative processes can be outsourced (see Maskell et al. 2007). Delivery factories in India, which can easily house 10,000 employees per location, form a cluster of knowledge in which employees can pursue their career paths and team up to develop innovative solutions.

3 Organising for Outsourced Innovation

Before looking at service providers for innovation and perhaps blaming them for the lack of the same, corporations should first consider whether innovation through sourcing is the right approach or whether the virtues of outsourced innovation may be overestimated. One has come to believe that large integrated organisations are "bad" and that flexibility and globally distributed delivery are "good". However, companies not focusing on market-driving innovation by nurturing and guarding their own capabilities may be putting their future at risk.

When should firms organise for innovation with their outsourcing and offshoring partners, and when should they rely on their internal organisation? Chesbrough and Teece (1996) already answered this question in a ground-breaking HBR article by relating it to the innovation in question. Some innovations are *autonomous* and can be pursued independent of other innovations. In contrast, some innovations are fundamentally *systemic* in nature, meaning that their benefits can be realised only in conjunction with related, complementary innovations. The two types of innovation call for different organisational delivery strategies. Autonomous innovation can well be achieved through outsourcing in a distributed delivery environment, while systemic innovation requires a high level of information sharing and the capabilities to coordinate throughout the entire delivery system. Such capabilities are usually available in a well-managed organisation rather than in a loosely connected network of providers or global locations.

Today, few companies can afford to develop and maintain their entire application landscape and all related technologies internally. Instead, they leverage a mix of approaches: some areas are outsourced, some are offshored and others are strategically maintained in-house. To organise information technology for innovation and follow the thoughts brought forward by Chesbrough and Teece (1996), corporations must first determine whether the innovation required in one area of the landscape is autonomous (it can be pursued independently) or systemic (it requires complementary innovation). In a second dimension, they must assess whether the capabilities needed to produce the innovation can be easily obtained through partnering with offshoring providers or if they first need to be created. Figure 1 derives three distinct strategies how to strategically organise for innovation.

Managing for outsourced innovation becomes even more difficult in the highly interlinked world of multisourcing, where a corporation holds outsourcing

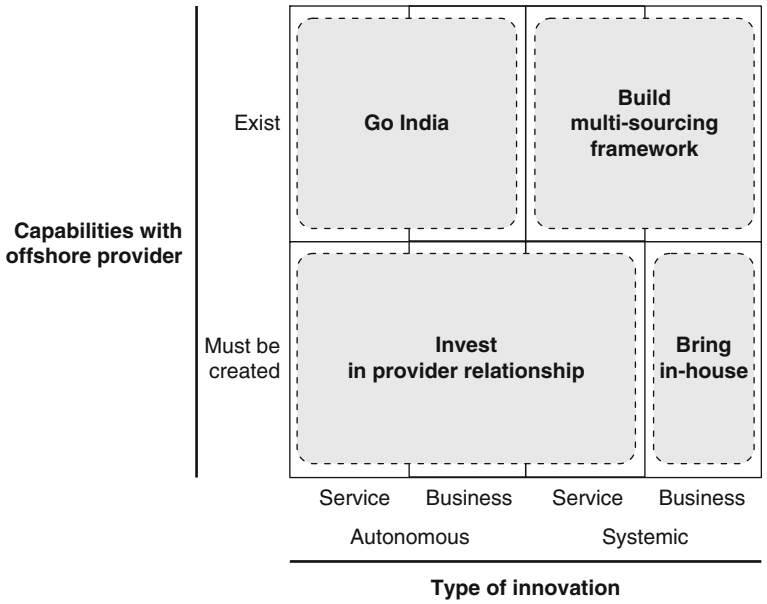

Fig. 1 Matching global service delivery to innovation

contracts with several providers. In the past, different providers avoided any interaction between each other, thereby hoping to prevent competitors to get a foothold in their own carefully guarded territories; information was only exchanged with the customer, and every opportunity was taken to make life difficult for the competitors. Going forward, providers now need to learn how to collaborate in a multisourced competitive environment. Their performance indicators, incentives and penalties need to be linked to their individual contribution to a successful performance of the entire multisourcing network. For the client corporation this signifies a shift in mindset and a skilful strategic design and operational management of the multisourcing contract network. It may also help to generate an atmosphere of controlled competition between providers where providers are allocated new work according to their innovation effectiveness.

4 Enabling Innovation Across Organisations and Cultures

Innovation has traditionally been studied from either a practical or methodological approach; rarely is culture considered and when it is, it is only in terms of organisational culture. But skills and innovative tendencies are human capital assets of a country's workforce (see Caraballo et al. 2011, p 29).

4.1 Understanding Jugaad Innovation

The chances for innovation in India's offshore delivery factories are high when corporate processes and culture are brought together. There is no question about Indian creativity in getting things organised at the individual and low-end level. The colloquial Hindi word *jugaad* is about the magic of improvisation, the creative ingenuity on the cheap, the fix-it approach, when things do not go as expected in an environment lacking resources (see Cappelli and Singh 2010, p 4–5; Chadha 2009; Krishnan 2010).

While Indians enjoy to celebrate themselves in showing how innovative they are in getting things done, it may not be as straightforward to incorporate the jugaad-type improvisation into an organisational innovation framework. Jugaad works in cases where immediate and quick fixes are asked for: it is nice when they work, but if not, one would not be worse off. This is not the way organisations typically work and it certainly does not strategically lead to a disruptive business opportunity opened through research. Research is open ended, requiring the ability to step back, think and visualise. Development happens within known boundaries, it is about achieving something within those delimiters.

Assuming that jugaad is a national trait, India's offshore industry should be better at developing solutions rather than doing innovative original research. In many application development and especially maintenance projects, companies would benefit from considering how alternative approaches could generate the required outcomes; in other words, how the jugaad approach could generate innovative solutions via unusual bottom-up routes. It is important for organisations to nurture and promote this path of growth, and not to look down on it as less glamorous compared to the top-down disruptive innovation.

At Tesco Hindustan Service Centre (HSC), the Bangalore captive offshore service centre of the world's third largest retailer Tesco with some 4,000 employees, jugaad is at play from process improvements making Tesco stores greener to cost savings in all aspects of operations. Its CEO Sandeep Dhar says that after 6 years building a centre of excellence in very diverse skills, there is an element of creativity in the solutions HSC provides (see Rai 2010).

4.2 Offering Innovation Incentives to the Offshore Workforce

Offshore service providers need to absorb the spirit of jugaad and avoid the beaten track by playing with resource constraints to come to alternative solutions, which they can then evaluate, measure and execute. Today, projects in India's delivery factories have operational goals according to which employees receive their salaries, bonuses and promotions. There is unease among the Indian workforce when doing a job differently, i.e. when experimenting and innovating, because this will take time. And time is something Indian employees do not have, aiming to meet their career and

financial aspirations in a business environment emphasising the importance of upward hierarchical progression (see Krishnan 2010). And on a practical level, for struggling with the normal course of a day, as in the big cities like Mumbai a good number of them have to commute 2 h each way every day to work.

Around the world, non-financial incentives, such as recognition, are believed to work better in stimulating innovation than monetary ones. But is this also true in India? India's employees in the IT services industry aspire for higher living standards and at the same time need to take care of their obligations as part of a collective society (see Messner 2009, p 9–12), such as financial support of elders in the family. Unlike their colleagues in the developed nations in the West, their basic level of needs is often not yet saturated and they need money to realise their aspirations. Therefore, the prospect of receiving a certificate and a shopping voucher will not help to change behaviours and induce the delivery of innovation in the workforce.

Service providers, who are willing to leverage employee-driven jugaad innovation for new solutions, need to consciously design innovation-related incentives and include them in their bonus schemes and career models, perhaps in the form of fast-track promotions. In the long run, these incentives should change managerial attitude towards innovation and conscious risk taking. When incorporating innovation in the contract, SLAs and KPIs, it is a challenge for offshore service providers and clients alike to implement this scheme balancing creativity and risk taking with ensuring operational efficiency and profitability.

4.3 Measuring and Managing Innovation

Client organisations and their sourcing management teams need to think very carefully about which providers can deliver innovation and which are simply offering a low-cost delivery.

If clients want their offshore service provider to bring greater levels of innovation to the project, they should start with defining their own innovation objectives. It is not enough to demand innovation or complain about the lack of the same. Instead, client corporations need to convey an understanding of what innovation means for their various stakeholders and how the service provider can help to achieve the goal. Every stakeholder segment across executive level management, business management and IT leadership typically focuses its attention on a different type of innovation. As the stakeholders' interest remains rather constant, it allows monitoring the persistency of innovation efforts on a continuous basis and linking metrics to innovation outcomes; this is key to shaping and communicating the desired outcome of innovation.

Innovation metrics are a way of ensuring that innovation will happen (see Cullen 2009, p 39), but they need to find the right balance between spurring the generation of ideas, avoiding the rise of unwanted projects and innovators killing their ideas too early in the process for fear of negative results and lack of encouragement.

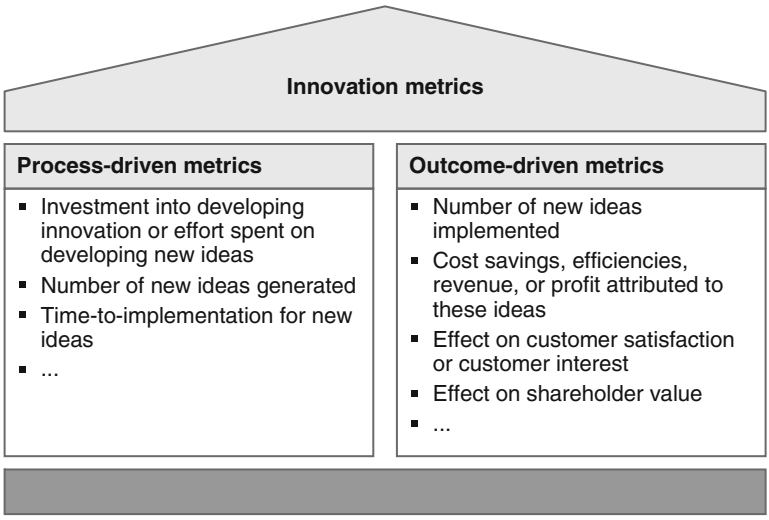

Fig. 2 Classification of innovation metrics

An effective system consists of a combination of process-driven and outcome-based metrics as depicted in Fig. 2.

It helps to provide an operational framework for bringing innovation to the table, for evaluating, approving and implementing new ideas. In an Indian cultural context of low assertiveness and high hierarchy orientation (see Carl et al. 2004; Hartog 2004), there is a real danger of ideas not being put forward or being killed early on by low-level managers who are too scared to stick out their necks. Online collaboration tools linked to incentive schemes for capturing innovative ideas and processes for evaluating them can help generating new ideas. Client corporations also need to formulate their expectations as to what they expect to see at different stages of idea generation, from early conceptual ideas to evaluated ideas or specific suggestions supported by a sound business case. Speaking from experience, it helps the process if clients get involved as early as possible, not only to avoid missing out on ideas generated by the offshore team but also to demonstrate a genuine interest in the whole process of generating ideas, thereby motivating the offshore team.

Certainly, there will also have to be a monetary incentive for the offshore provider to actively participate in the innovation process. Typically, innovative ideas around service delivery lead to cost reductions in the form of reduced headcount, which means—in simple terms—less revenue for the offshore service provider. De facto, this is a conflict of interest between client and provider most apparent in a time and material delivery mode, but in the medium to long term also noticeable in renegotiations for fixed price or outcome-based delivery contracts. Incentive schemes that work for both sides can either take the form of a revenue-sharing model where the provider receives a percentage of the cost savings generated by an innovative idea, or fixed payments based on the number of approved or successfully implemented ideas.

5 Conclusion

It is neither fair nor realistic to expect an offshore service provider to deliver innovation that simply is not part of the company's business mission and heritage. Some providers focus on their technology leadership and others on their business consulting expertise to deliver innovation.

But when providers come under constant cost pressure to reduce charge-out rates, they may lose leeway for and subsequently interest in following their clients' innovation objectives. If such behaviour is noted, it would be a good idea for client corporations to contact the executive leadership team of the service provider; they may get excited about the opportunity to establish reference cases and become known as an industry innovator. The driver here is that in an increasingly competitive marketplace, professional service providers will need to embark on a transformation from acting as mere providers of services to becoming providers of business services, solutions and innovation. However, if they refuse and lament that innovation is beyond the scope of their business model or a specific engagement, it may be time for the sourcing management team to reconsider their choice of service provider.

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Making Business Smart: How to Position for Business as a Service

Lars Theobaldt and Peter Vervest

Abstract A profound change will take place in the way of satisfying the information and communications technology needs of future business customers. This future customer is no longer a single company but rather a node in a web of networks—continually changing the links that it maintains and the positions it will take. Decision makers should see their company as a node on much larger and extensive networks of interdependent firms that are constantly being reconfigured. The number of nodes an actor can "see" across not only their customers and suppliers but also the contacts' contacts is called the network horizon. Especially CIOs must span the boundaries between own organizations and the growing networks in which their organizations operate; decision-making in very large networks is fundamentally different. To provide winning ICT services to such new customer requirements will prove to be a formidable challenge for today's ICT operators. This chapter presents a solid analytical framework as a basis for strategic positioning options of future "business as a service" providers.

1 Introduction

It is no rocket science to forecast that most of today's ICT managers—average age 45—will be retired or retiring in the year 2032. But how will information and communications technology (ICT) develop over the next 20 years? Are developments not much too dynamic and complex to allow any reliable predictions? And what real significance will the projected developments have on companies in the market?

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In this article we try to outline a trend that we believe will be a characteristic feature in the business world of 2032. Members of smart business networks will come together flexibly in ad hoc partnerships to find a solution to a specific task, usually the satisfaction of a customer's need. In any given situation, only those partners needed to solve the problem will become active. While examples of business networks already exist today, their potential is far from being exhausted. The networks will not be able to realize their full potential and become intelligent—i.e., "smart"—until business processes and rules have been almost completely automated using ICT.

The next stage in the automation of business processes will be reached in the form of smart business networks. The members of these intelligent industrial networks will join together in task-specific production and service value chains. They will establish ad hoc business relationships—and terminate them just as quickly. The networks will be managed using standard cooperation guidelines and processes defined according to industry-specific business operating systems. These systems will be characterized by their self-learning ability. Intelligent ICT infrastructure and solutions are both a fundamental prerequisite and a success factor here.

2 Blurring Industrial and Company Boundaries

Serving business customers will not be business as usual. About 20 years ago, we have witnessed the advent of Electronic Data Interchange (EDI) and email as well as mobile voice and data, all in different silos. Since then, business relationships are becoming increasingly digital and embedded into our economy. The digitization of the supply chains within industries has created tremendous value.

But where is potential for ICT value creation in the next 20 years ahead? Already today, we can depict the clear trend that companies increasingly need to make different linkages across industries and combine different capabilities from many different parties. As individual consumers, we increasingly expect from business companies to bring together communications, navigation, information, media and transactions from any service providers, on any devices, with a consistent service experience, in order to manage and engage in personal, social and business life, anywhere (see Seifert and Theobaldt 2008). Mobile phones can only become as smart as the fulfilment network, which is behind the user interface!

ICT services provisioning will be about this intelligent linking of business functions from many different industries. Previously distinct industries will combine and deliver new customer value: cars as intelligent hubs in the networks, smart energy grids, self-organizing logistics; there are many examples of the beginning of this grand emergence. The boundaries between ICT and other industries are blurring, causing the competition for shares in this growing market potential to heat up. Rising sales potential from convergent products and solutions will further push horizontal integration across industrial borders, and of course attract actors from the

other industries to look for opportunities enveloping EBITDA-rich ICT value creation and benefit from "industry convergence".

3 From Static Supply Chains to Agile Business Networks

The emergence of smart business networks (SBNs) enables dynamic and agile relationships between companies. Acting as nodes in the network suppliers, customers, business partners and competitors combine to generate "smart" results enabled by "smart" technologies. Companies are beginning to understand that skills in managing dynamic networks can provide more profit and greater competitive advantage than can a single facility or supply chain.

Business networks rather than individual companies are now determining competitive advantage. The individual company will no longer lie at the hub of its business network. It must participate in many technology-enabled business and social networks. Rather than acting in near-to-static value chains, dynamic process paths will connect the business network participants. To be able to participate, the business processes of all network players will need to be compatible. This is a formidable challenge!

The key characteristic of a smart business network is its ability to rapidly pick, plug and play business processes to configure rapidly a specific objective. One might regard a smart business network as an expectant web of participants ready to jump into action (pick) and combine rapidly (plug) to meet requirements of a specific situation (play). On completion the participants are dispersed to rest while, perhaps, being active in other business networks or more traditional supply chains. Accordingly, the fundamental organizing capabilities of smart business network are the ability to quickly connect and disconnect with an actor; the selection and execution of business processes across the network (plug and play). In this new business network approach, we see an increasing separation of the business from the transaction and the logistics layer. Participants share the process required to achieve the networks goals, i.e., the shared business logic.

One sees a first generation of smart business networks especially in banking, software and media. These mostly "two-sided networks" link different sides of their customer network—audiences and advertisers, or consumer credit cards and merchant authorization terminals. Often they are dominated by a handful of large platforms, as it is the case in the credit card industry. The business metrics are not as in a traditional value chain, where value moves from left to right: towards the left are the costs, towards the right are the earnings. In two-sided networks, cost and revenue are both on the left and on the right side. This enables flexibility in pricing and subsidization.

Meanwhile, a new generation of smart business networks is emerging: Amazon expanded its business model and moved from electronic book retailing to become the world's leading "e-tailer." Thousands of electronic book retailers join Amazon every month to benefit product presentation, regulatory compliance, risk management, conflict resolution and trustworthy transactions and logistic services. This

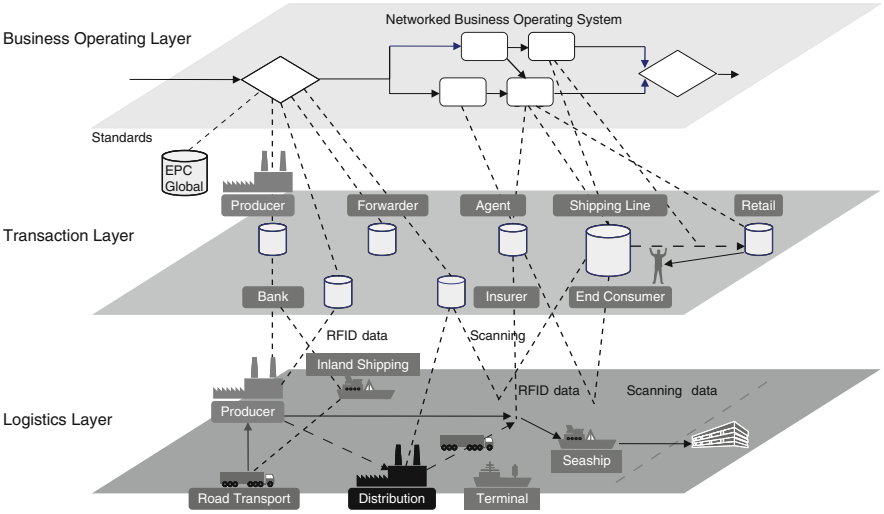

Fig. 1 The new business network extension

suite of business services is strictly managed by Amazon and such management ranges from consistent technical interfacing to business rules and practices (see Vervest et al. 2010). Other successful examples for a newer generation of smart business networks are e-Gatematrix, Multiasistencia, and Li & Fung. They all have in common an established "networked business operating system" (nBOS).

4 Strategies for Making Business Networks Smart

Networked business operating systems as shown in Fig. 1 will be increasingly offered "as a service." These business as a service (BaaS) providers are operating web-based business applications over the Internet, or Web-services, designed with modern security, management and identity standards. BaaS should not be seen as a form of ICT service provisioning: ICT services are shielded from the business service; any changes, disturbances or other events in the ICT service should not interfere with the business operations. ICT infrastructure and software can also be provided as a service (Internet Services Provisioning, Application Service Provisioning, Software as a Service, Process as a Service) but BaaS provisioning is concerned about the customer business level.

The key idea behind "smart business networking" is that organizations deliver new value by smart positioning of their capabilities in global networks of interconnected organizations and individuals. BaaS providers can play a pivotal role in doing so. We propose three different strategies:

- Platform provisioning

- Capability hubs
- Network orchestration

4.1 Platform Provisioning

Digital platform providers such as Amazon, Bol, Skype, eBay and Google focus on creating a proprietary network platform, loosely defined as telecommunications-based access to a computing environment allowing the user to perform predetermined platform-controlled and platform-supported business tasks.

A networked platform has some compelling advantages. Most importantly, the users have access to a more or less complete suite of business processes (from search and selection, to ordering, delivery, payment and administration). Since the platform owner controls who is given access and the related access rights, the linking of the business partners and the end-to-end management of business processes is not a significant issue. However, this creates user over-dependence on the network platform. For instance, if you are on Amazon you cannot access Bol; Skype does not give access to its competitors. This traditional lock-in resembles the islands of computer-based messaging systems in the early days of the 1970s. These disadvantages are not a problem as long as the price and quality are acceptable and the users are not enslaved. But networks have an interesting effect on size; the marginal cost of serving each additional user drops disproportionally. This means that at a certain point in time the integral cost of the market leader for adding the next user will be less than the marginal cost of its next-in-line competitor. Then natural monopolies develop and the winner takes all. That is when markets typically can go wrong and outside regulation steps in.

4.2 Capability Hubs

Using today's telecommunication capabilities, a company can outsource specific tasks to other companies located in remote parts of their previously constrained world. This can be done easily and swiftly at lower transaction costs than ever before. Friedman (2005) revealed the power of the Internet to flatten the world. The idea is simple: any (part of the) production process can be performed by picking the right—low cost—partners from all over the globe; contracting them for the execution of those tasks thereby reducing overall costs while maintaining ultimate control over the market place. So large companies outsource IT systems to India and manufacturing to China expecting that they will continue to control who makes the profit from the customer. Complicated outsourcing webs have developed.

Practitioners have felt the pain of transferring outsourcing tasks. When outsourcing, the company not only transfers the execution of a certain task, but it also transfers the logic that goes with the task. Tasks are combined in processes and processes are linked together to deliver the required customer performance; if that

chain breaks, one needs to know. In fact, one needs to know well before it breaks. One needs ready alternatives; one must be able to make switches in the supply chain to link the alternative resources to overcome the failure, but one cannot. The outsourcing company has lost the logic, the detailed understanding of management and control of specific tasks, and the skill to manage the process integration of discrete tasks.

Without controlling the business logic, the outsourcer no longer controls, or even understands, the execution of its basic business processes. In addition, it no longer masters the search and selection of trustworthy business partners.

There is a migration path from traditional outsourcing of entire functions to outsource modular business processes which results in a company pursuing a capability hub. The word "hub" means that the "capability" actor takes a position in the business network to which many adjacent actors funnel their needs for that specific capability. A business strategy that aims to become a capability hub tries to have as many actors as possible that "outsource" their capability to you as the cost leader and the performer with the greatest operational excellence. For instance, Amazon provides a platform for e-tailing (platform strategy). Once a customer decides to buy a book, DVD or whatsoever, Amazon does not deliver by itself but outsources the logistics handling, in particular the physical delivery, to a capability hub such as FEDEX, DHL, TNT or others. That choice used to be made by Amazon, but nowadays Amazon also allows the e-tailers on their platform to make that choice themselves by having a list of about 50 "authorized" logistics service providers. The same with other business functions such as payments, invoicing, advertising, etc.

Note that a capability is aimed at performing a business function in an overall business process. But, a capability is not the same as a business function: the business function requires—next to a capability of doing it—the "logic," i.e., the business schema of linking and putting different functions together plus the business rules. The challenging question is usually who controls the business logic.

4.3 Network Orchestration

"Orchestrators" direct actors in the business network, they co-ordinate and manage the combining of various capabilities for specific results aimed at the customer. Examples like Li & Fung or Multiassistencia have been described previously. Another example is The Big Word, which manages thousands of linguists worldwide for instant translation. Each of these use advanced business process tools to coordinate and optimize the business processes between many different actors.

These three positioning strategies can be endorsed by a geographical focus. The importance of smart city networks will grow alongside the urbanization of the world, especially Asian concepts (i.e., ten South Korean u-cities with central "city operating systems") seem to be promising (see Theobaldt 2008).

Network-based process management and community sourcing will be a prerequisite for making the strategies work. Managers must understand the vital importance of network resources and process management for their company. This requires:

- Understanding the essence of 'capability' from a network perspective.
- Process control; mastering the linking of capabilities in a network of different actors, i.e., how to manage, end-to-end, discrete processes distributed in a network of business partners.

A capability can be defined as a company's capacity to deploy resources, usually in combination, using organizational processes to realize a desired end. Prahalad and Hamel (1990) refer to the core competence of the company as "consolidating corporate-wide technologies and skills into competencies that empower individual businesses to adapt quickly to changing opportunities".

Process control has become a key challenge, if not a stumbling block, in the acceptance of BaaS. We argue in favour of the network business operating platform as the glue between different organizational information systems. There is a gradual shift from hardware-oriented architecture to software-oriented architecture. The real challenge is still to come; process management that follows a business-oriented architecture, i.e., that gives the full flexibility to design and execute business processes irrespective of the operational environment.

5 The Next Wave of "Smartness"

'Smartness' as a relative term means that the network of cooperating businesses can create better results than others. It could also be related to the capability to organize and influence the information flows within as well as to the topological structure of the business network. The next wave of "smartness" will be coming from decision support systems, which harness artificially intelligent software agents.

Already today, business intelligence software crawls the web, mines data and generates reports. The current hypertext document centricity will evolve to include an infrastructure of machine-readable semantic descriptions that can be understood and acted upon by intelligent agents. In the last 7 years, there has been significant progress towards the vision of a semantic web.

Decision support systems (DSS) and autonomous software agents increasingly help to compensate for human cognitive limitations, like "the tyranny of choice" in complex networked business environments. Deployed in a smart business network, a decision support system needs to address human decision support in highly agile business situations. Accordingly, there is a need evaluator services network, which evaluates where to connect and how to position in the network. These evaluator services can be composed of dataflow networks to accomplish arbitrary monitoring, analysis and decision support tasks ranging from simple data monitoring to fully autonomous intelligent agents (see Ketter et al. 2010).

6 Span the Horizons Between Own Organizations and Growing Networks

Decision makers should see their company as a node on much larger and extensive networks of interdependent firms that are constantly being reconfigured. The number of nodes an actor can "see" across not only their customers and suppliers, but also the contacts' contacts is called the network horizon. The size of a firm's network horizon is shown to be a critical determinant of a firm's ability to strengthen and keep its bridging position. However, expanding the network horizon beyond this point gives rapidly diminishing returns (see van Liere et al. 2008).

A series of experiments with executives from the insurance industry showed that high network horizon equals high performance. A key factor is the way the network horizon is distributed across different firms. These findings might explain why network orchestrators in a wide variety of industries are so successful. Li & Fung and Multiassistencia were among the first to see themselves as in larger business networks. In a homogeneous, low-horizon network, their extensive network horizon enabled them for a key position. NaturaHerstel from the Allianz Group is a good example for the expansion of a network horizon. This insurance proposition handles a claim by replacing and delivering the object, not by financial settlement. The additional nodes in logistics and economies of scale in purchasing allow them to generate additional business value.

7 Conclusion

The key challenge of the future is to capture a business logic, define the potential functionalities of the nBOS and to create the business operating layer. Companies must develop and act "smart" in rapidly changing and expanding business networks enabled by pervasive communications technologies. CIOs must span the boundaries between own organizations and the growing networks in which their organizations operate; decision-making in very large networks is fundamentally different.

Business executives are encouraged to exploit the benefits of cross-industrial collaboration and scientific knowledge exchange to elaborate their future business customer proposition. The Smart Business Networks Initiative (SBNi 2012) can be of help. There is urgency to understand how to position for BaaS and to explore the business horizon; today.

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Taking an Active M&A Role in the Consolidation of the Engineering Sector

Sören Bleßmann and Albert H. Savelberg

Abstract The professional services sector has become one of the most vibrant industries in Germany. In particular, knowledge-driven services such as technical services or IT services have had a strong impact on the German economy as they contribute around 30 % to the German gross value added. The highly qualified German service professionals are widely renowned and their services are increasingly exported into international markets. As in many other regions, the German market is highly fragmented. The average size of companies varies considerably but is generally small. Market consolidation, already taken place in many other regions outside Germany, has now started as German market players without critical mass are struggling for profitability or want to broaden their skills spectrum and capabilities in foreign regions. On the other hand, multinational market players are trying to expand their businesses into Germany to offer one-stop capabilities on a global basis and to benefit from ongoing growth in one of the most important markets in the world. During the past few years, M&A transactions in the German engineering services industry have played an important role in European mergers and acquisitions. The conditions for external growth in Germany are expected to remain favourable and acquisitions are currently a strategic option despite all uncertainties concerning the way the global economy will develop in the future.

1 Introduction

The highly qualified German engineers are internationally renowned. Germany ranks third among the service exporting nations worldwide and first in skill-intensive services such as technical services, IT services, financial services and environmental services (see German Trade & Invest 2011). Engineering services include product

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and industrial process design, construction design and management, systems engineering, maintenance and operations (see First Research 2011). Major industry sectors are automotive, aerospace, high-tech/telecom, utilities and construction/industrial. Demand is driven by the economic development of the respective supporting industries, e.g. the construction needs of private companies and governments, the willingness of industrial customers to invest in product development or the improvement of operating efficiency. Economic downturns disproportionately affect engineering service providers. Nevertheless, demand for engineering services is generally growing following a global trend. This is due to innovation being crucial for many companies as they have to manage the trend to shorter product life cycles, cost reduction and global competition. Thus, the number of companies outsourcing their knowledge-intensive business functions is increasing steadily.

2 The Engineering Industry in Germany

The annual global spending for engineering services is estimated at USD 750 billion and is expected to reach approximately USD 1,000 billion by 2020 (see NASSCOM 2007). The global market is highly fragmented and the average size of the engineering services companies varies considerably from one country to another, but is generally small. As an example, in Denmark, France and Sweden more than 90 % of the enterprises have less than ten employees. The distribution of turnover by market segments also varies considerably between the countries. Nonetheless, the global engineering services industry is led by some very large international groups. USD 25 billion of turnover has been generated by the top 200 firms according to the International Federation of Consulting Engineers (see FIDIC 2011).

To improve the understanding of different geographical markets, to gain exposure in higher growth markets and to be closer to customers and projects, global engineering services companies are often managed regionally. The market is characterised by an ongoing consolidation process which in turn is driven by the trend to offer one-stop-shop capabilities, since clients aim to reduce the number of their suppliers. Therefore, it is anticipated that the larger service providers will take a greater share of the market either via organic growth or further bolt-on acquisitions.

The German market, like many other economies, is highly fragmented with a few conglomerates which serve a number of sub-sectors and a large number of mid-sized, family owned and highly innovative SMEs focused on a specific engineering niche (see Hochberg 2011, p 22–23]). The largest 20 % of the German engineering services companies generate 80 % of the total revenues (based on Destatis (2010) data). The average size of companies is rather small and heterogeneous. According to Destatis, the average revenue volume amounts to approximately EUR 600,000. The ownership structure of the companies reflects this (see Fig. 1). Over two-thirds of all engineering companies are often family-owned sole proprietorships; 19 % are corporations with a more diversified engineering service portfolio. In contrast to

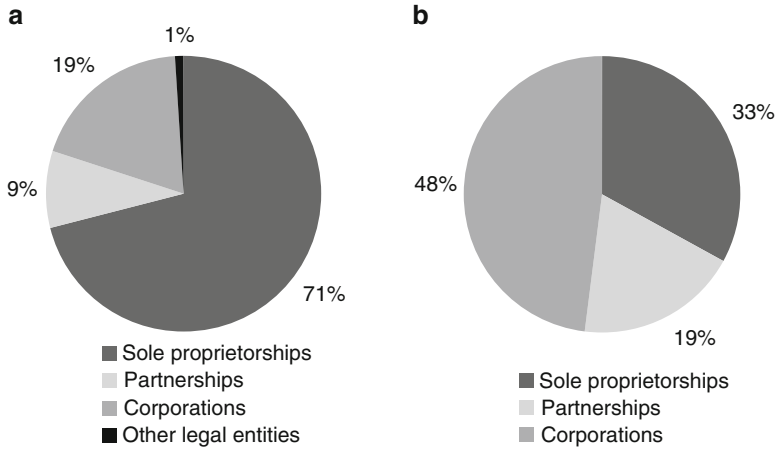

Fig. 1 Engineering companies by owner structure [based on Destatis (2010) data]. (**a**) Engineering companies by legal entity; (**b**) Engineering companies with revenues over USD 250,000 by legal entity

this, only one-third of the companies with revenue of more than EUR 250,000 are sole proprietorships, 50 % are corporations and the rest are partnerships.

Since their establishment, most German engineering firms have created leading positions in specific engineering sub-sectors or in a particular type of engineering field. They can be separated into companies that provide engineering services to the construction industry and companies that serve technology-driven industrial and machinery sub-sectors including automotive, process engineering or energy. The construction-related companies associated with infrastructure projects tend to be larger in terms of revenue than the technology-focused companies.

Market consolidation, already taken place in many other regions outside Germany, has now started and is increasingly gaining momentum. The economic downturn in 2009 has had a dramatic impact on the business of many market players in Germany, although a general recovery has taken place in most market segments meanwhile. Furthermore, the size of many market players in Germany is in general too small to handle the increasing complexity of larger projects which depend on the accurate calculation of project-related cost and the efficient use of the required skills in analysis, design, project management and operations. Smaller engineering companies often operate in niches with special expertise in a particular field and are therefore integrated as consultants into larger projects on a regularly basis.

In addition, financing sources are gaining in importance. As engineering service providers typically receive progress payments, it is necessary to provide a sufficient level of working capital to bear costs before customer payments are received. Final payments are often delayed considerably after a project is completed. Especially during the financial crises in 2008, the funding of many projects collapsed, e.g. in the Middle East, and the volume of bad debt increased. Larger market players

usually benefit from economies of scale, a wider range of skill sets and more financing facilities, not to mention the fact that according to their global exposure these players are able to benefit from different economic life cycles of the different regional markets or supporting industries.

3 Acquisitions and Partnerships as Means to Expand Skills and Presence

As for Germany, there has historically been a lower degree of strategic development by the market players. On the one hand, there are small profitable players in niche segments specialising in certain fields of expertise. On the other hand, there are many market players without critical mass struggling for profitability. Only a few players are able to operate on a global basis. Currently, there is a trend towards broadening the competence spectrum and geographical positioning of the businesses, thus spurring mergers and acquisitions activities. The larger market players are most likely to play the part of active consolidators. Many acquisitions in the past have been driven by those players to access new products, regional markets and technologies. Especially industrial and technology focused German engineering companies with innovative products based on in-depth engineering know-how have been of interest to acquirers in the last few years. Some have been purchased by larger entities to secure their special knowledge in certain industry sectors or technologies. Consolidation in supporting industries, e.g. the construction or automotive industries, will further increase mergers and acquisitions.

Due to the large number of smaller service providers in Germany and inadequate succession planning, a variety of targets and conditions for acquisitions are expected to remain favourable. However, high-quality acquisition targets are rare especially if profitability is an essential prerequisite. The reasons for this include the fact that many smaller engineering service providers are partnerships or owned by their management making it nearly impossible to bring down their individual goals to a common denominator.

The number of acquisitions in the engineering services sector has been constantly rising since the early 1990s and reached a peak at the beginning of the new millennium (see Fig. 2). The first decade of the twenty-first century was characterised by periods of high general economic uncertainties that impacted M&A activities of companies in all sectors including those in the engineering services sector. The first period of slow-down due to the bursting of the ‘new economy bubble’ lasted from 2000 to 2003 and affected the engineering services sector in two aspects. The number of transactions nearly halved from 190 to 112 worldwide. The valuation multiples, expressed as Enterprise Value to EBIT, fell sharply in 2001 to 7.0× from 10.8× in 2000, but recovered constantly over the following 2 years only to decrease to an all-time low in 2004. Compared to other sectors, worldwide M&A activity from 2005 to 2007 of engineering services companies has increased more strongly and with a quick recovery of the valuation

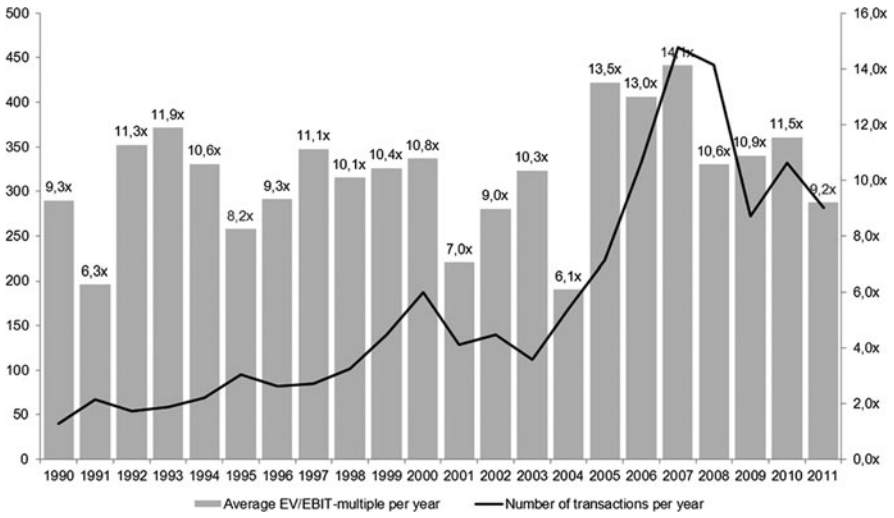

Fig. 2 Worldwide M&A activity in the engineering services market (based on ThomsonReuters (2012) data)

basis, which has stabilised on a high level in this period. Since 2008, economic uncertainties caused by the financial crisis in 2009 and the EURO and debt crisis in 2011 led to an understandable reluctance concerning investments for strategic acquisitions affecting the total number of closed transactions. Where transactions were closed in 2011, sellers had to accept lower valuation multiples which reached 9.4× EV/EBIT—a new low since 2004.

Dividing the target companies in the engineering services sector into those serving building construction and infrastructure businesses and those focused on technical businesses (such as automotive, aerospace and machinery industry), it can be seen that constantly more than half of all acquired companies serve the first segment (Fig. 3). This can be explained by the fact that acquirers working in the construction sector often deal with large projects in different countries and use the acquisition strategy to enter new (emerging) economies in Middle East or Asia or even to expand their service portfolio to reach a critical mass necessary in order to implement complex and large infrastructure projects. Another reason can be to acquire innovative services for individual project requirements.

4 M&A Deal Patterns in the Engineering Sector

The involvement of German companies in European mergers and acquisitions, acting as acquirer or as target, is constantly above or around 20 % since 2000 and therefore significantly higher compared to the involvement of other European countries. In 2009, the share of German companies involved in European transactions has even

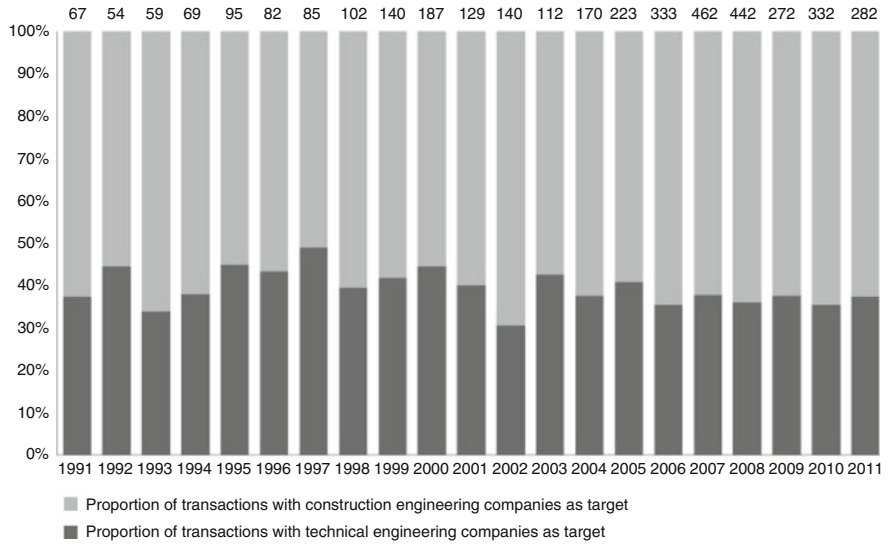

Fig. 3 Target companies in the engineering services sector (based on ThomsonReuters (2012) data)

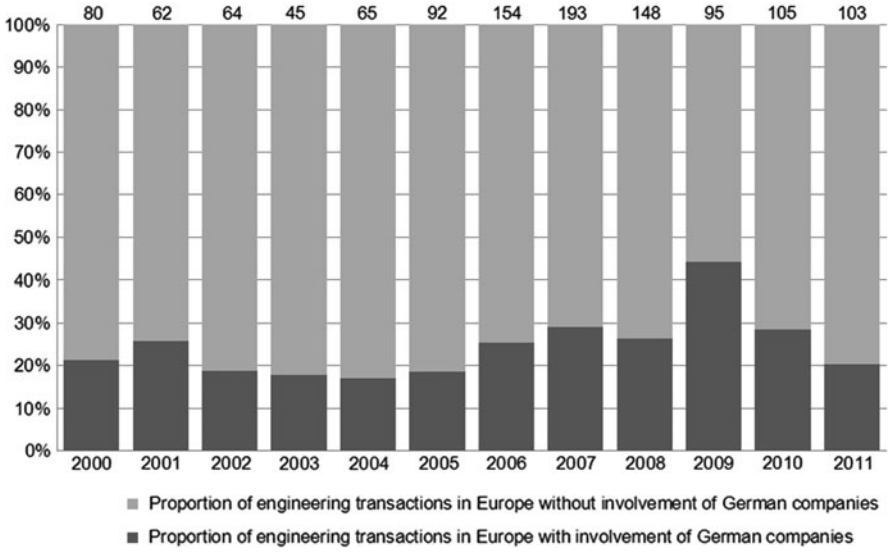

Fig. 4 Proportion of German engineering companies in European transactions (based on ThomsonReuters data)

reached 44 % (Fig. 4). In the case of targets acting in the field of construction engineering, this development reflects the good quality and a stable demand from public authorities as well as from private customers. Reasons for takeovers of

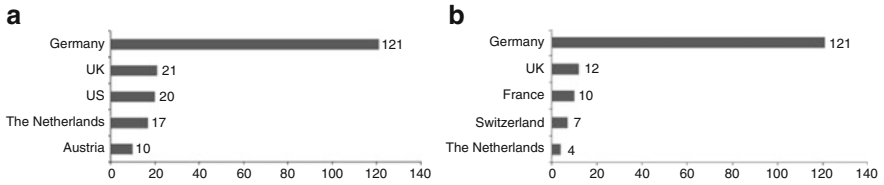

Fig. 5 Target/acquirer nations for/of German engineering companies (based on ThomsonReuters data). (**a**) Top 5 target nations for German engineering companies; (**b**) Top 5 acquirer nations of German engineering companies

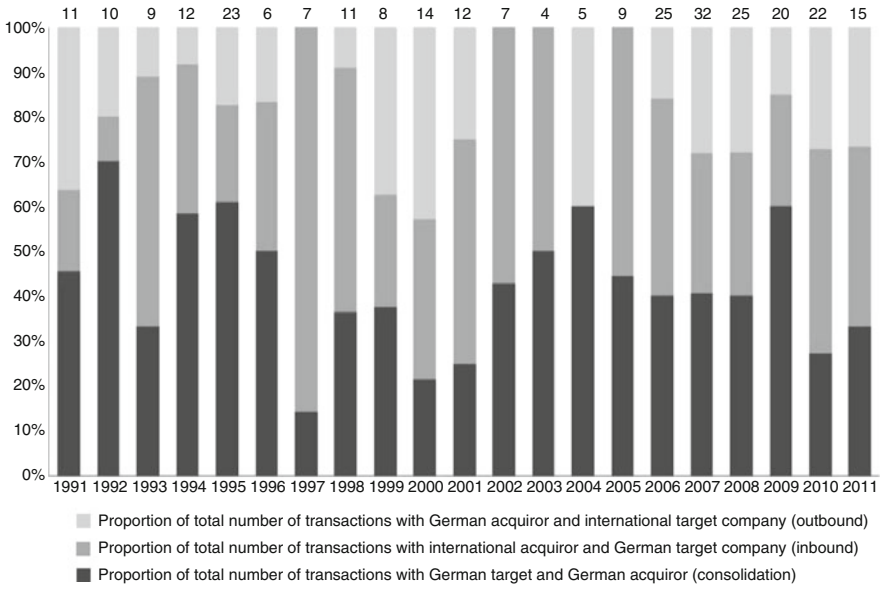

Fig. 6 Consolidation of German engineering market (based on ThomsonReuters (2012) data)

technically focused engineering companies are the high innovation rate, the access to highly qualified and educated engineers as well as established long-term relationships to notable companies with international reach. Another reason for the constant high interest of international companies acquiring German engineering service companies is that the German engineering services landscape, as mentioned before, is typically highly fragmented with a large proportion of family-owned small and medium companies. This market structure is also reflected by the M&A activities of German engineering companies acting as acquirer. Such moves are geared towards domestic competitors more than to European engineering companies.

An analysis of the most active economies in German engineering services companies shows that the UK is the second most active economy behind Germany, followed by companies headquartered in the USA and the Netherlands (Fig. 5). German engineering services players are most active in acquiring companies from the UK and France. However, they favour acquisitions in their domestic market.

Engineering services companies from the USA are apparently only of marginal interest to German market players. Especially in 2009, the number of national transactions between German companies was higher than the number of in- and outbound cross-border transactions (Fig. 6). This is due to the fact that during the economic downturn following the financial crisis, many international companies usually active in mergers and acquisitions were rather reluctant to invest abroad. However, these industry players have returned to the mergers and acquisitions markets.

5 Conclusion

The landscape for engineering services companies is becoming increasingly complex as new threats and opportunities will be constantly added to their businesses. Countries are striving to become low-carbon economies. New projects now need to take environmental considerations seriously. This increases the complexity of projects which will be more technically challenging and time consuming. On the other hand, there will be huge opportunities in the fields of power plant construction and grid extension due to the energy policy change in Germany. Energy efficiency and co-generation, electromobility, hydroelectric power and the importance of other renewable energy sources will be long-term growth drivers in the engineering sector. Ongoing globalisation will drive the relocation of production facilities in the supporting industries. Urbanisation trends based on growing population and migration to cities, especially in emerging economies, and mobility, e.g. the use of intelligent traffic management systems, are threats and opportunities at the same time. Boundaries between engineering and ICT are increasingly disappearing. The bottleneck of skilled employees already affecting the growth of engineering services companies in Germany might also have a negative impact on the capacity for innovation.

These trends will play into the hands of larger entities. German market players will need to build up their resources and capabilities and follow their clients to emerging markets outside Germany. International companies will satisfy their ever-increasing demand via further in-fill acquisitions of German targets providing both outstanding technological skills and a market-entry into one of the important engineering services markets in Western Europe. The conditions for mergers and acquisitions still remain favourable for both buyers and sellers. Mergers and acquisitions in the engineering services industry need to be based on an integration concept mutually acceptable for both sides—acquirer and target's key management—to be successful in the long term. Hence, the question is simply which side will take an active role in the ongoing consolidation of the engineering services sector in Germany?

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Part II
Successful Processes for Realisation

Balancing Industrialisation and Business Complexities

Thomas Reuner

Abstract The evolutionary path of the ICT sector towards an era of industrialised products and services is largely undisputed. Yet the pace of this unprecedented change and the extent of the transformation of the IT value chain are blurred at best; the pace of industrialisation is slower than most commentators suggest. The abstraction of conceptual frameworks and of marketing collateral needs to be reconciled with business models and contractual arrangements that underpin projects in order to gain better insight into the transformation of the IT value chain. BPO and SOA are examples of how provider propositions have not fully lived up to the expectations of achieving industrialised services and significant process improvements. The same applies for cloud services, the market for which is gravitating towards private and hybrid clouds. Other innovative services such as automated helpdesk offerings are still too embryonic to impact the value chain at this point in time. Consequently, the balance of power is unlikely to be challenged by disruptive players and the cost saving potentials as suggested in the context of multi-tenancy of public clouds will not be achieved. The evolution of IT departments will be reactive to other industry events. Suggested organisational changes such as the capability-driven IT organisation are contingent on the adoption of industrialised services but are not a conduit for change. Therefore, service providers need to position themselves in the various evolving ecosystems that will support industrialisation and communicate their value proposition more succinctly. The focus should be on emphasising the alignment of technology evolution, business models and changing business environment, but not on stoking inflated expectations of paradigm change.

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1 Introduction

The evolutionary path of the ICT sector towards an era of industrialised products and services is largely undisputed (see Walter et al. 2007).Yet the pace of this unprecedented change and the extent of the transformation of the IT value chain are blurred at best. This is mainly due to the fact that much of the discourse around these issues is strongly influenced by the marketing of the supply side. Large parts of this discourse have been popularised but in equal measures polarised by the discussions of the publications of Nicholas Carr (e.g. Carr 2009).

While it is open for debate whether 'cloud computing' is really the game changer as suggested by Carr's 'Big Switch' (and many providers), Carr's earlier arguments that with increasing commoditisation the competitive advantage of IT will diminish leads to the fundamental question of how service providers need to position themselves in order to safeguard their competitive advantage in an era of accelerated industrialisation. The flip side of the same argument is that IT departments will fundamentally change to such a degree that executives in charge for business processes could take over most responsibilities for IT as business is aligning with IT. Within this context, in order to analyse reference points for adoption of cloud services, it is critical not only to discuss the technological advances that will accelerate industrialisation but also to gauge the repercussions of the business models underpinning IT delivery.

The central assertion of cloud services as the metaphor for industrialisation is that organisations need to re-evaluate their approach to IT assets. As many parts of IT are commoditising, supplier choices are deemed to become less critical. Consequently assumptions about ownership and how to build IT capabilities should be re-visited in order to access scalable and low-cost service components (see Gammage 2010). Yet this fundamental shift in approaching IT assets leads back to the long established criteria for evaluating sourcing strategies. And history has shown that the promises of cost savings, quality improvements and agility as part of outsourcing agreements were mostly only reached when the right contractual frameworks were matched by the appropriate governance structures.

This article analyses the impact of industrialised service offerings on the IT value chain: Firstly, by analysing the market dynamics of service offerings aiming to accelerate industrialisation such as SOA and cloud computing; secondly, by looking at how the acquisition and management of ICT services by organisations will change over time; and thirdly, by discussing the positioning of service providers within this evolving landscape. This approach is meant to provide a better balance between supply and demand side issues and perceptions. Thus we aim to present reference points as to how to assess professional service firms and to provide guidance for future planning.

2 Market Dynamics

In the abstraction of conceptual frameworks as well as in marketing collateral from the supply side, the reference points for industrialisation in the ICT sector are clearly defined. Standardisation, automation, re-use of modular components as well as sourcing strategies are seen as key dimensions that can be enhanced by leveraging global supply chains. On their journey into this brave new world, organisations are investing in projects that are being perceived as critical for reaping the benefits of industrialisation: cost savings and agility. These projects typically comprise of (see Müller 2010):

- Portfolio rationalisation and management
- Service-oriented architecture (SOA)
- ITIL
- Virtualisation
- Outsourcing
- Offshore services

However, the outcome of these projects can vary greatly depending on supplier performance and the ramifications of contractual arrangements among other factors. The most telling example for this is probably the failure of the English multi-billion public sector healthcare contracts where some suppliers walked away from contracts while others were taken to court. The friction did not arise because of a lack of strategic direction or vision, but mainly because of deficiencies in project management and the quality of service delivery. This example is meant to highlight the point that an analysis of future market scenarios needs to reflect both supply and demand side issues that could impact the IT value chain.

The discourse around industrialisation has also become distorted by the over-hyped marketing of cloud computing (see Thomas 2008). Despite the fact that many expectations of industrialised services are influenced by the experiences of consumerisation (such as self-provisioning and ubiquity of access), the requirements of enterprise services are fundamentally different. The above-mentioned projects indicate that the common denominator is virtualisation which is enhanced by the evolution of browser technologies and the platform fragmentation of client devices. Such consumer issues are strongly influencing the discourse especially around cloud computing which in large can be parts attributed to the fact that there is no common understanding of what exactly constitutes cloud computing. How far this overlap goes is shown by the example of the UK G-cloud project, a public sector initiative aimed at providing ICT services across departmental boundaries, with the notion that services should access like in an App Store. But again as the example of the English NHS contracts has shown, technology provision has to be matched by procurement processes as well as provider performance.

The aspects that would establish cloud services as truly a new paradigm are virtualisation advancing towards applications and services underpinned by business models allowing full elasticity, such as Amazon's AWS services. In order to

understand the ramification of establishing new paradigms in the industry, another reference point for the adoption of industrialised services is business process outsourcing (BPO). Touted for a long time as the panacea to achieving higher levels of efficiency by the industry, in many instances providers offered industrialised services by lifting complete business processes onto their own platforms. However, the provider performance has been patchy as many processes require manual intervention and technology is just an enabler. Furthermore, company-specific knowledge often got lost during the project transition, thus impacting performance levels. Consequently, the promises of efficiency gains and cost savings could not always be materialised. Take, for example, HR BPO where providers had to retrench after their multi-process offerings were perceived as not always delivering on the promises.

The discussions around BPO lead to another critical point: that provider propositions should not be discussed as a binary choice of one proposition supplanting another. The experiences gained from evaluating BPO (and outsourcing at large) led to more mature sourcing strategies and organisations. Many organisations opted for shared service centres instead. Similarly, while service-oriented architecture (SOA) may have fallen short as architecture in the perception of many organisations, they are using the tools and principles born out of SOA to realise enablers for a more cloud-like environment.

Similar to the concepts of BPO and cloud services, SOA has been perceived as critical development for accelerating industrial services. The notion that SOA, as a set of principles and methodologies for designing and developing software with the aim of providing interoperable services, could overcome the fragmentation of processes and the massive wastage of the IT production has led to inflated expectations. Yet many organisations lack the discipline necessary given the enormous effort required to establish SOA across complex organisational structures. Probably, even more important for the perception of modest results are the limitations of SOA after M&A activities or similar strategic changes (see Ellermann 2011). Based on these assumptions, most organisations still lack a framework for overcoming the fragmentation of their IT landscapes and processes. SaaS and Business Process Management (BPM) can help to overcome some of the deficiencies, but probably only SMEs might opt for completely new approaches to architectural challenges (given the lower dependency on legacy systems) and could therefore adopt cloud services more aggressively than large organisations.

These issues therefore provide the context for the competitive positioning of professional service firms and three aspects appear crucial:

- Will commoditised cloud offerings accelerate industrialised services and will lead to a greater adoption of outsourcing?
- How will cloud services impact offshore provider?
- Will innovative offerings such as automated infrastructure management further erode margins for established professional services providers?

With the advent of cloud computing services, the discourse around industrialisation has reached a completely new level. Cloud computing has become to a large extent the metaphor for industrialised services (see Münzl et al. 2009).

This elevation is, however, in sharp contrast to the fact that the understanding of what exactly constitutes cloud computing is blurred at best. The blurriness is largely caused by an overlap of different constituents of the cloud, such as grid computing, utility computing, virtualisation, SaaS and Web 2.0, etc. The fuzzy perception of what constitutes cloud computing is mainly caused by the hype stirred up by the supply side. In its worst representation, the term cloud (computing) has become interchangeable with the Internet. The hype can be explained by the fact that the strong uptake of server virtualisation technologies has fuelled inflated expectations that virtualisation will move further up the value chain advancing towards applications and services. However, the potential paradigm shift is contingent to a lesser degree on technology, and more on the business models underpinning it. As such, investors have looked for disruptive vendors that could potentially shift the balance of power of incumbents.

In the initial phase of cloud computing, the emphasis was on the public cloud and the cost saving potential of multi-tenancy. The market dynamics around cloud computing have changed significantly over the last two years. In a strategic shift, organisations are moving their focus to private and hybrid clouds, because of the perceived risks of security, interoperability and immaturity of vendor offerings. This shift means that data are only virtualised within the boundaries of a company or organisation and only non-business critical applications are hosted by external providers such as Amazon, Savvis or Rackspace (a similar development to companies having chosen shared service centres instead of BPO). As a result the balance of power has swung back to large system integrators and telcos rather than focussing on potential disruptive players. Their focus on integrating cloud services into existing offerings while offering consulting and advisory services on top is aimed at mitigating the perceived risks around cloud computing. However, for buyers this also means that risk mitigation comes at higher price points not least because system integrators typically do not offer full elasticity for their cloud solutions as they try to protect existing outsourcing revenues. At the same time, innovative cloud pure plays such as 3tera, Terremark or 3Par have been acquired by established on-premise vendors, indicating the difficulties for disruptive start-ups to reach critical mass and penetrate the enterprise space.

The pace of adoption of cloud services appears much more critical for offshore provider than for many of its Western peers. Apart from labour arbitrage around BPO offerings, their key competence is focussed around customisation projects. Thus any significant acceleration of the levels of standardisation will inevitably curtail their addressable market. Furthermore, any substantial growth in the Platform-as-a-Service (PaaS) segment could restrict their advances in application development. And lastly, due to compliance issues proximity to customers could counteract some of the advantages of global supply chains. Naturally, they will aim to capitalise on the service opportunities around cloud computing but will face headwinds from new pure play competitors. But these competitive threats need to be seen in the context of the macro trends of the IT services market. Despite continuing strong growth of the leading Indian providers, transformational deals or leads in multi-sourcing environments are still few and far between.

Consequently, many providers are trying to beef up their consulting capabilities in order to move up the value chain. If successful, these moves could neutralise some of the competitive threats posed by cloud services. At the same time, Tata Consulting Services $2.2 billion BPO contract win with Friends Life in the UK underlines the ceaseless competitive threat for established providers. However, success on this scale has so far been largely confined to the US and UK markets. But importantly, this win is not just based on labour arbitrage but on combining offshore services with deep domain expertise gained in the wake of previous contract wins. This strategy seems to be representative for most Indian providers as their appetite for significant M&A appears to be modest, but their willingness to take on assets and people as part of deals is more pronounced than with established providers.

Another level of competitive threats will arise from companies like ServiceNow or IPsoft who not only offer helpdesk services as SaaS offering but automating their services thus cutting out significantly human interactions. Even though automation tools are by now part of the delivery backbone of many service providers and the fact that these companies are not yet on a scale to directly attack the large established providers, the vision of the players highlights another dimension of industrialisation. On the one hand, these companies offer automation for ITSM (ServiceNow) and remote infrastructure management (IPsoft) that will allow organisations to optimise their often fragmented processes. On the other hand, in the long term, such automated services on a larger scale could challenge the labour arbitrage of global supply chains. But then again as with cloud services, many of these innovative companies are likely to be absorbed by the incumbents through M&A.

3 Demand Side Issues

The evolution of IT organisations is largely depicted in a similar vein as the path towards industrialised services. However, in many commentaries the notion of a strong adoption of services such as cloud services is the implicit prerequisite for this change to happen. In this scenario, an ever-increasing alignment of business and technology is said to lead to tech-savvy business managers and staff provisioning their own technology solutions. Forrester predicted that the changes in technologies such as virtualisation, the above-mentioned change in provisioning of technology and a radically more complex business environment will lead to a collapse of the IT status quo. In its wake a new model, which Forrester has coined empowered Business Technology, will rise (see Cullen and Staten 2011). With a similar thrust the demise of the CIO, the rise of a Chief Process Officer and the notion of service orchestration as the core function of IT executives are being portrayed by many commentators as the likely outcomes of this fundamental change (see Hewlett 2011; Trost 2010). As with industrialised services, the direction and vision appear plausible, but the time lines and the impact on the IT value chain during this evolutionary path are far from certain. In particular, the notion that cloud services, and especially SaaS, will be the main conduit for this change needs to be examined.

Provided the understanding of cloud services is not just reduced to virtualisation, vendor offerings need to be evaluated as part of the sourcing strategy. Public and hybrid clouds due to the concept of multi-tenancy are essentially outsourcing agreements and therefore need to be assessed within the overarching sourcing strategy. Thus the notions of consumerisation with self-provisioning and ubiquity of access have to be reconciled with the complexities of sourcing contracts.

Consequently, in our view there remain considerable challenges on this path to a new era. Two main issues appear to stand out. First, more than two decades of legacy systems, proprietary data and billions of Euros in investments are unlikely to be easily or quickly substituted by a new paradigm; and second, the business models of service providers and especially licensing by ISVs are not aligned to allow organisations to fully reap the benefits of industrialisation.

We believe that cloud services will not fundamentally reverse IT architectures to more centralised systems, but that adoption will happen through commoditised solutions such as email, collaboration and testing. As such it will be an additional tool of the sourcing strategy rather than a new paradigm that will supersede client–server architectures. As with SOA, many methodologies and principles will be beneficial, but the integration of cloud services is just starting to mature. Therefore, the skill sets of IT executives must bridge legacy issues and the challenges of moving IT into areas directly linked to driving business value and strategies. The capability-driven IT organisation (see Hagen et al. 2010) is the long-term goal for most organisations, but we believe that the notion of business service orchestration where processes are decoupled from technology services is often influenced by the experiences of consumerisation where the reference points are standardised clients and often closed systems. Furthermore, there are parallels to the challenges for retained organisation in outsourcing agreements in that aggressive reduction in skill sets could potentially negatively impact the quality of service delivery. Thus, the notion that new breeds of organisational structures that will leverage industrial services will be lean steering committees needs to be discussed further. Moreover, in the medium term, while cloud services themselves are highly standardised, there are as yet no common standards for cloud services. Therefore, SaaS could increase complexities until cloud broker or other solutions for risk mitigation mature. As a result we believe that the evolution of organisational models will take more time than suggested by most commentators.

The second central point is linked to our assumption that cloud services will only gradually advance. As the business models of service providers, and in particular licensing by ISVs are not changing quickly enough in line with the cloud business model, the cost saving potentials that industrialisation projects are meant to realise will be compromised (see Foran 2010). In particular, full elasticity as offered by the likes of Amazon is offered by only a handful of hosting providers and pure plays. However, most available case studies point to public clouds and capacity–utilisation ratios that are not applicable for the private clouds which are being favoured at this point in time. But beyond the basic cost arguments of dynamic IT environments, the complexity of software licensing of the ‘old’ on-premise world will not be simplified by the cloud paradigm (see Claybrook 2011). Even if providers offer harmonisation and

migration programmes for hybrid environments, license management and therefore cost will remain opaque. Consequently one can point to softer metrics such as rapid provisioning, shorter project cycles or lower administrative costs to justify the business case, but the hard cost saving potentials will remain difficult to calculate. Therefore, in our view the lack of transparency of cloud business models will slow the adoption and needs to be addressed when evaluating provider offerings.

4 Positioning of Service Providers

There are no simple answers as to how service providers need to position themselves. Not only because of our scepticism about the time lines for the adoption of industrialised services that we have outlined above, but because of the complexities of the various ecosystems in which providers operate. In our view, the best way to approach the question is by clearly differentiating the customer segments.

Against this backdrop, we would expect the least change for the enterprise segment. We envisage that industrialised services will become part of a blended delivery backbone and will co-exist with other delivery models. As such, customer relationships and deep domain expertise will remain more critical for the success of providers than any specific technology capability. This is based on the assumption that no disruptive player will emerge in the medium term that would threaten the status quo of the leading system integrators. The obvious candidates, Amazon and Google, follow a completely different business model and do not have significant sales and consulting capabilities that are critical for enterprise customers. At the same time, system integrators increasingly offer bundled public cloud services (such as Amazon's AWS) and maintain their margin by offering higher end consulting and integration services. Thus service orchestration and the ability to support and strengthen customer's governance capabilities will be key for future differentiation (see Mulholland 2011).

While we expect only a modest impact on the enterprise segment in terms of market share, the critical question is how providers will counter the margin erosion that will follow stronger adoption of industrialised services. As discussed above, for a limited period of time nebulous contractual and licensing arrangements will continue to buffer the erosion, but the predictability of traditional outsourcing contracts will be challenged. Psychological price points that will be established by cloud pure plays in the SME segment will accelerate price pressures. Equally up- and cross-selling potentials around cloud services will decrease once organisations have completed basic cloud assessments.

In contrast to the impact to the enterprise segment, we envisage major repercussions for the SME segment. The channel will be critical for the broader adoption of cloud services, but few players are ready to embrace the new paradigm. This applies for resellers and vendors alike. For years it has been mooted that the channel needs to transition to a services-led business model, but many organisation still rely on product sales in order to up- and cross-sell. While there will be new

opportunities arising from the cloud scenario, the fallout could be significant (see Bittman 2011). The fundamental question is whether vendors are willing to share the managed services opportunity with their channel partner. There will be opportunities to provide aggregation and customisation, but the channel will have to compete for them with a new breed of cloud pure plays.

One critical point that applies to the enterprise and SME segment alike is that the cloud scenario will create new services-centric tech industry ecosystems where business partners will collaborate in a new stack of cloud computing (see Ried et al. 2010). Strategic bets in Middleware and PaaS, respectively, need to be placed that will determine the viability of offerings in particular around integration and management issues. However, in our view the shift in technology will not alter the fundamental criteria for success of service providers: robust client relationships, deep domain expertise and scale. Commoditisation of services will offer more choice of provider, but the above-mentioned criteria will remain decisive. The flip side of this argument is that we do not expect the emergence of new mega vendors that could disrupt the market in the wake of commoditisation and industrialisation and dominate specific market segments. In our view, ecosystems will remain complex and multi-faceted. But crucially established segments will change as services-centric models will dominate. Thus vendors are required to carefully target segments of these emerging ecosystems and communicating the value proposition in a differentiated fashion without labelling everything as cloud computing (see Ried et al. 2010).

Nevertheless, at the same time, the competitive threats will also arise from other angles that are only indirectly influenced by industrialisation. For instance, the accelerated IT-business alignment could create new opportunities for the old Big four business consultancies as well as for strategy consultants. KPMG's acquisition of Equaterra is an example of how robust client relationships and process expertise might be leveraged for high-end consulting services. As the title of this article suggests, successful service providers need to balance industrialisation and business complexity. As we were trying to show there are no simple answers as to how to achieve this balance. The complex challenges of IT departments rather require highly differentiated solutions and consequently the communication of the supply side needs to address these in an appropriate manner.

5 Conclusion

In our view, the pace of the evolution towards industrialised services such as cloud and automation is slower than most commentators suggest. The abstraction of conceptual frameworks and of marketing collateral needs to be reconciled with business models and contractual arrangements that underpin projects in order to gain better insight into the transformation of the IT value chain. Critically, it is not a binary question of one concept supplanting another but of how tools and methodologies can help organisations to balance cost savings and agility. Fundamentally, the discourse around industrialisation and in particular around cloud services is

influenced too much by the supply side. Suggested organisational changes such as the capability-driven IT organisation are contingent on the adoption of industrialised services but are not a conduit for change. As the market is gravitating towards private and hybrid clouds, the balance of power is unlikely to be challenged by disruptive players. However, service providers need to position themselves in the evolving ecosystems that will support industrialisation and communicate their value proposition more succinctly. In order to understand the pace of industrialisation and the impact on the IT value chain better, more research on the buy side and on the implications of sourcing contracts and licensing agreements is required. But the path into the era of industrialised products and services is irreversible.

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Industrialization Lessons for the European Banking IT

Samarth Shekhar

Abstract Faced with a second crisis in 3 years, European banks are fighting for survival. To meet stringent EU capital requirements, banks are reevaluating their portfolio of businesses, selling off noncore businesses, and looking for optimization, cost savings, and revenue growth all at the same time. Bank COOs and CIOs are expected to wave the magic wand that will cut IT costs while delivering business-critical IT initiatives, and sustaining run-the-bank quality and service levels. While European banks have lagged behind their US or UK counterparts in streamlining their IT or in adopting global sourcing and partnering approaches, the current situation calls for some big leaps rather than baby steps. If we look back to the crisis faced by leading German carmakers in the 1990s and how industrialization, sourcing, and strategic partnering helped them rebound, we see important learning for European banks as well as for providers. Global and Indian providers looking to grow in Europe need to stop force-fitting approaches that worked in the USA or UK. Each country has its own regulatory and business setup, with additional challenges of language and cultural differences and stringent labor laws. European banks need results—and they need them fast! Now is the time for the providers to step up the game: localize their local know-how and presence, understand the specific stage of IT maturity of the bank, and prepare the appropriate sourcing and partnering models with financial approaches that can help banks get tangible results within the short to medium term.

1 Introduction

Even before European Banks could wave a goodbye to the global credit crisis, they are faced with the sovereign debt crisis that seems to spread, prolong, and is here to stay. Some banks are considering changing their business models, some even

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pulling out of entire business lines. Those at the helm of Bank IT and back-office need to do some fundamental re-thinking to support and enable their business in these difficult times.

Although industrialization, partnering and sourcing concepts were born and tested extensively in the manufacturing and automotive sector, it now finds itself increasingly marketed—and in some cases, indeed, implemented—in other verticals. Bank CIOs and IT directors have become used to terms such as Testing Factory, Maintenance, Migration Factory, etc.

While IT industrialization, partnering, and sourcing models have been implemented and are in various stages of maturity in the UK and US Banking sector, most European Banks seem to be lagging behind.

Nowhere does this gap show itself as strongly as in Germany whose world-class automotive sector was challenged by carmakers from Japan in the 1990s—until Porsche experts had to fly down and see exactly what the likes of Toyota were doing right! Although the "crisis" came from competition rather than from a downturn, they were confronted with similar challenges of survival, retaining customers and revenues, and cutting costs.

Are there parallels and lessons for today's European banks—and consequently for the providers who serve them—from the crisis faced by European carmakers in the 1990s? Are European banks taking too long to understand something their counterparts in the automotive industry learnt the hard way—and after a losing significant time and money?

Can bank IT departments and suppliers continue to keep working the way they have done for the last several decades, given such fundamental shifts and pressures in the businesses they enable and serve? Are providers aligning themselves and their business development, sales, and delivery models to the current situation of these banks, instead of assuming what worked elsewhere or 5 years ago will work here and now?

2 The Challenge for European Banking IT

With Europe's sovereign debt crisis still unresolved and unclear of the future directions, economic recovery has become much more uncertain. This results in shortening the span of strategic decisions that are taken currently. As per World Economic Outlook (2011), the world economy is suffering from the confluence of two adverse developments:

- Much slower recovery in advanced economies since the beginning of the year, a development we largely failed to perceive as it was happening.
- Large increase in fiscal and financial uncertainty, which has been particularly pronounced since August 2011.

The long-term impact of these events is being debated and various thoughts are emerging on the same. The broad consensus is that "uncertainty is a certainty."

The European Financial Stability Facility (EFSF), the main part of the European Union aid package to combat the sovereign debt crisis, is a move in the right direction. But the Euro-zone is a monetary union without being a political union, which means there is no centralized budget that provides for an automatic insurance mechanism in times of crisis. At the time of writing, efforts are on to bring more intergovernmental agreements that will allow more stringent financial discipline among member countries to:

- Adopt drastic austerity measures
- Accelerate reforms
- Improve competitiveness and productivity
- Reduce the debt and deficit levels

For bank CIO's, industrialization of IT and back-office services, followed by phased sourcing of non-core layers or business areas to reduce costs, is an interesting concept. However, in the current environment, piecemeal approaches or proposals that give returns after 3 or 5 years will not help them achieve their immediate objectives.

Providers need to understand the pressures and urgency facing European banks and stop force-fitting models that helped them get a foot-in-the-door or "land," then mine the account over several months or years to expand. Providers need to do their homework on the bank's current back office and IT setup, tap local experts and advisors, and connect at the right level in the bank to come up with partnering and risk/reward-based models that can deliver a win–win in the right timeframe.

Given the language and cultural barriers and labor laws in European countries, most of the sourcing and partnering models will avoid mass layoffs or unfettered offshoring, preferring instead to transfer staff or creating joint ventures with guarantees for employment.

3 Key Lessons from Carmakers in Crisis

That there was indeed a crisis facing the premium German carmakers was first acknowledged by Roos et al. (1990). They highlighted that German carmakers were lagging behind their Japanese competitors, who were gaining market share in the USA, one of the key markets for German premium cars.

As Rosengarten and Stuermer (2005) point out, the Japanese leadership in quality and productivity began to create a crisis that the top German carmakers were not prepared for. Sales of Toyota's Lexus, launched in 1988 in the US market, overtook sales of BMW by 1990, and a year later that of Mercedes Benz.

Further, Rosengarten and Stuermer (2005) analyzed how the German carmakers first decided to understand what the Japanese were doing right, decided what aspects of their approach need to be adopted, and with what modifications or adaptations. Further, the likes of BMW and Porsche, reasserted what they call their "Premium Power," to recapture their position of leadership via customer

focus, branding, and innovation, instead of fighting the Asian competitors only on cost and quality. Some of the key learning from the automotive industry in crisis that is relevant to top European banks and providers relates to industrialization, sourcing, and partnering, and is summarized below:

Carmakers' learning from the crisis	Lessons for European banks	Lessons for providers focused on Europe
Industrialization: adapt but do not copy. Porsche's leadership and a team of specialists flew to Japan to study Japanese car factories, including those of Toyota, to study their continuous improvement quality approach (*kaizen*) and just-in-time deliveries. These were adapted to suit the production process at Porsche, bringing in efficiencies, quality improvement, and cost benefits while retaining innovation	Banks first need to understand what is possible in terms of industrialization, sourcing, and partnering. Then, apply it in their specific context, maturity of IT, and complexity to decide what parts to source, what to keep internal, and how to get there. Outsourcing everything or sending all work nearshore or offshore is not always the right answer: the top carmakers have always kept their core competence to themselves	For providers this means there is no "one size fits all." A solution that worked for one bank elsewhere may be a bad idea for another, or may need to be suitably adapted and localized. Certain steps in the software life cycle or certain domain and business areas may not be conducive to industrialization or offshoring
Industrialization: platform strategy. On the development side, the German carmakers started to leverage the same basic engineering structure, engine, gearbox, etc. for two or more car models. This continues to be an extremely useful approach that has helped reduce cost of production and gain economies of scale	For European banks, it translates to (a) consolidating IT and operations across different business areas like across Corporate Banking and Investment Banking. The key here is to understand what can be "shared" or commoditized and what is "specialist" or core to the bank's business (b) possibilities of white-labeling and sharing their platform with another bank	Providers can also bring in another dimension by taking over bank's applications and processing platforms as well as the associated staff, operating it as a "shared service" or utility for them as well as additional customers, thus lowering costs and possibly creating a revenue stream for the bank
Sourcing and Partnering: providers are key to achieving objectives. The top German carmakers used suppliers to add significant share of the value added, amounting to between 60 and 90 % of the total production cost of a vehicle as highlighted by Rosengarten (2005). In turn, suppliers are increasingly bringing in	Banks should set up a task force for identifying candidate business processes and IT areas that are noncore or commoditized, and finding the right suppliers to outsource or to partner. Agreements with existing and future strategic suppliers should be tied to the value added or innovation provided instead	Established and incumbent providers are going to be caught unawares by relatively new but value-focused providers who can bring in the required innovations and proactive proposals that help banks achieve their objectives. Providers who are serious about growing in Europe will take calculated risks and structure committed

(continued)

Carmakers' learning from the crisis	Lessons for European banks	Lessons for providers focused on Europe
innovations to their favored customers, giving them a competitive advantage in the premium car market; or they are bringing in cost saving approaches that are then shared between the supplier and the customer	of delivering the contractual minimum	benefit-led deals based on their prior experience and know-how
Sourcing and Partnering: achieving flexibility and cost-effectiveness. Premium carmakers need to focus on design and innovation, rather than on producing the cheapest automobile. They need access to efficient production factories but with flexibility—i.e. without overcapacity. Several carmakers leverage the production plants of their suppliers to achieve this: e.g., BMW contracted the Austrian manufacturer Magna Steyr to produce the X3 SUV	Banks need to ensure they do not build overcapacity for projects and programs that will ramp-up and ramp-down, but rather leverage the flexibility and low-cost development, package implementation, or maintenance capacity offered by supplier teams	Providers need to understand that most European banks are sourcing not simply for cost arbitrage but for availability of rare skill sets and expertise. High-priced local contractors and freelancers particularly related to package implementations or maintenance of off-the-shelf products are common at most bank IT departments, and are an excellent area for optimization

4 Industrialization, Sourcing, and Partnering

As we summarized in the previous section, industrialization, sourcing, and partnering approaches are critical to European Banks, not only to survive the current crisis but also to achieve long-lasting IT performance.

The generic definition of industrialization as per Butschek (2007) and Brockhaus-Enzyklopädie (2005) is the dissemination of industries within an economy, in proportion to agriculture, handicraft, and small trade. Relating to the production of goods and services, it is defined as the implementation of standardized and highly productive methods in order to increase efficiency and reduce cost. As per Brockhaus-Enzyklopädie (2005), the process of industrialization began at the end of the eighteenth century in Great Britain and was characterized by an increasing division and specialization of labor, capital-intensive technologies, mass production, rationalization and the application of new energy sources. Industrialization is seen as a necessary step for economic growth, technological advances and increasing wealth. Only industrial production methods allow production of a multiplicity of goods in a sufficient amount and quality.

1	**Guaranteed IT spending as a percentage of revenue**
	Fortune 50 European bank Leading US supplier of automated test equipment

2	**Product-based Royalty**
	Western US P&C insurer Major US aircraft manufacturer

3	**Guaranteed percentage of savings on IT cost**
	Leading UK Insurer Leading EU specialty retailer

4	**Unitized Pricing**
	Committed per policy price reduction – Leading UK insurer

5	**Upfront cost benefit from transformation & consolidation**
	Closed book administration for Equitable Life, US-based supplier of electronic components

Fig. 1 Results- and value-based pricing models

Applied to the process of industrialization as introduced above, Minich et al. (2009) state that the key concepts of such methods can be summarized in specialization, standardization and systematic reuse, and automation.

Industrialization being applied in the services industry is not a recent concept. As Karmarkar (2004) highlights in his groundbreaking article: "Think of technology as creating an information assembly line; information today can be standardized, built to order, assembled from components, picked, packed, stored, and shipped, all using processes resembling manufacturing. Industrialized information becomes steadily more efficient, less expensive, and more highly automated."

For European banks, the opportunity in speeding up industrialization and achieving their financial and operational objectives lies in adopting the right sourcing and partnering approaches.

As per Ross et al. (2006), organizations need to adopt different outsourcing relationships (i.e., strategic partnership, co-sourcing alliances, or transaction relationships) based on their architecture stages, viz. business silo, standardized technology, optimized core or business modularity. Banks (and providers) can use this framework to assess the current state of IT at the bank, determine their financial and business objectives (e.g., cost reduction, IT optimization, revenue growth, or differentiation), and decide on the correct approach for specific business processes or IT areas.

A key aspect of sourcing and partnering is the financial model. Some examples of the innovative pricing models that have been adopted by HCL are summarized in Fig. 1. Various partnering and engagement models, partnership with an emphasis on joint market creation and domain-led transformation of product distribution channel will become increasingly important for players serious about the European market.

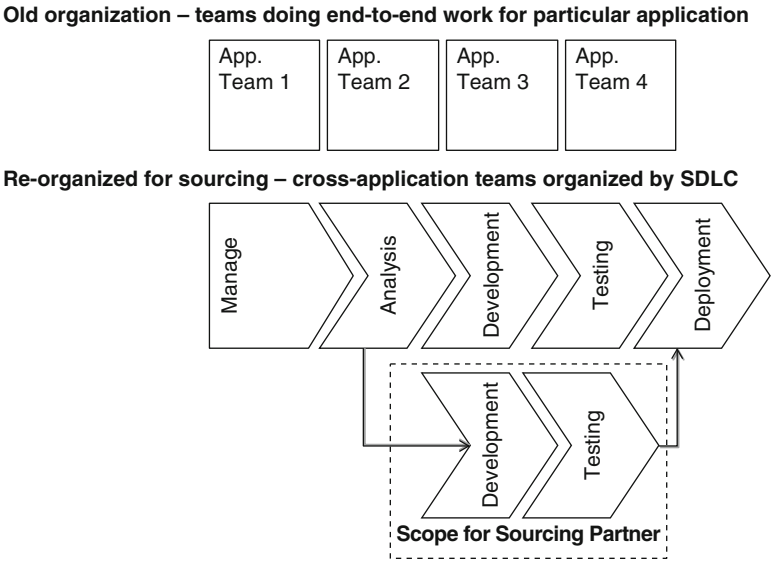

Fig. 2 Re-organizing for sourcing and partnering

5 Example: Industrializing Testing at a Top European Bank

European banking IT is highly verticalized, i.e., organized in closely knit teams doing end-to-end requirements, design, development, and testing of a business area or an application focused on the business process, e.g., payments or account opening. This means several team members have strong mix of business and technical know-how or performing end-to-end tasks of requirements gathering, analysis, design, development, and testing.

For successful industrialization, banks need to re-organize in a way that is conducive to partnering or sourcing. As an example, we illustrate how one of HCL's clients re-organized themselves for a strategic sourcing program for development, maintenance, and testing.

As shown in Fig. 2, the customer—a Fortune 50 European bank—organized itself based on the software development lifecycle (SDLC), with clear, well-documented (and translated) hand-offs before the outsourced stage, e.g., of Functional Requirements Specifications and existing Test Cases for Testing. This was followed by similar, clear-cut hand-offs back from HCL to the bank, e.g., for user acceptance testing and deployment.

For European clients, language and cultural barriers are also important, so a solid translation engine is a hygiene factor for providers working in Europe. Where required, providers should bring in local (German-speaking) teams in combination with the landed teams (onsite resources from the offshore organization) to address gaps in language/local know-how.

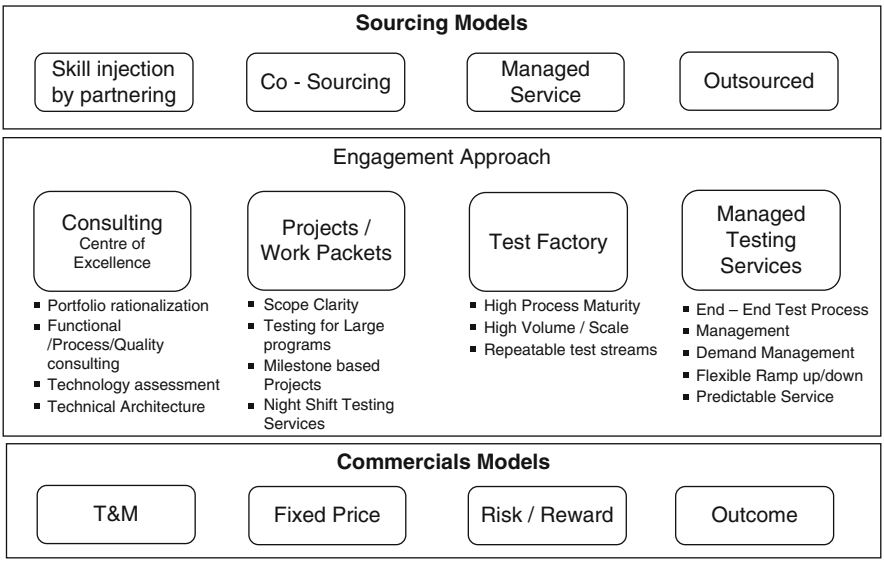

Fig. 3 Alternative sourcing and partnering models

The methodologies focus on standardization and industrialization-common tools, processes and methods, documentation and formal knowledge capture and reuse, and metrics-based approach. This requires a mindset change in the way of working, but the benefits and improvements can convince the technical teams to make these changes over time.

The partnering approach was chosen using the framework shown in Fig. 3.

By extending the testing factory across various IT divisions of the bank (similar to the Platform Strategy adopted by carmakers), and bringing in the repeatable people, tools, and processes with the relevant experience, the bank was able to start achieving cost reduction, resource flexibility and reduced time-to-market within 3 months of the factory setup. Documentation and process orientation also helped the bank reduce risk and increase internal industrialization as well.

6 Conclusion

The trigger for this paper was the current European crisis and particularly the impact on the banking sector: top European banks which are usually the leaders in their home market and have significant European if not global presence. This led to the comparison with the top carmakers, who have a strong brand and, in most cases, have grown by way of innovative product offerings. The paper touched upon industrialization, sourcing and partnering as the concepts connecting the IT industry and the automobile industry. It specifically explored the 1990s crisis faced by top German carmakers and their responses to this crisis not just with respect to

industrialization, cost reduction and efficiency, and quality improvement, but also to the fact that there needs to be an adaptation based on the specific business and technology context of the bank.

Further research can explore stages of industrialization, partnering and sourcing in European banking IT and back office, and their correlation with key bank performance parameters like cost-to-income ratio and return on equity; it can bring about an understanding how much industrialization and sourcing is "good" for a bank and if specific business areas (e.g., retail banking, investment banking) or business processes (e.g., loan approval, trading) play a role in determining the level of viable industrialization.

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Lean Management and Operations in the Global Professional Services Industry

Adam Bujak, Wailton Carvalho, and Rangaraj Sriramulu

Abstract Lean philosophy and techniques have a 50-year history being successfully implemented in many organisations. There cannot be many secrets about what Lean is and what is required to achieve it. Nevertheless, we find only few truly Lean organisations in the service industry.

The tertiary sector has often unique operational characteristics with most of the work virtually enabled within globally dispersed information technology systems. Our major focus is hence on the critical success factors for implementing Lean, required to sustain continuous improvement culture in a long run.

The below article is based on the experiences we have gathered across ten different countries on four continents. This helps us to integrate the cross-cultural and people-related aspects on top of Lean methods. The following chapters offer insights into achieving an effective and sustainable organisational change through structured implementation of Lean. The ultimate goal is to provide a practical reference guide on how to implement Lean in the service industry.

1 Introduction

Taiichi Ohno, the co-creator of the Toyota Production System (TPS), said once "People don't go to Toyota to work, they go there to think" (Hrivnak 2008). This shows the employee involvement and commitment in Toyota, driving improvements effectively and successfully on a daily basis. Every Toyota employee completes on average ten process improvements in a year—a major factor for successful Lean implementation (see Luscombe and Ross 2009). What is required in an organisation to achieve the same improvement level?

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In a business environment marked by unstable macroeconomic environment, rapidly changing customer expectations and escalating costs, process improvement has never been more important. Delivering value to the customers is becoming increasingly complex. Today's requirement is not only a rigorous focus on efficiency increase, but also elimination of the non-value-adding steps in the processes, resulting in accelerated value to the customer. What is required to develop and sustain a global Lean culture and see real bottom line benefit?

Service industry is often burdened with waste and inefficiencies. Lean tools, methods and concepts can be increasingly applied to the characterization and improvement of service sector process workflows. In the last few years our experience in IT, BPO and BFSI sector reveals that Lean can streamline the processes, facilitate problem solving, coordination, standardisation as well as root out waste from the system. What are the few key things service organisations should do to achieve massive benefits to its competitive capability through Lean?

We start with a section on Lean methodology followed by the critical success factors for implementing Lean in a service environment. The discussion is enriched by a case study and conclusions addressing the key success areas identified by us when implementing it for different organisations.

2 Lean

This section aims at providing an initial insight into Lean. After explaining its key components, we discuss the reasons behind driving its implementation.

2.1 Defining Lean

Lean can be defined as a production practice that eliminates the expenditure of resources not creating value for the customer. The term has been popularised in the 1990s to encompass a number of approaches to managing manufacturing companies. The ultimate goal is to make the organisation customer centric with the business perfectly aligned to the customer needs and the ability to run the service profitably.

Most business processes contain substantial waste, which generates costs at all levels. The seven key sources of waste include transportation, inventory, motion, waiting, over production, over processing, and defects.

The basic objective of Lean is how we can effectively deliver value for our customers. An organisation using Lean must approach this challenge by applying basic Lean principles, focusing on understanding the seven waste sources and value in its work as well as training staff who execute and manage the work to act as improvement teams bringing about the change. The common principles resulting in a perfect process driving value to the customer are as follows:

- What is customer value—anything which the end customer wants (completed right first time) and is ready to pay for.
- Develop the Value Stream Mapping to understand the value added and non-value added activities to address what customer considers as value. Removal of seven wastes in the workflow will result in a steady flow.
- Design and implement a pull system where the work depends on the customer demand.
- Continuously improve the process until a state of perfection is reached in which perfect value is created to the customer with no waste (see McCarron 2006).

2.2 Why Implement Lean?

Apart from revenue and profitability, cash is the lifeblood of every business. Health of a business is directly related to its cash flow. According to Arthur, there are two sources of cash flow:

- We get paid for our products and services by external customers. To increase the cash flow we need to sell more to our customers. To increase revenue and create differentiation we have to add value. A Lean organisation understands customer value and focuses its key processes to continuously increase the value.
- Internal sources are another source of cash due to mistakes, defects and delays making our business leak cash. When we plug these leaks, we manage to save all that money and build complete internal control of process and technology. By implementing Lean, even a small reduction in defects and delays will save costs for the organisation (see Arthur 2011, p 4).

Lean implementations help us in reducing waste and producing what the customers want, exactly when they want it—delivered it in the fastest time. This is a significant shift from the traditional thinking of keeping your resources utilised incurring more costs without considering the customer demand. We found in the services sector the employees grossly underestimating the amount of inefficiency in the system. The goal of the Lean initiative is to open up the work process and abolish the usual hierarchies. This also creates feelings of empowerment in employees and a sense of ownership to take part in Lean innovation.

3 Lean: Critical Success Factors

During our activities on almost all continents, we have identified four critical success factors allowing organisations to fully embrace the benefits of Lean (see Fig. 1). At the beginning, we will focus on leadership commitment, which

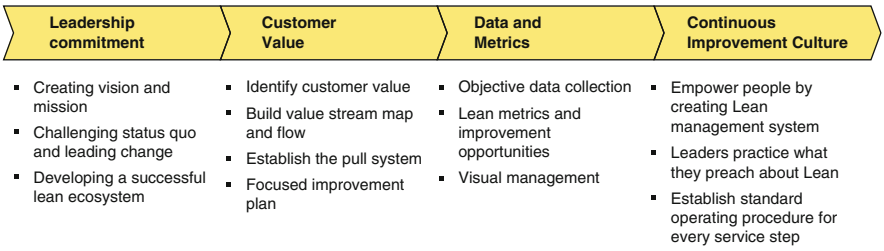

Fig. 1 Lean transformation: critical success factors

predefines the success or failure of the improvement process. Secondly, we discuss the customer value, which has to drive the ultimate direction of each business aiming at value generation. Thirdly, we stress the importance of gathering, processing and interpreting the data, being the primary factor in the Lean driven decision-making process. Finally, we outline the cultivation of the continuous improvement culture, ensuring the long-term Lean orientation and the resulting competitive advantage.

3.1 Leadership Commitment

Turning an organisation into a Lean system requires grassroots invention of how work is performed. The transformation demands leadership commitment driving sustained investment and involving every employee in the organisation.

The vision of the organisation needs to be crafted by leaders as per market demands and capabilities. Their objectives have to be explicit and few in number to enable focus. The CEO has to be the instigator, sponsor and the driver of changing strategy across the organisation towards a more customer-focused Lean approach. Senior leadership must treat it as a long-term change programme. In global companies spread across continents, the strategic vision should enable and align the organisation on a unified path and influence the relationships with suppliers and customers. When we talk about management involvement, this is the crux. Leadership team must be instrumental in challenging the status quo to explore new ideas and inspire the team to ensure continuous improvement. Leadership has to communicate on how the organisation is going to gather the customer needs, create value for its customers and proactively develop innovative products and services that deliver true value to the customers (see Byrne et al. 2007, p 7).

The goal is to stimulate an improvement process that continues to drive change, bringing real business benefit over very long periods of time. This is critically important as just teaching a few dozens of people the Lean skills and expecting them to apply it independently do not work. Leadership should aid in the development of an ecosystem, where the organisation can flourish in and ensure Lean co-exists comfortably with other frameworks and models.

3.2 Customer Value

Every Organisation needs to focus and take advantage of new business opportunities whilst ensuring they do not lose customers. Lean organisations continuously transform the key processes to enhance customer value. This will lead the organisation to be customer centric with the business perfectly aligned to deliver services profitably and result in loyal customers.

To achieve the total potential that Lean offers, we need to develop the value stream map (VSM) using customer insights obtained from different points of contact with the customer. Every step in the value creation chain ("value stream") of our service process links customer requirements in a logical, efficient manner without interruption. Any non-value added activity or waste in the value stream must be challenged on its existence in the flow, driving improvement actions to reduce or eliminate the waste resulting in more profitable and stable customer-oriented process. We can use methods like Voice of the Customer (VOC) to aid the development of VSM in organisations by capturing the customer's expectations, preferences and sufficient quantity of feedback across any type of channel.

Examples of typical activities present in many value streams that do not add value are as follows:

- Delay in receiving service orders, documents resulting overall delay in service provision
- Delay in approvals resulting in a pile up of inventory at a specific step in value chain
- Huge source of errors and variability occurs in services provision as hand-over of work happens inside and outside the organisation
- Over processing due to lack of knowledge—service work involves expertise and judgement that depend heavily on tacit knowledge of the person
- Issue of rework and transportation of documents

Before initiation of the value stream analysis it is key to fully understand the "As-Is" and "To-Be" state of the process in terms of creating value to the customers. Involving customers in this study is very valuable to reap large benefits. In most cases the value adding time (process cycle efficiency) is much less than 5 % of the total time. All the rest of the time is spent on non-value added activities. To develop a future state or "To-Be" state of the business, we need to engage senior managers in the task of truly re-thinking their business at strategic level. Standing back and looking at the complete value chain are critical.

Senior management needs to make strategic decisions to focus and prioritise Lean implementation. This will enable the workforce to meaningfully engage in the Lean improvement process. Once the key customer value streams have been developed, a focused improvement plan for elimination of waste needs to be drafted and implemented.

3.3 Data and Metrics: The Backbone of Lean

"Data is our friend" is a statement promoted by quality gurus like Deming (see King 2008, p 1). Lean and Six Sigma place a strong emphasis on data. Data in service environment can be obtained using IT systems and deploying modified data collections strategies. Objective data are needed to empower people with right information for calculating the Lean metrics and to make sound judgements. To get everyone on board with Lean transformation, we need to transform the metrics and ways of judging people performance. Targets such as OAE (Overall Asset Effectiveness), OTIF (On Time In Full), VOC and Continuous Improvement (CI) Savings can be very powerful, if they are established, monitored and individual rewards aligned with them. OAE is a replica of Lean metric OEE (Overall Equipment Effectiveness) for the service industry. Capgemini is the first organisation to implement this concept in a BPO environment. Measurement of people performance being the key asset takes place in three dimensions:

- Utilisation
- Productivity
- Service Quality

Data from time studies, tact times, staffing requirements and process yields will help in optimising value streams. Once we have identified the customer value through VSM and started our improvement journey, markers are needed to provide direction and measure progress. Lean must use targets to drive and measure improvement.

In summary, measuring data enables organisations to

- Identify the bottleneck and right root cause of a problem which needs to be eliminated in a Lean project.
- Evaluate potential process improvements and select appropriate improvement actions for implementation.
- Base lining the "As-Is" process performance and track progress over time to ultimately reach the "To-Be" state.
- Understand and communicate the success of Lean projects.
- Monitor the Deployment of Lean across the organisation (see United States Environmental Protection Agency 2009).

Lean benchmarking provides a "snapshot" of an organisation's performance compared to your competitors. The resulting gap analysis clearly highlights the future potential and the most appropriate focus for improvements to increase performance and operational productivity.

3.4 Continuous Improvement Culture

Developing a continuous improvement culture is crucial for a business to stay competitive. The Lean improvement techniques and methodologies have been available for the last 50 years, but the success depends on "soft" aspects of

organisational development, cultural leadership and people readiness for change to drive Lean improvements. To develop the culture we need effective involvement of people. Organisation culture is shaped by value, norms and assumptions shared by individuals of the organisation, which drive the behaviour of people working in the shop floor. The primary objective is to unlock the potential of each and every employee in the organisation, to systematically make waste visible and eliminate it. Employees are very interested in taking conceptual ideas and figuring out how to put them into practice.

During the initial months of Lean drive, lots of good ideas are generated and some dramatic local improvements delivered. Hence to sustain the improvement, a continuous improvement culture of "we are in it together" attitude—we work in a system, not a set of silos—needs to be developed. Leadership should invest in change agents to ensure Lean teams are working to support, rather than competing against each other. Change agents are critical to realise Lean benefits and ensure sustainability.

In a global organisation, people from multiple countries are involved in an end-to-end process. Effective communication becomes imperative—especially when the members come from diverse cultures all over the world. The aim must be to stimulate an improvement process that continues to generate improvements bringing real business benefit over very long, indeed indefinite, periods of time. Clearly defined hoshins during the start of the year will help employees to understand exactly the improvement objective.

Another fundamental requirement for embedding continuous improvement culture is to develop and establish a set of Best in Class Standard Operating Procedures (SOPs). SOPs are a key foundation for both Lean and Continuous Improvement and helps in driving "one best way" of performing a process which all performers of that process must follow. This helps in ensuring consistency of two critical factors—quality and performance leading to an effective Lean organisation. SOPs also provide the baseline or "starting point" for any CI activity. Standard SOPs thus reduce the variability in performance between individual members of staff during service delivery while relying on their flexibility, intelligence and judgement to work effectively.

Having discussed the critical success factors for Lean implementation, in the next section we will illustrate how Capgemini has gone through this Lean journey.

4 Lean in Capgemini

Lean transformation remains one of the common threads in Capgemini activities, the unifying purpose of our four disciplines and of our sectors. In 2010 strategy meeting, the organisation brought Group executives and members of the Board of the Directors together to renew the Group's attachment to its founding values and ethical principles. Capgemini objective for the years to come was declared: faster growth and improved profitability.

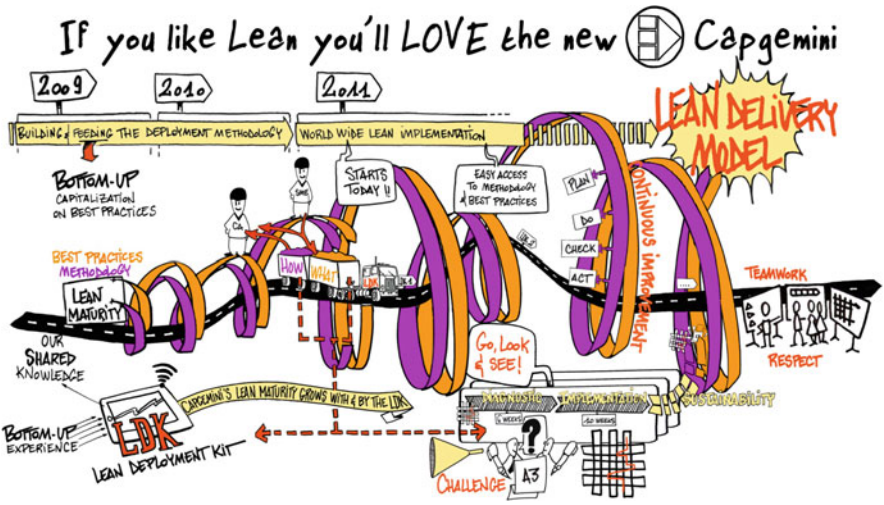

Fig. 2 Lean Delivery Model at Capgemini

Become a "Lean" company was one of the slogan encapsulated in this ambitious roadmap. Though in the past years "Lean and mean" management delivered promised improvements, the leadership wanted to make sure that Lean approach becomes engrained in team members' daily routines (see Fig. 2). It was declared that "To achieve our business goals and objectives by 2015, we align ourselves through standardized tools and incentives, capabilities, and a single 'right shore' team. All these powered by Lean."

In the past year, these standards and supporting tools together with Lean created the framework of relentless industrialisation of Capgemini. A standard Lean approach with guides, execution steps, tools and templates has been created. Senior leadership acts as Champions personally reviewing Lean projects and consistently meeting the managers leading the initiative.

Applying Lean principles in the Service industry requires an organisational change in culture with new behaviours to sustain process improvements. We launched the Idea to Improvement (i2i) initiative with the primary objective to unlock the potential of each and every employee in the organisation in identifying and implementing new ideas. Employees are taught to ask "the five whys" in everything they do to get to the root cause and identify waste in their system to finally eliminate it.

During the Lean workshop, the core team is brought together to create a value stream mapping for every process using post it notes on a wall in the war room. Assessment teams "walk the process" and every employee is encouraged to identify any form of waste big or small for elimination freeing the time for doing valuable work for the customer. We implemented visual controls to determine the status of all workflow objects within a system. Pull system and Lean metrics like tact time and OAE help us in maintaining an uninterrupted flow through the bottleneck operations. The end-to-end process map is shared with the customer team to ensure we capture real value to them.

As a global organisation, multiple people across geographies are involved in the process. Effective communication becomes imperative to ensure focus on Lean efforts—especially because we have members from diverse cultures all over the world. We developed a global online database to document and share what has been learnt as they improve their processes and various "best practices" solutions to various problems. We proudly teach employees to shamelessly copy what others have done—if not the solutions, at least the process of solving the problem. We have developed Lean community blogs where information is widely shared across the organisation. A3 tool is used to communicate crystal clear on the progress of Lean projects and also continue the Lean journey from where it was left by the previous person. The success of Lean is not only recognised internally. Capgemini has won the IQPC Best Process Improvement Award in Service and Transaction and many other international awards over the past 3 years.

5 Conclusion

The Lean section of this book was attempted to provide a simple and easy to understand guide for successful Lean implementation in a service organisation. While we have highlighted the basic requirements for Lean implementation, driving the changes to realise benefits needs a journey of change that touches every aspect of a business. A few Lean workshops or training on Lean tools like value stream mapping will not do. Lean requires re-engineering the heart and mind of an organisation to deliver on its full potential and financial returns. Specifically, we recommend that a Lean journey in service industry should follow the following principles and sequence:

- Leadership should develop an overall organisation strategy around the customer value chain and culture, which embeds Lean and sets long-term goals with clear measurable targets.
- Use Lean pilots to demonstrate the approach in different areas of the value chain, resource them adequately to ensure success and use them as catalysts for spreading Lean across the business.
- Identify and train Lean champions and change agents, equip them with resources and authority and visibly reward their success.
- Use benchmarking and external visits to successful Lean service organisations to create awareness in managers and employees as to what is possible.
- Establish Lean metrics and reward people for achieving them.

Lean is applicable for everyone and every industry, not just the manufacturing sector or the global organisations. The only question is, how well can we do it? If we can effectively apply Lean in our business, every day we eliminate waste saving significant amount of money and adding value to our customers. "Lean doesn't succeed or fail... Lean is just a set of principles. What succeeds or fails is the organization or the leaders who try." (Graban 2009).

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Transforming into a Networked Organization to Empower a Distributed Workforce

Oscar Berg and Philipp Rosenthal

Abstract Globalizing professional service firms leads to a distributed workforce. Keeping talent, expertise and experience connected is essential to stay productive and effective. The introduction of social business software seems to be the solution to this challenge for too many companies. The transformation into a really networked organization, however, has more to it than rolling out new IT tools. It is about transforming opportunistic cooperation into a collaborative work culture to create the right foundation for the adaption of new methods of information distribution and communication at the workplace. Best practice from social and commercial media cannot just be copied simply because users might know certain techniques or features, but using them at the workplace simply is something different. The right service design and change management initiatives will enable people to adapt the new approach, feel comfortable with the new opportunities and identify their individual value in it—probably the most important driver for success.

1 Introduction

All larger and a significant portion of smaller businesses have launched initiatives around Enterprise 2.0 or social business. An essential part of the transformation is the technological aspect. Employees have to be equipped with the right tools to enable them to be part of a networked and agile organization (see Chui et al. 2009; Bughin et al. 2011). However, the IT department is no longer the sole advocate of this transformation. C-level executives have taken the driving seat and improving access to intellectual capital and making the workplace more attractive for future talent is now on their agenda. They recognize that social technologies can accelerate the transformation of their business and that

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such a transformation needs to start with an organizational intent and a clear vision of the future workplace. In particular globally acting or expanding corporations start recognizing the potential the concept of a networked organization has.

It is a very attractive proposition to empower employees with the power of social networking and commercial internet services. The needs of the organization and the expectations and requirements of future employees are significant influencers.

Even though this development signals an end to IT being seen as a business burden and more of vital part of information work, the business-driven deployment of various tools has led to the development of two scenarios. Both of these threaten to severely hinder the ability of organizations to adopt the concept of social business.

1.1 Enterprise 2.0/Social Business

There are various perspectives on the concepts of Enterprise 2.0 (e.g. see McAfee 2009) and social business. Our very pragmatic point of view is based on two core characteristics that define a company that is transforming itself by embracing social principles and technologies:

- Business value is generated through networks where the key characteristics of the organizational framework are formality and hierarchy. Managers and leaders have evolved into coaches and guides for their subordinates and success is defined by collaborative achievements. A "we help each other" culture is established and mistakes are an essential (and accepted) component of successful and sustainable operations.
- The digital workplace has adapted successful patterns from social and commercial media in order to equip employees with the ability to overcome geographical and functional borders. It has been created as a service for all employees and bridges established and new ways of communication, collaboration and networking. Information is managed by relevance and considered to be a living DNA that contributes to the efficiency as well as the effectiveness of daily operations.

1.2 The Scattered Landscape of Social Tools

"Communications needs a blog.", "We need a wiki.", "We need a Yammer account." Among the many requests the IT department has heard recently, these are some of the most common. Social tools have been introduced by a lot of companies, depending on the technological knowledge of the requesting person

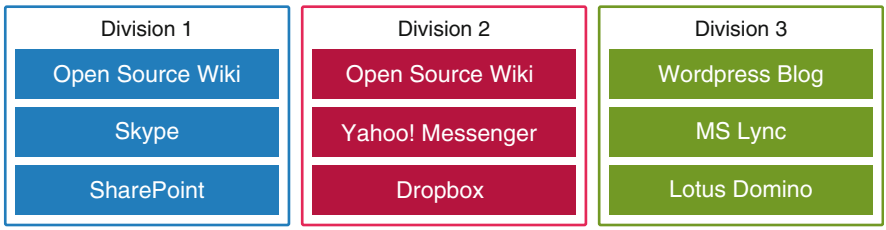

Fig. 1 Division-based social infrastructure (see Berg and Rosenthal 2011) © 2011 Tieto Corporation, reprinted by permission

or their level of autonomy (that is, their budgetary and organizational power). Since the enterprise architecture, business cases, requirement analysis, tool evaluation and deployment have not been properly planned, the social tool landscape of a lot of companies looks something like in Fig. 1.

Parts of the business will have been enabled to operate in a more connected and collaborative way. However, when it comes to cross-functional or inter-unit collaboration, there will be significant challenges because it will be difficult to find a common denominator beyond the "old" tools of email and face-to-face meetings. This is a paradox since the real benefits of implementing social technologies within an enterprise are expected to come from breaking down organizational silos and increasing transparency, openness and participation across the workforce to improve collaboration, innovation and responsiveness. From a cost and maintenance perspective, the scenarios illustrated above are probably the worst that can happen to IT departments, but the implications are even more severe when it comes to getting sustainable business value from the investments being made.

1.3 The Social Business Silo

The second scenario has more resonance for corporations that want to explore the potential of social tools on a broader scale. Unfortunately, in most cases it is a very tool-focused approach. A generic platform—mimicking established social internet services—is put in place with the expectations that employees will adapt the new channel to network and create value (if the second is even a named goal) (Fig. 2).

The major challenge here is the social component of the communication and collaboration infrastructure, which is wholly disconnected from IT operations and therefore also from business operations. The best illustration of this separation is the enterprise search function, which most likely will not govern social platform content and files. So highly valuable content and well-tagged information (which are two of the major benefits of social information management) are not part of the search results. Furthermore, employees have to make an additional effort if they want to be part of the new social community. They sometimes have to (re)create

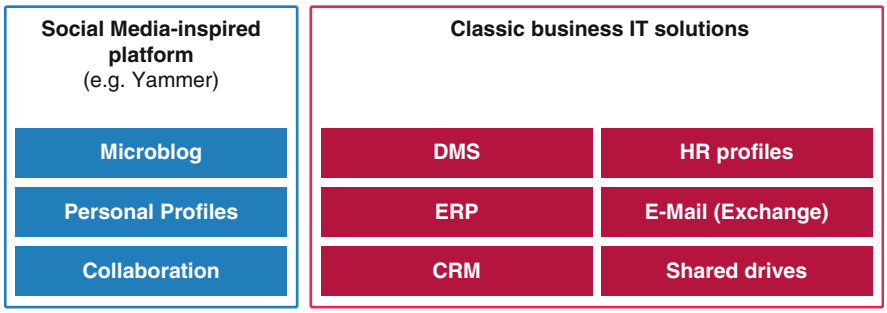

Fig. 2 Social silo (see Berg and Rosenthal 2011) © 2011 Tieto Corporation, reprinted by permission

content in the social platform as there is no integration with the actual business operations such as project work.

1.4 Socializing Business Operations

In our experience, the social silo is the most common scenario in mid-sized and large organizations. The next challenge will be to merge the two silos, to apply the learning from the experimental phase and to identify the parts of the organization where a more socially inspired digital workplace could add additional value as it becomes seamlessly integrated into business operations.

In the process of introducing the new opportunities inspired by social and commercial services on the Internet and adapted to the context of an enterprise, a company has to do two things:

- Prioritize where to start and where the improvements will deliver the quickest impact to actual business operations.
- Identify the right change management approach to ensure that individuals in the organization are able to adapt their behaviours and practices regardless of their technological knowledge or familiarity with social media.

2 Reason-Why: The Value of Being a Connected Organization

When executives and managers are forced methodologically to prioritize the three categories illustrated below, operational excellence is—in 95 % of the cases—their number one priority, corporate DNA their second and people their third (Fig. 3).

The reason is quite obvious: performance models and career paths are strongly connected to it. Getting things done efficiently is what organizations so far have built their business upon. Re-using existing intellectual assets and enabling people

Fig. 3 Three layers of value creation for social business (see Berg and Rosenthal 2011) © 2011 Tieto Corporation, reprinted by permission

to perform to their full potential is recognized as the required next step in the evolution of information and knowledge work productivity. However, few organizations have managed to take this step. Social business can be the key to unlocking this next level if it is understood as an integrative and connecting element of all three layers, which are described in the following sections.

2.1 Increasing Operational Excellence

Efficiency. Using the minimum resources possible to achieve goals is basic economics. Students are taught that principle in semester one of any degree that has anything remotely to do with economy. Social business can help to increase efficiency by addressing a simple principle that has found its way into the latest leadership and management literature: it is less about what you know and more about knowing where to look and who to ask.

The digitalization of businesses has laid the cornerstone for building powerful networks and utilizing the power of those networks. All that has to be done now is to join up the dots (or rather, to enable them to connect by themselves) and make sure that the concepts of collaborative intelligence and crowdsourcing find their way into the organization. Now is the time finally to unleash the power of operational networks that solve problems and act upon opportunities in a fraction of the usual time. This can now be achieved with significantly fewer resources and by activating underused resources such as expertise hidden in distant corners of the enterprise. Connecting the right people with each other and connecting everyone with the right information at the right time essentially is what social business is about. It allows

large enterprises to operate with similar agility, responsiveness and ability to innovate as a small start-up business.

2.2 Building and Activating the Corporate DNA

Effectiveness. Re-using as much existing information as possible and learning from past successes and failures to increase efficiency is the basic approach. Over the past few decades organizations have tried to tackle this field with initiatives such as knowledge management, expertise databases and formal training. Unfortunately, capturing, labelling, organizing and storing information as digital content has not contributed as much as expected to the agility and responsiveness of organizations.

The major shortcoming of many previous knowledge management initiatives (as well as all sorts of data mining and competence management) is that they have relied on employees being willing to make the extra effort to record their knowledge so it could be stored in a database and owned by the organization, without getting so much as a pat on the shoulder in return. It also required them to be proactive in their search for existing knowledge and to know exactly what to look for to have the slightest chance of finding it. It is even worse if the person who has to solve a problem does not know that at least 40 % of the solution already exists somewhere in the system.

Social principles and technologies can be used to activate and feed knowledge, tacit as well as documented, into business operations. Social metadata generated from our interactions with a certain piece of information can be used automatically to flag up related data that may be useful in a social project workspace, for example similar to the product recommendations on Amazon.com.

Social technologies will furthermore help to build the corporate DNA in a way that can more easily be connected to operational challenges. Storing information in a structured way is no longer simply a case of making folders and having standard file names. It is now based on contextual tags (author, workspace, project, client, date, type) and the information users add to it when sharing, consuming, discussing and rating information. The fact that there is only a tiny fraction of untagged pictures on flickr.com and literally no untagged pictures on Facebook shows that people actually tag information—as long as doing so gives them a certain value. Even files are shared with additional information, or at least a reason why someone is bothering their social or professional network with this particular piece of information.

2.3 Retaining, Winning and Connecting Talent

People are our best assets. This phrase is probably used by all corporations that rely on employee performance. So far the introduction of social business platforms has

been targeted at this level of optimization—even though ranks bottom in priority among operational managers. That is why social platforms have not yet contributed significant value to the corporate value chain. It is not that it has not contributed any value at all, but that the real boost in business value has yet to be seen.

What has been achieved so far is the knowledge that there is something in "social" that can be used to unleash peoples' potential. Making it happen has not been easy. Personal profiles are a good example of this. In contrast to the polished, rich and up-to-date profiles on professional networking sites, the personal profiles on many digital work systems are simply a collection of silent, static entries containing insufficient information—if they have been completed at all. So, why is that?

The answer is quite simple: there is no real value to the personal profiles, unlike the ones on professional networking sites which are used by head hunters. It is actually even worse, because networking and joining forces beyond functional or geographical borders is not part of employees' job descriptions. Get your job done. Focus on achieving your personal objectives upon which you are measured and evaluated. Use the tools you have to hand and do not bother others with your work. And if you have to, ask clear questions that can be easily answered without interrupting colleagues who also work for themselves rather than for the shared purpose of the enterprise.

People would be more motivated to set up and maintain personal profiles if they could be translated into job/career opportunities, recognition for contributions made to the success enterprise, the possibility of meeting new and interesting people that are suggested based on personal information, or quicker onboarding into a new organization or team. But as long as they have no real value, personal profiles within organizations will not be able to compete with their internet counterparts in terms of the quality of the information.

Being able to win new talent for an organization might be connected to this sooner than later. New employees—if they are talented and willing to contribute beyond the average—are not only after the money any more. More and more people are primarily interested in pursuing their passions, making new connections, enhancing their networks and joining forces with others to solve problems quickly and expertly. For that they simply expect a decent pay packet. Satisfaction and motivation at work comes from being able to realize your own potential by teaming up with other people who share the same passion. If a company can offer neither the culture nor the service infrastructure to achieve this, talented individuals are most likely to find another place to spend their valuable time.

3 Generations at the Digital Workplace

Too many social business initiatives are motivated by the expectations that digital natives might have of the digital workplace (see brand eins 2010). We believe that the first generation of digital natives will—possibly begrudgingly—to some extent

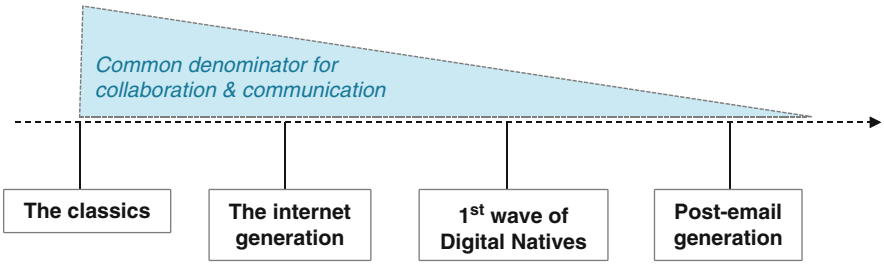

Fig. 4 Common denominator of generations (see Berg and Rosenthal 2011) © 2011 Tieto Corporation, reprinted by permission

accept today's working environment and IT landscape. They are still used to using email and services that are accessible through multiple interfaces.

The post-email generation (or second generation of digital natives) will be the real challenge. They will have never learned to use communication and collaboration tools as we have, because for them the digital landscape will have evolved into an integrated service that seamlessly integrates with their online and offline lives. They will be the first generation which is more comfortable reading information on screens than on paper, and which rarely communicates via email (Fig. 4).

Designing future and social media-inspired workspaces for the post-email generation is not the solution, either. The major challenge will be to close the gap between the existing talent in an organization and the future workforce.

Change management initiatives and the roadmap towards a social media-inspired workspace have to take this into account and ensure that the gap is as small as possible.

4 Motivating Behaviour vs. Mimicking Platforms

Facebook has over 900+ million users already (see Facebook 2012). However, a more important fact is its ability to keep users on its service for up to seven hours at a time (see Nielsenwire 2010). Without proprietary (and very attractive) content, that is an impressive statistic. Furthermore, it illustrates what social business is about: motivating intrinsic behaviour in employees and encouraging social media behaviour in the workplace.

Looking at the quadrant of Fig. 5, it is probably the blueprint behaviour of an extremely effective and heavily networked information worker. If workplace tools are considered to be—and managed—as services, which are geared towards their users' needs and preferences as well as being designed to be intuitive to use, corporations will be able to unleash a potential that has so far been hidden within hierarchical and formal structures.

Fig. 5 Social media behaviour (see Berg and Rosenthal 2011) © 2011 Tieto Corporation, reprinted by permission

Seeking inspiration from commercial and social internet services is definitely recommended in this context. For example:

- Understanding the mechanics of the broadcasting channel Twitter and how easy it is to follow people (@name) or hash tags (#subject) can be key to revolutionizing internal information and knowledge distribution. It is never been easier to stay on top of certain subjects with minimal effort.
- The easy rights and role management that Google has designed for its social service, Google+, can be the solution to one of the major points of pain in large organizations. Even in a social business, it is not feasible for everyone to have access to everything. Therefore, it is necessary to manage access rights in dynamic environments and with less technology-savvy users simply and intuitively.

5 Perspectives on Transformation

When initiating their transformation into a social business (see also Pricewaterhouse Coopers 2011), companies have to take into account three major influences on its eventual success:

- Understanding and addressing organizational obstacles
- Ensuring and nurturing a cultural transformation
- Making "social" part of the actual business operations

5.1 Organizational

Previously we briefly described the levels at which a social business approach can add value and deliver a real ROI, even in a couple of measurable KPIs. As long as people are driven and measured by goals that are tied solely to business operations, the other two layers will be considered simply as additional effort/work. Social business services have to create the glue between the layers.

There is no reason why the construction and maintenance of the corporate DNA should not be a direct result of business operations, almost as an automatically created by-product. Respective support services have to be designed so they are not

huge hurdles for people such as project managers to overcome. Looking at it the other way around, it is even more obvious: accessing the corporate DNA to add effectiveness to the operations should not require any additional effort at all. The support services of a modern digital workspace should remove that burden from employees.

The same principle applies to the people layer. Personal profiles should evolve and become richer automatically based on the contributions and results a person delivers over time and the people and content with which they interact. From time to time some proactive tuning might be needed. From generated content and documentation as well as delivered solutions, profiles can be generated that allow:

- Others to identify the required experts or to get a picture of another colleague by simply looking at the personal profile online.
- The system to link them to relevant and useful information by simply using the profile as a search query and matching it back to the respective information and source.

Another factor that has to be addressed in this context is the impact of social business on operations management. Strict formality and a rigid hierarchy do not go well with a networked organization. Even though there will always be the need for a formal structure that gives guidance and keeps things grounded, managers will have to know at which point they have to switch to a new role.

We suggest training managers to reposition themselves as coaches or trainers. It is important to let go and increase your employee's autonomy. Today's managers will be tomorrow's guides to corporate networks. Facilitating new connections and directing people to the right node can be significantly more valuable than managing them as resources and supervising how they do their job.

Changing the definition of management roles will not only nurture a collaborative culture, it will also help the managers affected deal with their fear of loss of power. This concern should not be underestimated, particularly in organizations with a long history and a well-established set of rules about how they do things.

Of course, we are well aware that this future concept of work and management cannot be fully applied to all organizations. In particular, this is when a company has certain functions such as contact centres that are established and measured in a solely task-orientated way. However, even in companies that deal mainly in task and transaction-oriented work there will be a chance to establish a collaborative culture and take advantage of the current revolution in business IT. For example, a support desk contact centre could establish a best practice community for solving recurring issues significantly faster.

5.2 Cultural

At the core of the transformation into a social business is the evolution from cooperation to collaboration. In a nutshell, this means that employees start

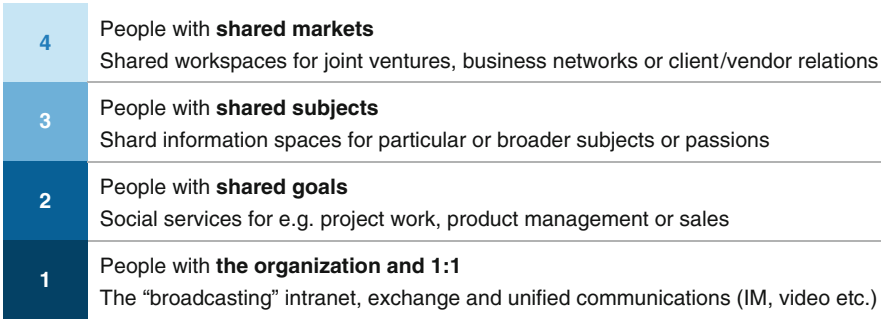

Fig. 6 Four stages of people relationships (see Berg and Rosenthal 2011) © 2011 Tieto Corporation, reprinted by permission

co-creating new value and assets for the company instead of solely contributing input and/or advice in the creation process. A networked organization lives off the nodes that continuously develop and change depending on context, requirements and situation. It is a highly agile environment. This new level of agility automatically leads to the next layer of Enterprise 2.0: a help culture that actively seeks to educate and improve the use of informal learning methods. Therefore, it is acceptable not to know everything as long as you are willing and able to reach out to others that can compensate. A side effect of this will be an organization that is continuously learning, because each individual will be regularly confronted with new and relevant inspiration or knowledge. Mistakes are an important part of this help culture. Some projects and initiatives have to fail in order to support the learning process—assuming that this failure happens once and is learned from. As the American statesman and inventor Benjamin Franklin once said: "I didn't fail the test, I just found 100 ways to do it wrong."

5.3 Operational

A question we are often asked is how organizations should approach the transformation into a social business. From our own experience, we have decided to stick to the "social" element of the Enterprise 2.0 concept and concentrate on people relationships as shown in Fig. 6.

Our basic belief is that the closer social business services are to how people actually work, the more likely they are to adopt them. As long as they are perceived as a better alternative to the old ways of doing things, people will learn and use them and thereby influence their peers and increase adoption throughout the organization. Moving from broadcasting and intranets (1) to an increase in productivity (2), nurturing informal networks of expertise or passion (3) to actually connecting networks beyond corporate borders (4) is our view of the basic roadmap outline.

Our experience of Enterprise 2.0 roadmaps will have some influence on this principle to a certain extent, even if they were initially geared to solve operational challenges.

One word of advice: there will always be early adopters—which is good—and there will always be those who simply cannot be convinced to adopt new practices, something which will never change. Setting your organization's adoption rate target at 100 % will lead to failure. Do not forget, there are still some people out there without computers or who have an assistant to read and reply to their emails.

6 Conclusion

A revolution in business IT is one cornerstone of the transformation into a networked organization. Without addressing the (work) cultural, managerial and leadership challenges that come with that transformation the results will be marginal and far from sustainable. Social business comes from social—where the human should be in the centre of all thinking.

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Legal Framework of IT Outsourcing and Global Sourcing: A Comparative Approach from the Indian, Anglo/American and German Legal Perspective

Ulrich Bäumer and Prashant Mara

Abstract At the latest since the dawn and rise of globalisation, IT outsourcing and global sourcing are part of every company's business plan and, in fact, business reality. In many ways globalisation and IT outsourcing/global sourcing are inextricably intertwined and one cannot say with certainty which trend followed which. Businesses today have been able to take advantage of technology in order to use models such as offshoring in order to reduce their costs without a corresponding decline in quality. However, concerns such as data confidentiality and security issues have emphasised the need for businesses to take considerable care when dealing with cross-border transactions. As outsourcing (offshoring) always involves companies from two jurisdictions, some knowledge of different legal regimes is required. This article examines the outsourcing model in the context of the information technology industry and looks at the most important clauses and legal issues in such contracts in the light of Indian law, Anglo-American law and German law.

1 Introduction

1.1 Basic Summary of Offshoring and Global Sourcing

Businesses are constantly being driven to reduce costs and enhance productivity in order to increase shareholder value. Many business models have been adopted to achieve these goals, and for many years outsourcing has been seen as one of the proven solutions. Businesses have also been taking advantage of global sourcing

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opportunities, and nowadays going offshore is hardly novel. For truly global players it is almost the norm. Venturing offshore can offer the opportunity of cost arbitrage by using equally qualified, but cheaper, employees and lower-cost resources and services from offshore locations. Originally a trend led by manufacturing, offshoring is now also a concept readily deployed for providing services via call centres and back-office service centres.

However, offshoring is not necessarily the same as outsourcing, as any of a wide range of business models may be adopted. One option is to set up and manage the business's own offshore operations as a 'captive' organisation. Companies such as SAP, Hewlett-Packard, Accenture, Siemens and Microsoft are following this model. Another model is third-party outsourcing, in which the customer utilises the services of an external service provider. Yet another option used frequently in India is the BOT (Build-Operate-Transfer) model, a hybrid model in which the customer initially uses an external service provider but reserves the right to operate the service later on (e.g. a joint venture with a call option).

Sourcing offshore is not without its risks and disadvantages. For an offshoring project to be successful, it is important for a business to understand its reasons for offshoring as well as why it has selected and how it can manage a certain offshoring model. Offshoring is about more than just saving costs. Issues such as control, core competency, provider capability and reputation are also highly relevant.

As with any business solution, there are always advantages and disadvantages to the eventual model that is adopted by the business user. The following table sets out some of the pros and cons in the context of the three typical offshoring models: third party, captive and hybrid.

Model	Third Party	Captive	Hybrid
Concept	Subcontracting work to a third party to provide services or products	Establishing and running an offshore operation to carry out business functions	Any combination of onshore, offshore, captive or third-party operations
Pros	– Time to solution can be shorter than other models – Customer can rely on contractual rights to ensure satisfactory performance – Service flexibility – Access to expertise – Value for money	– Customer has direct control – Can reduce costs by avoiding third-party profit margins and ongoing savings – IPR vests within the group and can easily be monitored and controlled – Captive's employees can be part of the customer's corporate culture	– Each function can be sourced to the operation best suited to perform it – Better risk management through diversification – Flexibility to transfer functions between operations when needed
Cons	– Loss of control – Harder to incentivise provider's personnel – Potential IPR issues, e.g. contamination and security	– Time to solution often slower than third-party model – Higher setup costs – Potential difficulties with bureaucracy	– Requires increased resources to manage each relationship and delineate responsibilities – Can be more costly

(continued)

Model	Third Party	Captive	Hybrid
	– Business risk because function taken outside the corporate boundary – Enforcement issues where provider is offshore	– Direct exposure to local risks – Customer responsible for ongoing compliance with local laws and regulation	
Use	– Growing trend towards partnership models such as Build-Operate-Transfer and Build-Operate-Manage	– A joint venture can be established to exploit shared resources and experience (compulsory in some countries and circumstances) – Increasingly popular with multinational corporations	– Certain services can be provided globally from a single location on an Application Service Provider basis

1.2 Sourcing Models and Analysis of the Utilisation of the Various Models

The usage of the various service delivery models outlined above varies around the globe, as does the degree to which outsourcing and offshoring has been adopted successfully. India has dominated the world market as the supplier to the global outsourcing market since the trend to seek offshore services first emerged in the late 1990s. This is principally thanks to the size of its skilled English-speaking workforce, low-cost bases and understanding of the need for flexibility and culture of learning.

India's pre-eminence may now be working against it, however, as cost inflation fuels growing competition from China, Eastern Europe and South America (particularly Brazil), amongst others. China has already established itself as the number two outsourcing destination and, with its phenomenal economic growth, massive workforce, and strong government backing, there is a good chance that it will overtake India in coming years. The outsourcing industries of Eastern Europe and South America are still in the early stages of development but look set to benefit from their proximity to Western Europe and the USA, respectively.

1.3 The India Perspective

There has been a resurgence of interest in the Indian IT sector in the recent past, along with an increased focus on the movement of work to India. In the late 1990s, many US and British companies turned to Indian IT professionals for help in dealing with the threat of the Y2K bug. It was at this time that Indian IT professionals

became a sought-after resource, and many Indian IT professionals shifted to the USA and UK as a result. However, the subsequent bursting of the dotcom bubble forced many Indian IT professionals to head back to India, and IT companies in the USA also started looking at means to cut costs without having to compromise on the quality of the services they offered. Many looked at India as a viable option, since they found an abundance of IT professionals who had worked in the USA and were acquainted with the American work ethic and culture. The movement of work to India thus began for a number of reasons, including the following:

- Language. English became an official language in India as a result of the country having been a British colony until 1947. There is thus no dearth of talented and educated people who are highly fluent in English. This attracted most nations to India for outsourcing, putting India ahead of China in tapping the IT outsourcing market.
- Culture. Another advantage is the perceived adaptability of Indian workers. Their fluency in English also enables them to meet international requirements when delivering to international clients.
- Market domination. Global companies have realised that outsourcing to India can offer numerous potential benefits focused on the economic, strategic and IT expertise of the Indian vendors. IT revenues in the Indian market by the foreign companies have been growing at quite a rapid pace.

1.4 The Anglo-American Perspective

Outsourcing has been a popular business solution for many years. The industry has evolved from the early bureau service models to a diverse and rapidly growing market sector. The outsourcing market has become a mature market supported by specialist providers (from all over the world), consultants, lawyers and other specialists.

Today, UK and US business uses all the models of outsourcing detailed above. However, no single model is likely to gain supremacy over the others in the near future. It is believed that each company will assess its available global resource and skills pool and choose a combination of in-house teams and outsourced services in order to reach its desired business and technical goals. The UK seems to be following the USA in this trend towards smaller multi-sourcing deals. As Phil Morris, Morgan Chambers' CEO, put it: "The [U.K.] outsourcing market has matured and clients are becoming smarter in the way they contract. Businesses are beginning to drop the 'offshore' or 'nearshore' labels, moving instead to 'global sourcing', with no geographical boundaries. This opens up the market to a new wave of providers and contracting models."

With English as the international business language of choice, the UK and USA have found it very easy to leverage world resources and various low-cost countries as the outsourcing offshoring market has matured. The British and American population and workforce are far less advanced in other languages than their

European counterparts. This makes it an easy market to serve, but a difficult supply hub for international service provision. India has been a particular and dominant beneficiary, having been a British colony and thus sharing colonial, linguistic and legal ties with the United Kingdom. China's current shortage of sufficient English-speaking workers is one of the major challenges in the growth of international service provision in China (though this is rapidly changing).

Despite the trend for UK and US businesses to outsource offshore, the culture in the UK and USA still has a lot to offer. The English and US workforce has extensive exposure to global sourcing compared to continental Europe and its ability to combine knowledge of IT domains with the realities and imperatives of real-world business challenges is a real advantage. For this and other reasons, Britain and the USA have freely adopted the outsourcing model across many industries (and in recent years, the public sector outsourcing market's growth has been particularly strong). In a now mature market, it can certainly be said that there is a British and American outsourcing culture. The savings, efficiencies and business successes to be gained from outsourcing and offshoring frequently speak volumes to those tasked with the sourcing decision, and the change and effort required is usually justified at the Board level, though there is sometimes debate further down the line about whether all the benefits promised by a discrete project are ever fully realised.

1.5 Perspective from Germany

In Germany, the outsourcing models described above are all used in practice. The German market is a difficult one to crack for outsourcing service providers. This is due to many reasons, especially the following:

- Language. Although English is the international business language of choice, and global companies like Siemens have already adopted English as their first language, many German companies still prefer to operate in German. Service providers have to cater to this and prepare all documents, contracts and services in German. Also, some outsourcing services, such as BPOs and BTOs, require consulting services, which must be provided in German. Therefore, it is easier for international service providers in India to cater to American or British customers.
- Market domination. The German market for outsourcing services has historically been dominated by the four top providers, T-Systems, IBM, Siemens Business Services and EDS, although the recent spate of captive takeovers offers a threat to that dominance. It is a challenge for Asian service providers to break this market dominance and the 'old boys' network' of the established market players, and this is a contributing factor to the lead that nations such as the UK and USA have over Germany. Nevertheless, the market is likely to grow dramatically in coming years, and the value of outsourcing in Germany has exceeded 60 billion Euros in 2010 already.

2 A Closer Look at the Outsourcing Model

As discussed above outsourcing can offer real benefits, but the impact and potential consequences for the business undertaking outsourcing must be properly evaluated. Among the advantages of outsourcing are cost savings (through factors such as economies of scale and reduced overseas costs and overheads); access to cutting-edge technology, processes and skills; the ability to focus internally on core competencies and objectives, access to flexible, adaptable and scalable solutions; more efficient management of workloads; and decreased product development cycle/speed to solution. However, there are also the risks of loss of control (including loss of quality control), adverse public opinion (especially where there is a loss of domestic jobs or a negative impact on the local economy), scope creep leading to cost increases, problems with security/confidentiality, retransition issues and cultural and communication difficulties.

One way to understand outsourcing is to think of it in terms of a cycle going through four initial stages preceding operation (and subsequently retransition): self-assessment, choosing a provider, negotiation and implementation.

2.1 Self-Assessment

Before a company embarks on any outsourcing project, it needs to make a full and frank assessment of its current business and any anticipated impact on the way the sourcing is structured. This will typically involve a statement of requirements or service/solution specifications based on its own internal due diligence and the knowledge it has of its existing solution, often using the assistance of specialist advisers. In the case of second-generation outsourcing this can be a harder task, and a well-advised user will build in certain contractual rights to elucidate the information and any support that it may require in these circumstances from the incumbent supplier.

This self-assessment should include technical, commercial and legal analyses. For example, questions would have to be raised as to the severability of the processes, whether the processes require proximity, whether they can be standardised, whether they are of sufficient scale, and whether there are any legal or regulatory impediments. Aside from this, questions will also be raised as to what the management and shareholders would want from the strategic sourcing programme, what the impact on existing personnel would be, whether the union (if one exists) should be consulted, and also as to what the market's perception of these changes would be.

This statement of requirements is then often used to approach potential suppliers to market-test and sometimes to commence a selective procurement process. Such a selective process is frequently driven by an all-encompassing invitation to tender (ITT) which outlines the potential outsourcing in hand and invites prospective suppliers to bid for the project at the same time as providing further information

about their specific recommended solution. It is essential to communicate the rationale for the sourcing and then identify the objectives and instil them in the project team. It is often prudent for a customer embarking on offshoring for the first time to first outsource a small-scale non-critical project before exporting any business critical operation. Providers offering the most attractive solutions may be short-listed by the user, and a specific solution and provider then chosen. At times, a 'preferred supplier' and reserve may be selected and a competitive negotiation created by the user allowing him to extract maximum gain from each of the providers in a competitive situation. However, such a process is time-consuming, only justified in some situations, and can be a significant cost of bid for the suppliers in question (costs which can eventually be passed on to the unwitting user).

In other circumstances, the user may simply select a certain provider without recourse to an ITT or competitive tender. Selection can be made based on alternative reasoning or because the provider (or a third-party consulting provider) has consulted with that user and recommended or sold in certain services. In certain public sectors or in the case of specifically regulated industries such as water supply, the project may be subject to the national public procurement rules applicable to that business depending on the nature and value of the project in hand. This can significantly affect the way potential providers are sought as well as the timing and manner in which a potential contract with a provider is offered.

The impact of offshoring on external sources should not be underestimated. There are many current examples of businesses trying to distinguish themselves in the marketplace by emphasising the fact they do not offshore. It is increasingly common for 'thou shalt not offshore' clauses to be negotiated into agreements with the chosen provider. In trying to reach into the service delivery methods of their contractors and prohibit them from utilising offshore services in the delivery or subcontracting of services, the customer can frustrate real savings. While one might consider this approach prudent, a blanket dismissal of the opportunity is perhaps a little naïve.

2.2 Choosing a Provider

A customer can maximise its options and benefit from competition among providers in tendering for its work. The ITT should clearly specify the customer's requirements in order to increase its prospects of attracting suitable providers and accurate proposals. It is also important to examine the size and capability of the provider, whether the provider uses its own employees or subcontractors, what processes and operational procedures are deployed to protect confidentiality and intellectual property rights, and what other customers the provider is supplying (in case of a conflict of interest).

If a decision has been made to go offshore, the location of the offshoring service also needs to be considered. Naturally, there are many factors to consider: time zones, languages, product localisation needs and synergies with existing or

potential markets or users all need to be considered when making a decision on location. This may be compounded if multiple locations are to be used. The choice of country ought to be influenced by factors such as the expected role of the country in the global economy in the long-term, the talent pool and experience available (including language ability), the legal controls and export controls applicable, the scalability of operations and potential speed to operations, the availability of governmental incentives (such as the software technology parks in India), the country's infrastructure and potential risks; and the overall effect on cost (including domestic management costs).

2.3 Negotiation

An outsourcing contract should be a 'living' document that can evolve and be actively managed by the parties, helping to sustain and build the relationship by providing practical solutions to identify and resolve issues at an early stage. The contract should incorporate a clear definition of each party's responsibilities, along with service level agreements, as well as contract management procedure with co-operation, monitoring and reporting procedures, and procedures to identify and deal with changes to the agreement. It should also incorporate an escalation and business continuity procedure, and a clear retransition/exit strategy.

2.4 Implementation

This stage of the life cycle—when the project goes live—is the one that most commonly causes problems. Success often depends on good preparation, and it is therefore important to have a well-developed implementation plan that includes project managers with clearly defined roles and responsibilities, a defined and clear timetable, a milestone process, and acceptance testing procedures for deliverables.

2.5 Summary and Recommendations

Outsourcing, and especially offshore outsourcing, has its advantages and disadvantages. The risks are inherent and obvious when one considers that every project involves many parties from all corners of the world, working in various languages and time zones. However, the advantages can far outweigh the risks if the project has been prepared thoroughly, and if the customer outsources certain business operations to the right service provider for the right reasons.

One particularly important aspect is the organisational and legal framework of such IT projects. Typically, outsourcing and offshoring projects are long-term commitments for the customer, and the service provider and the duties and rights of the partners need to be defined. Therefore, the outsourcing contract (framework or master services contact and statement of works) needs to address all relevant aspects of the project. The contract also needs to include exit scenarios and exit clauses that assist the parties from the beginning with the retransition of the application. The application must then be backsourced to the customer or transferred to another service provider, and the parties must know their rights and duties during that phase of the contractual relationship as well.

Therefore, it is imperative for both parties to think about and negotiate a contractual framework for the outsourcing project that takes into consideration all material aspects of such a long-term business relationship. This article goes on to describe important legal clauses under Indian, British and German law in a comparative analysis. Please take note that the following list is not exhaustive, and that there are many more legal and commercial issues (such as tax, human resources and real property) that need to be addressed in a framework agreement.

3 Comparative Legal Analysis (Overview)

Every offshoring project by definition deals with partners from different jurisdictions, and needs a solid contractual framework, especially since such projects are often intended for longer periods of time. A comparison of the legal systems in India, the UK/USA and Germany with respect to IT outsourcing, as well as the contractual frameworks available in each jurisdiction, would thus be helpful at this juncture.

3.1 Overview of the Different Legal Systems with Respect to IT Outsourcing

3.1.1 The Indian Perspective

India has a detailed and well-defined legal system in place. The Indian legal system is based on English common law, and is thus governed by statutes, rules and case law. The Indian judicial system has a unified structure, with the Supreme Court, the High Courts and the lower Courts constituting a single judiciary, the independence of which is guaranteed by the Indian Constitution. Generally, the contract is considered supreme among its parties.

3.1.2 The Anglo-American Perspective (UK and US Law)

Under Anglo-American law, there are no laws specific to outsourcing and, save for any contractual restrictions, in general, businesses have complete freedom to outsource on whatever terms they wish. Every outsourcing arrangement will involve a wide spectrum of contractual issues, some of which are discussed in more detail below. In addition to these, the parties to an outsourcing agreement governed by Anglo-American (UK) law must consider the implication of legislations such as the Data Protection Act, 1998 (DPA) and the Transfer of Undertaking (Protection of Employment) Regulations, 2006 (TUPE). The DPA protects the rights of individuals in relation to the use of their personal data. A customer that outsources the processing of personal data remains responsible for any breaches of the DPA by the provider. TUPE protects the rights of the employees of a business being transferred. Where TUPE applies in an outsourcing situation, any of the customer's employees who are engaged in the function being outsourced may, in certain circumstances, automatically transfer to the supplier (along with all related rights, liabilities, and obligations). There are a range of associated rights and obligations. For example, there must be consultation with representatives of the affected employees and such employees are protected from dismissal in connection with a transfer. The customer must take all proper measures to avoid breaches of TUPE and minimise cost and disruption to its business. If the customer is regulated by the FSA, or Financial Services Authority (i.e. a financial services firm, bank, insurance company or any other regulated financial service provider regulated by the Financial Services and Markets Act 2000), then it must comply with FSA outsourcing regulations, which include taking reasonable steps to avoid undue operational risk. There are also widely accepted best practices within the industry, such as provision for an exit strategy, which will usually be followed by any party choosing to enter into outsourcing transactions in the UK.

3.1.3 The German Perspective

Pursuant to German law and IT outsourcing, the first and most important distinction that one has to make is between sales contracts (*Kaufvertrag*, governed by §§ 433–453 of the German Civil Code, known as the *Bürgerliches Gesetzbuch* or BGB), contracts to assist (*Dienstvertrag*, governed by §§ 611–630) and contracts to perform (*Werkvertrag*, governed by §§ 631–651). The German courts apply a 'centre of interest' analysis to establish which type of contract (and therefore which set of statutory provisions) governs a certain transaction.

If the main duty of the service provider is to grant a licence for a standard software of the service provider, and the customer customises and installs the standard software himself, then this will be construed as a sales contract, and the German courts will apply the rules for sales contracts laid down in §§ 433–453 of the BGB. If the service provider writes a code for the customer, provides additional services, and

is relatively free to decide how he will create and deliver his products/services, then the courts in Germany will most likely decide that it is a contract to perform, and they will apply section 631. In this case, the German Supreme Court, or *Bundesgerichtshof* (*BGH*), has held that the service provider is responsible for the end result. This leads to a higher degree of responsibility for the service provider.

In most, if not all cases, a complex IT outsourcing relationship will include various duties to be performed by the service provider, and will be construed as a contract to perform services. Ultimately, the service provider must deliver his products and services according to the specifications of his client, but he will decide how to best create and deliver these services.

The next legal test under German law is whether the contract is individually negotiated between the parties (*Individualvertrag*), or whether this is a 'terms and conditions' scenario (*Allgemeine Geschäftsbedingungen*). Pursuant to § 305(1) of the BGB, a 'terms and conditions' scenario exists where the rules were drafted in advance for a (theoretically) repeated use, and where the party proposing the terms was not willing to negotiate such terms (where the terms were accepted by the other party without negotiations). This distinction is very important under German law, and triggers a different legal review of the contractual clauses by the German courts. If the clauses are terms and conditions in the sense of § 305 of the BGB, then these clauses must withstand a more rigid test by the German courts. §§ 305–310 of the BGB were written to safeguard consumers against unfair contract clauses by large businesses, which are perceived to be in a stronger position to negotiate a contract vis-à-vis consumers. However, the German courts apply some of the same restrictions in a B2B context, and therefore IT outsourcing contracts in a 'terms and conditions' scenario are subject to much more rigid review by German courts. It is therefore imperative for the service provider to discuss its own draft of the outsourcing contract with the German customer, and to keep a record of such discussions. The most common legal structure for complex IT outsourcing agreements is the contract to perform (*Werkvertrag*), on an individually negotiated basis (rather than a 'terms and conditions' basis).

3.2 Liability

3.2.1 The Indian Perspective

In India, the issue of damages is covered under §§ 73 and 74 of the Indian Contract Act, 1872. The concept of extra-contractual damages (including punitive and exemplary damages) is not well established in Indian jurisprudence. Compensation is payable for loss which (a) naturally arose as a result of the breach, or (b) the party knew would arise as a result of the breach. Here, the principle of restitution is applied and the party suffering the loss is compensated so as to put it in the same position as if the contract had been completed. In other words, the measure of compensation is directly related to the measure of loss actually suffered. § 73 itself

provides that no compensation will be given for any remote and indirect loss resulting from the breach. This is, however, set to change if a recent ruling by the Delhi High Court is anything to go by. In *Microsoft Corporation v. Deepak Raval*, Justice Sikri not only awarded compensatory and punitive damages, he went on to state:

> In the present case, the claim of punitive damages is of INR 500,000, which can be safely awarded. Had it been higher even, this Court would not have hesitated in awarding the same. This Court is of the view that punitive damages should be really punitive and not flea bite and quantum thereof should depend upon the flagrancy of infringement.

Parties may agree beforehand to a fixed sum payable by the party committing the breach to the other party ('liquidated damages'). In such a case, § 74 of the Indian Contract Act would apply. If the sum agreed to is a reasonable pre-estimation of the expected loss, the court may award the entire sum without insisting that the innocent party prove that the loss actually suffered by it was commensurate. If the predetermined amount has the nature of a penalty, and if the party committing the breach is able to prove that the other party has not suffered any loss despite the breach, the innocent party may not be entitled to the said predetermined sum. Even if the party in default is not able to prove this, the innocent party is entitled only to reasonable compensation not exceeding the amount mentioned in the Contract Act. Finally, India also follows the principle of mitigation of loss/damages. Therefore, the innocent party is obligated to try and mitigate its losses in the face of the said breach.

3.2.2 The Anglo-American Perspective (UK and US Law)

The principles governing damages for breach of contract are fundamentally the same in the UK/USA as they are in India. The claimant is entitled to be put into the position he would have been in if the contract had been performed. However, the claimant may only recover direct losses, which are those (a) arising naturally from the breach, or (b) as may reasonably be supposed to have been in the contemplation of the parties at the time they made the contract, as a probable result of the breach. Furthermore, there is a principle which has developed through English case law over time that the claimant has a duty to mitigate his losses, so he cannot recover damages for any part of his loss which he could have avoided by taking reasonable steps.

Both user and supplier are usually keen to avoid the uncertainty of legal technicalities, and so limitation and exclusion of liability clauses are the norm. Parties are generally free to do this, except that liability for fraud, death, or personal injury caused by negligence can never be excluded. In most circumstances any restriction on liability for misrepresentation must be reasonable, pursuant to the Unfair Contract Terms Act, 1977 (UCTA) (UK), and implied terms as to title to assets cannot be excluded or restricted. Certain provisions of the UCTA are excluded in relation to international supply contracts. It is common for parties to impose a financial cap on liability. The cap is, of course, a matter for negotiation,

and a variety of commercial factors will apply in reaching the applicable cap (not least the bargaining strength of the parties). It is also common to exclude liability for certain types of loss, in particular economic loss (e.g. loss of profits, contracts, business, anticipated savings, goodwill and revenues). In the landmark *British Sugar* case, it was held that the term 'consequential loss' only refers to foreseeable loss (such loss as may reasonably be supposed to have been in the contemplation of the parties at the time they made the contract, as a probable result of the breach) and does not include direct loss (losses arising naturally, according to the normal course of things, from the breach of contract itself). Therefore, a clause excluding only consequential or special loss would not preclude the recovery of pure economic losses that flow directly from the breach. However, where a service is business-critical, and particularly where it is intrinsic to the customer's ability to generate money, it may be perfectly appropriate to seek to recover lost profit where a service failure impedes that money generation. In addition, under UCTA a party seeking to rely on a provision purporting to exclude or restrict liability for any other damage or for misrepresentation, where the agreement is made on that party's standard written terms of business, must show that the provision passes a test of 'reasonableness', a factor in which is the relative bargaining strength of the parties. However, the vast majority of outsourcing contracts are individually negotiated, and, where this is the case, any exemption clauses contained therein will not be subject to this test.

In practice, of course, it is unlikely that a customer would wish to sue an incumbent supplier for breach of contract, and therefore the recovery of damages by way of court action is generally unpalatable as an option unless the contract is terminated. It is therefore necessary to have other remedies within the contract, as otherwise the customer risks having no effective control over the performance of the supplier, making his position vulnerable (the supplier, of course, being aware that termination would be a risky and extreme option). Such contractually agreed-upon remedies invariably include an escalation procedure and service credits in the form of liquidated damages. However, there is a wide range of other options, such as re-performance of failed services, services in kind (e.g. free consultancy), specific costs or losses (e.g. costs of wasted advertising or third-party substitute services), and partial termination.

US law furthermore recognises 'punitive damages' which must be mentioned here to complete the picture, but which we will not elaborate on in greater detail here.

3.2.3 The German Perspective

Pursuant to the statutory provisions in §§ 631, 633 and 634 of the BGB regarding contracts to perform (*Werkvertrag*), the service provider of customised, or individual, software is obliged to deliver software/services that are 'free of defects'. In case he does not rectify the defects within a reasonable period of time (set by the ordering party), the vendor may be held liable for damages pursuant to §§ 280 and 281 of the BGB. Furthermore, in regard to the delivery of software, German courts have imposed additional pre-contractual and contractual duties upon the

developer of individual software. In the event that the service provider's knowledge in regard to the requirements, complexity and expenses of the software is superior to that of the ordering party and the service provider is able to identify any shortcomings in the ordering party's ideas, the service provider has a duty to provide expert advice to the ordering party. This is often referred to as 'expert liability'. The service provider thus has to ask all relevant questions in order to determine the actual requirements of the ordering party. He then has to advise the ordering party regarding the identified specifications of the software. The Cologne Federal State Court (*Oberlandesgericht*, or OLG) has held that this duty also applies in case of ambiguity in the specifications. Moreover, the service provider should try to establish a high degree of IT knowledge on the part of the customer in the framework agreement.

The industry standard in Germany is that the service provider is liable, without limitation for intentional acts, or for gross negligence, but also that he can limit his liability for simple negligence. The actual limitation of liability for simple negligence is subject to the bargaining powers of the parties and, at the end of the day, is also subject to a fairness test applied by a German court on a case-by-case basis. That said, the most important issue concerning liability under German law is to establish the difference between simple (limited liability) and gross (unlimited liability) negligence (assuming, of course, that no service provider would intentionally harm a customer).

While there are no statutory provisions defining gross negligence, the German courts, in a string of decisions, have developed a detailed concept of gross negligence. Gross negligence means a failure to act or a conduct that is so reckless that it demonstrates a substantial lack of concern for whether damage will result or not. Gross negligence has to be distinguished from simple negligence. Simple negligence is generally considered as a failure to exercise the degree of care considered reasonable under the circumstances, resulting in an unintended damage to another party. In short, the distinction between simple and gross negligence is that while simple negligence is a standard of 'may happen', gross negligence is a standard of 'must not happen'. German courts have defined the meaning of gross negligence as meaning, *inter alia*, a violation of a duty of care that exceeds simple negligence significantly and is individually inexcusable, a severe disregard for obvious and easily applicable security measures and for the necessary duties of care, the absence of the slightest precaution or alertness, and the disregard of obvious deliberations and of what would have been clear to everyone in the relevant situation.

There is no precedent of gross negligence in the area of IT or outsourcing projects in Germany. The reason for this is probably that the majority of software contracts and outsourcing projects that were the subject of a legal dispute are high-profile transactions with established market players. Therefore, they are mostly resolved through an out-of-court settlement between the contracting parties. Additionally, service providers in Germany usually do not want to be publicly exposed in the courts as having acted in a grossly negligent manner. Importantly, the burden of proof to establish gross negligence is on the customer. It is therefore up to the customer to try to establish gross negligence on the part of the service provider by showing that the service provider mismanaged the project or that it used inexperienced developers.

3.3 Warranties

3.3.1 The Indian Perspective

Indian law implies a number of terms into any contract for goods or services. The Sale of Goods Act, 1930, implies a term that goods shall be of satisfactory quality and fit for purpose. A warranty is a stipulation collateral to the main purpose of the contract, the breach of which gives rise to a claim for damages, but not to a right to reject the goods and treat the contract as repudiated. Where a contract of sale is subject to any condition to be fulfilled by the seller, the buyer may waive the condition or elect to treat the breach of the condition as a breach of warranty and not as a ground for treating the contract as repudiated. Thus, in a contract of sale, unless the circumstances of the contract are such as to show a different intention, there is:

- An implied condition on the part of the seller that, in the case of a sale, he has a right to sell the goods and that, in the case of an agreement to sell, he will have a right to sell the goods at the time when the property is to pass.
- An implied warranty that the buyer shall have and enjoy quiet possession of the goods.
- An implied warranty that the goods shall be free from any charge or encumbrance in favour of any third party not declared or known to the buyer before or at the time when the contract is made. Where there is a contract for the sale of goods by description, there is an implied condition that the goods shall correspond with the description; and, if the sale is by sample as well as by description, it is not sufficient that the bulk of the goods corresponds with the sample if the goods do not also correspond with the description.

3.3.2 The Anglo-American Perspective (UK and US Law)

There are no standard warranties in an outsourcing contract, but Anglo-American law does imply a number of terms into any contract for goods or services. The Sale of Goods Act, 1979 (UK), implies a term that goods shall be of satisfactory quality and fit for purpose and the Supply of Goods and Services Act implies a term that services shall be performed with reasonable care and skill. These terms are implied as conditions, which give the innocent party the right to terminate and claim damages, as opposed to warranties, which only give a right to sue for damages. However it is common for all implied terms to be excluded. Where the agreement is on the supplier's standard terms, such an exclusion clause is likely to be held unreasonable and therefore unenforceable under UCTA, but as mentioned above, this will not be relevant where the contract has been individually negotiated.

There are some areas in relation to which express warranties will often be agreed. For example, the standard to which the supplier will perform the services, confirmation of entitlement to enter into the agreement and perform the obligations,

confirmation as to the accuracy of information exchanged prior to contract, compliance with the DPA and FSA regulations and the Euro currency compliance of the services or products being supplied. Clearly, however, the parties will seek to tailor warranties to the circumstances of each particular deal.

3.3.3 The German Perspective

In the absence of a contractual provision in the framework agreement or statement of work, the warranty issue under German law is governed by §§ 633–639 of the BGB. The service provider is thus required to deliver the product/service free of errors and legal claims of third parties, with a statutory warranty period of 24 months. However, the parties are free to contractually agree to a lesser duration of warranty. In a 'terms and conditions' scenario, they can limit the warranty period to 12 months, and in an individually negotiated contract, they can limit the warranty period even further.

A typical warranty clause should also address the following issues:

- What happens if an error occurs: does the warranty period extend automatically, or does it start anew after the error was fixed?
- What constitutes an error? What are the error classes and how do the parties categorise the errors?
- When does the warranty period begin?
- What are the rights of the customer? Can he demand the delivery of a new deliverable? Who can choose the right?
- What are the limitations? Is the service provider still liable if the customer amends the services or uses the service against the recommendations of the service provider?
- What are the overall liabilities under warranty?

Generally speaking, the service provider needs to accept responsibility for his deliverables, and the customer needs to understand that there must be a balance between the risk of the service provider and the potential profits. The definition of the obligations and the status of the service provider is an important aspect of a warranty. The service provider therefore has to make sure that the duties are well defined (and that the scope also expressly states what is beyond the scope!) In this respect, it is important to note that the German Supreme Court for Civil Matters has repeatedly held that the service provider has a special obligation as an expert and therefore has to point out if there are insufficiencies in the requirement specifications of the customer. The parties therefore need to work diligently on defining the scope of the services.

Since missing or insufficient documentation and program descriptions are tantamount to an error in developing the software, the clearer the definition of the scope and the mutual responsibilities, the easier it is for the parties to define an error and to deal with a warranty situation. The service provider has to provide warranty free of charge. This includes all packaging and travel costs and all other costs associated

with bug-fixing. Needless to say, there can be a conflict between maintenance and warranty, and the parties also have to describe an error clearly in order to agree if this is an error (e.g. under warranty and therefore free of charge for the customer) or an issue for maintenance.

3.4 Intellectual Property Rights

3.4.1 The Indian Perspective

There are several intellectual property rights principles and statutes that may be relevant in an outsourcing arrangement. Copyright can be transferred from the author to third parties, provided such transfer is recorded in writing. As a general rule, computer programs and methods for doing business are not patentable in India, although computer-related inventions can be patented in some cases.

3.4.2 The Anglo-American Perspective (UK and US Law)

There are several intellectual property rights principles that may be relevant in an outsourcing arrangement. For instance, IPR created by an employee acting in the course of his employment automatically vests in the employer unless otherwise agreed—there is no principle of work-for-hire under UK law (as there might be in the USA).

As in Indian law, copyright can be transferred from the author to third parties, provided such transfer is recorded in writing. However there is also a distinct concept of an author's moral rights, which cannot be transferred. Moral rights include the right to be identified as the author of the work, but it should be noted that these do not apply to computer programs. As a general rule, computer programs and methods for doing business are not patentable in the UK, although computer-related inventions can be patented in certain narrowly-defined circumstances (UK) and even more easily in the USA.

3.4.3 The German Perspective

Unlike most of the common law statutes, German civil law does not allow for a transfer of the copyright itself as stipulated in § 29 of the German Copyright Act (*Urheberrechtsgesetz*), which permits transfer only by inheritance. The reason for this is the civil law concept of *droit moral* (*Urheberpersönlichkeitsrecht*), which is not as common in some of the common law countries. This principle stipulates that the creator of a copyrighted work has some personal, 'moral' rights, and that these cannot be taken away from him. A clause in an outsourcing contract whereby the service provider transfers the copyright in a certain deliverable is, therefore, void

under German law. Thus, the correct legal mechanism under German law is a licence. The customer will demand a simple or exclusive license to use and exploit the deliverable for a certain period, and in a certain geographical area. Normally, the licence clause will include the following parameters:

- Simple or exclusive licence (depending on the software itself; standard versus customised software)
- Irrevocable or revocable licence
- Unlimited or limited licence (by time)
- Unlimited or limited licence (by geographical reach)
- Right to sublicense (or the absence thereof)
- Limited or unlimited rights of the licensee

One additional question that needs to be addressed in the intellectual property and license clause is the point in time until which the license right is valid. This could be upon the conclusion of the contract, upon the formal acceptance of the deliverable, or upon the payment of remuneration in full. Another issue in this respect is the ownership of the documentation and program descriptions. These rights should also be addressed in an IT outsourcing agreement, and they should correspond with the IPR clause, in which the service provider should include a provision that he is allowed to use and exploit the deliverable, and that he is free to use all 'pre-existing rights' for other customers and projects. Generally speaking, the customer will try to limit the ability of the service provider to execute similar projects for his competitors, and the service provider has an interest to advance his industry expertise by providing similar projects for numerous market players. This conflict of interest needs to be addressed upfront, preferably in the master services agreement itself.

3.5 Indemnifications

3.5.1 The Indian Perspective

Indemnity under the Indian Contract Act is a contract by which one party promises to save the other from loss caused to him by the conduct of the promisor himself, or by the conduct of any other person. Damages under Indian law can generally only be recovered for breach of contract if the claimant can prove that the breach caused loss, and to the extent that those losses are direct and have been mitigated. However, these rules do not apply where the claimant relies on an indemnity. In most IT outsourcing contracts, the service provider is expected to indemnify the buyer of services for non-compliance with the specifications given by the buyer to create the software, for any intellectual property infringement of any third party, for any employee-related claims, for any personal injury or property damages, etc.

3.5.2 The Anglo-American Perspective (UK and US Law)

As in India, the rule that a claimant can only recover damages for breach of contract if he can prove that the breach caused loss (and to the extent that those losses are direct and have been mitigated) does not apply where the claimant relies on an indemnity, because the claim is for a debt rather than for a breach of contract. As such, indemnities are often heavily negotiated, and often avoided at all costs, in any outsourcing deal where there are likely to be significant potential losses which are too remote to fall within a claim for contractual damages.

In many outsourcing deals, intellectual property rights are either licensed or transferred, and it is standard for the recipient of the rights to be indemnified against any claims or losses resulting from the infringement of any third-party rights by the rights licensed or transferred. Indemnities are commonly tied to the agreed warranties, and so will often cover losses resulting from non-compliance with the DPA, security breaches, and for infringement of third party IPR. Where employees are transferred under TUPE (UK) as part of the outsourcing, the customer will generally agree to indemnify the supplier against historic liability in respect of those employees, and, likewise, the supplier will indemnify the customer against any future liability.

3.5.3 The German Perspective

In most IT outsourcing projects, the service provider will create individual software for the customer. He will therefore be responsible for the result (error-free software). Since 2002, German law does not differentiate between errors in the deliverable because of factual deficiencies (*Sachmangel*) or legal deficiencies (*Rechtsmangel*). Both have the same consequences: the German customer can first demand rectification, reduce the price, or not pay the price at all. The customer can also correct the error (either himself or through a third party), and also claim damages.

The industry standard in Germany is that the service provider only has to indemnify the customer if the customer (1) informs the service provider about a third-party claim, (2) assists the service provider against such a claim and (3) lets the service provider have the final word on how he wants to settle the dispute. Also, the amount of damages payable under the indemnity is usually limited to the same extent as the general limitation of liability.

3.6 Summary

From the above legal analysis, it is obvious that the three legal systems examined have substantial similarities as well as differences. Unsurprisingly, the Indian and

the Anglo-American legal systems are very similar. On the other hand, the German civil law system deals with these issues differently, and has a different starting point; the German statutes and the concepts of *Werkvertrag* and *Dienstvertrag*. Above all the national legal systems, there are also international agreements and legal theories that can also play a role in finding the right answer to a specific legal issue.

4 Conclusion

Although very mature in some markets (especially the USA and, to a lesser degree, the UK), outsourcing and global sourcing are still in their infancy. There are quite a few central European and other markets that are virtually untapped by the outsourcing phenomenon. Outsourcing transactions and global sourcing initiatives are also becoming larger and more complex, as evidenced by the rise of the BPO market. Transactions are more global in nature, and more aspects of businesses are being outsourced. Multinational companies are not just outsourcing an aspect of their business in one jurisdiction, but are more likely to look at this from a global perspective. In terms of the outsourcing transaction, this means bigger rewards—and ultimately, bigger risks. Therefore, contracts have to be precise enough to deal with the various legal, technical, and operational issues, and at the same time flexible enough to leave room for development. Outsourcing relationships are by nature long-term relationships where trust and co-operation between the partners are required attributes and also necessities for success. Furthermore, various legal systems are involved in transactions such as offshoring and thus must be taken into consideration. The differences between the various legal systems need to be taken seriously, and the parties should make sure that the contractual relationships will withstand the test of all jurisdictions involved and comply with all legal requirements from the various supervisory institutions in those jurisdictions.

However, this does not mean that parties cannot structure their transactions in a way that safeguards them against risks associated with multi-party and multi-jurisdictional transactions and satisfies the compliance officers in both organisations. The parties are ultimately working on a common project, and a security or compliance problem will always affect both parties. This should motivate them to start the transaction on a solid legal basis and manage it closely. If the industry is not hit by any more security or compliance scandals, the market for outsourcing and global sourcing will continue to grow substantially over the next few years, benefiting both customers and service providers.

Obviously more complex transactions also involve the transfer of assets, employees and real estate which triggers much more complex legal issues. This must, however, be dealt with in a separate article in the next edition.

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Service Analytics: Leveraging Data Across Enterprise Boundaries for Competitive Advantage

Hansjörg Fromm, François Habryn, and Gerhard Satzger

Abstract The modern view on services focuses on the co-creation of value between providers and customers—leveraging knowledge, skills, and resources of both partners from an overall system point of view. This perspective goes beyond the typical customer integration in a traditional services context, thereby leading professional services firms to quickly adopt new methods to exploit this potential. This includes capturing, processing, and analyzing data produced by multiple actors within a services system with the objective to support strategy implementations and drive complex decisions—an area which we call "service analytics" in this paper. We describe the nature of service analytics and outline its distinctiveness with regard to business analytics. We subsequently provide a typology of its approaches based on the different types of data available in services systems. We finally illustrate the potential of service analytics by means of two application scenarios: customer intimacy analytics focusing on the service encounter as well as demand and inventory analytics which are concerned with customer usage.

1 Service Systems: Co-creating Value Across Enterprises

Undisputedly, modern economies have turned into "servitized" economies—with almost seventy per cent of the gross value added being derived from the tertiary sector (Satzger and Ganz 2010) and with an increasing number of industrial companies proceeding to engage in service-type offerings (Neely 2009).

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Analyzing particular managerial challenges for service enterprises, the distinction between products and services has traditionally been posing a significant problem for researchers and practitioners. In recent years, however, the insight started to prevail that products and services merely are extremes of a continuum of "solutions" that we can observe in the market (Engelhardt et al. 1993)—where typical service challenges do occur in the service-end of the continuum, but not exclusively there. The focus, therefore, has shifted away from service enterprises or industries to specific challenges to create, market, and deliver service-type solutions—regardless of the type of industry they belong to.

Most prominent—while still controversial—is the so-called Service-Dominant Logic proposed by Vargo and Lusch (2004, 2008) that advocates the perspective that value is not "embedded" in products or services, but rather is created by the knowledge, skills, and resources employed by both provider(s) and customer(s). The particular challenge then is the joint value-creation (co-creation of value) of partners aiming at incorporating potential contributions from both sides to come up with a solution that—from an *overall* system point of view—maximizes the generated value. This goes far beyond the typical customer integration in a traditional service context in that it elevates the viewpoint above the simple provider perspective. Moreover, it opens the view to analyzing and purposefully designing more complex service systems comprising larger numbers of stakeholders (Maglio et al. 2006; Spohrer et al. 2007).

Existing "disconnect": Looking at traditional service patterns, we realize that one of the key challenges obviously consists in making the knowledge, skills, and resources available at one integration point—i.e., to connect the partners. This gets evident looking at a simple example with data being one of the important resources to be shared: energy providers and their customers would both benefit from understanding and reacting to the consumption patterns in an energy system. So far, however, individual consumption is neither measured "real-time" nor frequently communicated to the provider limiting insights and preventing arrangements like incentivized contracts within the system. Energy is flowing from the provider to the consumer, but no information regarding its usage is flowing back from the consumer to the provider. Similar situations can be found in other industries. Automotive manufacturers, car dealers, and vendors of value-add services around the car do not know much about the usage of their products and services by the customers. Doctors and other medical service providers do not know about their patients' behaviors and health status once they have left their offices.

Instrumentation to overcome the "disconnect": Modern information and communication technology is helping to create a "service system wide" view and, thus, exploit the inherent potential as evident in our energy scenario above: rather than manually reading consumption values once a year, energy meters could provide values let's say every 15 min—creating about 35,000 times more data than before. At the same time, this data could centrally be made available and energy providers could manage capacity (e.g., by anticipating expensive peak periods) as well as influence capacity (e.g., by incentives for off-peak consumption)—to the advantage of all parties: lower energy prices for consumers, higher profits for providers, and

environmental benefits for all. The "disconnect" will presumably be overcome in the next few years with the emergence of new instrumentation technologies. An increasing volume of data will be collected either by the users/customers themselves (e.g., through mobile/smart phones) or by technologies like smart metering in energy services, telematics in automotive and mobility services, RFID in logistics, condition sensors in engineering, data capture solutions in healthcare, etc. The further dissemination of electronic networks, led by the internet "revolution," will increasingly enable the sharing of the captured data across organizational boundaries and support their availability at the point of decision.

Where data is available already today, the potential is clearly visible—as in e-services (services fully rendered over the internet): by design, these services require connectivity between providers and customers. So, e.g., customers visit the provider's web pages in order to obtain the service. Thus, the provider is able to analyze the customers' usage characteristics at any level of detail. Typical data of interest are the overall number of page visits, the number of page visits per customer, the time intervals between page visits, the path that an individual customer takes through the web site, etc. (see Srivastava et al. 2000; Han and Chang 2002). With this data, the provider can perfectly analyze the behavior and preferences of individual customers, can make recommendations, can assess the general acceptance and attractiveness of his web offering, and discover possible usability problems related to navigating and finding information on his web pages.

For this process of capturing, processing, and analyzing data taken from a service system—in order to improve, extend, and personalize the service and create new value for both the provider and the customer—we use the term *service analytics*.

2 Service Analytics: Nature and Typology

In the following, we first clarify the notion of analytics and then position service analytics as well as dissect this new field via a typology of its approaches.

2.1 The General Notion of Analytics

There is no single agreed-upon definition of the term "analytics." Some authors like Kohavi et al. (2002) use the terms "analytics" and "data mining" interchangeably. Others like Davenport (2006) use "analytics" as a synonym for "business intelligence." Some dissent is particularly related to the question if analytics should include or exclude data management and reporting technologies: Davenport and Harris (2007) distinguish between "access and reporting" and "analytics," both seen as subsets of business intelligence.

For our purposes, we consider data management and reporting as the "basic analytics" which are a prerequisite for "advanced analytics" (see Kobielus 2010) built on methods from statistics and operations research.

Basic Analytics include reporting solutions based on data warehouse and data marts like standard and ad hoc reporting, online analytical processing (OLAP), queries, drilldowns, and alerts (see Chaudhuri and Dayal 1997).

Advanced Analytics comprise various methods from statistics and operations research which can be *descriptive*, *predictive*, or *prescriptive* (INFORMS 2012). Data mining and machine learning algorithms like clustering (segmentation) and association can be used to identify similarities between customers (e.g., for recommendations). Text mining algorithms are the basis for customer experience, sentiment, and complaint analysis in unstructured data sources like blogs on the internet. Temporal data mining algorithms are able to discover sequential usage patterns, e.g., in the browsing behavior of customers on a provider's web pages. Visual analytics and visual data mining can be used to provide a clearer view and understanding of relationships within a complex service system. Time series forecasting, regression analysis, and artificial neural networks are the most widely known methods for prediction (e.g., of service demand) and trend analysis. Finally, methods like simulation and mathematical optimization can be used to prescribe or recommend the best possible actions for improvements.

Davenport and Harris (2007) consider analytics the next source of competitive advantage. A recent survey by Lavalle et al. (2011) revealed that top-performing organizations are using analytics five times more often than low performers. Davenport and Harris (2007) point out that the competitive advantage of analytical methods increases as their "degree of complexity" (from basic to advanced) increases.

2.2 Service Analytics as Analytics to Support Service Systems

The adoption of analytics applied to service systems is still in its infancy. Some areas like web analytics are more advanced, some other areas like healthcare analytics are just starting. The goal is to apply basic and advanced analytics to an entire service system in order to generate the highest benefits for all partners according to the value co-creation principle.

In most industrial application areas, this goal has not yet been reached. We observe different adoption and maturity levels along two dimensions resulting in a Service Analytics Typology (see Fig. 1).

Typically, *data inside the service provider's organization* are easy to obtain. They are typically accessible through the provider's financial and operational planning systems like Enterprise Resource Planning (ERP) and Human Capital Management (HCM). Accounting and performance reporting (e.g., on the utilization of service resources) are typical examples for basic analytics applied to data inside a company (provider data). Workforce Analytics describe the application of

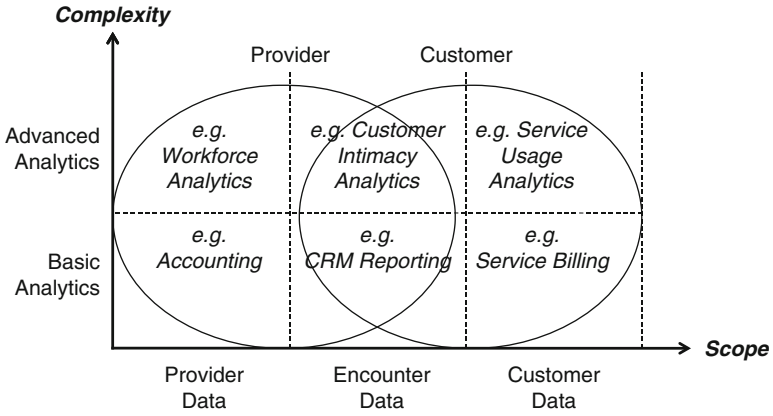

Fig. 1 A typology of service analytics approaches

advanced analytics to workforce planning and scheduling (see Mojsilović and Connors 2010).

Data related to the "service encounter" (see Payne et al. 2007), i.e., the interaction between service provider and customer, can be retrieved from Customer Relationship Management (CRM) Systems. CRM systems are widely deployed in the industry, but few companies use their systems to capture data on activities and interaction patterns in sufficient detail to allow advanced analytics to be applied. Our first example below, however, will illustrate the potential and reach of innovative approaches.

The availability of *data related to the use of the service* by the customer (customer data) is still limited in many cases. We were talking earlier about a "disconnect" between service provider and customer. If service usage data are captured at all, then this typically happens only outside the boundaries of an enterprise. As stated before, ICT may increasingly assist to overcome this "disconnect" in the future. These technologies, however, will generate an exploding amount of data. Service providers will encounter considerable ICT challenges (processing power, storage) in capturing the full potential of this "big data" (McKinsey 2011). High efficiency and speed are required from intelligent algorithms to process and analyze vast amounts of data. The application of advanced analytics to big data will become an immense opportunity for service companies to improve their decision making processes in the future (see White 2011).

A key societal question, though, is if the customers want to share their usage data with the service provider. Security and privacy concerns are the biggest obstacles to be overcome. The future will tell if providers are able to demonstrate to their customers the value and benefits of sharing data with them—and are able to prove that they handle this data with highest responsibility and care. Only then, a trustful relationship between the provider and the customer will be established, which is essential for achieving a common objective.

3 Service Analytics in Practice

We have selected two examples for Service Analytics from different areas of our typology. The first illustrates the use of advanced analytics in the context of customer intimacy (encounter/relationship data), the second explains the application of advanced analytics for service parts forecasting and inventory optimization based on detailed usage patterns (customer data).

3.1 Customer Intimacy Analytics

A recent survey conducted with 1,500 chief executive officers worldwide established that today "successful CEOs make customer intimacy their number-one priority" (IBM Institute for Business Value 2010). Customer intimacy (see Treacy and Wiersema 1993) has gained momentum over the last years as the ability to capture customer needs and to tailor provided solutions accordingly has become a key success factor also in the B2B space. However, even though CRM systems are well established today, they do not provide the appropriate means for supporting the implementation of a customer intimacy strategy: "the role of customer intimacy has been under-investigated" (Liang 2009) from an IT perspective. In particular, the measurement and management of customer intimacy still lacks analytical support.

Recent work on "Customer Intimacy Analytics" at the Karlsruhe Service Research Institute by Habryn et al. (2010) has addressed the question how existing CRM systems can be complemented with service analytics to assess customer intimacy by leveraging operational data available in the provider's information system. Service analytics enable the evaluation of the key aspects of a customer intimacy strategy: the acquired customer knowledge and established customer relationships as well as their impact on business. Therefore, service analytics allows providers to better assess progress and success of their customer intimacy strategy with different customers.

The first step of the analysis is concerned with the extent to which the activities and interactions between the provider and customer employees have improved the knowledge of and relationships with the customer *(acquired customer intimacy)*. Activity and interaction data which is related to the service encounter is captured from the provider's CRM system, which automatically records phone calls, emails, letters, and meetings. From this data, statistical information on specific interaction patterns such as frequency, regularity, intensity, and mode are derived. In parallel, information related to the acquired customer knowledge and established customer relationships are empirically gathered by means of surveys. Machine learning algorithms are subsequently applied to correlate the interaction patterns found in the dataset with the acquired customer knowledge and established customer relationship values returned from the survey: the result are calibrated, CRM-data based

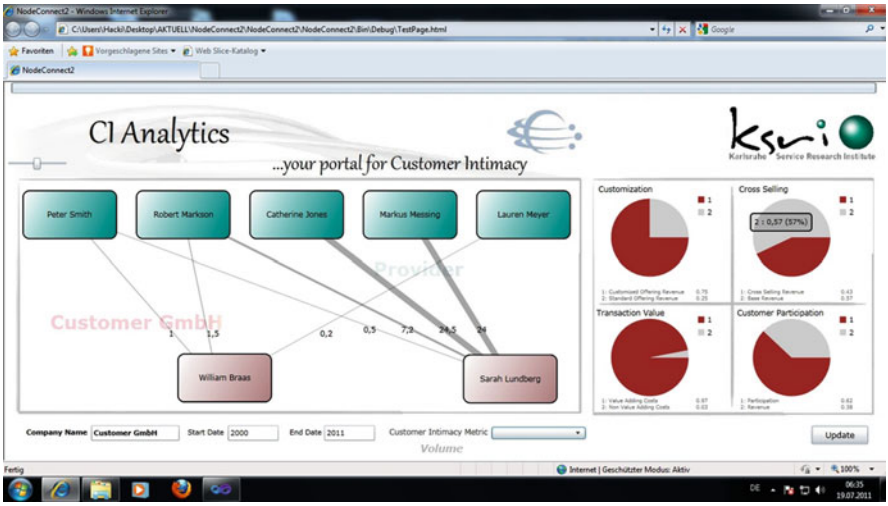

Fig. 2 Customer intimacy dashboard of KSRI-Solution *CI Analytics*

metrics allowing to assess the degree of customer intimacy. These findings allow an organization to gain insights on how to best establish, maintain, and enhance customer relationships as well how to effectively acquire customer knowledge by optimizing the customer interactions and activities.

The next step investigates to which extent the service provider has turned these acquired customer knowledge and established customer relationships into better solutions, improved service, additional sales, and higher customer satisfaction. This is called the *leveraged customer intimacy*. Several indicators for it have been conceived such as the percentage of customer participation in solution development, the percentage of customization in solution offerings, the percentage of cross selling of overall sales, or the reduction of transaction costs. These indicators are calculated upon available project and revenue data related to the service encounter. The solution, thus, allows to accurately estimate the business impacts resulting from the adoption of the customer intimacy strategy.

Figure 2 illustrates the customer intimacy dashboard which has been prototypically implemented. While the left hand side provides visualized information on the relationships established between the provider and customer employees, the right hand side depicts four of the conceived customer intimacy performance indicators.

In summary, the "Customer Intimacy Analytics" solution applies the service analytics concept on data related to the service encounter in order to support the assessment and monitoring of the customer intimacy strategy with different customers. It thereby supports the allocation of the provider's resources as well as the planning of the provider's investments with regard to its different customers.

3.2 Demand and Inventory Analytics

Our second example describes a situation where advanced descriptive, predictive, and prescriptive service analytics are applied to customer usage data. A provider of automotive after-sales services operates a distribution network to supply his customers and service personnel with spare parts. Inventories are kept in the warehouses to cover uncertainties in the demand. The provider's objective is to secure the availability of parts while keeping inventory costs at the lowest possible level. This may be considered a well-understood task, having been addressed by logistics and industrial engineering researchers and practitioners for decades—however, the performance of spare parts distribution networks is still poor in many cases, and companies are sitting on high inventory levels to compensate for this poor performance.

Studies have shown that companies often rely on either "rules-of-thumb" or standard ERP systems with less sophisticated algorithms for inventory management (see Wagner and Lindemann 2008). For customer intimacy we have shown that CRM systems can be enhanced with advanced analytics to provide additional value. Similar observations apply also to inventory management: ERP systems can be enhanced with advanced analytics to significantly improve the availability of materials and to optimize inventories.

The first step is to derive knowledge about current and future demand. The best source of information is the orders for spare parts that the customers have sent to the provider. These orders are kept in the provider's ERP system and are typically available several years back—they virtually depict the usage of customers. Advanced statistical analyses of historical demand data provide detailed information on demand level, variability, trend, seasonality, and sporadicity (irregularity). Figure 3 shows a typical demand pattern for a particular spare part, together with its statistical characteristics. Demand can be influenced by external factors like weather, temperature, economic cycles, promotions, holidays, and many others. If data on such external data are available, correlations between these factors and the demand can be identified. The prediction of future demand could now be viewed as an extrapolation of the historical demand, adjusted by the influence of the external factors.

Descriptive and predictive analytics provide demand forecasts for each individual spare part. The demand forecast is one input for inventory optimization. Other inputs are cost factors like ordering costs or inventory carrying costs including warehousing and capital costs. Inventory theory provides a variety of methods to determine the optimal inventory level for each individual part, together with optimal reorder points and reorder quantities.

The value of applying advanced analytics for demand forecasting and inventory optimization has been proven many times in industrial practice (see Korevaar et al. 2007). Forecast quality could be improved and inventory levels reduced by typically 15–25 %, sometimes even more. At the same time, the availability of parts and materials could be significantly increased. Higher availability reduces the

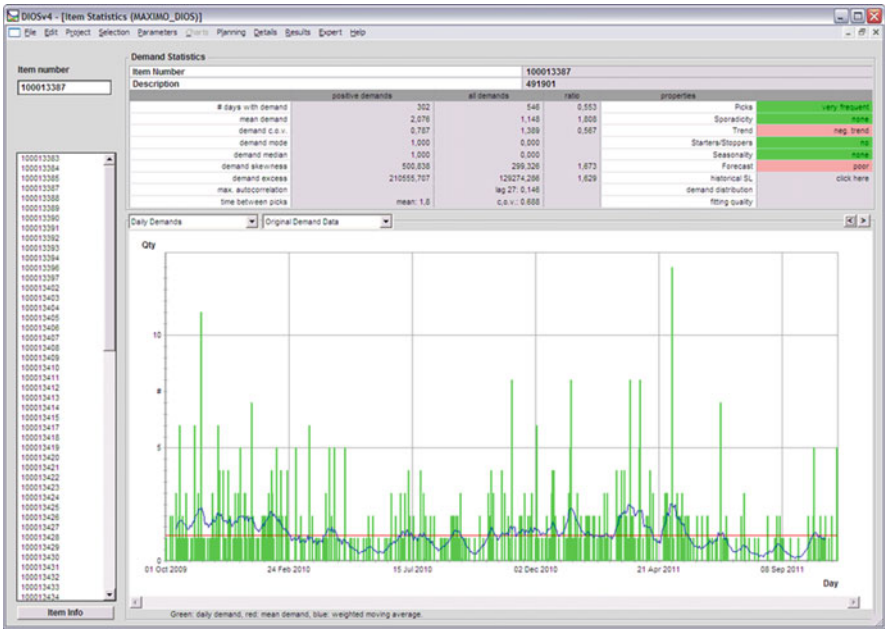

Fig. 3 Typical demand pattern in a service parts environment

customers' waiting time for parts and thus the downtime or performance degradation of the customers' resources (car, machine, etc.). Lower inventory levels reduce the logistics cost and lower the working capital of the supplier. This example demonstrates again that service analytics can be applied in an economic environment for the benefit of both the customer and the service provider.

4 Conclusion

In this paper, we propose to define service analytics as the application of analytics for service systems in which value is co-created by the provider and the customer. Service analytics combine provider data, customer data as well as service encounter data in order to improve, extend, and personalize services, thereby creating added value for both the provider and the customer. Through the adoption of the service system view, service analytics enhance the potential of business analytics and become a key solution for contemporary challenges such as resource allocation, usage optimization, and any complex decision making processes involving multiple stakeholders and requiring the system view. The success of service analytics is, however, heavily depending on the availability of exploitable data and, thus, relies on the readiness of the provider and customer to share this data and interconnect

their information systems for achieving a mutual benefit. The shift from a transactional to a relationship approach to a business, in which partners trust each other, is, thus, a key factor for the future success of service analytics.

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The Power of the Customer and Its Implications for Business and IT Integration

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Abstract This article discusses the current status and future developments for IT departments in terms of customer interaction: We define customer interaction as a key process for enterprises—and therefore as much as a chance as also a risk for the success of the business. We see IT departments engaged in large IT transformation programs for the mantra of customer orientation and over this risking the agility and responsiveness to business needs. Business departments have taken over the role of bringing agile, innovative IT solutions into the enterprise, yet cannot integrate these solutions into the big picture of enterprise processes and IT. We think that an approach called Interaction Support Systems could help IT departments to organize the large IT programs and still include agile IT solutions for the business departments. Especially mobile technology will shape the customer experience. And as the "smart customer" arises, enterprises will have to put even more focus on the customer experience: Customers will not only interact with the enterprise about a product or service, but also and probably much more with other customers. We show different scenarios of shaping a new customer experience at the point-of-sale with the help of IT.

1 Introduction

Business and IT integration, when view from a customer interaction perspective, is a coin with two faces:

- Face 1: Large-scale transformation programs versus agile IT
- Face 2: Business innovation versus operational excellence

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1.1 Large-Scale Transformation Programs Versus Agile IT

Many IT organizations are currently working on large IT transformation projects. However, this does not automatically mean that IT is agile and able to respond very quickly to business needs. When it comes to agility and quick response times, the idea of a layer called ISS—Interaction Support Systems—is well worth looking at. ISS has to do with cross-channel integration and tight links to social media management. Instead of "hiding" customer interaction within each channel, its processes and IT infrastructure, customer interaction should be allowed an independent existence of its own, which will make it clear that customer interaction does address all vertical business areas, such as ordering, billing, service and marketing, as well as all business stakeholders, such as sales, partners, service, etc. This article shows how such a layer should be structured.

1.2 Business Innovation Versus Operational Excellence

Social customer experience is an excellent example of the difficulties which IT organizations encounter when responding to new business needs. Also, IT organizations have to deal with a new generation of smart consumers. What will be the IT answer to such developments?

Based on the convergence of mobile technology and self-service applications which are currently being adopted at the point-of-sale, a process and IT framework for customer experience must be developed. On the business innovation side, this process and IT framework must have their focus on generating revenue so that business can identify the most profitable fields of application for mobile applications concerning marketing, sales and service at the point-of-sale. But what are the implications for an IT organization?

2 Large-Scale Transformation Programs Versus Agile IT

Since the 1990s, customer orientation has been the classical mantra for enterprise IT landscapes. In cooperation with IT vendors, IT departments have started out with customer care systems. Around the turn of the millennium, they created and followed the CRM (customer relationship management) hype, reviving the topic of "customer orientation" under the names of "customer lifecycle management,": "customer value management" and, more recently, "customer experience management." The result is a wealth of functionality and IT systems which have the purpose of managing and leveraging customer information in order to generate added business value.

Integration of CRM platforms and other enterprise IT systems has been continually pursued. This has led to a full-blown middleware approach called EAI (Enterprise Application Integration) which almost exclusively deals with synchronizing customer information and systems. Subsequently, large vendors, such as Oracle, SAP, Microsoft or Amdocs, have integrated CRM into their Enterprise Application Stacks, thereby creating a vision that one fully integrated platform, which covers CRM as well as core business processes, will lead the ultimate way to customer orientation and agility.

Many enterprises in different industries are following this vision by performing large-scale transformation programs to one of these platforms. In many cases, this blocks all other innovative activities for establishing a new and future-proof landscape for a long time. After some of these endeavours were successfully completed, it turned out that—more often than not—full end-to-end integration within one platform at best provides consistency, but any agility has vanished from the environment due to the sheer size and strong internal interdependencies of the platforms.

At the same time, customer expectations and behaviour have substantially changed due to customers adopting an internet-based lifestyle and getting used to the convenience of highly interactive customer experience models created by major internet companies: Online and mobile interaction with peers, communities and companies via social networks have become commonplace. Customers want self-help via the internet without having to call contact centres and issuing a formal service request.

2.1 Business Drives Innovation: Yet Does Not Harmonize Cross-Channel User Experience

Given the fact that IT has been struggling with integrating customer management landscapes for so long, does that mean that enterprises have missed out on this innovation? Not at all! In most cases, something completely different has happened: business departments—typically marketing and online businesses—have taken the opportunity to roll out solutions which rely on small, agile players and cloud offerings, e.g., in the domains of social media management or web customer service.

Then again, these solutions do not quite manage to establish fully harmonized cross-channel user experience at a large scale and to fully integrate into the customer management landscapes. This is because they started out as solutions for a specific department and channel, and often, these are neither interested in sharing their solutions with other channels nor do they have the IT capabilities or the capacities to do so.

IT departments may feel reassured by the fact that their ability to deliver enterprise applications is now required by business departments, but they should

not do so: after all, it was their lack of responsiveness that in many cases had triggered creation of these isolated solutions.

2.2 Interaction Support Systems Focus on Creating Value Within Customer Communication

The approach towards harmonizing cross-channel user experience may be creating a new layer ISS. ISS have their focus on creating value for and within customer interaction via internet, mobile and social channels, instead of assembling large data volumes on customers and synchronizing them with complex system landscapes. ISS fully integrate knowledge and response management, thus providing a mixture of self-care, assisted care interaction management and real-time decision management, which helps select the next-best activity in order to maximize interaction value.

What should be handled in this ISS layer?

- Integrated work distribution
- Social CRM
- Cross-channel sales & service
- Real-time decision management
- Interaction analytics

2.3 Agile Approach for ISS

To be able to provide this kind of solution for the internet in the required time-to-market, IT departments need to look beyond their established IT stacks and processes, which are highly complex, but not very flexible. The ISS solutions delivery model enables an agile approach since it is not burdened with highly complex dependencies and is only loosely coupled with the backend systems, including CRM.

Also, in ISS, cloud and SaaS solutions, such as Salesforce.com or RightNow, will become more and more acceptable even to large IT departments. By their very nature, ISS support cross-channel, internet-based customer interaction. All these solutions keep growing beyond their classical SME (small medium enterprise) market and become more and more interesting for large enterprises.

As a consequence, IT departments are no longer isolated, standalone entities producing and delivering IT services. They become part of a globalized eco-system of IT providers with whom they compete in terms of cost, flexibility and time-to-market, while at the same time cooperating with them to incorporate these services into a common ISS landscape in order to provide additional value.

3 Business Innovation Versus Operational Excellence

A new development in the field of customer interaction is customer experience at the point-of-sales. With the rise of the mobile environment, customer behaviour is changing and this will affect the IT approach to customer experience.

3.1 Building Customer Experience at the Point-of-Sale for a Mobile World

In the past decades, the retail market has been subject to significant changes (Rigby 2011, Harvard Business Review). With the advent of super-stores, mega-stores and e-commerce, which are highly efficient and effective, prices have reached unprecedented lows; and based on their success in the market it is fair to assume that super-stores and mega-stores are here to stay.

At the same time, customer loyalty has significantly decreased as buying decisions are mostly influenced by low prices. Many small retailers trying to compete not through price but product and customer competence were driven out of the market and customer loyalty has dropped to unprecedented lows. Generally speaking, however, significantly reduced price levels also mean that further competition solely based on prices will no longer be profitable.

This has led to the retail market's re-discovering of customer experience as the factor that makes a difference—only that good customer experience must now be delivered in the challenging environment of these highly cost-effective super- and mega-stores. Consequently, more and more self-service technologies, such as kiosk systems or digital signage, are currently being rolled out.

3.2 Delivery of Good Customer Experience Is More Challenging than Ever

It has been widely noted that digital natives, the generation born during or after the general introduction of digital technology, have a different attitude towards accessing and sharing information, collaboration, and problem solving in their private and professional lives.

In fact, the digital natives' interaction with technology has led to the emergence of a new pattern of SoLoMo applications, which stands for the convergence of social networks, location-based services, and mobile devices (see Kleiner, Perkins, Caufield & Byers 2011). While not exclusively targeted to the point-of-sale, the first implementations of these new types of applications have already started to put their mark on the point-of-sale. It is, for example, not uncommon for people to use smart

phones for running online price checks directly in front of the shelves or to prefer reading online reviews in the shopping aisles over consulting a shop attendant.

It is essential to understand how new technology for marketing, sales and service is currently being adopted at the point-of-sale before taking a closer look at customer experience reflecting the needs and wants of the new generation of smart consumers.

With all the changes in the retail market, customer experience at the point-of-sale has again become a major differentiating factor. However, providing good customer experience in the organizational and physical structures of super- and mega-stores has become significantly more difficult.

This is, on the one hand, due to the fact that the workforce at the point-of-sale has changed from shop owners and long-term employees with deep product insights to younger and—more often than not—underpaid and inexperienced staff. It is important to note that this is not only the case in low-price discount stores but also in flagship stores of highly regarded brands as, for example, the now defunct blog of an Apple Store employee showed (see CrAppleBlog 2011).

The diminishing numbers of product experts behind the counters now have to face the arrival of the smart consumers (see IBM 2009, 2011) who have a product expertise of their own. Today, it is not uncommon that an employee who has received little or no training on the products he is selling has to deal with a customer who has not only compared a number of reviews from trade magazines, but also has read dozens of other consumers' comments in Internet forums, and may even have studied the product handbooks that she downloaded from the vendor's product support pages.

One strategy of addressing the needs of the smart consumer is to provide the consumer at the point-of-sale with information tools similar to the ones he uses at home. This has, for example, lead to a strong growth in self-service kiosk technology and applications (see IHL Consulting Group 2011). Today's consumers can get support from a large number of self-service tools, such as way finding, product information and price scanners, coupon dispensers, gift registry, voucher or value card enrolment, and, of course, self-checkout.

However, implementing kiosk technology at the point-of-sale also has its limitations. For one, kiosks are additional technical devices which not only require floor space and connectivity but are also significant investments as the devices have to be laid out for the harsh point-of-sale environment and often include special hardware for printing or processing payments. Another important limitation is that most of the time, the kiosk application cannot identify the consumer in a convenient way. This makes targeting the kiosk applications to the specific needs or preferences of a customer difficult.

Of course, these limitations must not necessarily result in completely abandoning kiosk technology at the point-of-sale, as some experts have already claimed (see Intava 2011). This is especially true if applications require specific hardware which can only be provided in dedicated devices, such as self-checkout terminals or photo printing kiosks.

Fig. 1 Shopping Lifecycle Model with typical activities/needs per segment

For most other areas, however, mobile applications are gradually being recognized to be the better solution. With mobile applications, customers can be reliably identified which usually is not possible with kiosks installed on the premises. Mobile applications have a much wider scope as they can also support the early phases of the shopping lifecycle, such as product and price information, including the latest discount, shopping list generation, or shop location.

A few weeks ago, Apple has entered another domain, which until now was in the firm hands of the self-service kiosk industry: self-checkout. Customers can now pay for selected articles with their mobile phones and complete a purchase in the store without touching or interacting with anything in the shop but the product they are purchasing.

3.3 Shopping Lifecycle Model

Mobile applications have a number of key advantages over more traditional self-service technologies for consumers and businesses alike. This view is supported both by the Shopping Lifecycle Model, which NTT Data developed as an analytical framework, and by use cases derived from this framework, which do not only help to significantly improve customer experience but at the same time increase sales and reduce cost.

The NTT DATA Shopping Lifecycle Model consists of five segments as depicted in Fig. 1:

- The *Deals* segment mainly serves as a channel for conveying promotional information to the consumer. As the customer can be identified by the mobile application, promotional information can be tailored according to preferences, groups, or demographics.
- The *Favourites* segment also has a focus on preferences. Customer can maintain shopping lists or define preferred configurations, e.g. for meals or services.
- The *Shop* segment supports the actual shopping experience with shop locators, product and price information including customer reviews, way finders, or self-checkout.
- Purchases may trigger progress in loyalty schemes, for example bonus cards, which are maintained in the *Rewards* segment.
- The *Share* segment benefits from the built-in social media integration of mobile devices and provides a way of linking the purchase with activities in a number of social networks.

Altogether, the Shopping Lifecycle Model enables consistent customer experience that goes beyond today's multi-channel approaches and is referred to as *omnichannel retailing*.

The following business benefits can be realized with mobile applications supporting the full shopping lifecycle:

Building block	Business benefits within Lifecycle Model
Deals	Targeted promotional information is delivered directly to customer at no cost
	Promotions can be linked with purchases and hence effectiveness can be easily measured
Favourites	Customer preferences are explicitly documented and serve as an input for promotional and selling activities
	Customer preferences can also be implicitly recorded in a shopping history, as each purchase made via the application is personalized (in contrast to many point-of-sale transactions, which are not)
Shop	Platform for targeted cross- and up-selling activities resulting in larger shopping baskets
	Reduces the workload on retail/service staff who can focus on activities which provide more added value
	Delivers product/price information for the smart consumer in a controlled environment, which may improve comparability of prices
	Reduces cost in self-service as no additional kiosk devices are required, which are often equipped with specialized and expensive printing or payment hardware
Rewards	Fosters customer loyalty and works at all levels—from brands or chains down to individual shops
	Enables easy handling of a reward system with a way of instant redemption of rewards
Share	Leverages pre-integration of mobile devices with social networks
	Increases popularity of businesses in location-based social networks
	Makes friends and followers of customers aware of the business

The following scenario for a restaurant chain illustrates the application of the Shopping Lifecycle Model:

Via the restaurant chain's mobile application, customers get information on special offers (e.g. linked to coupons) targeted to their current locations and preferences (*Deals*). Customers can also use the application for browsing the restaurant's menu at any time, e.g., on the way to one of the chain's restaurants. Via the menu, customers can also learn about the ingredients and nutrition value of the food offered by the restaurant, read other customers' reviews and select and store favourite meals so that they can easily order these meals repeatedly (*Favourites*).

For the restaurant chain, the menu also serves as a platform for cross- and up-selling which take customer preferences into account. Having entered the restaurant, customers can immediately place their orders, identify their tables by means of a QR code and pay via the mobile device (*Shop*). This is not only convenient for customers, but also reduces the workload on the service staff. Turning the mobile device into a bonus card, the purchase is then credited in the restaurant chain's loyalty program (*Rewards*). Last but not least, the mobile application also allows customers to automatically check-in their favourite location-based social networks and thus implicitly make the restaurant known to their friends and followers (*Share*).

3.4 Evaluation of Current Approaches

To better understand the significance of the Shopping Lifecycle Model approach, it is worth looking at mobile shopping solutions targeted at the point-of-sale that were most recently introduced in the market and which are regularly reviewed on Retail Customer Experience's Mobile Monday blog (see Mobile Monday 2011).

Most applications more or less resemble a shopping list. They lack both targeted media content and any integration with the point-of-sale (way finder, product availability, or self-checkout). Promotional information is not targeted towards the individual customer but is rather generic (e.g. value of the day). Integration with existing e-Commerce solutions is often implemented by redirecting to a URL.

Only few companies offer strong integration between the mobile application and the point-of-sale. One of these companies is Apple, which supports almost all customer-facing processes, such as product information and customer reviews, events, product purchase, reservation and pick-up, staff requests, and, off late, also EasyPay, which enables unattended self-checkout for commodity articles in Apple stores by means of a Store App (see Apple Store 2011). Another example is Metro Group's future store initiative. Its mobile application covers the shopping lifecycle well and includes in-shop activities. However, even this forward-looking initiative does not make full use of customer data, e.g., for targeted promotions that could be delivered in real time at the point-of-sale, and many business benefits identified in the table above still are not implemented.

In a nutshell, information sources like Retail Customer Experience's Mobile Monday convey two important messages:

- The large number of solutions introduced in the past 12 months shows that the market is ripe for mobile applications supporting customer experience.
- Most importantly, these solutions still reside at very low levels of the Customer Experience Maturity Model (see Chordiant 2011) as they focus on functions, data, and processes. They still have to take into account customer's profile and context in order to establish a truly individual and intelligent dialog with customer.

3.5 Suggestions for Improvement

Taking a look at the drivers which influence customer experience at the point-of-sale, it becomes evident that customer satisfaction increases. Also, specific and measurable business benefits can be derived for organizations which implement mobile solutions covering the full shopping life cycle.

For individual businesses, the following table contains the elements for a specific and quantitative business case. The examples show benefits in customer scenarios and qualitative statements with regard to higher revenues or cost savings:

Component benefit	Significance	Scenario
Targeted Media Content Increases revenue	Stimulates customer needs by targeted media content delivered to the mobile device. Targeting can either be product-specific (e.g. delicatessen) or customer specific (e.g. customer purchasing Asian food products)	Linda (Housewife, 39—does not have a smart phone but uses an iPod Touch) has started to change her grocery shopping habits since she has started learning about new recipes or following cooking shows on her mobile device. (Adopters in the market: Tesco, Metro) Mary (Student, 22—uses an HTC Tatoo) tries to avoid advertising. However, she has installed the mobile app of her favourite fashion brand as they offer an "outfit of the day" that sometimes inspires Mary when choosing her outfits. She has even added new accessories to one of her outfits
Events Increases revenue	Informs customers about events hosted at a nearby point-of-sale. Increases number of customer visits to the point-of-sale	John (Chief Engineer, 52—uses a Samsung Nexus S) learns about a Jazz music event in the dealership usually servicing his car. He decides to attend the event and in the break gathers some information regarding the latest models and their exceptionally energy efficient engines

(continued)

Component benefit	Significance	Scenario
Gift-With Purchase, Buy-More-Save-More, Coupons, Cross- and Up-Selling Increases revenue	Influences customer's shopping behaviour towards higher spending, more frequent purchases, or additional product categories	Ken (Sales Manager, 32—uses an Apple iPhone) regularly visits a restaurant chain for lunch. However, he never tried any of the coffee products. At his next purchase, Ken receives a coupon for a free coffee and cheesecake with his lunch. Ken starts to like the coffee and starts ordering coffee regularly after his lunches
Shop Locator/Location-Based Advertising Increases revenue	Points out bargains in the neighbourhood to customers and attracts additional customer to stores	Linda is a regular customer of a supermarket chain. While she normally only frequents the supermarket near her home, she is informed about bargains at a new supermarket near her workplace. She starts shopping during her lunch break and has more time for her family and kids in the evenings Susan (Retired, 55—does not have a smart phone, but uses an iPad that she received as a gift on Mother's Day) is interested in a particular art book. She is unsure whether the quality of the prints in the book is good enough to justify the high price. She checks which of the stores of her favourite book chain has the book available and plans her shopping trip accordingly
Auctions Increases revenue	Stimulates customers' purchasing decision by introducing certain urgency	Mary never reads the advertisements in her letter box. However, the app of her favourite fashion line, which she has installed due to daily outfit suggestions (= > targeted content), informs her that a number of "second season" items are auctioned the next day. She decides to participate in the auction while commuting to university

(continued)

Component benefit	Significance	Scenario
Gift Card Increases revenue, reduces cost	Provides gift card purchase and redemption on a mobile platform/across all channels Avoids manual registration of gift cards	Susan has received a gift card for her favourite book store as a birthday present. She can spend the amount of money across all channels—regardless of whether it is the e-reader, the web shop or the store
Shopping History, Favourite Products/ Meals Increases revenue	Provides customers with a shopping history/list of favourite products that can be handy for repeated purchases At the same time builds a database of customers' purchasing habits	Ken is always in a hurry during lunch. He now has a number of favourite lunches configured in his mobile app which he can order from his mobile phone when entering the restaurant. This saves a lot of time and allows him to have a coffee (and a cheesecake?) after lunch
Shopping Lists, Wish Lists Increases revenue	Provides a means to push opportunities that arise from promotional activities in the sales cycle	Both Linda and Mary maintain their shopping lists conveniently in the mobile app. Items from targeted content, coupons, etc. can easily be added. Mary has published her fashion shopping list as a wish list for her upcoming 23rd birthday
Incentivized Surveys Increases revenue, reduces cost	Provides information on customers' views. Customers can complete the survey on the mobile device in their spare time and receive small incentives Raises acceptance of surveys and reduces cost in conducting surveys (e.g. through questionnaires at the point-of-sale)	Linda has tried out a new range of Asian food products that were recently introduced in the store. She is asked to complete a survey on her experience with the new products and can earn a 5€ voucher when participating in the survey. Linda completes the survey during her daily commute
Customer Reviews Increases revenue, Reduces cost	Gives customers a more differentiated view on products, written by other customers May lead to more realistic expectations, lower return rates and increased customer satisfaction	Susan is interested in a book on Walt Whitman, the American poet. She finds two books with similar contents and publisher notes. In the customer reviews, however, she finds out that one book uses more scientific language, so that a few readers do not recommend it for a leisurely read. Susan decides to go for the other book

(continued)

Component benefit	Significance	Scenario
Product/Price Information Increases revenue, reduces cost	Allows customers to access comprehensive product and price information anytime, anywhere Staff has to answer fewer questions	Linda is on a diet (again). The nutrition information is integrated in the shopping list and so she can easily get a health rating for her shopping list regarding her diet. For products that do not go so well with her diet, the mobile app suggests better equivalents with less fat or sugar. Linda replaces some of her products with healthier ones. The slight price increase does not worry her
Self-Checkout Reduces cost	Reduces staff at the point-of-sale Also reduces waiting time for customers May save expensive hardware (e.g. kiosk systems) and cash handling	After Ken has finished his lunch (including the coffee and the cheesecake) he checks out using his mobile application. He confirms the checkout when leaving the restaurant using a QR code. Now Ken even has time for a short walk after lunch
Way Finder Saves cost	Guides customers to the right place in the store Reduces the number of questions to the staff	After having explored Asian cuisine, Linda is now trying out a Cajun dish. She is not sure where to find the required spices, but a way finder for the supermarket, which is part of her mobile app, is guiding her through the shop to pick up all required items of food from her shopping list
Brand Loyalty/Bonus Cards Increases revenue	Ideally adjusts itself to a customer's interests, habits and purchases, thus becoming more and more useful—a good mobile app Increases loyalty by integration of bonus cards	Since Ken is a loyal customer of the restaurant chain, he has soon reached the level of consumption that provides him with a free coffee after lunch. When visiting new customers, Ken is keen to find the closest restaurant of his preferred chain. This proves not to be difficult, as he can transfer the address of the next restaurant to his car's navigation system. Ken spends even more of his lunch budget with his favourite chain

(continued)

Component benefit	Significance	Scenario
Facebook, Foursquare, Shop Check-ins, Branch Loyalty Increases revenue	Integration with Facebook or Foursquare allows digging into the customers' social networks and using it for social marketing purposes. With "Deals" and "Places", Facebook is becoming more and more relevant for retail	Mary sees in Facebook that her friend Ann has checked in at her favourite fashion chain. Later that day she calls Ann and asks here whether she had purchased a new outfit and learns that quite a few new items have recently arrived in the store. Mary now plans to check out these items herself in the next days

4 Conclusion: Go Mobile or Go Home?

The use cases introduced above do not only help to significantly improve customer experience at the point-of-sale but also increase sales and reduce cost. Implementation of these use cases, however, differs significantly from the development and deployment of typical point-of-sale systems.

These solutions must be based on state-of-the-art technologies as opposed to today's proprietary point-of-sale technology. To employ these technologies, retailers must open their back-end systems to outside clients and work with highly dynamic and non-standardized interfaces of the social web.

Most importantly, omnichannel retailing requires integration of functional and technical processes across multiple channels. This means moving away from traditional local metrics, such as same-store sales to channel-independent indicators, for instance return on invested capital.

However, it is not an option to embrace mobile technologies at the point-of-sale, because in the near future virtually every phone will be a smart phone, and users will expect consistent omnichannel experience. Retail market leaders like Apple and Metro have already recognized this need and have started implementing omnichannel solutions which cover large parts of the Shopping Lifecycle Model.

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Part III
Inspired Talent Management

Successful People Strategies for Innovation in Global Delivery and Virtual Teams

Clas Neumann

Abstract While we often do not see great product innovation from countries that have traditionally a strong presence as global delivery destinations (China, India or Eastern Europe), a lot of innovation exists in the underlying processes, management models or as "hidden" innovation inside products we perceive coming from developed markets. At the same time, innovation will not happen without highly engaged people, glued together by a strong sense of urgency and common mission. Way too often, companies believe that through a set of global processes and policies they can create a functioning global delivery organization or a distributed R&D landscape and that local talent will unquestioningly follow them, as long as the pay cheque displays a high figure. Though the global firm needs global processes and a set of standardized policies and common values, it is by far not sufficient. A global people strategy including local values and true participation will open many avenues for the globally distributed centers to have a diverse set of policies. It does not only provide a better local fit, but also increases the employee engagement significantly. As a result, employees will be encouraged to actively work towards a better working environment, better products, and better services—and ultimately solve many of the challenges in their everyday work, through innovative solutions. This article describes proven people strategies to create a highly innovative global workforce.

1 Introduction

Recent studies suggest that there is not only a strong linkage between engaged employees of a company and the companies output and profitability, but also a significant increase in innovation, when employees of the firm are highly engaged see (Gallup 2010).

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As the evidence seems to be established, the next questions to ask specifically in a global delivery or R&D network are about the type of innovation we can expect and how to create highly engaged teams, who not only drive excellence in their delivery, but also think beyond the scope of their project and try to constantly find new solutions to daily challenges.

This article will use SAP as an example since it has succeeded in distributing its software development and global service offerings around the world since 1994. The journey started with an R&D center (SAP Labs) in Palo Alto, and this initial research & product development hub was soon followed by SAP Labs in ten more countries. Today, there is a network of 15 SAP labs in 12 countries. From those labs, SAP offers professional services to its customers, internal services for global lines of business, and creates software products in distributed teams. The creation of software products happens usually in one to three locations per product. Today every location is able to handle the full development life cycle of the created products. In other words, SAP has not followed the traditional route of splitting requirement analysis, blueprint, design, coding, quality assurance, and testing—but believes in doing all these steps within small teams in all locations.

In many ways, SAP's strategy with respect to the distribution of its services and product development is different from that of many other multinational companies, as it started very early with a relatively large number of hubs, which allowed certain "near-shoring" of talents and services, as well as attracting a much higher diversity of talent around the globe.

On the other hand, with the high number of centers (which in average have about 1,000 engineers), there are various challenges to solve:

- One has to have absolutely proven and scalable processes in place.
- One needs to constantly reduce the complexity of too many locations for one specific product.
- One needs quality leadership locally as well as globally, that is ready and willing to work un such a multicultural / multidimensional environment.
- One, most importantly, needs to constantly engage with all employees in all locations—from believing in the strategy to the excellence in their daily work.

Regardless of whether SAP created the Labs by herself as a real new setup from scratch (like in Palo Alto, Ireland, Hungary, and in all four BRIC countries) or integrated them as part of acquisitions (like in France, Canada, Bulgaria, Germany, or Israel), there are always four key dimensions that play a role when creating a new SAP Lab:

- Risks and cost scenarios (the typical hard factors of locations)
- Market potential
- Talent
- Innovation

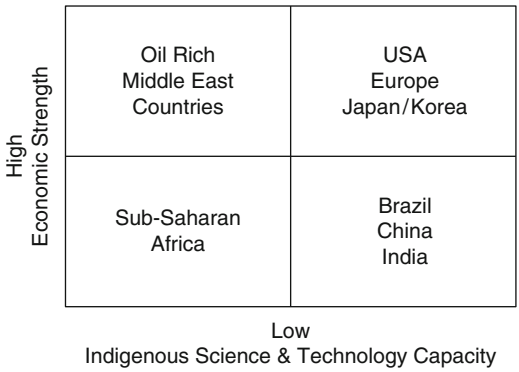

Fig. 1 Positioning of the developing world in the science and technology landscape

Whereas the first three dimensions led many global IT companies to open service delivery centers or research hubs in the BRIC countries over the last 20 years, breakthrough innovation were often not expected from those locations.

On the other hand, multiple corporate success stories have meanwhile proven that innovation in emerging markets is possible if the science and technology capabilities are utilized in the right way. Leading researchers like Prahalad (2004) and Mashelkar (2011) highlighted specifically the opportunities arising in emerging markets from innovation. Others like Govindarajan et al. (2009) went even a step ahead and argued that innovation from emerging markets can reversely change the mature markets as well. In Fig. 1, Mashelkar (2011) tried to put all countries in one single diagram in a simple way.

The real success factor for SAP has been the empowerment of the employees in those centers far away from the decision makers in the headquarter, and their engagement level. We realized that the engagement level, which in the end defines the output and innovation, has to be constantly stimulated in order to remain high. Depending on the size of the organization and its life cycle, the approach has to be varied.

SAP managed to have consistently high levels of employee engagement in its offshore centers. China and India, for example, in 2011, had employee engagement values above global average, and also topped local benchmarks in local best employer studies.

At the same time, in many of the SAP Labs, the innovation index (which is a summary of different KPIs like patent applications, invention disclosures, and participation and success rates in innovation campaigns) is often higher than that in its headquarter in Walldorf, Germany.

So what is the secret behind the success in keeping such high levels of motivation and innovation?

- Global innovation programs which are available across the globe.
- Global people strategy which encourages local participation and inclusion.
- Integration and trust between local teams, local management, global management, and leadership.

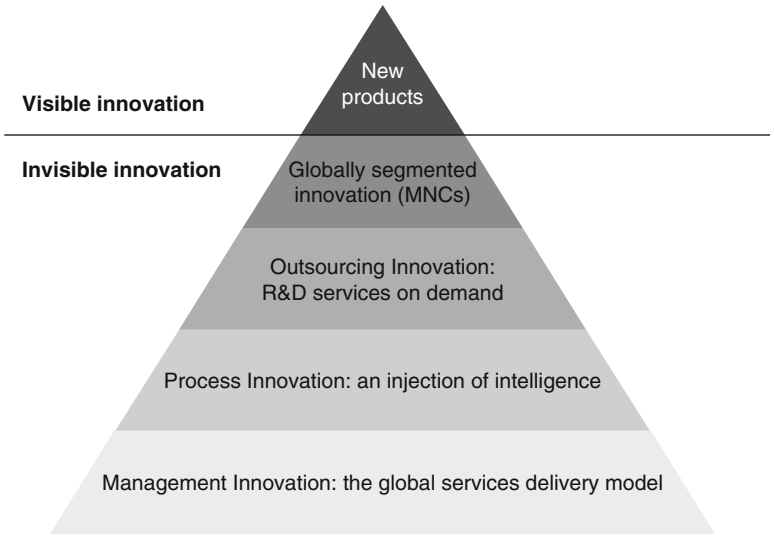

Fig. 2 Invisible innovation

2 Global Innovation Programs and Local Participation

The other important point is the type of innovation to look for: It may be unrealistic to expect the next breakthrough product innovation, which redefines the world market for those products, from an offshore R&D center or a global delivery hub. This is unlikely, as the mission of the teams in these multinational company settings is often narrowly defined, the exposure to the customer demand beyond the domestic market is low, and the expertise on methods and models to create intellectual property is often nonexistent.

Nevertheless, a lot of innovation happens either built-in as product components or as a completely new innovation in the area of processes or models. Kumar and Puranam (2012) argue that innovation from countries like India can be often "invisible," but nevertheless very relevant. There are four levels of invisible innovation in a pyramid model (see Fig. 2):

1. Globally segmented innovation, by major multinational corporations (like GE, CISCO, and SAP). This describes horizontal segmentation of product development, e.g., complete product components or solutions coming from one country, whereas the final assembled product is still perceived by the consumer as an innovative product from another country (usually the multinational company's headquarters).
2. Outsourcing innovation. Whereas specifications of expected results are given by a client, the complete R&D to get to those results is outsourced. So whereas the

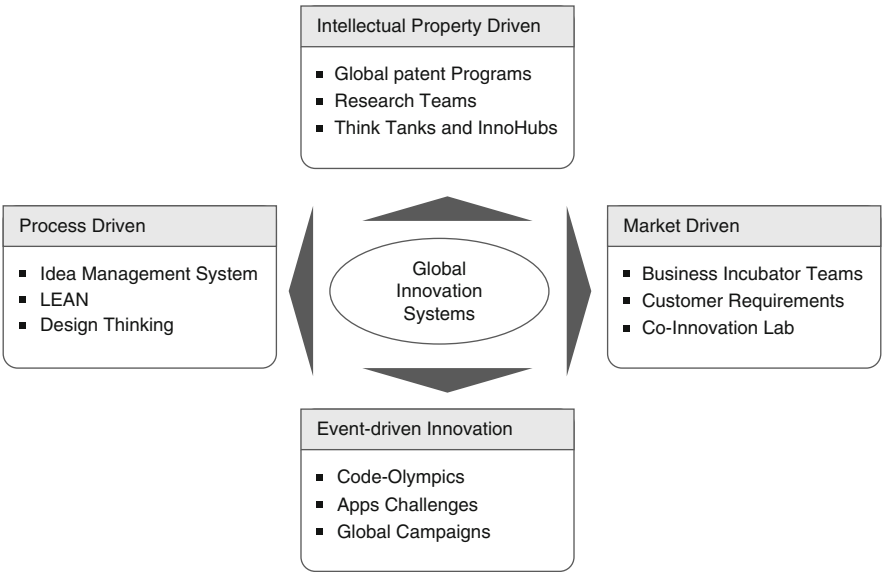

Fig. 3 Global innovation systems

intellectual property may still be owned by the client, the innovation to get there was done by the outsourcing firm.

3. Process innovation through injection of talent. This describes the phenomenon of overqualified personnel often working in large offshore or call centers which results in breakthrough process innovation, as the employees do not just fulfill a duty but want to utilize their skills and make the process more efficient.
4. Management innovation in the global delivery model, by large outsourcing firms, e.g., in India. This describes the highly efficient, scalable delivery systems, invented and fine-tuned by those firms, which make specifically IT projects possible on large scale with a very high success rate.

How to get people to actively participate in the innovation process? First and foremost, it is important to make all innovation systems in a company available at all its global centers, irrespective of whether those are core research hubs or captive product development centers of global delivery units. No one is less or more innovative than someone else as per a job description or location!

Irrespective of whether these are process-driven systems, intellectual property-driven systems, market-driven systems, or event-driven systems (see Fig. 3), most, if not all of them, should be made available in all locations. Participation should be encouraged through local incentives and adjustments of these systems.

3 Global People Strategy and Local Inclusion

There are two important aspects for the global delivery firm or a global R&D network when it comes to the people strategy:

- The availability of people-related policies, benefits, and programs across the globe.
- The opportunity for the local teams not only to adjust global programs to make them a better fit, but also specifically being able to participate on a grassroot level creating complementary elements of such programs and policies, which globally no one would have thought about.

3.1 Availability of Global Policies and Programs

Most multinational companies have a global strategy when it comes to their people programs, but the main question is how much of that is reflected at the grassroot level. So having a great people development program in your headquarter which colleagues in Shanghai have never heard about, or having a global stock option program which is unavailable to colleagues in Bangalore, leads to a "them versus us" thinking and deep de-motivation; top management loses credibility very fast if injustice is even perceived in its slightest form.

In the context of a globally successful distributed service or R&D, there are some areas where a company has to ensure that as a matter of fairness and transparency, they should be similarly structured and the key elements made available for all employees globally. These are as follows:

- Compensation and benefits
- Career models
- Organizational design
- Pay for performance culture

But beyond those, a multinational company that relies on a global workforce which works as a team (like a professional services company) needs to put special emphasis on simplification of the programs, to allow local flavors and enrichment of the framework.

3.2 The Localization Challenge

It is obvious that not every global program can run everywhere in the same shape or fashion—this would neither be desirable nor wise. Often, companies speak of "glocal programs" in this respect. Examples of localization are as follows:

- Compensation structure: The compensation matrix should always follow the local market conditions and requirements.
- Benefit basket: Again, local elements must be taken care of, e.g., pension funds, health insurances (in India perhaps parents can be included), and transport to the company (a must in China, Brazil, and India).
- Career model: Though the principles should be the same globally (and certain career levels should match on a global scale), there could be the need locally for additional career levels (driven by the demand for more frequent promotions).
- Talent management: It is important to have a global standard regarding employees considered to be a part of a special talent pool. But the program itself can be quite different, as colleagues would have different expectations: Whereas in some cultures, no one would like to be publicly announced as "Top Talent" or "High Potential," in other cultures this is a matter of pride. The same is true for corporate awards, which could have a large impact in Asian countries, but a lesser impact in central Europe.
- People development: Again, in Europe, a development culture of "on the job" and "training as per job need" might be preferred, whereas in India colleagues are more interested to do formal courses (even with grades and certificates) and learn things beyond their current job responsibilities to increase their job market value. This has to be taken into consideration when people development programs are structured.

Even more important than creating this "glocal framework" is to present colleagues with the opportunities to actively participate in the creation of policies that may be relevant to them. This kind of participative role is usually taken care of in large European companies by the selected workers council. But in a typical offshore location, such systems do not exist, or they are often not effective.

Therefore, the management should create working teams of employees who take the ownership, on a continuous basis, for certain policies or day-to-day concerns. At SAP Labs India, for example, this was started with three employee committees for food, transport, and social activities and later expanded to the so-called Ignite team, who work on most of the existing employee-impacting policies and programs. Obviously within a framework of "nonnegotiable" items (like pay hike), the senior management retains the right to veto.

Such engagement immediately creates an atmosphere of trust and inclusion. Besides, it makes the programs and policies usually much stronger, since neither the local management nor the global management would know about all the little difficulties the team members face every day. Areas that matter to colleagues and where policy proposals could be worked out by cross-level/cross-line teams are travel, family benefits, working time flexibility, vacation models, and the like.

4 Integration and Trust

A very important area, which is often forgotten in the daily focus on execution, is to create over time an atmosphere of mutual trust between globally distributed centers. Locations, managers, and employees alike must feel integrated into the global corporation and need to become a real part of the commonly shared culture.

"Integration" consists of three main elements:

- Direction (a shared strategy and vision)
- The right people in the right places (people who have autonomy, responsibility, and accountability)
- Relationship (negotiating differences, building strong teams and partnerships, understanding others, and leadership skills)

Relationship is at the core of integration because without strong relationships amongst managers and employees, any attempt to reach a shared vision will fail as hierarchies and global lines have their limitations.

4.1 Direction and Leadership

A high-performing, innovative culture can only be created if the leadership in all locations is equipped with the right tools and skills, and displays the required level of passion. Besides, leaders are expected to provide direction to their employees. Beyond the well-known features of a good leader, in the multi-locational context, one needs culture-sensitive, globally savvy, and experienced leaders. Only then their direction will be understood and accepted. To build these skills, the following measures can be implemented:

- Make global competence mandatory for Global Leadership Positions (Rule: 2 years of experience in a location other than one's own nationality or a proven track record of different roles within a career).
- Create Global Leadership Associate Program (GLAP): Many leading global companies already have such programs (with long traditions of success) that keep track of promising leaders and assess their different roles and locations (out of their comfort zones); resolving today's repatriation issues by providing plans for all mobile managers that utilized their newly acquired global competence (Return on investment for SAP).
- Create awareness on the do's and don'ts of leading virtual teams by systematically introducing best practices on virtual management (e.g., trainings should be "must attend" for leaders of virtual teams).
- Develop constantly the next generation of leaders from across the globe.

Similar to leadership, innovation can hardly be fostered by brilliant individuals keeping their knowledge with them. Instead, a "high touch" development program focuses on elements like cultural sensitivity, virtual teamwork, and LEAN across borders. Beyond this it is important to invest in talents, for example, by presenting young talent with the opportunity to learn from seniors, specifically on international events. Another successful approach is to rotate the best: The best people should not only voluntarily rotate with other locations, but it should also become a mandatory exercise.

4.2 The Right People at the Right Places

The selection and continuous development of the right people at the right places are very important elements of a successful people strategy in a global context. Important decisions have to be taken for the senior positions on the following criteria:

- Local fit (understanding of local culture, language, and business rules?)
- Global network (how well is the person connected globally, e.g., with the headquarter?)
- Core skills resp. value-add (can the new manager bring new and additional skills to the new team or organization?)

Beyond the personal fit, if the environment does not suit the job expectations, there is a high probability of failure. Elements should include the following:

- Collaborative culture
- Decentralized decision making (e.g., giving competence and decision authority to LEAN teams in the different locations)
- Focusing on high performance by teams rather than by individuals (LEAN Principle)

4.3 Relationship

No technology can substitute the "human-touch" impact of a face-to-face meeting: Face-to-face meetings facilitate shared understanding which is beyond other means. Such relationships are especially important in high-context cultures (e.g., Brazil, China, India, and Korea), and a company needs to supply resources and time for these kind of interactions.

This could be done through:

- Creation of horizontal project groups for some of the projects that are highly visible in the company; such groups should span board areas (LoBs) and

locations, and work on challenges which are perceived as a common threat or an opportunity.
- Creation of a program for the top 100 leaders of the firm, which gives selected managers the opportunity to socialize, learn, and work together on multiple occasions with a special focus on the customer and business.
- Creation of a "Young Volunteer Program." It is an opportunity for promising interns/students/young colleagues to spend a couple of weeks in a different location on a volunteer program (using low-cost options such as shared accommodations, self-funded flights, etc.). The people they meet and the common experiences that are shared leave them with an open-minded approach and at times create lifelong friendships and contacts.
- Offer similar access to technology and infrastructure wherever there is a significant employee presence. For instance, LEAN facilities (at SAP they are called "APP-Houses") offer a flexible environement for easy collaboration on-site. In addition, access to global communication systems should be there, like telepresence, use of webcams or virtal team software.
- Broadening the horizon of current and future Leaders. Single-location/single-line careers lead to micromanagement ("I know it best," "Not invented here") and a lack of cultural understanding. The physical mobility of employees and leaders is key in helping to "get to know what you don't know" and in building strong personal relationships within global companies.

5 Conclusion

Technology advances, availability of talent on global scale, comparative cost advantages, and strong processes have certainly helped, over the last two decades, in making the global service delivery and globally distributed R&D a success. Nevertheless, most processes and the organizational design of multinational companies have been created to maximize efficiency and output. Cost, scale, quality, and speed are no longer differentiators between global service delivery firms and (within a multinational company) different captive centers.

The differentiator today is the additional value that a specific unit can deliver, which is determined by the innovative ideas and solutions people can apply to the problem of the client, irrespective of whether the customer is internal or external. For this to happen, those who deliver the service on a day-to-day basis must be highly motivated, engaged, and willing to work beyond the call of duty—individually as well as within the team.

The measures described above can help in making this happen, though these can only serve as an orientation and not as the ultimate recipe for success, which will vary depending on companies, cultural and strategic fit of measures, within its people strategy, which have to be ensured.

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Diversity and Inclusion: A Business Imperative in Global Professional Services

Swati Jain and Richard Lobo

Abstract Diversity and inclusion is a critical success factor to win in the flat world. As global corporations begin operations from offshore locations and cater to clients across the world, they begin to recognize the value of a diverse talent pool. Differences translate into creativity, innovation, flexibility and better adaptation to a changing environment and enhanced understanding of customer requirements. Workplaces that explicitly celebrate differences encourage employees to draw fully on their individual potential contributing to organizational success. Infosys is an example of an Indian firm consistently augmenting cultural competency and intelligence of their workforce through training programmes, networking forums, experience sharing opportunities and other initiatives. With operations in 32 countries and employees belonging to 89 nationalities, the company strives to be an equal opportunity employer by leveraging on differences. It has designed scalable processes to acquire, engage, motivate and retain talent, one of them being the formation of employee resource groups. Today, diversity and inclusion has become a business imperative for firms of Indian origin in global professional service delivery to excel in the changing industry, optimize operational efficiency and maximize benefits.

1 Introduction

The diversity and inclusion vision is to leverage the power of differences for sustainable competitive advantage and create a workplace where employees from varied backgrounds have the opportunity to participate, develop and contribute freely and equitably.

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What sets diversity and inclusion at Infosys apart is the multidimensional approach that integrates organizational structure, business strategy, HR policies and training efforts to enhance effectiveness of diverse teams leading to higher and sustainable benefits for the employees as well as the organization. The board of directors provides the diversity and inclusion vision, senior management develops a strategy and presents a framework to accomplish this vision and the diversity team translates it into a plan of coherent action. The training team, HR team and the business units provide constant support required in the execution of the plan to acquire the desired results.

A collaborative effort from multiple stakeholders makes it possible for the vision to be translated into measurable outcomes. To evaluate the success of the diversity and inclusion practices, inclusivity levels are measured across the organization through an inclusivity index, a mechanism which was developed to track the progress of diversity awareness and promotion within the company. Periodic surveys and reviews involving the employees, senior management, HR and customers are also carried out to assess and improvise the initiatives.

2 Employee Resource Groups at Infosys

Infosys has instituted multiple successful affinity groups, also called Employee Resource Groups (ERG) for employees to have an opportunity to collaborate across business units, functions and levels. According to Infosys SR (2011), this enhances:

- Information sharing
- Networking
- Competency development
- Skill enhancement
- Collective problem solving

The five ERGs shown in Fig. 1 promote diversity and inclusion through a three-pronged approach consisting of programmes, policies and facilities. These affinity groups are instrumental in effecting changes not only within Infosys, but also within the society at large.

2.1 Women's Inclusivity Network

Infosys Women's Inclusivity Network (IWIN) was instituted in 2003 to create a gender sensitive and inclusive work environment for women employees and develop them for managerial and leadership roles thereby maintaining gender ratios at all levels in the organization.

Since traditional attitudes changed, women have expressed high career aspirations in addition to desire for knowledge, persistence in the face of challenges and capacity for hard work. With the unprecedented growth in the IT industry and competition for best-in-class talent, leading firms of Indian origin realized that the

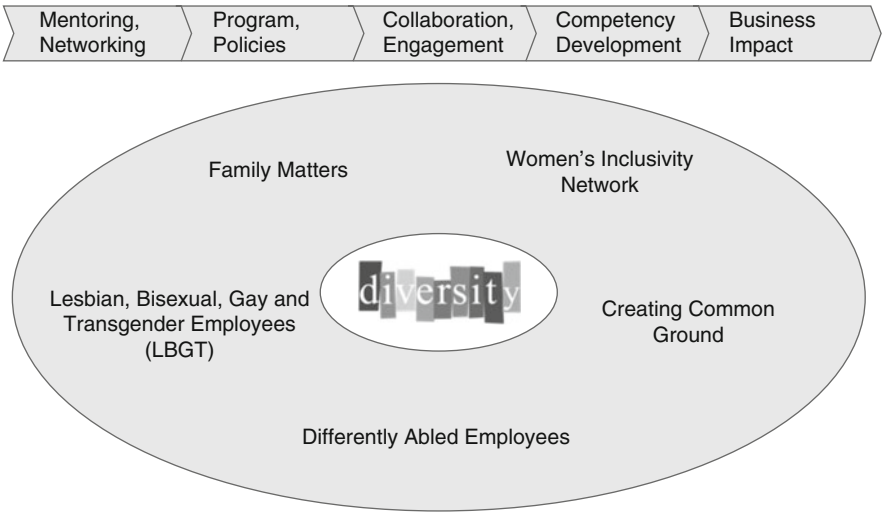

Fig. 1 Employee resource groups

impending talent crunch could be solved by developing and nurturing the 5.5 million educated ambitious women entering the workforce each year (see Sharma 2011). In India, 42 % university graduates and 25 % of MBA holders are women. Hence there is a large educated, talented workforce available to be tapped.

The advancement of women executives needs to be enabled through greater flexibility in work timings, work from home option, special support for women responsible for childcare or eldercare, exclusive training, mentoring and experience sharing programmes for stronger network development. IWIN consistently works towards achieving these objectives. Women bring elevated social sensitivity, creativity, empathy and innovation to the organization impacting effectiveness significantly. The gender diversity practices in Infosys seek to address needs specific to the development, engagement, growth and retention of women employees.

2.2 Family Matters

Family Matters is an employee affinity group to promote work–life balance among young parents in the organization.

With more and more urban, nuclear families fast becoming the norm, there is a gnawing need for support systems and a sensitive work environment to facilitate men as well as women employees to be able to effectively balance the demands of work and family life. The erstwhile non-issues, such as child care, elder care and other responsibilities that were taken care of effortlessly due to extended families living together, have become critical issues today. India is yet to evolve in terms of availability of quality and reliable child care, elder care and other support systems that are taken for granted in the developed countries.

Apart from paid maternity leave, paid paternity leave, paid adoption leave, flexible working hours and work from home option, Family Matters offers peer network for support and information sharing. There are family enrichment programmes and workshops organized for employees so that their personal lives are fulfilling. The programme is measured in terms of coverage, feedback from beneficiaries, and alignment with business goals. The impact has led to change in the traditional roles played by women and men in the Indian society reinforcing egalitarian values.

2.3 Creating Common Ground

Creating Common Ground focuses on equipping Indian employees with skill sets required to succeed in the global environment and supporting non-Indian employees in centres across the globe to assimilate into the organizational culture.

The practices are implemented organization wide based on demographic and societal trends with distinct focus on specific countries. It has been effective in retaining a multicultural talent pool, creating synergies among culturally diverse workforce and providing innovative solutions using multifaceted perspectives. It has reduced cultural friction, creating successful professional relationships thereby impacting employee satisfaction. The initiative has been instrumental in the development of cultural competence at the individual and organizational levels, giving Infosys a competitive advantage over others in the global professional services market.

2.4 Differently Abled Employees

Infyability is a forum that works towards creating a sensitive and inclusive workplace for differently abled employees (PWD, people with disability).

The recruitment process at Infosys includes favourable interviews and selection processes for PWDs encouraging them to apply for multiple roles and positions at Infosys. Special training programmes are held for PWDs to enhance their skills and competencies. Latest ability-enhancing tools and gadgets are made available to support them with their work. Facilities and infrastructure are PWD friendly. Regular accessibility audits are conducted to identify and restore physical barriers; sign language interpreters are present at important events.

Infyability works towards sensitizing managers and colleagues to the needs of PWDs through workshops, training programmes and other events. PWDs are given opportunities to showcase their talent at multiple forums. For instance, the World Disability Day is held organization wide to create awareness and foster inclusion. Infosys also provides interest-free loan to PWDs for the purchase of ability-enhancing products.

2.5 Lesbian, Bisexual, Gay and Transgender Employees

IGLU (Infosys Gay Lesbian Employees and You) is an affinity group to create a safe and respectful work environment for employees who are homosexual, bisexual or asexual.

In the past, sexual orientation and gender identification were largely considered a personal prerogative or private information not concerning the professional lives of the LGBT (lesbian, gay, bisexual and transgender employees) and therefore the corporate sector has been aloof to this subject. But now that research and surveys have established a direct correlation between sexuality and workplace productivity, Infosys has made concentrated effort to promote an inclusive environment that enables employees to bring their whole selves to work. Catalyst (2009) found that LGBT employees who work in organizations with employee networks, resource groups and mentoring programmes are 7–16 % higher in their workplace experience scores. Infosys has instituted stringent anti-discriminatory and anti-harassment policies and believes that LGBT should be able to share with their colleagues and seniors who they really are, what they believe in and how they live their lives. They should be judged only for their performance at work and the contribution they make to the development of business. They should feel confident that they will be appraised based purely on their knowledge and competencies. And they should never have to forfeit client interfacing opportunities for being who they truly are.

3 Commitment to a Positive and Thriving Work Environment

As a professional service provider of Indian origin with a global reach, Infosys is committed to providing a thriving work environment free of unlawful harassment.

3.1 Harassment Policies

Organization policy prohibits harassment based on race, religious creed, colour, national origin or ancestry, physical or mental disability, medical condition, marital status, age, sexual orientation or any other basis protected by federal, state or local law or ordinance or regulation.

The organization holds regular training programmes and seminars to educate employees on workplace conduct with examples and case studies. An e-learning module is also available. Any complaint of harassment is dealt with speedily using the organization's grievance redressal process. Employees are protected from retaliation for either complaining or participating in the resolution process.

3.2 Global Internship Programme

A global internship programme called InStep was initiated at Infosys in 1999 to attract talent from top academic institutions around the world. The programme draws students from management, technical and liberal arts backgrounds.

InStep fosters a multi-cultural environment within the organization and provides high-impact strategy and cutting-edge research projects. InStep also brings diverse perspectives from best-in-class talent. In the last 10 years, Infosys has partnered with 664 interns of 41 nationalities from 95 of the top universities across the world. InStep incessantly explores co-creation opportunities between industry and academia through case studies, publications, research projects and other engagements.

InStep has become an exemplary effort from the global professional services industry to collaborate with global talent in the pursuit of excellence.

4 Conclusion

In the globalized environment of professional service delivery, firms of Indian origin need to constantly evolve in order to remain pertinent to their clients as well as their own employees. The ability to tap into the best human talent globally is an important sustainable edge to win in the "flat world". Business strategy has to be aligned with people strategy as a critical factor for superior results. High potential and high impact diversity, together with inclusion initiatives, are key to deriving high value from a global workforce.

Professional organizations such as Infosys focus on establishing the right value proposition required to attract global talent by becoming an employer of choice. Just as organizations select people they want to hire, talented people pick the organizations they want to work for. For the employee value proposition to create an image of the company that attracts and retains best in class talent, it must therefore be aligned with the organizational strategy plan, its vision, mission and values.

Diversity and inclusion practices result in specific observable changes in employee behaviour, for instance:

- Open, direct and high-impact communication with peers, seniors as well as with clients
- Heightened confidence levels while interacting with individuals from different cultural backgrounds
- Improved knowledge of corporate etiquette and global outlook

With enhanced synergy and team spirit within distributed project teams, employees are able to better understand and cater to customer demands. Improved customer satisfaction scores have a positive impact on the service provider's brand image. Apart from social and moral implications, diversity and inclusion practices

have direct financial implications; it becomes viable to expand the business at reduced costs to multiple locations around the world as the workforce is acquired locally.

And for a long-term benefit, significantly improved employee satisfaction also leads to significantly reduced employee attrition rates.

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Advancing Intercultural Competencies for Global Collaboration

Wolfgang Messner and Norbert Schäfer

Abstract Globalization is not a rite of passage, and culture appears to be the most neglected and underestimated source of challenge in global professional services. Academic research on national culture and cultural differences has identified dimensions with an effect on the functioning not only of societies and individuals, but also of organizations and project teams. Once cultural differences are recognized and understood, there is a better chance of building bridges across cultural gaps instead of seeking to achieve feigned homogeneity. Global managers need to develop a set of twelve affective, behavioural, and cognitive competencies for successful intercultural interaction. A targeted development of these key competencies requires a sound appraisal to identify individual strengths and limitations. They can be assessed and developed using ICCA™ (Intercultural Communication and Collaboration Appraisal) as a diagnosis framework. At its core, ICCA™ looks at the areas in which one's environment is "different" from the culture one is going to work with. And using the Q methodology as a psychometric measurement tool, it charts a path towards advancing intercultural competencies by studying the manager's subjective viewpoints.

1 Introduction

In the twenty-first century, successful professional services firms are organized across countries, continents, and cultures. Teams are set up and work is performed in places where employees with the right skills are available at the best price. It is a logic that dictates companies to focus on the best value and quality of their products or services.

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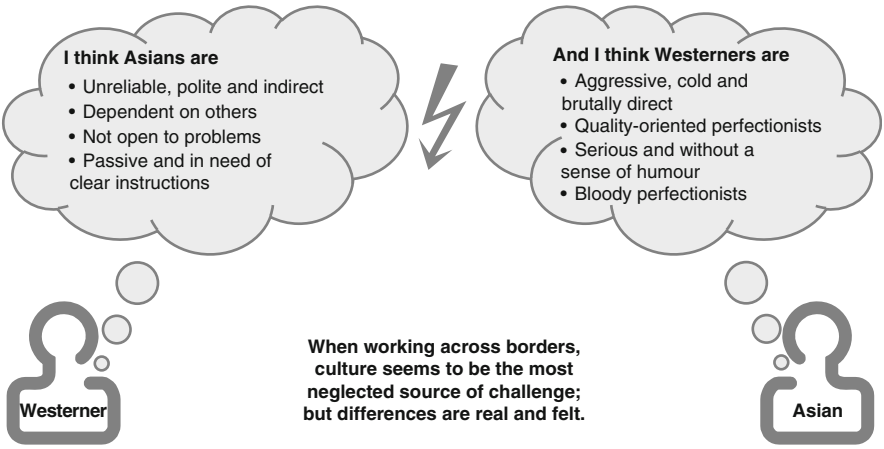


Fig. 1 Perceived cultural differences

William J. Amelio, CEO of Lenovo, called it *Worldsourcing*. As per Amelio (2007), the label on the outside simply identifies the last stop on a complex global delivery journey; a minor glitch or sub-par standards can nearly destroy a brand.

Still, globalization is not a rite of passage. There are horror stories about failed endeavours to globalize service delivery, lack of quality, cultural clashes, data thefts, and companies moving things back home for these very reasons. Getting the processes and governance structures right for delivering consistent products or services from various parts on the globe (see Messner 2010) is really only one part of the game. And just as we are imagining that teams in different countries and cultures are all following the same standards towards a common goal, we notice many deep-seated misconceptions about the other culture in day-to-day interactions. Some get articulated; some don't and stay tucked away beneath the conscious mind.

It is beyond argument that in every cross-cultural alliance there is scope and potential for misunderstanding. While working across borders, culture seems to be the most neglected and underestimated source of challenge in selling in each other's country, in acquisitions, and in producing products or delivering professional services.

Cultural differences are real and felt. What people from one culture think about themselves and about members of another culture is often in stark contrast to how they are being seen from the other culture. Figure 1 shows common perceptions between Westerners and Asians. For example, while Westerners say that Asians are polite, indirect, dependent on others, and in a perceived way unreliable, Asians call Westerners cold, aggressive, direct and think that with all the perfectionism and punctuality they exhibit, they have forgotten about personal relationships.

Superficial aspects of culture, like English as a business language, office dress code, American-style fast food, and standardized processes and governance structures, can lead to believe that potential cultural differences can easily be navigated. But values and attitudes, which really drive differences between nations and cultures, are invisible at first glance, but impact the way how work is delivered the most.

There are two ways in which we react to differentness. One, we try to deny or wish differences away. Second, we worry about them as an obstacle to progress and success. In order to overcome this state of ethnocentricity, we need to be fully aware of our cultural differences and about our own competencies in dealing with them. But the truth is that, according to Bhawuk and Brislin (1992) becoming interculturally fluent in another culture can take three or more years of full-time exposure in the other culture. The other truth is that in today's fast moving age of worldsourcing, global business does not give anyone this much time. We need an instrument to help set us on the right path; alone we will never achieve our full potential.

Every great sports person has a coach, politicians have advisors, and top business people have coaches to help bring out their best. Similarly, intercultural coaching helps to relate an individual's cultural perspective with the worldview of the people around her or him. But the field of intercultural coaching is still evolving and many fundamental issues are yet to be fully understood and resolved, including what abilities are needed for successful intercultural interaction? The answer to this question is of course key to an intercultural training and coaching process. Any lack of clarity on this point of course means that the focus of training and coaching is likewise unclear, leaving the globally dispersed and culturally multi-faceted team in as bad a shape as before.

This chapter discusses the key intercultural differences and their relevance for global delivery, highlights key intercultural competencies, and it also suggests a diagnosis framework for assessing and developing intercultural competence.

2 Culturally Driven Differences and Similarities

Academic research on national culture and cultural differences started in the 1950s. Issues qualifying as common problems worldwide were identified and some first criteria for the identification of cultural differences proposed. Edward T. Hall highlighted that "Culture is man's medium; there is not one aspect of human life that is not touched and altered by culture. This means personality, how people express themselves [. . .], the way they think [. . .], how problems are solved [. . .]". And he further warned that "denying culture and obscuring the effects that it can have on human talents can be as destructive and potentially dangerous as denying evil" (Hall 1976).

But only in the 1980s, the first worldwide survey about values of people in different countries was conducted by the Dutch professor Geert Hofstede; he stresses that "culture is more often a source of conflict than of synergy. Cultural differences are a nuisance at best and often a disaster" (Hofstede 1967–2007). Between 1994 and 2004, the pioneering work of Hofstede was followed by House et al. (2004), Chhokar et al. (2007) and their GLOBE study of leadership and organizational behaviour effectiveness. It identified cultural dimensions which have an effect on the functioning of societies, groups, businesses, and individuals.

- *Power distance* is the degree to which people expect and agree that power should be shared unequally.
- *Institutional collectivism* describes the degree to which the society encourages and rewards collective action, group loyalty is emphasized at the expense of individual goals, and whether being accepted by other people is important.
- *In-group collectivism* depicts the degree to which people express pride, loyalty, and interdependence in their families.
- *Assertiveness* is the reflection of beliefs as to whether people should be assertive, aggressive, confrontational, and tough in social relationships.
- *Future orientation* describes the orientation towards planning and sacrificing instant individual or collective gratification for long-term future rewards.
- *Uncertainty avoidance* is the extent to which ambiguous situations are threatening to individuals, to which rules and order are preferred, and to which uncertainty is tolerated in society.
- *Performance orientation* represents the degree to which an organization or a society encourages and rewards its members for performance improvement and excellence.
- *Gender egalitarianism* gives a picture of the extent to which an organization or a society minimizes gender role differences while promoting gender equality.
- *Humane orientation* describes if individuals in organizations or societies are encouraged or rewarded for being fair, altruistic, friendly, generous, caring, and in general kind to others.

The GLOBE study provides indices for these dimensions on a scale of 1–7 to compare current perceptions (as-is practices) with ideal perceptions (should-be values). In addition, these constructs are compared at a societal and organizational level.

Other models, such as proposed by Trompenaars and Hampden-Turner (1997) or Walker et al. (2004), share a large degree of practical commonality. But all these models show that people from different cultures think and act differently while being tasked with the same job. Once a global manager recognizes and understands these cultural differences, there is a better chance of "building bridges across the cultural gaps, and not seeking to achieve 'one size fits all' homogeneity in the team". Instead, "The global manager has to collaborate with the team in establishing 'cultural ground rules' for day-to-day work that focus on the common tasks and goals, rather than try to eliminate the individual cultural differences" (Raghavan 2008).

3 Competencies for Effective Intercultural Collaboration

The importance of communication to build bridges between cultures is well acknowledged. According to Spitzberg (1993), such intercultural communication will be competent when it accomplishes the objectives in a manner that is appropriate to the context and relationship.

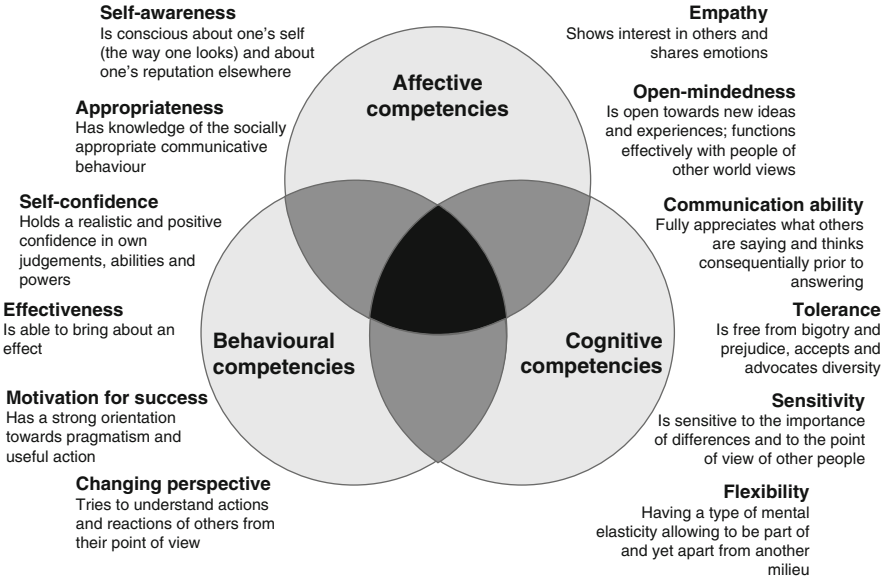


Fig. 2 Key intercultural competencies

Unfortunately most existing models of intercultural competence are fairly fragmented with only a list of skills, abilities, and attitudes. While such lists appear to be useful on the surface, there is no sense of integration or coherence across lists.

In order to tell which competencies are most important for intercultural collaboration, we have derived intercultural skills from various academic publications (e.g., Bhawuk and Brislin (1992), Graf and Mertesacker (2010), Spitzberg (1993) to name but a few) and connected them with our own experience in the field. The resulting twelve essential intercultural competencies are shown in Fig. 2.

By means of an international survey, we have then asked a group of 137 interculturalists and international managers to pinpoint the six most important competencies:

- Open-mindedness
- Changing perspectives
- Communication Ability
- Flexibility
- Tolerance
- Sensitivity

While the obvious approach was to count how often each competence was classified as important, a more comprehensive picture emerged when we also took the actual ranking into account. Some competencies were only selected by few of the survey participants, but when selected, they were ranked most prominently.

Therefore we introduced a sounder weighting of the competency rank (the first most, the second most, the third most important competence, etc.) by using the mean of the rankings as the criteria of importance. In a subsequent step all competencies that were not considered for rank one to six by a survey participant were labelled with position seven. While this approach avoids the problem of a few, but prominent responses, it shrinks and under-rates the real difference between the competencies. Figure 3 shows the summary of the results of the survey in more detail.

4 ICCA™: Intercultural Communication and Collaboration Appraisal

Despite these varied constructs of intercultural competence, a study by Deardorff (2006) concludes that intercultural competence can indeed be measured. However, its multi-dimensional and multi-perspective nature needs to be taken into account. Numerous such external instruments now exist that claim to assess intercultural competencies. Notwithstanding, various surveys—such as Fantini (2009) and Graf and Mertesacker (2010)—conclude that most existing single instruments are usually inadequate for measuring all aspects of intercultural competence; some are predictive, others formative, normative, and/or summative.

In our research work, we have brought together applied skills with requisite psychological expert knowledge and developed ICCA™ (Intercultural Communication and Collaboration Appraisal) as a practical, reliable, and cross-culturally valid diagnostic instrument (Messner and Schäfer 2012). Using ICCA™, one can identify the areas in which one and one's environment is "different" from the culture one is going to work with. ICCA™ also provides concrete advice on how to develop which skills to become more appropriate and effective in intercultural collaboration. ICCA™ can be used for a wide variety of purposes, including:

- Individual assessment in intercultural coaching and counselling situations
- Group analysis in intercultural teambuilding efforts
- Selection of expatriates
- Needs assessment in an organization for training design
- Further academic research

The instrument is available as an online version and a paper and pencil version, for one-time individual self-appraisal and as a licensable version for trainers, coaches, and corporates. It is easy to complete and it generates an in-depth graphic profile. At its core, ICCA™ consists of four parts:

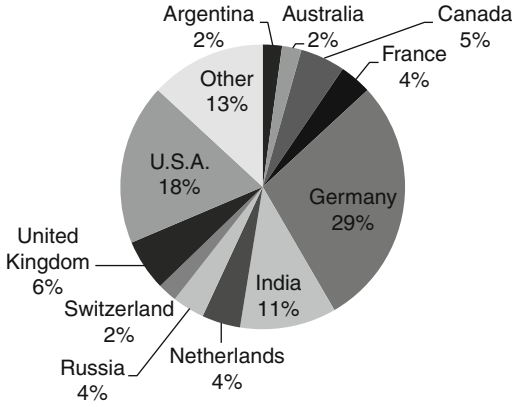
- Part 1: Cultural predisposition
- Part 2: Time personality
- Part 3: Competencies in intercultural collaboration
- Part 4: Organizational commitment

Survey: Ranking the intercultural competencies by importance

Competency	Rank	Arithmetic mean	Standard deviation
Open-mindedness	1	3,28	1,992
Changing perspectives	2	4,59	2,013
Communication ability	3	4,60	2,115
Flexibility	4	4,79	2,098
Tolerance	5	4,80	2,235
Sensitivity	6	5,04	2,070
Empathy	7	5,20	2,050
Self-awareness	8	5,45	2,278
Appropriateness	9	6,13	1,537
Motivation for success	10	6,15	1,777
Self-confidence	11	6,30	1,516
Effectiveness	12	6,72	0,999

Survey: Demographic information

Country of residence



Survey sample $N = 137$

41%+ interculturalists (trainers & academicians)

25%+ employees of global service providers

79% with a Master's degree, M.B.A. or Ph.D.

71% have lived in at least another country for longer than a year

Conducted in 2011 as an online survey

Fig. 3 Relative importance of intercultural competencies

4.1 Part 1: Cultural Predisposition

The increasing globalization of the professional services firm and connection of its project teams in its delivery centres across the globe does not mean that cultural

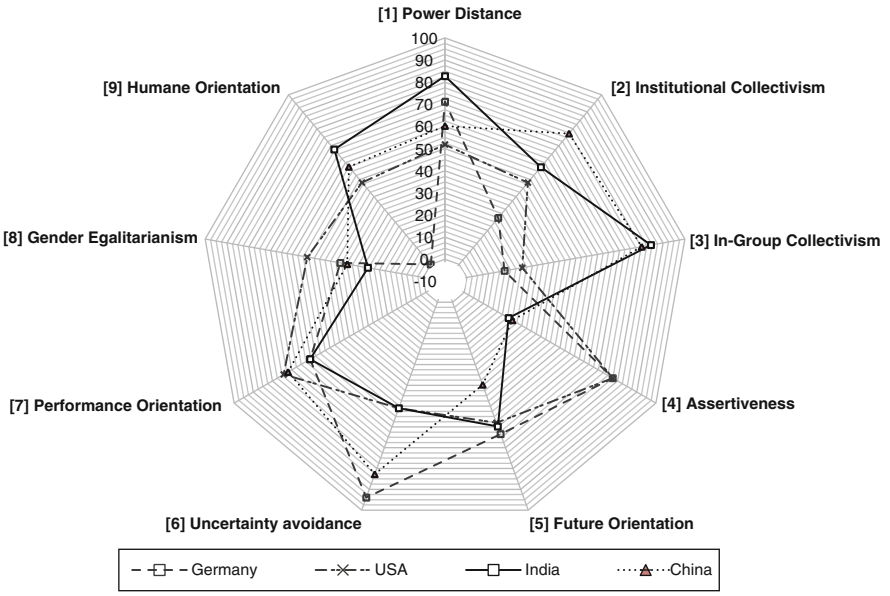


Fig. 4 Intercultural dimensions

differences are disappearing or diminishing. On the contrary, when cultures come into contact, they may converge on some aspects, but their idiosyncrasies will likely amplify. One of the challenges is acknowledging and appreciating cultural subtleties in different parts of the world. In order to work effectively with globally distributed teams, managers need to respond positively to practices and values that may be drastically different from what they are accustomed to.

By holding up a mirror, this part of ICCA™ permits the participant to embark on a journey of self-discovery and see the remarkable grip of unconscious culture. It builds upon the questionnaire items for the GLOBE dimensions as proposed in House et al. (2004) and respondents rate the items on a 7-point Likert-type scale. With the help of diagrams shown in Fig. 4 and a verbatim description of how individuals on the different sides of the spectrum tend to behave, participants can make comparisons to determine similarities and differences among themselves and initiate ways to improve intercultural relationships.

4.2 Part 2: Time Personality

The concept of time personality has recently become increasingly relevant with discussions around work vs. personal time and home office concepts. But there is also an underlying cultural dimension of time personality, such as preferences and feelings towards combining activities or not.

Hall (1959) discovered that whole cultures, such as those encountered in the Middle East, Latin America, and Asia are polychronic. *Polychronic time*, as the term implies, is non-linear and cyclical, several things are happening at once. Completion of all transactions is more important than adherence to pre-set schedules. High context communication is the accepted and expected norm. On the other hand, *monochronic time* emphasizes schedules, segmentation, and promptness. It promotes linear thinking and low context communication styles. According to Hall (1976), a strong correlation between approaches to time and communication style exists. Individualistic and monochronic-oriented cultures follow a *low context* communication style, i.e., the mass of information is explicitly vested in the message. More collectivistic and polychronic-oriented cultures are *high context*, and they operate based on information which is already internalized with the other person; very little explicit information is transmitted as part of the actual communication.

While polychronicity depends on the boss to handle contingencies and stay on top of thing, monochronicity suffers from blindness to humanness of its members, making it look like inhumane to polychronic people. However, typical monochronic Westerners are also psychologically stressed in many ways when confronted with polychronic business partners.

Scientific attempts to measure aspects of time orientation started in the late 1970s and in the early 1990s; Kaufmann et al. (1991) introduced the PAI Scale resulting in a myriad of derived instruments. The concept of time personality was hypothesized by Francis-Smythe and Robertson (1999) and included behaviours, cognitions, and affect. Lindquist and Kaufman-Scarborough (2007) developed a more exacting reflective model independent of specific disciplines with PMTS (polychronic–monochronic tendency scale) as the resulting measurement scale. Besides behavioural measures, it includes measures for the preference, the liking, and the feeling of being comfortable with a type of behaviour.

During the research leading to ICCA™ and based on feedback especially from non-native English speaking participants, the wording of the five items proposed by Lindquist and Kaufman-Scarborough (2007) was adapted to increase their intelligibility and general applicability. Two reverse-scored items were added and while they are not included in the calculation of the ICCA™ time personality value, they serve as a disruptive element for the participants in an otherwise unidirectional questionnaire.

The focus of this part of ICCA™ is to show the individual's tendency towards either monochronic or polychronic behaviour and the degree of positive feeling about this position on the continuum. It is a reflective (latent) construct and hence the position on the scale is driven by a person's actual polychronic–monochronic tendency position. The time personality value calculated by ICCA™ thus enables to determine whether an individual matches the predominant time and communication style in another culture and it thereby allows forecasting the efficiency when working together within a specific cultural group.

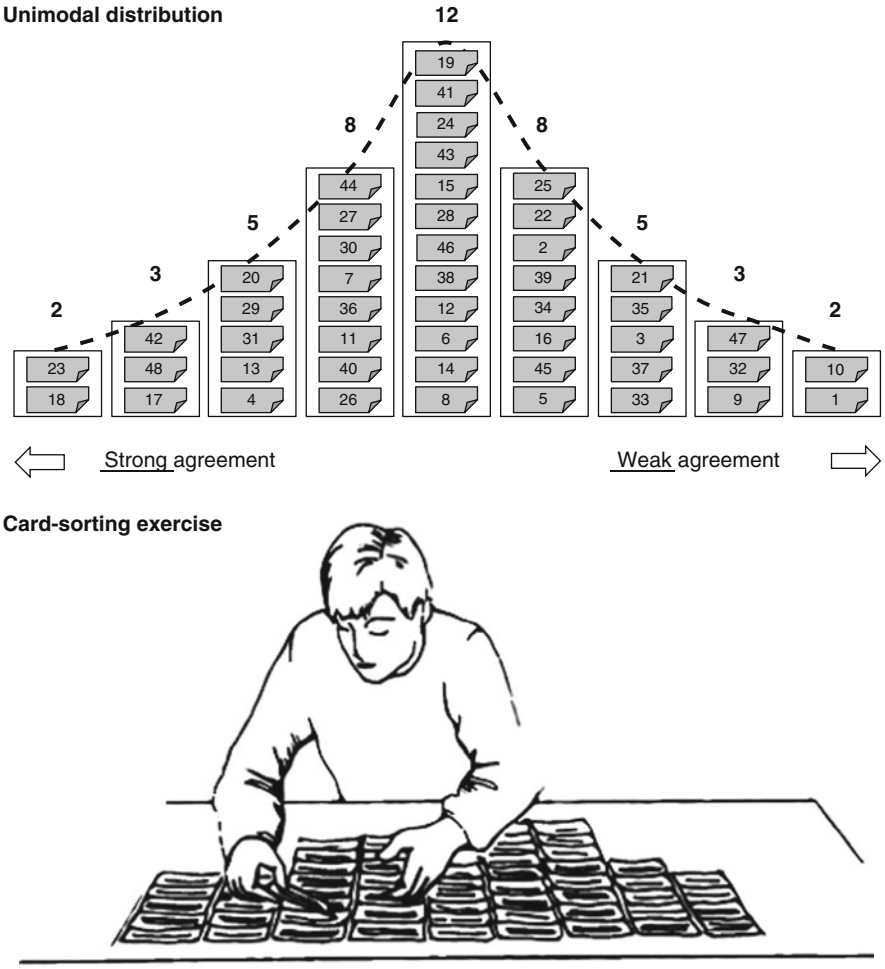


Fig. 5 Q Methodology

4.3 Part 3: Competencies in Intercultural Collaboration

A targeted development of key competencies in intercultural collaboration requires a thorough appraisal to identify individual strengths and weaknesses. Such an expert appraisal is a questionnaire-based instrument to identify deficiencies in relevant competencies consisting of three parts: the questionnaire, the report, and suggestions for development.

All three parts can be found in ICCA™ as well. However, instead of using a standard Likert-type scale questionnaire, a prescribed symmetrical, unimodal distribution as shown in Fig. 5 is imposed on the participants to force them to carefully think about their relative intercultural communication strengths and limitations.

Items placed in the middle categories are psychologically less salient than extremely placed items in portraying a person's competencies. This so-called Q methodology was originally developed by Stephenson (1935, 1953), is now an established psychometric research method to study people's subjective viewpoints, and applied by Schäfer (2011) for the assessment and development of management key qualifications.

The critical incident methodology was chosen to derive items which aptly describe the intercultural competencies. The Q methodology has many advantages over the standard Likert-type questionnaires; it motivates participants better and already through the process of comparing and sorting items they are able to reach a deep introspection of their own behaviour and competencies. Reviewing the layout with a coach can be the beginning of a high-quality intercultural coaching dialogue.

4.4 Part 4: Organizational Commitment

The last part of ICCA™ looks at the commitment to the organization. At a general level, it describes a psychological state that characterizes the relationship of an employee with the organization for which they work; and this psychological state has implications for an employee's decision to remain in the organization or to quit and find another job elsewhere. While human resource management has been researched plentiful in the Western hemisphere, only recently Jha (2011) has analysed organizational commitment in the context of India's IT services industry as well.

Three factors of organizational commitment have been identified by Meyer and Allen (1991).

- The *affective factor* describes an individual's emotional attachment, identification with, and involvement in the organization and its goals. It results from and is induced by individual and organizational value congruency. Certain characteristics of the job, good performance, the feeling that the organization "cares" for its employees when making decisions, and the degree to which employees are involved in the goal setting and decision-making process are elements which help creating intrinsically rewarding situations.
- The *normative factor* reflects the sense of moral obligation to remain in an organization, an old-style value of loyalty and duty. This is measured by the extent to which an employee feels obliged to make personal sacrifices and not criticize the organization.
- The *continuity factor* exhibits the individual's awareness of the costs of leaving an organization. Non-transferable personal investment, such as close working relationships with other employees, community involvement, acquired job skills being unique to the organization, and monetary investments, such as contributions to pension funds or stock options, can make it look too costly for an employee to leave and seek employment somewhere else.

The analysis of organizational commitment as part of the ICCA™ is useful on two levels. First, a professional services company can study organizational commitment to understand the strengths of its employee base and overall the health of its organization. It should also know that it can actively influence the affective and normative factors by providing challenging jobs. Second, positive organizational commitment also supports an individual employee in passing quickly and unharmed through the phase of disillusionment which appears to be almost a given in intercultural encounters. Looking at the degree of affective, normative, and continuity commitment as pre-warning indicators, a skilled coach can enter into a high-quality coaching dialogue and thus help the employee not to fall too deep into the state of culture shock, but regain productivity as quickly as possible.

5 Conclusion

Cultural incidents are a legitimate cause for concern in globally distributed professional services delivery. But at the same time, they can become a motivation for learning about the other culture instead of turning against it. And in this process, one learns a great deal about one's own culture as well. At home, one is rarely ever prompted to reflect on the cultural self and own views. But once encountering another frame of reference, unusual behaviour of colleagues is noticed just as one becomes aware of one's own behaviour. Unusual behaviour is observed as a difference to one's usual behaviour, to what has so far been seen as the norm.

Developing the ability to see situations and behaviour from multiple perspectives is a great benefit even if working in a mono-cultural environment. It allows identifying alternatives to the standard way of doing things. Thinking outside the box, reinventing the organizational setup, changing the paradigm—in professional services delivery one does it all the time.

With ICCA™ we have introduced a practical, reliable, and cross-culturally valid diagnosis framework for intercultural communication and collaboration appraisal, which is grounded in business reality and charts a path to progress intercultural competencies in a quality coaching dialogue. A sound assessment is an integral part of the intercultural coaching and education process; it provides an objective indicator to balance subjective views. When properly executed, ICCA™ not only provides solid information about the individual that can guide the coaching process, but can also enrich and transform the global collaboration experience. Nevertheless, none of the findings should be considered to be absolute; in the daily interplay of lives, things can often be completely different. The key is that the ICCA™ participant as benefactor will find some significant meaning in the process of becoming more effective and appropriate in global collaboration.

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Emerging Economy: Emerging Talent

Shachi Irde and Madhuvanthi Ravi

Abstract Women today are present in every field of work. Research has consistently indicated strong correlation between diverse senior management and financial performance of organizations, highlighting business benefits from having considerable number of women employees as part of the workforce. Though global organizations hire women, they fail to realize the concerns women employees face and often do not enable their advancement through special support. The changing demographics are posing a threat of a possible talent crunch which is working its spell on organizations that are currently looking at investing in women. The scarcity of global talent has led to many organizations pro-actively doing their best to recognize, retain, and develop women. In India, keeping women employees on the job has proven difficult in a traditional patriarchal society. According to U.N. statistics, at 34.2 % India's rate of female participation in the workforce is the lowest of any of the BRIC countries. Women make up 42 % of college graduates in India, a high potential talent pool that is available but largely untapped. What India needs is not just the change in organizational policies, but a societal change in attitudes and perceptions to bridge the talent gap.

1 Introduction

A traditional outlook has played a vital role in shaping the modern India. A quick tour through the time periods crucial in women's empowerment helps understand the perspectives.

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1.1 Women in Ancient India

In the ancient period, women were independent and were treated with equality and respect. They were educated in all spheres including martial arts and were trained in handling various important and administrative positions in their kingdoms. Hindu epics like Mahabharata and Ramayana, which are imbibed in the belief system of Indians even today, have portrayed women in key roles: a single request from the queen made the King send his son Rama on an exile. Mahabharata speaks of acceptance of polygamy for women (Panchali). Ancient Indian epics portray women being independent and courageous; however, society gave into social discrimination when civilizations transitioned to the medieval period.

1.2 Women in Medieval India

The eleventh century saw the emergence of Islam in India, an otherwise Hindu nation. This brought in new values and practices to an otherwise equal society. The practices like the use of "Purdah" (a loose veil to cover the face or the whole body), polygamy (which was restricted to men only), child marriage, and oppression of widows became rampant during this period. Women were confined to their homes and were restricted from pursuing education, which in effect prohibited their advancement. The lack of education and restraint on independence made them dependent on men and further increased the gap between the two genders.

1.3 Women in Modern India

The period of modern India began somewhere around the nineteenth century. Though the British came to India in 1600 AD, it was only after 200 years that they put an end to the merciless practice of Sati (a recently widowed woman would immolate herself in her husband's pyre), the 'Sati Prevention act' in 1829. Social reformists also lifted the ban on widow remarriages and the "Widow Remarriage act" was passed in 1856. Other progressive legislations which led to abolition of child marriage were also passed in the early1900s. Though this did not immediately result in women's empowerment, it certainly paved the way for women's progress [see (Tharakan 1975)].

During India's struggle for freedom against the British rule, thousands of women bravely battled repression and courted arrest. Some sections of the women activists even took to arms. Since Independence, there has been tremendous progress in the socioeconomic status of women, though not all of it is satisfactory. On one hand, there has been growing awareness about the need for gender equality. Pro-women activists have led powerful movements for emancipation of women.

Various liberating acts on property succession, maternity benefits, and equal remuneration have been passed. Also, campaigns on education of women have gained prominence. Women have entered politics, medicine, academics, nursing, aviation, and police force and have emerged as leaders in all spheres. On the other hand, oppression and atrocities against women have also continued. Cases of domestic violence, dowry deaths, kidnappings, and molestation have risen.

With the dawn of the modern era, old values have transformed to accommodate a modern outlook. In spite of adverse social conditions, women have not only survived but have also grown and achieved a great deal of success due to sheer resilience and mettle.

In the postmodern era beginning in the late 1970s, information technology (IT) emerged in India as a sector and then as an industry in itself. This helped women take up technical education earnestly and in today's India, one sees many women entering the field of engineering and technology.

2 From Talent Crunch to Talent Stream

An aging population and the growing demand for skilled professionals have resulted in a serious talent crunch around the world. In India, the gross domestic product (GDP) registered an annual average growth of 6.6 % between 1990 and 2010 [see (Indian Express 2011)]. The shift in government policies, growing economy, and growth in sunrise industries like IT and BPO saw an increase in demand for talented, skilled professionals in the subcontinent as well.

One of the key talent sources in the emerging markets is women. In India, these opportunities coupled with needs see close to six million women entering the workforce every year. Still, according to U.N. statistics, at 34.2 % India's rate of female participation in the workforce remains the lowest of any of the BRIC countries.

Indian women have entered into professions ranging from technology to sales, finance to management. They are educated, extremely ambitious, and passionate about their work and are willing to go the extra mile to achieve what they want. Today, an Indian woman competes alongside man in almost every field. She can be an independent, career woman or a significant contributor to the household income.

The transformation from dependent to independent woman has not been easy. India is and continues to be a country with patriarchal culture; women end up juggling with career and managing their personal needs, cultural and societal responsibilities, and expectations. Hence, the challenges faced by women as employees and employers employing women are varied.

Currently, women make up 42 % of college graduates in India [see (People Matters 2010)]. To successfully tap into this huge talent pool, professional service providers and other industries alike have to pay special attention to women's needs in terms of the following:

- Safety
- Support system (child care and elder care responsibility(ies)
- Catering to cultural norms

2.1 Safety

Though in the urban cities in India, the crime rate is more or less comparable with that in cities around the world, the difference comes in its treatment. There are laws prohibiting employers from employing women beyond certain time or requiring employers to provide safe transport to women working late hours. It is therefore not uncommon to find fewer women in industry sectors that require them to travel significantly, e.g., pharmaceutical sales and liquor sales.

2.2 Support System

Professional child care and other support systems as an industry is still in its infancy. While domestic help is available easily for household work, they are highly inconsistent in their services and often unreliable. Women tend to lean on their parents or in-laws for support to care for their children, and are expected to reciprocate by caring for the elderly in the family. Another factor which is prevalent is 'dust.' Because of the dry weather coupled with loose soil, fine dust tends to settle on everything everywhere. Women end up spending a lot of time either dusting or monitoring maids dusting the house, which otherwise is a seasonal factor in most countries. Employers having programs for childcare, eldercare, or flexi time including part time are much preferred organizations by women.

2.3 Catering to Cultural Norms

The phenomenon of the "leaking pipeline" of talented women occurs much earlier in India than in most Western countries. Even in the urban cities, women are expected to get married early. Arranged marriages are common and a woman relocating to the location of her spouse remains an expectation. Hence, many women end up quitting a promising career to fulfill their obligations.

Due to family and societal pressure, many women put off starting their career to much after they have been 'married and settled.' Innovative ways of accommodating these requests become part of company policies, for example, preferred relocation for women or second career options wherein women who have taken a break for child birth or marriage have separate career streams to join in.

The emergence of the IT industry has had many advantages for women. Being a sunrise industry, there is more equal footing in an otherwise gender-biased society. Safer working environments, flexible working options, and global opportunities are some of the factors that have attracted women to this industry.

3 The Gender Inclusion Journey at Infosys

Infosys as a professional service provider of Indian origin realized the potential of this readily available talent pool and aligned its benefits to cater to the needs of women. For Infosys, diversity in talent is not an option, but it is a critical success factor to build tomorrow's enterprise. The focus on diversity and inclusion started quite early, and gender was and continues to be one of the key focus areas. The company formed Infosys Women Inclusive Network (IWIN) in 2003; IWIN addresses specific needs to the development, engagement, growth, and retention of women by promoting an inclusive workplace where the potential of women is leveraged and every woman feels valued, heard, and fully involved with the company.

Back in 2003, the number of women employees in Infosys was only 19 % and today it has increased to over 34 %. This is even more significant and inspiring considering the growth of total employees from 15000 in 2003 to over 140,000 employees in 2012, making Infosys amongst the largest women employers in the IT sector in India.

The goals of IWIN are all mapped to attract, increase, and retain (AIR) women employees (see Fig. 1), with the intent to expand the bottom of the pyramid and to chart out a strategy to retain women as they move up in their career life cycle.

Infosys attracts talent by pioneering exclusive programs like Campus Connect, SPARK, SPARK Guru, and internship programs. Initiatives like SPARK, a program that aims at raising the aspiration levels of students, have made young Indians think of bigger opportunities and challenges that awaited them once they completed their education.

Infosys places a lot of importance on safety of women in and out of the campus. Self-defense classes are held in the campus to train women to be more prepared when faced with an unsafe situation. The organization provides special taxis to women with a security guard to make sure that women reach home safely on days when they end up working late to meet client deadlines.

This is primarily done as a measure to ensure safety of women employees and make them feel safe. Transport arrangements that are provided for employees are hence not considered as perks but as a necessity for women to feel secure—not only in the campus but also at extended work places. Indian organizations like Infosys are acknowledged for its expertise to hire the best talent and provide the workforce an ecosystem to realize their potential and deliver the best. The number of safety precautions and measures taken for women and strong antisexual harassment policy make Infosys a company that parents want their daughters to work for. Every day,

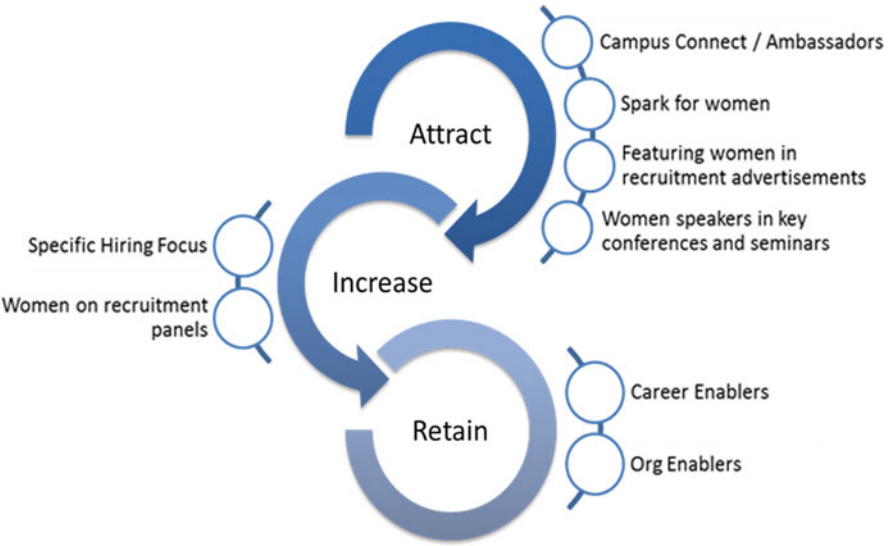

Fig. 1 AIR strategy and initiatives

31 women join Infosys, i.e., 918 in a month and 11,013 in a year (based on the hiring trend in 2011). It is notable that the average age of all Infosys employees is only 27 years and the workforce includes 86 different nationalities from around the world. The organization evaluated the commitments of women and chartered a support system, which is depicted in Fig. 2. Today, Infosys has 91 % of women returning from maternity leave and it is interesting to note that every single day 7 women avail the option of maternity leave.

Infosys as an organization works hard to keep its employees highly motivated because, in the words of the company's founder and Chairman Emeritus, "Our assets walk out of the door each evening. We have to make sure that they come back the next morning."

The world-class work environment has a university campus-like culture and facilities at all primary locations. The fast-paced, results-oriented work ethic encourages personal empowerment in a non-hierarchical organization. The focus is on growth and retention of motivated and growth-orientated employees, with managed attrition—people are encouraged to build their employment assets and those who do not progress are inevitably edged out. Education is considered a continuous process, with part-time and distance education always encouraged. A Web-based integrated training management system provides a list of suggested training courses based on competencies identified for each role. For instance, the company's recent investment in Harvard Manage Mentor for a set of e-learning modules vouches for the organization's commitment to learning and development of its employees. The company has made a continuous effort to create leaders of tomorrow, creating higher value through what is termed "thought leadership."

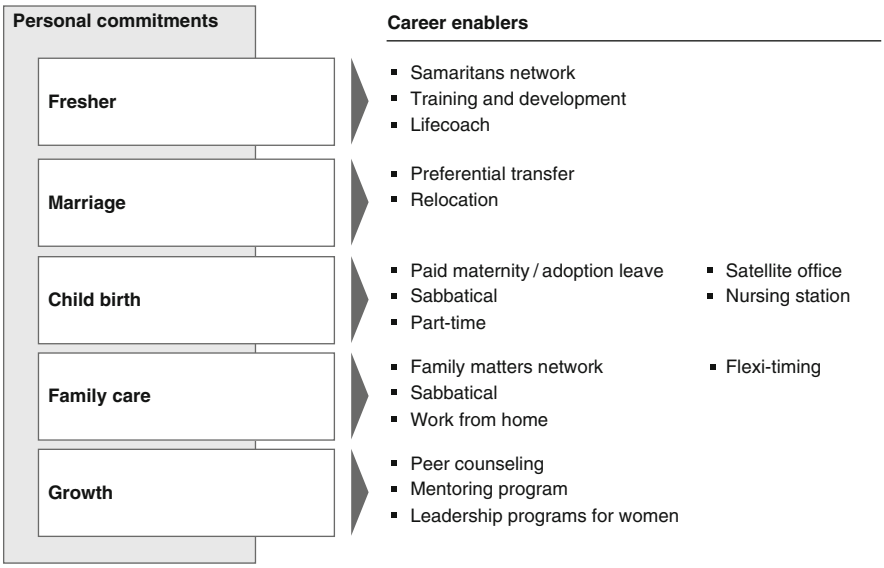

Fig. 2 Personal commitments and career enablers

Looking at some examples, Srilatha, a Senior Project Manager, recently had brought her children to Infosys campus, for the 'Bring your kid to work' event. She says, "As a mother of two, there have been these times when I have thought about jeopardizing my career by simply 'giving up.' But not anymore; for I am an Infoscion." Looking at her mommy take phone calls and interact at work, her daughter Charvee said "I want to be like my mommy when I grow up."

It is interesting to note that working women are not only the role models for their children but are also the key to changing the mindsets of generations to come. Gaurav, a system engineer at Infosys who shares his workplace with his mother Superna Shankar, says, "I have always seen my mom go to work, I have seen what it means to her and today I am more than happy to support my wife who is also a working professional."

Varsha Verma, Account Delivery Head for one of the top 20 accounts at Infosys, who has been with the organization for over 14 years says, "When I reflect back at my life, there are mixed emotional moments that I cherish and regret. There are also these moments which give me sense of achievement and strengthen my sense of belonging to Infosys. I have thoroughly enjoyed every moment I have spent at Infosys. Even at this juncture, I wish I was young again to have joined this journey sooner and stayed here longer." The recent launch of Infosys Women In Leadership (IWIL), an exclusive leadership development program for women, shows that the organization cares and readily invests in developing women talent. "Leadership comes naturally to women. IWIL would fine tune their thought process and empower them to take leadership decisions. With the launch of IWIL, we hope to achieve a very clear business imperative and that is to see more women leaders emerge at Infosys" says Ms. Gurjar, Sr. Vice President and Head HR.

The future of women in Infosys is clearly envisioned and Infosys is currently working on developing the leadership quotient. Neharika Vohra of the Indian Institute of Management, Ahmedabad, who conducts the leadership program for women Infoscions, says, "I am bugged seeing classrooms full of men when we conduct leadership sessions. Though leadership is a neutral subject, the challenge we find is that women do not even apply thinking 'it is not for me' and hence miss out on many opportunities. It does feel extremely encouraging when corporate giants like Infosys are investing in programs like women leadership."

Investing in developing women and getting them to senior management positions is the need of the hour.

4 Conclusion

Gender discrimination has been a universal phenomenon in human history. Societies as well as boardrooms have traditionally been male dominated and not always inclined to accommodating women due to cultural and attitudinal barriers.

Global and future corporate models need to be redesigned to favor gender diversity and shatter the pervasive glass ceiling. Women inherently possess enhanced social sensitivity and team spirit. Having women in authoritative global positions enhances organizational effectiveness through creative problem solving, innovation, heightened awareness of the challenges, and better responsiveness to changes. Infosys as a leading global professional service provider of Indian origin has undertaken measures to enhance awareness, increase accountability, and encourage positive action towards women's empowerment. The organization is committed to integrating diversity and inclusion in the fabric of its culture. For the coming years, it envisions a significant improvement in the representation of women in the board, among title holders, and in the executive and management council. The journey so far has been invigorating, but there are milestones yet to be achieved; incremental improvements will produce lasting results which in turn will lead to a positive change.

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Part IV
Experiences and Case Studies

Emerging Markets from an Indian Perspective: Focus on Germanic Countries

Som Mittal and Ameet Nivsarkar

Abstract In this chapter, we try to unlock the potential of what is called the "powerhouse" of Europe, the DACH or Germanic region. The German speaking countries consisting of Germany (D), Austria (A) and Switzerland (CH) exhibit strong characteristics of a developed economy. It is our quest to unravel the emerging markets for the Indian IT-BPO industry and to power the next round of industry growth. As per the latest projections, Germanic economies are leading the European recovery. At the same time, the Indian economy is emerging and finding its place in the sun with a projected growth rate of over 7 % in 2012. Given this context, the two resilient economies present opportunities for collaboration across sectors and to build over their long historical, political and economic connections. Information technology has emerged as a market changer in the recent times and is an enabler to innovation. It is therefore an apparent first choice as a field to foster collaboration between the two regions. The Germanic economies are looking for a makeover while Indian companies are looking to explore newer markets to deliver their expertise. The need is mutual and so are the benefits. The chapter identifies partnering opportunities for Germanic countries and India to develop a fresh perspective on how the two regions can leverage each other's strengths, products, services, markets and the shared history for a mutually beneficial future.

1 Introduction

The Germanic economic system is firmly anchored in the principle of the welfare state and therefore excludes a purely free market economy. The economic policy is based on the notion of the social market economy, which attempts to balance the pure market economy with socialism. The fundamental idea is based on the

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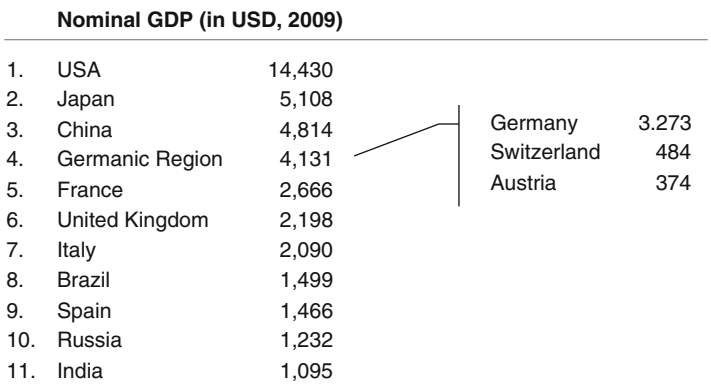

Fig. 1 Germanic countries—together the fourth largest economy

principle of freedom of a market economy, supplemented by socio-political methods for keeping a due balance in society. On the one hand, the system is designed to enable market forces in principle to develop freely, while on the other hand, the state guarantees a welfare network that protects its citizens from risks.

1.1 Germanic Economy: Overview

Germanic countries, in aggregate, have a total nominal GDP of more than USD four trillion making the region the fourth largest economy in the world (Fig. 1, CIA World Factbook 2009). The aggregate Germanic economy is larger than other major European economies like France and UK. Among the earliest industrialised, these countries have well-developed and stable economies with a significant presence of small- and medium-sized companies coexisting with large trans-national companies. Quality and innovation-led competitiveness has traditionally been the highlight of the region.

Germanic countries have a well-developed social market economy with a high standard of living. They enjoy well-developed industry, banking, transportation, services, and commercial facilities. The GDP composition for Germanic countries features a large service sector, a sound industrial sector, and a small, but developed agricultural sector. Service sector constitutes 60–70 % of the region's GDP, while industries constitute 30–35 %.

In per capita terms, its citizens enjoy one of the highest shares of the economic income with per capita GDP in the excess of USD 44,500 for Germany, USD 65,000 for Switzerland and USD 50,600 for Austria (Fig. 2).

Owing to the small local markets, the region has always been dependent on exports for economic growth. Roughly 68 % of the region's turnover is generated through exports. Till very recently, Germany was the largest exporter in the world with a contribution of almost 9.6 % in the world's total exports.

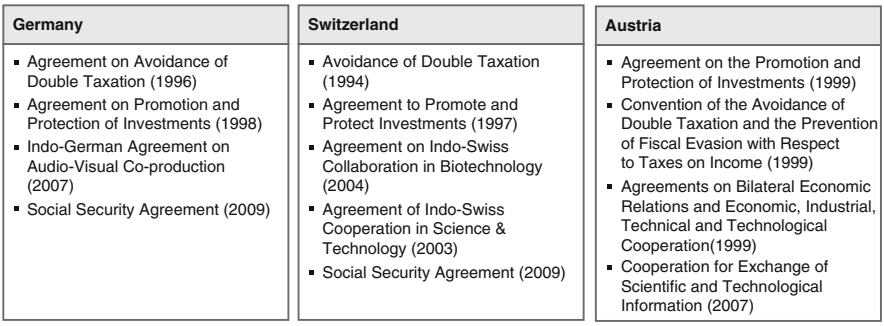

Fig. 2 Bilateral agreements with Germanic states

Germanic countries are also among the most competitive. While Switzerland tops the global ranking on competitiveness, Germany is ranked 7th and Austria 17th. They are characterised by high capacity for innovation and a very sophisticated business environment. Supportive government policies, efficient workforce and the dominance of the prosperous small and medium enterprises underpin their competitiveness.

Germanic countries are high-wages countries, and therefore quality as a differentiator has been a critical component of their competitiveness. To this end, Germany currently commits around 2.5 % of its GDP to Research and Development (R&D), considerably more than the EU average of around 1.8 % (2006). The federal government plans to increase spending on R&D to 3 % of the country's GDP in the year 2010.

1.2 Industry

Industry accounts for more than 80 % of total exports and is thus, the engine driving foreign trade. The key industrial sectors are automobiles, electronics, industrial manufacturing, consumer products and chemicals. Telecommunications has also become a sector of great importance. Germany has the world's largest industrial sector and is the third largest producer of automobiles.

While manufacturing is the foundation of the Germanic economy, the region is gradually transforming into a knowledge-driven economy with a strong tertiary sector. The service sector has become considerably more relevant, and its role is by now almost on par with that of the industry.

1.3 Made in Germany

The Germanic region is home to large internationally acclaimed brands, which emphasise the regions' commitment to quality, innovation and cutting-edge technology. These brands are also the leaders in their respective industries and represent

not only the large but also the small- and medium-sized companies, which form the backbone of the Germanic economy.

1.4 The Dominance of the Small and Medium Enterprises

The German economy is not only made up of industrial giants like Daimler, SAP, Siemens, Bayer and BASF, but also from Small- and Medium-sized Enterprises (SMEs). These are companies with annual sales of below Euro 50 million and a payroll of less than 500. Over three million SMEs employ 80 % of all personnel. With over 20 million employees, these SMEs together easily constitute the region's biggest employer. A small business-based economy allows new companies to enter the playing field more easily and opens up enormous market potential for the service industries. More than 95 % of the enterprises in Germany in the fields of chemical, machine building, automotive, electrical and optical instruments belong to SMEs. As a result, the economy is particularly flexible, varied and competitive.

Many highly specialised companies enjoy a leading position in the world markets, because research and development is particularly fostered in the SME sector. By quickly implementing innovations, companies are able to secure their leading roles in their fields. Most SMEs are managed by the owners themselves, meaning that the majority shareholder and management of the company are frequently one and the same. Companies are often handed down from one generation to the next. Around 95 % of German companies are family-owned and almost every third company now has a woman at its head. The strengths of SMEs include the swift realisation of marketable products, an international focus, a high degree of specialisation and the ability to successfully claim niche positions in the market.

2 Challenges Facing Germanic Economies

The Germanic countries along with the USA, Japan and UK have been the traditional economic leaders for over two centuries. However, according to data from the International Monetary Fund (2012), developing countries such as China and India have been increasing their share of total global GDP, even when taking into account the effects of the global financial crisis. The traditional leaders such as the Germanic countries have been losing their share of the global economic pie, signifying a shift in the economic status quo from developed countries to emerging markets.

Germany, which was the world's biggest exporter until China recently overtook it, made up 5.6 % of global GDP in 1985, but its share dropped to 4.5 % in 2005, contracted further to 4.1 % in 2009, according to preliminary figures, and is predicted to fall again this year to 4 %.

	Imports to India (2008-09)		Exports from India (2008-09)		Total trade
Germany	USD 12.0 billion	▪ Energy ▪ Manufacturing	USD 12.0 billion	▪ Manufacturing ▪ Garments ▪ Organic Chemicals	USD 18.4 billion
Austria	USD 0.7 billion	▪ Energy ▪ Manufacturing	USD 0.5 billion	▪ Pharmaceuti-cals ▪ Organic Chemicals	USD 1.2 billion
Switzerland	USD 11.9 billion	▪ Metals ▪ Energy ▪ Pharmaceuti-cals	USD 0.8 billion	▪ Organic Chemicals ▪ Garments ▪ Minerals	USD 12.7 billion
TOTAL	**USD 24.6 billion**		**USD 7.7 billion**		**USD 32.3 billion**

Fig. 3 Indo-Germanic trade

India, whose share of global GDP was 2.5 % in 1985, went a long way, more than doubling its share by 2009 to hit 5 %. China, now the world's largest exporter, has continued to increase its share of global GDP despite the economic crisis. Comprising only 2.9 % of global GDP in 1985, it is estimated to have hit a whopping 12.1 % in 2009 and is predicted to reach 12.7 % this year. These trends are expected to stay and have a bearing on the way economies operate and businesses develop in the next half century. The Germanic economies or the "powerhouses" of Europe are cognisant of their decreasing dominance in the world economy and the need to collaborate with the emerging players like India and China.

3 Indo-Germanic Trade Relations

The Germanic region shares with India's excellent historical, cultural and trade relations. Germany and Switzerland feature amongst India's largest trade partners and generally speaking, the Germanic interest in pursuing close cooperation with India has been increasing since the liberalisation of the Indian economy.

The two regions are actively engaged in providing impetus to the economic relations by identifying various areas where untapped potential holds the promise of further growth, such as aerospace, defence, manufacturing, automobile and ICT in the context of these industries and as a separate opportunity as well (Fig. 2).

The total trade between India and the Germanic region in 2007–2008 stood at around USD 32.3 billion, with Germany and Switzerland being the largest partners (see Fig. 3, compiled from Government of India, Department of Commerce 2010).

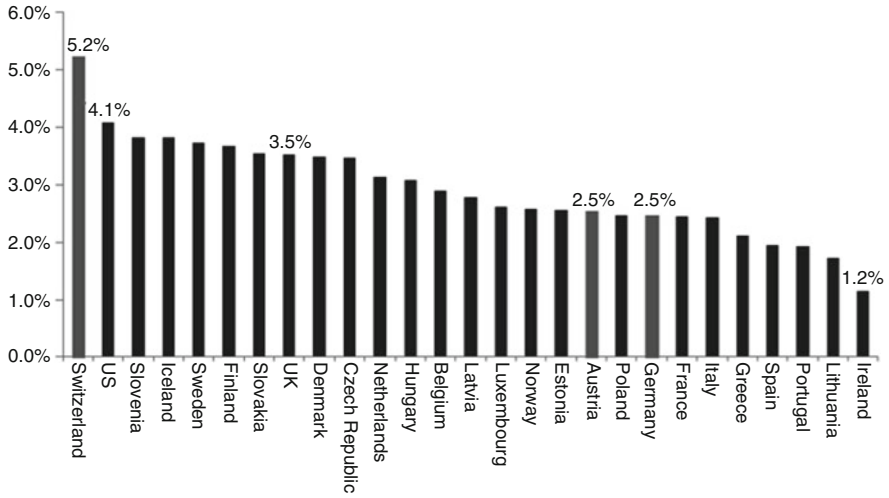

Fig. 4 IT investment as a percentage of GDP

4 The Enabling IT Environment

The Germanic countries are among the leading countries when it comes to the quality and depth of their ICT infrastructure. Measures of ICT infrastructure include the penetration of traditional fixed lines, broadband access lines, mobile phones, PCs, internet users and internet servers per million population, quality of internet connections and level of e-business development. These countries offer affordable internet access, deregulated telecom markets, security of the internet, infrastructure, government support for ICT development, laws governing the internet, strong ICT skills of the workforce and high quality of ICT supporting services.

The Germanic countries are among the top twenty nations with the highest IT investments as a percentage of GDP. Germany and Austria each spend close to 2.5 % of the GDP on IT, whereas Switzerland leads the norm by spending over 5 % (Fig. 4). In value terms, these economies together spend over USD 175 billion on IT, of which more than 10 % or around USD 18 billion is spent by the government.

With a total market volume in excess of USD 176 billion in 2010, the Germanic region is the world's third largest spender on IT after the USA and Japan. This includes over USD 50 billion in hardware, USD 25 billion on software products and more than USD 100 billion on IT services (including the internal IT staff cost), based on estimates by NASSCOM PwC (2010). Most companies from the region perceive IT as strategic and have mature IT-management functions and processes.

Out of the total spend of USD 100 billion on IT services, more than USD 46 billion constitutes the outsourced or purchased services. The remainder cost of USD 54 billion is incurred on employees. The region in aggregate is the largest IT services consumer in Europe ahead of UK, France and Italy.

Among the three countries, Germany is the largest spender with IT purchases worth USD 36 billion followed by Switzerland (USD 7 billion) and Austria (USD 3 billion). These markets are growing with CAGR of around 5.6 % and are expected to grow to a size of over USD 65 billion by 2015.

5 Opportunities and Strategies for Collaboration

IT services are important for the Germanic countries as it contributes to enabling the productivity growth and efficiency of the Governments, industry and society and at the same time stimulates the creation of high added-value and sustainable jobs. The Germanic economies are facing the following challenges:

- Diminishing economic superiority in the global markets and the changing market scenario post-globalisation
- Decreasing market share in most industries and emerging global competition across industries
- High labour and social costs
- Demographic challenges posed by an ageing society
- Decreasing number of science and technology talent to support innovation and competitiveness
- Slow productivity growth
- Need to reduce cycle time and time to market

Innovation and technology upgrading are key drivers for success in today's highly competitive markets. Hence, there lies an immense opportunity for Indian and German companies to collaborate and leverage each other's strengths in areas of technology and cost effective techniques for mutual benefits.

5.1 Long-Term Approach to Develop Trust

Success in the Germanic market requires a long-term commitment to market development supported by a localised sales team and backed up by an excellent delivery expertise. Indian companies getting into this market need to have a long-term outlook towards the market and accordingly develop their approach (Westhoff et al. 2007). The market is highly relationship-based with consensus-based decision making in most client companies. Relationships are particularly more important when dealing with the SME segment. The gestation period in the market can be as high as six months to one year and a short-term strategy may not work. Also, cost as the only value proposition may not trigger business in this quality-sensitive market.

Indian companies looking to grow in the Germanic region need to communicate their long-term commitment to the region by investing in localisation initiatives, developing strong German language capabilities, participating in local events and

trade fairs and educating clients from the region on the benefits and risks of offshoring.

Business relationships are built over time, and building confidence with the local clients is very important. It is often perceived that Indian companies are hesitant in accepting purely onshore engagements, which require resources to work closely with Germanic teams. Success in the Germanic region closely connected to the extent of credibility Indian companies establish in this market. Engaging locally for onshore projects and delivering to the client's satisfaction can help Indian companies gain credibility and trust leading to more business and opportunities for offshoring.

5.2 German Language Skills

German language capability is the single largest baseline expectation for doing business in the Germanic region. The requirement is more pronounced in the case of IT and BPO businesses in an offshoring context where the complexity could escalate considering multiple cultures, languages and working styles (Bäumer et al. 2010).

It is important for Indian companies to approach the market equipped with ample German language skills among the sales as well as the delivery teams. India has a large German language training capacity which needs to be further enhanced and expanded to meet the demand for German language professionals. Indian companies are also advantaged by having access to a pool of resources adept in quickly learning new languages and deploying those skills on client engagements. This latent advantage should be leveraged for the mutual benefit of the Germanic and Indian industries.

Further, Indian companies need to conduct business culture training for IT sales and delivery professionals likely to be deployed on projects from the region. The cultural training should ensure that the delivery team is skilled at assessing the project situation and putting measures in place that adequately bridge the cultural gaps.

5.3 Localisation

While Indian companies understand the need for localisation, often not many realise that poorly managed localisation initiatives can be dangerous (Weigand et al. 2009). It is essential that localisation initiatives be undertaken considering the resultant customer experience. For example, it is often seen that Indian companies fail to get the right local talent and therefore have to resort to the second-tier German talent. This leads to the situation where the hired employee does not understand the Indian companies and subsequently leads to confusion internally as well as with the client. In some other instances, Indian companies begin with

hiring a single local person who heads their Germanic operations, hoping that this will get business.

Localisation is a critical factor for success in the region and Indian companies need to think through on the extent of localisation before they approach this market. Some baseline localisation expectations are:

- A local legal entity as representative.
- Local sales and project management. A very crucial requirement considering the criticality of establishing relationships, credibility and trust among the large companies and most importantly the SME segment.
- Local marketing and success stories. Develop sales and marketing collaterals in German language and participate in the local trade events. Similarly, local success stories are among the most powerful marketing tools in the Germanic region. Experience with large German companies can be leveraged to showcase local successes.
- Engage on onshore projects.

5.4 Delivery Excellence

Germanic clients are sensitive to quality and flawless delivery focusing not only on the end product but also the intermediate process. Indian companies need to ensure the following:

5.4.1 Domain Expertise

It is essential that Indian companies bring to the table a combination of technology expertise as well as high domain understanding. This is particularly relevant for this region where the local terms of business across industries are unique. It is important therefore that the resources appreciate these differences and display an understanding to quickly grasp the nuances.

5.4.2 Detail Orientation

It is important expectation throughout client interaction from the pursuit to the closure of the engagement. Pricing estimates, quotes, project plans, project reporting should be provided with a detailed break-up of the activities. Indian companies need to be mindful of this requirement since they risk being perceived as not detail-oriented.

5.4.3 Strong Project and Quality Management

Poor project management has been highlighted as one of the most frequent challenges faced by Germanic clients when working with Indian companies. Communication, stakeholder management, project reporting and quality management are the areas where Indian companies need to improvise. Indian companies need to be aware that the cornerstone of Germanic competitiveness is their thrust on quality in all their products. It is worthwhile for Indian providers to ensure quality throughout the engagement and at each stage from the requirements gathering stage to providing support. While quality is a baseline expectation globally, the factor assumes significant importance in the Germanic context.

5.4.4 Security and Data Protection

Germanic clients are sensitive to the data and IP protection environment at the vendors' locations. Indian companies should ensure that they conduct regular audits and take initiatives to communicate compliance.

5.5 Strategic Options for Indian Companies

IT service providers local to the Germanic region operate in a high-wage market with reducing talent pool. They will be keen on leveraging offshoring strengths of their Indian partners to deliver benefits to their clients. Indian companies should explore establishing these partnership arrangements for the mutual benefit of the Germanic clients, service providers and Indian IT companies. Considering the fragmented nature of the IT services supply side, the market also offers opportunities for Indian companies to grow inorganically to obtain access to specific client accounts, technology expertise or skills. Indian companies are already buying smaller companies in Germany in order to create a "language interface", as well as to use them for support, marketing and contracting platforms. Considering the emerging trends of IT and BPO with respect to nearshoring, Indian companies should consider setting up a delivery centres in the Eastern European countries to serve clients from Germany, Austria and Switzerland.

6 Conclusion

The potential for Indo-Germanic collaboration within the IT and BPO sectors is immense. Indian companies have the opportunity to grow their revenues from the current USD 2.6 billion to over USD 10 billion by 2020 in the world's third largest

IT services market. On the other hand, Germanic clients have the opportunity to tide over their economic and demographic challenges and sustain their competitiveness. However, it is essential that the Indian and Germanic industries initiate focused action steps directed at realising these benefits.

6.1 Action Steps for Indian Industries

- Leverage/popularise Germanic region as a location for international studies. Out of over 450,000 Indian students venturing abroad for international studies, only 4,000 consider Germany as a viable location. NASSCOM and the Indian industry should promote German education in India to enable higher people-to-people contact, better familiarisation of each other business and social culture and facilitate better integration.
- Help build capacity in India for language and cultural training. It is evident that German language skill is the most critical success factor for Indian companies in the Germanic region. NASSCOM needs to work with Indian education and training agencies to promote study of German as a foreign language.
- Work together on issues such as data security and protection. Compliance to data security directives has been identified as a major hindrance for promotion of IT and BPO business between India and Germanic countries depriving both sides from benefits of offshoring. NASSCOM should work with Germanic & EU policymakers to identify solutions for mutual benefit. In parallel, NASSCOM should continue initiatives in the Indian industry to improve the data security environment.
- Work towards a pan EU-wide accepted ICT (Intra-Corporate Transferees) visa. The absence of a pan EU-wide acceptable ICT visa significantly impacts the mobility of Indian professionals in the Germanic countries and also increases the cost of doing business for companies. NASSCOM should work with policy bodies in Europe to facilitate the introduction of a pan EU-wide accepted ICT visa.
- Encourage SME service providers to collaborate as well as mobilise interests among SME clients towards offshoring. SMEs really hold the key to success in the Germanic region. NASSCOM should act as a bridge between the Indian and Germanic SME segment service providers and facilitate the discovery of mutually beneficially operating models. Similarly, NASSCOM should work with SME clients in the Germanics and help them understand, initiate and benefit from offshoring.

6.2 Action Steps for Germanic Countries

- Controlled migration. Germanic countries need a highly qualified and motivated workforce across industries and, more so, in the knowledge-based sectors. The strategy should be, therefore, be to attract the best brains from the world over. The current policies on work permits and permanent residency need to be made more industry-friendly and flexible.

- Education reforms. Many of the talent shortage issues that these countries face are also because the education system is not in keeping with the changing nature of the economy and the demographic profile. As a result, in spite of the higher unemployment rate, these countries continue to face talent shortages in specific sectors. The policymakers need to take steps to reform the education system to ensure that education is relevant and meets the economic and social requirements. Encouraging adaptation of science and technology courses has a direct bearing on the innovation capacity for the future.
- Popularise region for international studies. Only 8–10 % of the total international student base chooses the Germanic region as a destination. This inhibits the inflow of talented manpower with high skillsets getting assimilated in the Germanic countries.

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Transformation Journey from Offshore Service Provider to Global Innovator

Sascha Schwarz and Carsten Hentrich

Abstract Infosys has gone through a strategic transformation journey from being a small offshore IT services provider to a respected global consulting and IT services firm focusing on optimizing, transforming, and innovating the business of its clients. Distinct strategic transformational waves led Infosys, at certain stages of its corporate history, to reinvent its business model and strategically adjust the direction for the future. Influential factors inside and outside the organization have enabled each transformational stage and critical success factors have contributed to a path of growth. In its current transformational wave commencing in 2011, Infosys clearly focuses on the European markets creating new significant value levers. The result is a new level of service that delivers business impact for Infosys clients. This strategic transformation was piloted in France and Germany and once again implies a major paradigm shift not only for Infosys as a multinational company of Indian origin, but also how Infosys is perceived by its clients. Till date, this transformational journey is an exemplary and unique example for professional service firms on how to successfully plan and implement change within an organization.

1 Introduction

Infosys Limited (Infosys) was established in 1981 by seven cofounders with a capital of US$200 in Pune, India. The vision was to create India's most respected global company (see Barney 2010). Three decades later Infosys has a global footprint with 64 offices and 65 development centers in the USA, India, China, Australia, Japan, Middle East, UK, Germany, France, Switzerland, Netherlands, Poland, Canada, and many other countries. As of September 30, 2011, Infosys and

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its subsidiaries have 141,822 employees, revenues of US$6.6 billion, and a margin after tax of 24.8 % (see Infosys 2011).

This is a unique story, and the question is, what strategic transformational changes has Infosys undergone during its journey to position the organization and its strategic capabilities? In its first 20 years, Infosys focused on developing and managing applications for clients and pioneered the global delivery model (GDM). In the following 10 years, the company aggressively leveraged and mastered the GDM to outperform rivals. Considering the demand for end-to-end services, Infosys started to identify and create new services such as packaged or system integration services.

Probably the most important strategic change in Infosys' 30-year history was the announcement of "Building Tomorrow's Enterprise" strategy in March 2011. Infosys is now positioning itself as an enabler for its clients and partners to build their future enterprise based on—optimization (of operations), transformation, and innovation—so clients and partners can provide a service portfolio up to the highest levels of the value chain (see Caucis 2011).

For the underlying analysis we applied the 7-S Model by Waterman et al. (1980) to understand which strategic changes Infosys has undergone during its journey as a response to the changed internal and external environment. Furthermore, we conclude on the critical success factors that have enabled Infosys to go through such a rapid transformation. In a final analysis, we will show how these success factors are constant enablers that form the organizational DNA to cope with the past, current, and potential future transformational waves.

2 A Big Dream or the Beginning of Infosys 1.0

2.1 Infosys Vision

In the early years of Infosys, the vision and strategy was unwritten but well-practiced, as Narayana Murthy the cofounder of Infosys, has often stated. The company agreed to structure itself as a transaction-based business model that was not personality driven, but focused on strong team work without any hierarchy. This implies that each transaction was assessed from a zero base and decisions were made on facts and data and not on emotions or past precedent, thus focusing on the long term rather than achieving short-term success. This approach is also reflected in Infosys' management goals and objectives, which were set for the long haul and employee compensation. Furthermore, all employees were urged to be cost conscious, and productivity and quality have always been the guiding principles for employees.

Over time, Infosys established a foundation of values that were universal across cultures to ensure adoption across national boundaries. Infosys promoted five attributes (1) *openness* to new ideas; (2) *assurance* that the best idea is selected (meritocracy); (3) increase the *speed* of actions; (4) *imagination* or *innovation,*

which implies providing better and more ideas than yesterday; and (5) *excellence* of execution through proven implementation methodologies that are improved over time (see Barney 2010). These attributes have accompanied the Infosys journey, are still valid today, and build the foundation of Infosys' success.

2.2 Infosys' Early Years from 1981 to 1990

The business environment in India during the 1980s was difficult. Infosys had to spend 2 years importing a computer into India and then spend an additional year to get a telephone line, so the company quickly realized that focusing on the domestic market would not support its vision. For this reason, Infosys concentrated on the overseas business except for Narayana Murthy, who stayed in India to build the corporate office and focus on generating new business. The rest of the founders performed on-site programming at clients in the USA.

After the first year of Infosys' formation, the company started hiring and training new employees from universities in India to increase their workforce. By sending the new employees to overseas customers, mainly in the USA, Infosys was able to build relationships with its clients by providing high-quality services on-site. When the clients felt they had established a strong relationship with Infosys they moved the software development back to India. In tandem, Infosys started to hire employees in India and implemented processes and systems to take advantage of lower costs and economies of scale.

During this period, Infosys focused on acquiring domain knowledge in key vertical sectors, such as technology and banking to help it gain a strategic advantage for future customers in other sectors. The time difference between India and the USA also proved to be a competitive advantage as it enabled Infosys to provide 24-h workdays to its clients (see Barney 2010). To build its presence in the USA, Infosys entered into a joint venture with Kurt Salmon and Associate (KSA), in 1987, to expand its marketing effort. KSA was responsible for sourcing projects for the joint venture and Infosys provided the software expertise and technical knowledge. The partnership enabled Infosys to access new clients and opportunities. Based on Infosys' long-term growth objectives, the partnership ended in 1995 (see Barney 2010).

During its first decade, Infosys was still operating as a fragile start-up but was able to achieve sales of US$3.24 million with a profit of US$553,000 and had a workforce of around 200 people.

2.3 Infosys from 1991 to 2000

In 1991, the Government of India launched a number of policies to enable economic liberalization, which included the significant relaxation of restrictions on the private sector. Indian companies were now able to open offices in foreign

countries, hire employees in those countries, and travel easily. The liberalization also supported the access to capital markets, which enabled Infosys to hold its initial public offer (IPO) in 1993 and to be listed on the stock exchange in India. Infosys raised US$4.4 million through this offer. To support the company's business strategy for future growth, Infosys made a private placement of shares in 1994 and raised US$7.7 million. In March 1999, Infosys raised an additional US$70.38 million by issuing 2.07 million shares under the American Depositary Shares Program and became the first India-registered company to be listed on NASDAQ (Infosys 2003). The new capital allowed Infosys to build its new Bangalore headquarter and India's biggest single-location development center (DC) in 1994. During this decade, the company opened several sales branches worldwide and established DCs and training facilities in India to meet the needs of its clients and employees.

The driving forces for these investments were obvious. First, the competition between Infosys' peer group grew rapidly. IBM, Hewlett Packard, and other big players started to establish their own subsidiaries in India or partnered with local Indian companies to benefit from the lower labor arbitrage and skilled people. Infosys believed that high quality standards and the continuous improvement of existing processes and systems would achieve and sustain its competitive advantage. The company strengthened its effort of "zero-defect" tolerance and achieved ISO 9000 certification in 1993 and Level 5 of the Capability Maturity Model Institution (CMMI) in 1999. At that time only 1.5 % of software companies in the world achieved CMMI 5 level.

In the 1990s the shortage of IT professionals and graduates in the developed countries increased the demand for sufficiently skilled people. As the company was virtually unknown in the market and wanted to ensure continuous growth, Infosys decided to establish the DCs at locations nearby the most prominent places to attract and retain the right employee talents. Furthermore, Infosys launched its first Employee Stock Option Plan (ESOP) in 1994 to create high levels of motivation and commitment from its employees. The company's strategy was to focus on resources and competence as its core strength and Narayana Murthy stated: "Our assets walk out of our buildings every evening... We have to get them to come back!".

In 1995, Infosys lost its major client General Electric (GE) in the rate negotiation process. At that time GE accounted for 25 % of Infosys revenues. Within 48 h, Infosys disclosed the outcome of the negotiation and explained how the shortfall would be replaced. However, this experience was a lesson learned and the company limited the maximum threshold of a single client to a maximum of 10 % of the company's total revenues. Furthermore, Infosys introduced the PSPD Model which stands for Predictability, Sustainability, Profitability, and De-risking. This model helps the management to evaluate risk-return trade-offs and thereby make effective strategic choices.

In retrospect, deregulation, the rise of the internet, and the increase in demand for IT outsourcing enabled Infosys to develop and excel its GDM and grow from a small company with revenues of US$3.24 million in 1990 to revenues of US $203.44 million in 2000.

3 The World Is Flat: Infosys 2.0

3.1 Change of Client Demand for End-to-End Services

Client demand is changing rapidly and the development cycles of technology are reduced continuously. The evolution of technology is impacting an entire enterprise because the players in the global competition increasingly have the same conditions so the playing field becomes flat (see Friedmann 2005), which leads to the transformation of the enterprise business model. Small changes alone can evolve the entire external and internal environment. During the end of the 1990s, the internet hype changed customer preferences and technology rapidly. When in 2001 the dotcom bubble burst many new or existing business models, paradigms, and rules became obsolete.

Today, social media like Facebook or Twitter will continue to dramatically change a whole generation—globally. This affects the entire value chain of organizations now and also in the future. The demand for service providers, who can offer an end-to-end service portfolio globally, will increase. This means that clients will expect the same service provider to offer consulting capabilities to design new business models and IT concepts, as well as to develop, test, install, and maintain the new hardware and software. This will reinforce the competition, because former partners will become rivals and only those companies, which will have a critical mass and the ability to be adaptive enough for coping with these changes, will survive (see Govindarajan and Trimble 2011).

3.2 C-LIFE and Organizational Change

The three key strategic resources of Infosys are human intellect, technology, and processes. Combined with the awareness that Infosys can only succeed based on its ability to recognize, learn, and assimilate the environmental changes in a way that they can bring business value to its customers, the company has undergone several strategic decisions and changes in the last decade.

Due to its growth rate and decision to grow organically, in 2000, Infosys decided to formalize its values and engaged a set of leaders and employees, besides the Infosys board members, to understand their concerns about the existing values, and how they were embedded into the organization's processes and stakeholder relations (see Farjoun 2002). During an iterative process a set of primary, nonnegotiable, cross-cultural, and practical values were consolidated and transferred into the acronym C-LIFE. C-LIFE stands for Customer Delight, Leadership by Example, Integrity and Transparency, Fairness, and Pursuit of Excellence. Processes and systems were implemented to ensure that new employees recognized and acted according to the new Infosys values (see Barney 2010).

In 2004, Infosys combined its Learning and Development Group with the Infosys Leadership Institute (ILI) at Mysore, India. ILI provides managerial and

leadership training based on a nine-factor model of leadership behaviors. To support the growing demand on highly skilled young professionals and the development of high-potential leaders, Infosys opened the Infosys Global Education Centre (GEC) in 2005, which enabled the company to train 4,500 employees at any given time. Infosys invested heavily in its education capabilities and the GEC is now able to educate 14,500 employees simultaneously.

The dramatic growth of Infosys also required a new organization, which supported the strategic objectives and the ability to assimilate the environmental changes. In 2005, Infosys established a new sales organization to be more client focused. Furthermore, it established business units (BU) across its vertical industries to support client service. The new BUs such as Enterprise Solutions (ES) or System Integration (SI) was organized into packed services, e.g., SAP, Oracle or Microsoft, and supported the co-operation and partnership with the software vendors.

Infosys recognized that other competitors such as Accenture, Capgemini, Tata Consulting, and Wipro adapted the GDM, which reduced its competitive advantage and would limit the future growth of the company. Therefore, Infosys set up SETLabs with the primary target to identify market trends and to develop innovative solutions and products within the partnership ecosystem. One of the first products was the launch of the International Retail Banking solution Finacle in 2000. Today, Finacle is implemented in 140 banks across 73 countries and is one of the most successful banking solutions in the market.

The company also realized the limitation of its business consulting capabilities to provide transformational services to its clients. In 2002, the company established Infosys Consulting (IC), a fundamental new business for the company, which advises clients on how to redesign their operations and provides access to the "C-suite" in client organizations (see Govindarajan and Trimble 2011). With its own legal entity, Infosys Consulting was able to grow out of the Infosys box and build its own capabilities, organization, and culture. Infosys Consulting provides business consulting expertise and has enabled Infosys to establish end-to-end services that generates measurable business value for clients. For the added value services, the company was able to differentiate itself from peers and was able to charge higher prices (see Porter 1999).

3.3 Globalization Versus Geographical Concentration

Infosys had a high geographical concentration of business. In 2000, Infosys was highly dependent on the North American market, which accounted for 78 % of its revenues; Europe 14.8 % and 7.2 % the rest of the world (see Infosys 2001). The company recognized that this geographical concentration could lead to volatility in its business because of political and economic factors in its target market. Therefore, Infosys proactively looked for business opportunities in new geographies and made significant efforts to grow its business in Europe and Asia. Acquisitions like Expert Information Services Pty. Ltd. in Australia and the opening of new offices in Europe facilitated the entry into these target markets.

In Europe, Infosys concentrated on UK, France, and Germany. Distinct characteristics of the individual markets—economic growth, IT spend, willingness to outsource, cost of penetration and price points, as well as cultural differences such as language, work culture, and ethics—influenced the growth rate of these countries significantly during this decade. Initially, sales increased dramatically but slowed down in Germany and France due to language and cultural differences, while growth in the UK continued. In March 2010, the company revenue distribution across the regional markets was as follows: 65.8 % North America, 23 % Europe, and 11.2 % rest of world, which meant only a small change in comparison to the objectives set. However, by March 2010, Infosys employed 113,796 Infoscions globally and generated revenues of US$4.8 billion with a net profit of US$13 million.

4 Building Tomorrow's Enterprise: Infosys 3.0

4.1 Changing the Service Portfolio: 2010 Until Today

In March 2011, Infosys announced its new "Building Tomorrow's Enterprise" strategy. The key driving forces for strategic change are the increased competition and the changing client demand for end-to-end services. Furthermore, the offshore commodity can no longer provide the high margins due to its "linear growth" nature. Infosys has to achieve greater "nonlinearity" in its revenue by identifying new services to maintain its position as an industry margin leader among its multinational and top-tier India-based competitors (see Caucis 2011).

Infosys' objective over the next 5–7 years is to have the company's revenues come equally from: operations services (application development and maintenance, validation, infrastructure management and BPO—currently 60 % of its revenue); transformation services (consulting and systems integration—currently 31.7 % of its revenue); and innovation services (new intellectual property, products, platforms, and engagement models—currently 8.3 % of its revenue).

To mature its high-value services, Infosys strengthened its partnerships with clients, alliances, and universities and identified seven strategic themes: Digital Consumers, New Commerce, Healthcare Economy, Sustainable Tomorrow, Smarter Organizations, Emerging Economies, and Pervasive Computing. Infosys believes it can generate new services and innovation for clients based on these key demand drivers and incorporated the seven themes in the new corporate strategy of "Building Tomorrow's Enterprise."

4.2 Building Innovation & Platform Capabilities

When comparing the increase in revenue of its transformation services since 2006 (3.5 % compared to 31.7 % today) and the growing number of consulting-led

transformational deal wins over the last years, Infosys' investment in its consulting capabilities have been quite successful and almost make up one-third of the revenue split (Infosys 2006). Considering that 65 % of revenues account for the traditional business and the consulting capabilities are on a good track, Infosys has increased its investment in innovation and new platform capabilities by creating Infosys Labs (an expansion of former SETLabs). Infosys Labs is a primary research and innovation organization with more than 2,000 industry and technology experts to generate new intellectual property and to drive innovation and transformation for clients. This will also support Infosys in the introduction of new services and new engagement models. Infosys has already launched and sold seven functional platforms, including end-to-end services (see Infosys 2011).

Recently, Forbes (2011) ranked Infosys number 16 among the "World's most Innovative Companies," among the likes of Google and Apple. This accolade proves that the path that Infosys has been following for several years has been successful so far and the decision to launch the new brand positioning is a plausible strategy.

4.3 A Complete Evolution of the Entire Organization

The new strategic positioning of Infosys required essential organizational changes so that a sustainable competitive advantage could be achieved. As discussed before, Infosys had already completed the transformation groundwork back in 2003 by aligning its business along six industry verticals to support its go-to-market strategy and build transformational and innovation capabilities. The new organizational structure aims to better position Infosys for growth, according to the identified seven strategic themes, by realigning the company's business along four industry verticals and three horizontal service functions. The newly formed four global industry verticals are fully P&L responsible, and this also applies to the horizontal units. The new verticals ECS (Energy, Utilities, Communication & Services), FSI (Financial Services & Insurance), Manufacturing, and RCL (Retail, CPG, Logistics & Life Sciences) will support the development of industry expertise and the client end-to-end ownership ensures a common view on the client. The three horizontal service functions are deployed within each industry vertical to provide domain expertise, to create synergy and scale by creating best-in-class offerings along the value chain, and by considering optimization, transformation, and innovation services. The horizontals are Consulting & System Integration, Business IT Services and Products, Platforms & Solutions.

After reaching a critical mass and being perceived as an independent brand, Infosys Consulting (IC) has been integrated within the new organization into the Consulting & System Integration service line, which is led by the former IC CEO Steven Pratt. Furthermore, three additional new service units, which operate a cross industries have been created for the key market trends Cloud, Mobility, and Sustainability.

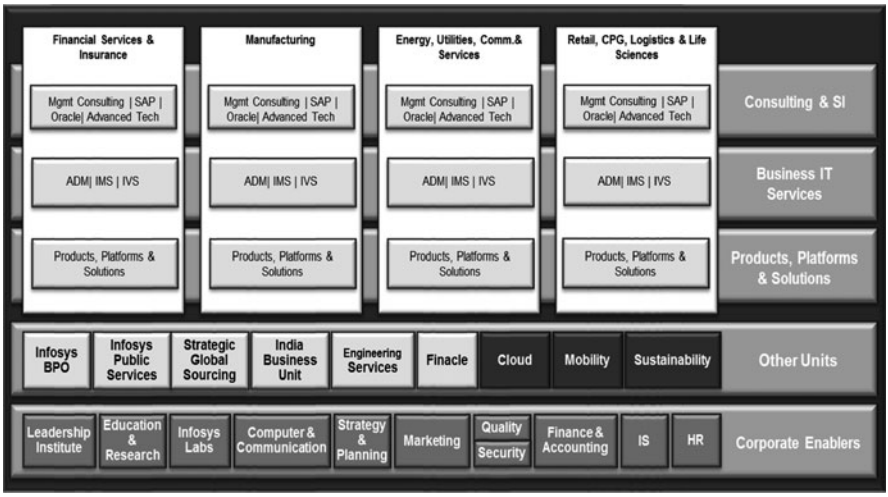

Fig. 1 Infosys 3.0 organizational structure

Infosys has been transformed into a smarter organization with decentralized decision-making processes. This has led to the re-assignment of many mid- and senior-level managers, which is a new experience for Infosys, considering that the company growth rate over the years was over 20 % on average and space for personal growth was always accommodated. In fact, a few senior executives left Infosys. The attrition rate has not increased significantly, which indicates that the smooth change management approach involving employees on each level was successful and that the employees believe in the company's future vision (see Caucis 2011).

Infosys will continue to apply its PSPD model to ensure that the expectation on business unit leaders' actions will support Infosys' roadmap of "Building Tomorrow's Enterprise" (see Infosys 2011). The organizational structure of Infosys 3.0 is shown in Fig. 1.

4.4 Adaptation of the Mission Statement

Infosys has developed its vision, which states that Infosys will be a globally respected corporation. The vision is supported by Infosys operating principles—the mission statement, the corporate values, and aspirations. In 2011, the mission statement and the value definition changed slightly to accommodate the "Building Tomorrow's Enterprise" strategy.

The previous mission focused on achieving Infosys' objectives in an environment of fairness, honesty, and courtesy towards its clients, employees, vendors, and society at large. Infosys has changed the wording in a broader sense to

Fig. 2 Infosys vision

"Strategic Partnerships for Building Tomorrow's Enterprise." The value definition changed from "Customer Delight" to "Client Value" because "Building Tomorrow's Enterprise" aims to generate sustainable and accountable client value.

The aspiration to achieve equal revenues from transformation, innovation, and operational efficiency services with specific geographic focus, supported by 15 % global talent diversity, completes the adapted vision and mission statement for Infosys 3.0 (see Fig. 2).

4.5 Renaming Infosys Technologies to Infosys Limited

The new strategic positioning of Infosys 3.0 has also had an impact on the corporate brand and its name. In the past, Infosys has mainly been recognized as an Indian IT outsourcer and this was supported by its earlier name Infosys Technologies Limited which has now been renamed to Infosys Limited. The new name underpins the strategic positioning of Infosys and will support the company direction to be recognized as a business enabler to provide innovative and transformational end-to-end services.

4.6 Paradigm Change for Europe with France and Germany as Pilots

To further boost its business presence in Europe, Infosys recognized that a significant paradigm shift was necessary. Observing the fact that Europe requires

a different approach to bridging cultural barriers and to achieving sustainable growth, a greater local presence was necessary. In 2010, the business in Europe made up about 23 % of Infosys revenue but was intended to grow to 40 %. To achieve this goal, in the beginning of 2010 local country leadership was implemented as a pilot project, both in France and Germany. Country heads for Germany and France commenced their jobs to drive the strategy for Europe in January 2010 and started building a local leadership and consulting organization. They collaborated closely while forming independent tactical approaches on how to best attract their local markets, based on their local market knowledge and cultural insights. There was a common agreement, however, that the local leadership and consulting organizations should be catalysts for local strategy implementation, while leveraging global capabilities of the broader global sales and delivery organization. This was a way to compensate for the missing link between local skills and global capabilities. This was a significant paradigm shift for Infosys that aimed to better leverage cultural diversity, compared to the old approach where the strategy for Europe was primarily driven out of the European headquarters based in London, UK.

The results after 2 years of execution show that this was the right decision to take. For instance, in Germany the revenues have doubled as a result of this new paradigm. The German consulting organization is one of the fastest growing consulting organizations in Germany focusing on driving optimization, innovation, and business transformation services for its clients. Several new global DAX accounts were opened where Infosys started sustainable new partnerships with a differentiating quality portfolio of services. Infosys has successfully made the first steps from being a global organization towards becoming a *glocal* enterprise—one that has local and global capabilities.

4.7 Building Innovation and Transformation Services in Europe

Going *glocal* has also meant having localized specializations of global services that are more appropriate for local markets to address local market needs; in short, how Infosys has localized its global offerings on innovation and transformation for the European market. The fact that Infosys did not yet have such a strong brand in Europe as in the USA, actually served as an advantage. Positioning high-value consulting services based on innovation and transformation has also served as a brand-building exercise to shape clients' perception in a fresh way. In this context, it was decided to position transformation and innovation services as two sides of the same coin, while approaching the topic from a business value articulation perspective. This means to speak the language of business people rather than technical people and to address business needs rather than technical needs. The services are positioned with a primary focus on serving a business purpose and to achieve business goals. Technology is viewed as an enabler for new business initiatives,

addressing new business opportunities, and even designing and implementing new business models.

Innovation can be defined as an envisioned technology that enables the end-state of the business and leverages new technological possibilities to achieve business goals. Transformation is the counterpart that deals with *how* to get to this desired end-state of the business. This involves aspects of road-mapping and managing change, for instance, as well as identifying the value levers, potential fields for innovation, and evolving the business model around the desired end-state. Both innovation and transformation create a synergy that primarily addresses a business audience.

One interesting example to illustrate this idea is cloud computing, which is commonly considered to be a very technical topic. Infosys' position as a cloud ecosystem integrator includes four stages of cloud adoption: *strategize*, *build and automate infrastructure*, *aggregate and migrate*, and *integrate and innovate*. The highest-value stage is focused on cloud-enabled innovation and a service offering has been created that specifically focuses on viewing cloud as an enabler for new business models.

This service offering was specifically created to target the European market as there is a demand for a cloud service that supports local needs but delivers differentiation against local competition. The offering has been designed around identifying new business opportunities and designing the corresponding business models to address revenue growth. This translates into industry-specific value stories that address specific value propositions, such as improving the effectiveness of the sales force through the cloud. For example, cloud-enabled e-shop solutions can scale extensively and cost-effectively by integrating sales channels to provide cross-channel user journeys and improve customer loyalty. In addition, this type of solution can leverage new sales channels, like social media, to enable personalized marketing and optimized product/service lifecycle management with customer analytics. All these concepts work in combination as an overall business solution to address the target of revenue growth.

5 Constant Enablers for Evolution: The Organizational DNA

So far we have illustrated the different waves of the Infosys transformational journey from being an offshore IT service provider to becoming a global innovator. The interesting question is, "What have been the constant enabling factors throughout the transformational waves that have served as a kind of organizational DNA and have been the basis for successful past, current, and potentially future evolutionary transformations?" These enablers for evolution are the recurring principles and drivers that have been observed to having made the significant difference to both define the next stage of transformation and also to successfully execute it. We have used the 7-S model as proposed by Waterman et al. (1980) for this analysis and will present the results in the following sections.

5.1 Super-Ordinate Goals

From the outset Infosys established a corporate vision, mission, and values that are constant and only evolve slightly over time. It has been the same vision for more than 30 years, from the small Indian firm with just a handful of people to the global company it is today with more than 140,000 employees worldwide. The vision has always embraced a higher purpose to serve the broader community rather than just economic trends. This *common and stable vision* served as a guiding principle to align the whole workforce and also to attract the right people that share this vision and contribute to bringing it to life.

5.2 Style

The style of Infosys has been coined by the vision and has made it tangible for everyone in the company. The culture has always been observed as a sharing community with a family-like leadership style, where wealth has always been shared with the employees and the broader community.

The long-term vision has always implied a long term and *sustainable leadership* approach, which is actually reflected in the history of Infosys. Long-term foresight is a leading paradigm. The commitment from senior leaders to this vision and the value system that comes along with it is a living example for all employees. An ethical style builds trusted long-term relationships with clients.

5.3 Structure

Structure has always been viewed to serve a temporary purpose only. Infosys has taken it seriously and has been able to *continuously adopt new structures* as a result of changing conditions. Structures have been flexibly changed as a reaction to a changing demand and have been architected from the very beginning around the principle to serve global clients across country boundaries and to implement global processes.

5.4 Strategy

Longterm sustainability can be observed as a primary strategic principle from the beginning until today. More important than the actual strategy is the concept of an *adaptive strategy process* that allows Infosys to react with agility to changing internal and external circumstances. The ability to selectively forget the

past and create the future with a long-term view is a core strategic capability (see Govindarajan and Trimble 2011).

5.5 Systems

To cope with a rapidly growing organization, *industrialized processes that scale globally* have been set up from the very beginning. The processes have been continuously optimized and improved with technology support. For example, Infosys holds a CMMI Level 5 certification. A legal organizational form has been chosen that remains unchanged and goes beyond country boundaries to dismantle inter-organizational political/goal conflicts to enable smooth global delivery.

5.6 Skills

A key enabler is the *ability to learn and adapt new skills quickly*. This specifically applies to technical skills and learning new technologies. Apart from the quick acquisition of knowledge, Infosys realized that the creation of knowledge is equally important and invests in applied research and intellectual property creation. Both capabilities form the basis to innovate the organization and its offerings.

5.7 Staff

Infosys has always focused on attracting and *acquiring the best talent globally*. The company has built an infrastructure and a work environment that is attractive for employees and one that creates an atmosphere of pride. Embracing global diversity and also global collaboration is reflected in the staff and the working culture. This talent pool serves as an enabler to act agile and to create knowledge.

6 Conclusions

This paper applied the 7-S-Model to understand the key enablers that have driven the Infosys transformation from an offshore IT service provider to a global innovator over the past 30 years. We have outlined the key factors for all seven dimensions of the model and our analysis revealed that Infosys has developed a kind of organizational DNA, which enables the company to handle the transformational changes. The seven key capabilities that form this DNA are: common and stable vision, sustainable leadership, continuous adoption of new structures,

adaptive strategy process, industrialized processes that scale globally, the adoption of and the adaption to new skills quickly, and the acquisition of the best talent globally.

The company has listened to its customer and partnership ecosystem and developed, over the last 2 years, seven strategic themes for the future. The organization has been aligned appropriately to be able to provide the correct competencies based on a common value system, skills, processes, and technologies. Furthermore, we have illustrated that the company has considered the maturity of the GDM, and a supply-constrained labor market in its strategic transformational journey, and relies more on its nonlinear growth initiatives and high-end services to maintain its industry-leading growth and margin profile. The launch of Infosys 3.0 and the enablement by the new organizational structure was the next logical step to demonstrate its competitive advantages.

With the transformational waves Infosys has undergone, it has made an increasing business impact for its clients. As a result, with each transformational wave Infosys was also able to change the perception of its clients about the company, positioning a different quality of services. The reinvention of the business model appears to be client-centric, which in turn, increases the business impact for clients with each transformation. We conclude that this concept is another important success factor for a globally operating service firm, i.e., to put the benefit of the client in the center of each transformation.

We conclude that this analysis could be used by other companies to focus on their capabilities and how to transform their organization in a similar way, and to shape the basis for a sustainable global organization. The work may also be used to improve those identified core capabilities within the Infosys internal organization to further optimize performance and to create more transparency among the organization.

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Departments in Transition: How Businesses Organise Their Knowledge Work

Frank Schabel and Andreas Stiehler

Abstract During periods of change and transition, engineering departments take the lead, because it is precisely here that the requirements for innovation (and thus greater networking) are especially pronounced. This is also clearly noticeable in IT. The results of a study conducted by the authors in Germany, Austria and Switzerland, however, confirm the leading role that has been assigned to IT both in terms of the use of technology and external sourcing. Finance & Accounting (F&A) departments, by contrast, give the impression of being relatively conservative with regard to many of the measures discussed in this study. On the one hand, this is logical—after all, many activities can be carried out via formal line-tasking processes; innovation requirements are also relatively low. On the other hand, F&A managers must increasingly deal with issues such as skills shortages, diminishing knowledge shelf life and processes and procedures that are becoming outdated at an ever-quickening pace. Sooner or later, some catching up on their part will be required. The rising proportion of project-based structures in F&A makes it clear that such a change is already taking place.

1 Introduction

In recent years, many businesses have optimised their production and logistics processes. In addition to measures for automation, this includes the outsourcing of process steps in order to reduce costs and shorten production and delivery times. As part of this shift in added value, knowledge work is growing in importance in the more advanced, industrialised nations. Businesses are thus increasingly measured

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by their ability to efficiently organise their knowledge work and promote and progress innovation.

Such development naturally carries with it consequences for departments with a high proportion of knowledge workers, because ultimately the responsibility for being able to compete successfully increasingly rests on their shoulders. Our study (Stiehler et al. 2011) shows how departments with a high proportion of knowledge workers perceive the challenges associated with this change and which measures they use to react to these challenges.

- IT: For the purposes of this study, this includes both traditional IT departments and service units that, in addition to standard IT matters, look after further technical aspects or related areas (e.g. telecommunications and IT security). Knowledge workers in this area are typically IT professionals with a degree in computer science or business information systems.
- Research & Development (R&D): In addition to actual research and development work, this includes those departments within businesses that also deal with production planning and construction. Knowledge workers in this field are typically engineers with an industry-specific background, e.g. chemical, pharmaceutical or mechanical engineers.
- Finance & Accounting (F&A): For the purposes of this study, this includes all areas that deal with finance, financial reporting and controlling. Knowledge workers in this area typically have a business background with specialist knowledge in finance, financial reporting or controlling.

All three departments have a comparatively high proportion of knowledge workers. However, they differ considerably with regard to process maturity, technological affinity and the necessary degree of networking between employees to accomplish their core responsibilities. What influence such differences have on the current challenges and measures employed for the organisation and improvement of knowledge work will also be investigated in this study.

We surveyed 148 departmental heads of large businesses. This computer-assisted, telephone survey was carried out between February and April 2011.

2 Knowledge Work in Transition: Trends and Challenges

The growing importance of knowledge work in generating added value leads to an increase in both the prestige and importance of those departments with a high proportion of knowledge workers. This thesis has been confirmed by the predominant majority of department heads surveyed. In particular, managers and team leads in R&D see the growing importance of their departments as a factor in the overall success of their companies. This is not surprising, given the central importance of these departments in the innovation process.

It is worth noting, however, that the bulk of IT and F&A managers as well as team leads also report the growing importance of their departments in the overall success of their companies. Thus, as part of the discussion around outsourcing, the significance of

these departments has frequently been questioned in recent years. The survey results suggest that this discussion has, however, abated. Less than one in ten department managers now find that the importance of their departments is being questioned.

This increasing strategic importance should not, however, obscure the fact that the demands on these departments with regard to increasing efficiency, transparency and service orientation have clearly increased. In particular, IT and R&D managers confirm that the pressure to demonstrate this added value in the form of concrete metrics is on he increase. In F&A, this pressure to justify one's position seems to be less pronounced; however, managers in this area see themselves as being increasingly called upon to focus more on being service providers with regard to other departments.

2.1 Organisation and Process Design

Knowledge work is no longer created in an "ivory tower"; rather it is built upon exchanges between employees, customers and external partners. Due to the increasing fragmentation resulting from generating added value, the demands on external networking in recent years have grown even more. Managing increasingly more comprehensive and complex communication and exchange processes poses a substantial challenge. Almost 90 % of department heads (among these a disproportionately large number of R&D managers) confirm these findings.

Also, the image of the knowledge worker as an individual who concerns himself with very similar tasks or issues for an extended period (or even throughout his entire employment career) is no longer valid. On the contrary, some 80 % of those surveyed from all three department areas confirmed that processes and procedures must be adjusted to changing conditions at an increasingly quicker rate. Moreover, in excess of two-thirds of those surveyed reported having shorter and shorter planning periods. Against this backdrop, a flexible organisation and a high degree of flexibility on the part of employees are becoming increasingly more important.

Because efficiency—in addition to flexibility and the will to innovate—is gaining increased attention in the departments surveyed, a further result has been produced. Many respondents—among them, a disproportionally high number of IT managers—see themselves as being at the mercy of increasing budgetary pressures. This does not necessarily mean that budgets are being cut; in many cases, budgets have simply shrunk in relation to the services provided.

2.2 Recruitment and Development

The shortage of skilled workers has a particularly strong impact on departments engaged in a high degree of knowledge work. In R&D departments, where there is a significant demand for highly qualified engineers, this problem is particularly acute. However, this lack of qualified employees is not the only challenge facing managers in the departments surveyed.

More and more employees and candidates are demanding a flexible working environment, i.e. more flexible working hours or the possibility of working from home. This is understandable: on the one hand, requirements for flexibility on the part of employees are increasing. On the other hand, knowledge work itself does not necessarily require that individuals be tied to a set place or time. Departments that succeed in recruiting the best staff (or want to retain them) must be more forward thinking with regard to this area. Fifty-nine percent of respondents across all the departments surveyed confirmed this view.

It is interesting to note that only relatively few respondents report a declining acceptance of rigid, hierarchical organisational structures by employees. This suggests that the trend towards more "democracy in company organisation" as part of the much-hyped "Enterprise 2.0" has been somewhat overrated. One can also argue, however, that the managers surveyed are themselves part of the existing hierarchies and so are more likely to underestimate this issue.

Ultimately—judging by the survey results—the area of training and further development will continue to grow in importance as significant input factors for knowledge work. More than 40 % of those surveyed confirm that the knowledge necessary for carrying out core tasks is becoming outdated at an ever-increasing rate. To keep pace with this development, departments must invest more heavily in the further development of employees or at least create incentives and conditions for the continued updating of skills and qualifications.

3 Measures: The Need for Action and Implementation

Against a background of increasing demands for flexibility and the growing pressure for innovation, formalised, rigid processes in the organisation of knowledge work are proving to be more and more of a hindrance. As an alternative, many departments are currently changing over to project work—i.e. collaboratively working, in teams, on processes that are limited in terms of both time and the thematic scope of the work being performed.

More than half of the department heads report that the proportion of project work being carried out in their departments over the last 2–3 years has increased. At the same time, they expect this trend to continue in the future. It is noteworthy that the trend towards project-based structures has not only been observed in departments with traditionally strong project work such as R&D and IT, but also in F&A.

In fact, more than 60 % of the F&A managers surveyed have reported an increase in project work over the past 2 years. It must be said, however, that the bulk of F&A activities can be efficiently mapped through formal processes. It is thus logical that the average proportion of project work here lies markedly below that of the level generally expected for IT and R&D. The increasing demands for flexibility (e.g. through increasingly shorter planning periods and the growing number of compliance issues) are also being felt, however, in F&A. By expanding their amount of project work, many F&A departments are obviously trying to meet these challenges.

3.1 Use of External Specialists

The use of external support helps departments to develop further and to master current challenges in a number of ways. First, the allocation of projects or process steps to external service providers offers the opportunity for departments and businesses to focus more effectively on their core competencies and, in doing so, to increase efficiency. Second, the deployment of external specialists helps resolve capacity and know-how shortfalls, which in turn increases flexibility. Third, working with external specialists affords companies the opportunity to acquire new ideas and to think outside the box.

The survey results show that many departments are already currently using external specialists. During the last 12 months, one in two departments allocated projects or process steps to external service providers. Similarly, many departments make use of flexible forms of employment, such as engaging external specialists either as freelancers or through the hiring-out of temporary employees.

In many departments, externally provided services have become an integral component in creating added value. In every second department (that uses external service providers), the average proportion of external specialists deployed exceeds 5 %. In every fourth company, this exceeds 10%. This proportion—according to the expectations of the department heads surveyed—will continue to increase over the next 2–3 years.

However, even here there are clear differences between the departments studied. The demands made on external service providers and the use of external specialists in R&D and IT are far more prevalent than in F&A. This is hardly surprising. The reasons for these differences are, first and foremost, the more demanding nature of the activities involved in these projects as well as the greater lack of experienced specialists characteristic of the R&D and IT fields.

When comparing departments, it is worth noting that, by contrast, the possibilities for external support in R&D are exploited in a similarly intensive fashion to that of IT. The survey does not, however, support the idea that IT has a possible leading role in external sourcing, as is often discussed.

3.2 Success Factors in the Use of External Specialists

The deployment of external resources offers companies more than just the resolution of resource bottlenecks. More than 50 % of managers with experience in utilising external resources report an increased acquisition of new ideas for improving processes and procedures. Just under 40 % of those surveyed see it as an advantage that by using external resources, employees are able to look beyond departmental and company boundaries. Roughly one in four department heads views the use of external resources as helpful in resolving outdated and entrenched organisational structures in businesses.

In order to fully exploit the advantages for further development in departments through this transfer of knowledge and expertise, the use of externals must be long term and strategically planned. In almost 50 % of departments (among these a disproportionate number are in R&D), this is already the case.

Department heads with experience in using external resources recommend a mix of measures to improve the incorporation and integration of external staff. In particular, they consider the following to be absolutely vital: intensive coaching during the first few days of employment; the designation of a specific individual to give support and advice to external personnel and the creation, maintenance and documentation of functional specifications.

Furthermore, over half of those surveyed believe it is necessary to involve external personnel in team meetings and exchanges of ideas as well as in the communication and knowledge management infrastructure. In other words, in order to ensure that their deployment meets with the greatest possible success, external specialists must be viewed as permanent components of the team while employed by the company and, accordingly, be integrated into the business' internal processes. Furthermore, team-building measures and exercises can also be helpful, but only a third of those surveyed considered these to be necessary.

4 Key Points

Business departments with a high proportion of knowledge workers are facing profound changes. They must base their strategic direction, organisation and process design as well as their personnel policies and personnel development on new premises.

4.1 Strategic Direction and Self-image

The vast majority of respondents confirmed the growing importance of their departments for the overall success of their companies. At the same time, however, they see themselves as being increasingly required to demonstrate their added value through clearly defined metrics in addition to being called upon to strengthen their positions as service providers to other departments.

4.2 Organisation and Process Design

Managers in the surveyed departments must carry out a difficult balancing act. On the one hand, increasingly shorter planning periods in addition to processes and procedures that are becoming ever more rapidly obsolete ensure that demands on flexibility and innovation are growing. This is where stronger networking between

internal and external employees offers a great deal of potential. On the other hand, the increased need for communication and coordination associated with this stronger networking decreases efficiency. The survey results confirm that in many departments, budgets—as measured in terms of requirements—tend to decrease.

4.3 Staff Recruitment and Development

A shortage of skilled workers is especially noticeable in departments with a high proportion of knowledge workers. To recruit more employees and involve them more closely with their departments, managers must use flexible working arrangements to cope with ever-increasing demands. They must also create conditions and incentives that promote the further training of employees and thus react to the increasingly rapid obsolescence of current knowledge sets.

5 Conclusion

A reorganisation of knowledge work, the implementation of supporting technologies and the use of external support are key action areas for addressing the challenges outlined above. Many of the measures discussed are, in fact, already being implemented. The survey results also show potential.

More than half of the department heads reported a growing proportion of project work (as an alternative to formal line-tasking procedures). Furthermore, they see an acute need to actively promote internal and external networking as well as giving individual employees greater responsibility.

Over the past few months, external specialists have been used in more than 40 % of the departments surveyed. It is also the respondents' view that the use of external workers will continue to increase. Their use not only helps close gaps in expertise and resources, but also enables the further development of the organisation (e.g. through new ideas for process design). In addition to intensive coaching from the outset and appropriate processes, structures and documentation, a successful integration of external workers requires their greater involvement in internal structures and processes.

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Internationalising the Departments for Devices and Accessories of a Communications Technology Company

Marit Loewer and Holger Neinhaus

Abstract Ambitious financial goals and low performance in the past years are forcing a leading communications technology company to develop new ways of improving its business. The company's headquarters are located in a European country, but the company also owns subsidiaries in its neighbouring countries. These subsidiaries are independently operated and synergies are hardly made use of. Through closer and more efficient cooperation between the headquarters and the subsidiaries, two objectives could be achieved: To save costs on the one hand and to increase sales on the other hand. This transformation into an international department for communications technology devices and accessories with integrated processes and consistent goals is implemented in a project. Representative sections of the department are selected to run a pilot; the rollout is supported by trained change agents from within the company who ensure sustainable anchoring of the new processes afterwards. Four factors turn out to be the most important components of these changes: Changing employees' mind-sets, creating expertise, defining new processes and anchoring sustainable change in the company.

1 Introduction

Increasing competition in the market for telecommunication due to increasing deregulation since 1998 and at the same time low performance in developing innovations internally were leading to decreasing sales figures of a leading communications technology company in Europe. To avoid further loss of market share and profitability, it was forced to investigate new ways of improving its business. The company had subsidiaries in several European countries. Each one of the subsidiaries had a department for devices and accessories, besides the same department in the headquarters.

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Up to that time, synergies were made only little use of and a lot of tasks were carried out in parallel in every subsidiary. This was due to the fact that each subsidiary was run independently from the headquarters. Each party was only responsible for its own national performance. In the past few years, the main focus of top management was clearly set on the home market as that with the most promising potential. As a consequence, the department in the headquarters was concentrating only on needs of its home market and purchased goods only based on the demand of this market. There was very little interaction with foreign subsidiaries. They were allowed to order products from the headquarters but could also purchase products independently. Sometimes the very same products were purchased from the same suppliers but separately for each other—cost advantages due to economies of scale were neglected. Furthermore, advertising costs had a major share in overall costs in every subsidiary, since part of the business was performed via online or catalogues which were in parts produced nationally. Even the advertising material for the online shop (product description and pictures) was often produced nationally. The synergies of central creation of standardised advertising material were not used up to that time.

The transformation into an international department for devices and accessories was implemented with support from SMP Strategy Consulting. With the clear objectives to cut costs on the one hand by exploiting untapped synergies as well as to increase sales on the other hand by optimising the product offerings, new roles and processes were defined and implemented. The new roles and processes ensured a closer and more efficient cooperation between headquarters and subsidiaries. This article will describe the procedure of how these changes were implemented as well as the biggest challenges and the factors which made these changes successful.

2 Project Overview

The project started with an analysis and a conceptual phase in which the current distribution of tasks was analysed and new roles of cooperation were defined in workshops (see Fig. 1).

The role of a market manager (located in the subsidiaries) and roles of an assortment manager and a purchasing manager (located in the headquarters) were set up. These roles, in the past jointly fulfilled by one person in every country, were now separated. Expertise in each role and avoidance of double work were the leading motivations. The national market manager was supposed to gather in-depth know-how of the respective market. Market trends were to be analysed, competitors to be observed and conclusions from sales performance of the respective own assortment were to be drawn. Based on this analysis, the market manager was expected to send requests for the appropriate national assortment to the headquarters. The international assortment manager was supposed to create an international assortment based on the national requirements. The national market manager would plan the national quantities to be purchased and the national selling price for the share of products of the international assortment planned for his country. The international purchasing

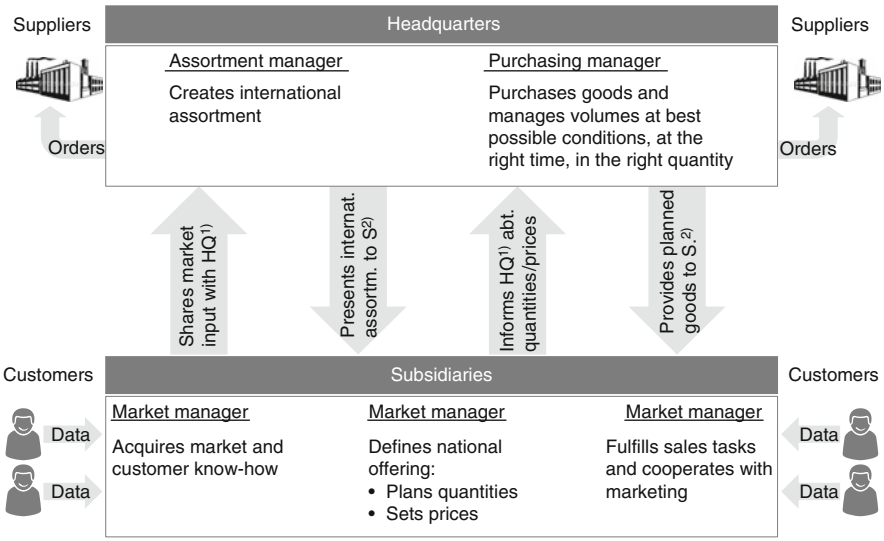

Fig. 1 International roles and processes

manager was then responsible for buying the desired articles at the best price in the right quantity and at the right time. And lastly, the market manager would be responsible to support the effective marketing of products in his own market. The expectation of the new roles was to bundle know-how and therefore to enhance the expertise and also to avoid double work.

During a pilot phase of 3 months, the most important fields of optimisation were tackled by selected teams of the department in headquarters as well as in subsidiaries. SMP Strategy Consulting took over the role of a trainer and was responsible for the project management.

Potentials to *save costs* were identified in the operation of the departments. In addition to the neglect of economies of scale, the large number of suppliers for sometimes similar products unnecessarily increased complexity and the workload within the company. Furthermore, based on the slightly different product ranges, also print catalogues and other marketing brochures and online shop contents were designed differently per country leading to high marketing costs. The standardisation of advertising materials seemed to offer high potential for cost savings.

Furthermore, possibilities to *increase sales* by improving the assortment were identified: Firstly, so far the international part of the assortment had been composed on the basis of previous year's sales performance of products on the home market, but did not necessarily meet the demands of the foreign markets. A common system for monitoring the sales performance of articles was missing and therefore, the department in the home market had no knowledge about customer preferences and sales performance in the other countries. Secondly, the pricing was done as cost-plus pricing. Neither the competitors' prices nor the customer price elasticity was the basis to set prices, but the aim of gaining a certain margin. As a result, prices

were not set on a competitive level. And thirdly, the availability of products was not sufficient, especially in the subsidiaries. The bestselling items were sold out very quickly, since product planning was done based on the sales performance in the home market and not based on the projected demand or past sales performance of that product in the respective country. And since demand differed considerably between countries, a nationally precise planning had to be set up.

The specific tasks tackled in the pilot phase were the following:

2.1 Objective 1: Save Costs

1. Lowering buying prices by using economies of scale: The different assortments from all subsidiaries were compared and it was identified, which products were similar and could be purchased internationally in higher quantities within existing supplier contracts but in a better scale of discount. This process was done per product category and generated the first quick wins because buying prices were lowered immediately.
2. Decreasing complexity and improving contract conditions by consolidating suppliers: After having identified the products to be purchased in one batch, the next task was to analyse which supplier would be the best for international cooperation. Supplier conditions and qualities were compared and contracts renegotiated in order to reduce supplier complexity and therefore effort. The teams discovered that due to a lack of experience and volume, the supplier contracts of the subsidiaries were mostly inferior to the contracts from the headquarters. Terms of payment, guarantees of quality, etc., were renegotiated on the basis of higher volumes with the result of improving supplier conditions by a significant amount.
3. Lowering marketing costs by standardising content and advertising material: The content of the online shop had not been standardised up to that time. Even though product descriptions and product pictures were mostly taken over from the headquarters, they were very often subsequently changed to meet the taste of each country. Rewriting descriptions and retaking pictures generated high marketing costs. Consequently, a standard for product descriptions and pictures was set up internationally during the pilot phase and production was only done in the headquarters afterwards.

   Also most of the printed advertising material from the headquarters was used, but changed nationally due to differences in the assortment, in customer preferences and based on the assumption that nationalised advertising material would be more efficient. Additionally, country-specific advertising material was also produced by the subsidiaries and used only in the respective country. During the pilot phase, the efficiency of the national advertising material versus the standardised international advertising material was tested. Based on the rate of advertising costs to turnover and to profit, most of the national advertising material had a poorer performance than the international advertising material.

These results led to the decision to produce mostly standardised catalogues and brochures in the headquarters as soon as the product range would be standardised.

2.2 Objective 2: Increase Sales

1. Increase sales by optimising the product offering: International products were selected from existing products from the previous year based on their sales performance in the home market. However, neither new trends nor the sales performance in subsidiaries were considered for purchasing decision. Market analysis was almost neglected in the subsidiaries and new products were often integrated in the product range only based on recommendation of suppliers. And the headquarters did not consider the sales performance of the subsidiaries because no data were available due to a lack of shared information systems. During the pilot phase, the procedure for a sound market analyses per subsidiary was defined, including the analysis of new trends and the constant observation of the competitors' offering. Furthermore, an interim data base was set up which delivered the sales performance per product from each country on a weekly basis. The headquarters was therefore able to identify which were the internationally bestselling items based on shared KPIs like sales, visits and conversion rate. Only those items were taken into further consideration to build an internationally successful and standardised assortment.
2. Increase sales/margins by optimising prices: Up to that time cost-plus pricing had been implemented in all subsidiaries. Price analysis of competitors' prices during the pilot phase showed in parts a major discrepancy between the company's own prices and those of competitors—even with the result that the own prices were sometimes far too low. By adapting the prices to a competitive level, sales were increased for some products, for others the margin was optimised.
3. Increase sales by optimising product availability: Product planning of international products had so far been done by considering the demand in the home market very precisely, and the demand from the subsidiaries by contrast only marginally. Subsidiaries were not deeply involved in the planning process and did not see the sample products live—only a copy of a product picture for the most important products. Their planning was just a stable percentage from the order placed by the headquarters—which fit the demand for the home market but not necessarily the demand for the subsidiaries' markets. This led to either backlogs or sold out products. Especially the demand for the bestselling items could often not be served and sales were lost due to a shortage of goods. Based on the analysis of sales performance of the top selling products per country of the previous year and trend analysis in every market, the quality of planning was improved. Furthermore, individual meetings were set up with responsible employees per assortment in every country. By seeing the products in person,

the employees from the subsidiaries were able to plan for their own country more precisely than before.

For every field of optimisation, the future procedures were defined, the new division of labour exercised and already implemented. Responsibilities were appointed and meeting routines between headquarters and subsidiary set up. And last but not the least, the organisational set up was redefined, appointing international managers per product category to be responsible for the international performance as measured by common KPIs.

3 Challenges and Success Factors

Different challenges emerged during the project. The main challenges of the internationalisation of the department for communications technology devices and accessories were changing the employees' mind-set, creating expertise, defining new processes and anchoring sustainable change in the company.

3.1 Changing the Employees' Mind-Set

One big challenge was to create a change of mind in employees who had often been employed for over 20 years and were used to the way of working nationally. Roles had been defined for a long time and hierarchies settled—and most of the employees were not keen on change. Especially for employees of the subsidiaries, the new roles meant a huge change in responsibility, since the purchasing responsibilities were transferred to the headquarters and market analysis responsibilities had to be established instead. The roles of employees in the home market changed as well, as they had to assume responsibility for product management and purchasing for all countries instead of only for the home market. The solution to this challenge was threefold.

First, a sense of urgency for this transformation was implemented by direct communication by the company's CEO. Several international meetings were set up to explain the reasons for this necessity and to show that no alternative solution was at hand if the whole company wanted to survive. Management was closely involved in the whole project: a steering committee with all CEOs from the headquarters and subsidiaries met every 4 weeks to make the most important decisions; several meeting routines on management level ensured a close cooperation with the employees.

Secondly, the new tasks were developed together with the teams: Pilot teams from different representative departments were defined, which were led by appointed team leaders. The team leaders were trained on a weekly basis and

provided with the necessary know-how, but the actual way of working was developed by the teams themselves.

And thirdly, employees were motivated and convinced by achieving quick wins during the pilot phase. The project tasks were planned in a way that the first quick wins could be already obtained (e.g. from international purchasing of goods and supplier consolidation). Seeing that their efforts were already successful, most employees got the motivation to push change further.

3.2 Creating Expertise

Another challenge of the project was to provide employees with the necessary expertise. Up to then, the employees in the departments in the headquarters as well as in the subsidiaries did not have any knowledge about the products and their sales performance in other countries. Data about the sales performance of products were available in every subsidiary; however, the data were not consistent and an automated data exchange was not possible between offices due to different IT systems.

During the pilot phase, an interim data base was set up (which was planned to be implemented as an international IT system in the mid-term), in which the relevant international data were consolidated on a weekly basis to serve as a basis for decision making to create a successful international assortment. Furthermore, an efficient way of market analysis was defined and implemented. The trends and products with the highest sales potential per country were identified and reported to the international department which then decided whether these trends and products were to be purchased for the international assortment.

3.3 Defining New Processes

The distribution of tasks between the headquarters and the subsidiaries required a new definition of processes and cooperation. During the pilot phase the new processes were tested and adjusted where necessary. For many employees it was the first time that they got to know their colleagues from the subsidiaries. Several meetings in person and regular meetings via conference calls assured that employees got to know each other and to build a first basis for their future cooperation. The tested processes were documented after the pilot phase and responsibilities were determined. In this way, the most optimal transparency for future cooperation was created for everybody.

3.4 Anchoring Sustainable Change in the Company

Some employees from the departments of communications technology devices and accessories were appointed to serve as trainers for their colleagues throughout the pilot phase. They were especially trained in an initial boot camp as well as in weekly meetings, in which they were provided with the necessary know-how for every task. A suggestion for the procedure per task was discussed in those weekly meetings and precise instructions for every field of optimisation were developed. These instructions were passed on by the trainers to their respective teams—mostly in conference calls and video conferences, since the teams consisted of all international employees for one assortment. This procedure had several advantages: For one, the trainers were experts in their field and made sure that the defined procedure was in accordance with the necessary work requirements. In addition, they ensured the efficient guidance of their teams—during the project as well as after the project ended. In this way it was assured that the know-how did not stay only with the external project manager, but was already anchored in the company for sustainable use after the end of the project.

4 Conclusion

The pilot phase of 3 months already resulted in considerable cost savings and increases in sales. Precise estimations of future potentials by the subsidiaries and the headquarters assumed an increase of roughly 10 % of contribution margin per year for the international department for communications technology devices and accessories.

Furthermore, the new roles were implemented in both the headquarters and the subsidiaries. All employees of the department already worked according to the new processes and responsibilities. The managers knew precisely which goals to achieve in months and years to come in order to really exploit the identified potential. The basis was set for an international department of devices and accessories.

Following the standardisation of product assortment, the standardisation of advertising materials was planned for the coming months.

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Notes on the Participating Companies

BITKOM | http://www.bitkom.org
BITKOM is the voice of the information technology, telecommunications and new media industry in Germany. BITKOM represents more than 1,600 companies, with 1,000 direct members, including practically all global players as well as 700 key midsize companies. BITKOM's membership generates a sales volume of 135 billion euros annually, exporting 50 billion euros worth of high technology each year. BITKOM offers a wide-reaching, powerful network that brings together the best minds and top companies from the digital world. BITKOM organizes a permanent exchange between experts in the field and industry leaders, offering its membership forums to promote cooperation and platforms for contacting crucial clients.

Capgemini | http://www.capgemini.com
Capgemini, one of the world's foremost providers of consulting, technology and outsourcing services, enables its clients to transform and perform through technologies. Capgemini provides its clients with insights and capabilities that boost their freedom to achieve superior results through a unique way of working, the Collaborative Business Experience™. The group relies on its global delivery model called Rightshore®, which aims to get the right balance of the best talent from multiple locations, working as one team to create and deliver the optimum solution for clients. Capgemini is headquartered in Paris, France, and operates in 40 countries. We are, above all, a people company—around 110,000 people in North America, Europe, South America and the Asia Pacific region. Capgemini reported 2010 global revenues of EUR 8.697 billion.

Detecon International GmbH | http://www.detecon.com
Detecon is one of the world's leading consulting companies for ICT management consulting. Our services focus on consulting and implementation solutions which are derived from the use of information and communications technology (ICT). They encompass classic strategy and organisation consulting as well as the planning and implementation of complex, technological ICT architectures and applications. Detecon's expertise bundles the knowledge from the successful

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conclusion of management and ICT consulting projects in more than 160 countries. Detecon is a subsidiary of T-Systems International, the business customer brand of Deutsche Telekom.

Erasmus University Rotterdam | http://www.eur.nl
Erasmus University Rotterdam is an international knowledge workshop for critical thinking and academic training, driven by a strong focus on current social issues. The university concentrates its expertise on issues of management, organisation and policy in the public and private sectors on the one hand, and on the field of sickness and health care on the other. Erasmus University Rotterdam has bundled its education and research in three domains in which the university has a national and international reputation to maintain: Economics and Management; Medicine and Health Sciences; and Law, Culture and Society. The university counts the following as its core tasks: to generate knowledge from research, to share knowledge in education and to transfer knowledge to the community. Its driving forces are academic curiosity, critical reflection and social engagement.

GloBus Research | http://www.globusresearch.com
GloBus Research Ltd. is a business management and training consultancy helping companies address strategic and operational challenges in the areas of services sourcing, intercultural collaboration and investment decisions. The company's core competencies are embedded in its name GloBus, which is the Latin word for sphere, and at the same time, a word combination of global and business. Dr. Wolfgang Messner set up GloBus Research in early 2011 to change the way that global collaboration is undertaken and to achieve a positive outcome for everyone involved: the customer, the service provider and the individuals touched by the globalisation process. The ICCA™ (Intercultural Communication and Collaboration Appraisal) diagnosis framework is managed through GloBus Research.

Hays | http://www.hays.com
Hays plc is a leading global professional recruiting group. Hays is the expert at recruiting qualified, professional and skilled people worldwide, being the market leader in the UK and Asia Pacific and one of the market leaders in Continental Europe and Latin America. It operates across the private and public sectors, dealing in permanent positions, contract roles and temporary assignments.

HCL | http://www.hcl.com
HCL is a USD 6 billion leading global technology and IT enterprise comprising two companies listed in India—HCL Technologies and HCL Infosystems. Founded in 1976, HCL is one of India's original IT garage start-ups. A pioneer of modern computing, HCL is a global transformational enterprise today. Its range of offerings includes product engineering, custom & package applications, BPO, IT infrastructure services, IT hardware, systems integration and distribution of information and communications technology (ICT) products across a wide range of focused industry verticals. The HCL team consists of over 85,000 professionals of diverse nationalities, who operate from 31 countries including over 500 points of presence in India. HCL has partnerships with several leading global 1,000 firms, including

leading IT and technology firms. HCL GmbH, the German subsidiary of HCL, is among the top 25 IT Services firms in the Lünendonk list.

IBM | http://www.ibm.com
International Business Machines Corporation (IBM) provides information technology products and services worldwide. Its Global Technology Services segment provides IT infrastructure and business process services, including strategic outsourcing, process, integrated technology and maintenance services, as well as technology-based support services. The company's Global Business Services segment offers consulting and systems integration, and application management services. Its Software segment offers middleware and operating systems software; information management software for database and enterprise content management, information integration, data warehousing, business analytics and intelligence, performance management and predictive analytics; software for identity management, data security, storage management and data centre automation; software for collaboration, messaging, and social networking; software to support software development for IT and embedded systems; business intelligence software, which provides querying and forecasting tools; predictive analytics software to predict outcomes and act on that insight and operating systems software. Its Systems and Technology segment provides computing and storage solutions, including servers, disk and tape storage systems and software, point-of-sale retail systems and microelectronics. The company's Global Financing segment provides lease and loan financing to end users and internal clients; commercial financing to dealers and remarketers of IT products and remanufacturing and remarketing services. It serves financial services, public, industrial, distribution, communications and general business sectors.

Indian Institute of Management, Bangalore | http://www.iimb.ernet.in
The Indian Institute of Management Bangalore (IIMB) has been recognized as the No. 1 Business School in Central Asia by Eduniversal, a French Consultancy Group, for 3 consecutive years. Established in 1973, IIMB today offers a range of post-graduate and doctoral level courses as well as executive education programmes. IIMB's Research Centres of Excellence are engaged in adding value to their communities in the areas of public policy, capital markets & financial management, corporate governance, entrepreneurship, software and supply chain Management, to name a few. IIMB obtained the European Quality Improvement System (EQUIS) accreditation awarded by the European Foundation for Management Education (EFMD). With a faculty body from amongst the best universities worldwide, IIMB is fast recognized as a leader in the area of management research, education and consulting.

Infosys | http://www.infosys.com
Infosys Limited was established in 1981 by seven people with US$250. In Q2 of the current fiscal year, Infosys generated revenues of US$6.604 billion and a margin after tax of 24.8 %. Infosys has cash and equivalents counts of US$3.784 billion and is debt free. Infosys defines, designs and delivers technology-enabled business

solutions for Global 2000 companies. Infosys also provides a complete range of services by leveraging domain and business expertise and strategic alliances with leading technology providers. The offerings span business and technology consulting, application services, systems integration, product engineering, custom software development, maintenance, re-engineering, independent testing and validation services, IT infrastructure services and business process outsourcing. Infosys pioneered the Global Delivery Model (GDM), which emerged as a disruptive force in the industry leading to the rise of offshore outsourcing. The GDM is based on the principle of taking work to the location where the best talent is available, where it makes the best economic sense, with the least amount of acceptable risk. Infosys has a global footprint with 64 offices and 65 development centres in the USA, India, China, Australia, Japan, Middle East, UK, Germany, France, Switzerland, Netherlands, Poland, Canada and many other countries. Infosys and its subsidiaries have 141,822 employees as on September 30, 2011. Infosys takes pride in building strategic long-term client relationships. In all, 98.5 % of Infosys revenues come from existing clients.

Karlsruhe Service Research Institute/KIT | http://www.ksri.kit.edu
The Karlsruhe Service Research Institute (KSRI) at Karlsruhe Institute of Technology (KIT) aims to be the leading European research institute in the field of Service Science. It develops concepts, methods and technologies relevant for innovators and decision makers to create and capture value in an increasingly services-led economy. It applies a holistic interdisciplinary approach to solve business problems along the dimensions of people, organisation, information and technology. It provides a service innovation hub for researchers and practitioners, and offers prime programmes to educate future researchers, business leaders and professionals.

Mahindra Satyam | http://www.mahindrasatyam.com
Mahindra Satyam is a leading global business and information technology services company that leverages deep industry and functional expertise, leading technology practices, and an advanced, global delivery model to help clients transform their highest value business processes and improve their business performance. The company's professionals excel in enterprise solutions, supply chain management, client relationship management, business intelligence, business process quality, engineering and product lifecycle management and infrastructure services, among other key capabilities. Mahindra Satyam is part of the $14.4 billion Mahindra Group, a global federation of companies and one of the top ten business houses based in India. The group focuses on enabling people to rise. Mahindra operates in the key industries that drive economic growth, enjoying a leadership position in tractors, utility vehicles, information technology, vacation ownership, rural and semi-urban financial services, etc. Mahindra has a significant and growing presence amongst others, in the automotive industry, agribusiness, aerospace, automotive components, consulting services, defence, energy, industrial equipment, logistics, real estate, retail, steel and two wheelers. Mahindra Satyam development and delivery centres in the USA, Canada, Brazil, the UK, Hungary, Egypt, UAE, India, China, Malaysia, Singapore and Australia serve numerous clients, including many Fortune 500 organisations.

NASSCOM | http://www.nasscom.org
NASSCOM is the premier trade body and the chamber of commerce of the IT-BPO industries in India, with more than 1,300 members, which include both Indian and multinational companies that have a presence in India. A not-for-profit organisation, NASSCOM's member and associate member companies are broadly in the business of software development, software services, software products, consulting services, BPO services, e-commerce & web services, engineering services off shoring and animation and gaming. NASSCOM's membership base constitutes over 95 % of the industry revenues in India and employs over 2.24 million professionals.

NTT DATA EMEA/Cirquent | http://www.cirquent.com
The Japanese IT consulting and services company NTT DATA employs over 57,000 people in 35 countries around the world. NTT DATA Europe, the Middle East, Africa Argentina and Brazil will be headed by Thomas Balgheim and employ over 6,000 IT experts. Through two globally harmonised business units, Financial & Public Sector and Enterprises, NTT DATA offers innovative business and IT solutions, providing companies and organisations with measurable added value. NTT DATA focuses on business and IT consulting, customer management, IT security and business intelligence. NTT DATA also specialises in outsourcing. The company offers a comprehensive range of outsourcing services, from application management and infrastructure management to business process outsourcing, with local or global delivery methods.

Osborne Clarke | http://www.osborneclarke.com
International law firm Osborne Clarke combines legal expertise and in-depth sector knowledge to offer clients focused, practical and technically excellent advice in everyday language. The firm's commitment to the digital business (IT), financial services, automotive, energy & natural resources, life sciences, real estate and retail sectors results in lawyers with real industry knowledge and bespoke sector-focused products and services. Osborne Clarke is known for its unstuffy approach and business focused legal and tax solutions.

Pierre Audoin Consultants | http://www.pac-online.com
From strategy to execution, Pierre Audoin Consultants (PAC) delivers focused and objective responses to the growth challenges of Information and Communication Technology (ICT) players.

Founded in 1976, PAC is a privately held research & consulting firm for the software and ICT services market. PAC helps ICT vendors to optimise their strategies by providing quantitative and qualitative market analysis as well as operational and strategic consulting. We advise CIOs and financial investors in evaluating ICT vendors and solutions and support their investment decisions. Public institutions and organisations also rely on our key analyses to develop and shape their ICT policies.

SAP | http://www.sap.com
As market leader in enterprise application software, SAP helps companies of all sizes and industries run better. From back office to boardroom, warehouse to

storefront, desktop to mobile device—SAP empowers people and organisations to work together more efficiently and use business insight more effectively to stay ahead of the competition. SAP applications and services enable more than 176,000 customers (including customers from the acquisition of Sybase) to operate profitably, adapt continuously and grow sustainably.

SSC Consult | http://www.ssc-consult.com
SSC Consult provides professional advisory services combining competencies in corporate finance/M&A and management consulting in numerous industries including the professional services sector to successfully implement corporate restructurings, divestitures and acquisitions in the mid markets.

SMP Strategy Consulting | http://www.smp-ag.de
SMP AG is a strategic consultancy that specialises in identifying areas of growth and business potential and then developing them jointly with clients. SMP's clients include many DAX corporations and upper mid-sized businesses, especially in the core sectors of energy, retail, financial services, telecommunications and IT.

Tieto | http://www.tieto.com
Tieto is the leading IT service company in Northern Europe providing IT and product engineering services. The highly specialised IT solutions and services complemented by a strong technology platform create tangible business benefits for our local and global customers. As a trusted transformation partner, Tieto is close to its customers and understands their unique needs. With about 18,000 experts, Tieto aims to become a leading service integrator, creating the best service experience in IT.

tsm strategies | http://www.tsmstrategies.com
tsm strategies is a consultancy providing high-value research and consulting services for the high-tech industry. The wealth of experience and expertise provided by the tsm strategies team help customers to draw up and implement successful technology, sourcing and market strategies. The strength of tsm strategies' insights lies in its ability to adapt the directions of global technology to the needs of local markets. Focus areas include sourcing, IT services, BPO, data centre and wireless. These insights help ICT providers, end-user organisations and financial institutions to understand and address markets and technology evolutions successfully. tsm strategies blends the global reach of its projects with its deep understanding of the European markets.

University of Applied Sciences Ludwigsburg | http://www.fh-ludwigsburg.de
The University of Applied Sciences Ludwigsburg specialises in the education and training of fully qualified management staff in public administration. The two faculties, Management and Law and Tax and Business Law, offer four Bachelor courses and two Masters degrees. The University of Applied Sciences Ludwigsburg also heads the International Forum of Public Administration and Management, an association of European universities involved in research and training in the area of public administration.

WHU – Otto Beisheim School of Management | http://www.whu.edu
WHU is the leading German business school; the privately financed school was founded in 1984 by the Koblenz chamber of commerce and is located in Vallendar near Koblenz and with a second campus in Düsseldorf. WHU maintains a leading-edge network of over 180 partner universities worldwide. The school's partnership with the Kellogg School of Management, USA, has led to the joint Kellogg-WHU Executive MBA Programme being ranked as one of the best EMBA programmes in Europe.

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