When your competitors are collaborating, can you afford to be left out?

Buyer-supplier collaboration
When recession takes hold, there’s safety in numbers

Merging the real and virtual world
Why, and how, companies should define their digital strategy

The better the question.
The better the answer.
The better the world works.
The ethos behind collaboration is well understood and yet it has never featured highly, if at all, on the board’s agenda. That is, until recently. In a market that demands agility, speed and flexibility, companies are increasingly exploring collaboration in a variety of contexts that, up until now, had either been overlooked or considered unworkable.

In this edition of Performance, we examine some of these collaborative relationships. For example, we examine the opportunities arising from collaboration across different markets. India promises high growth. In addition, recent policy changes are further fueling the country’s development, offering vast potential for investment in high-tech manufacturing. Our article explores these opportunities in more detail and offers insights into the prospects for Indo-German collaboration as an example of how countries could work together.

Our article “Buyer-supplier collaboration: reassessing the opportunities for enhancing performance in a macroeconomic recession” explains why it is critical to reassess the collaboration between buyer and supplier during a recession. The article offers guidance on how to undertake such an assessment, including elements such as strategic importance, target alignment between the two parties and perceived risk of opportunism.

Companies may need to focus on their relationships with suppliers, but they also need to keep a close eye on their relationship with customers and the market. With consumers now on an equal footing with organizations as a result of the proliferation of social media, isolated issues can quickly escalate into a “flame war.” Our article examines what precautions organizations can take to limit the potential damage.

In this age of social media and era of digitalization, the merger of the real and the virtual world, together with business intelligence and technology, have impacted how business is done. Our article explains why, and how, companies should define their digital strategy, if not, they will be left behind.

In other articles, we look at different aspects behind driving efficiency and effectiveness. We ask whether shared services are the solution for controlling (management accounting) to strike a balance between enhanced quality and greater efficiency. We offer practical advice on improving the development and delivery of megaprojects within the oil and gas sector. And we present a case study about how a Swedish food retailer reduced waste and improved efficiency.

I hope the articles in this edition of Performance provide valuable insight and information to help your business innovate, grow, optimize and protect.

Enjoy reading this issue!

Markus Heinen
Chief Patron, Performance
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Digital strategy: merging the real and virtual world

The era of digitalization is rewriting the way of approaching the market and, as a consequence, the strategies of competition. Today’s leaders need to take decisions in order to tackle and thrive under the new circumstances conceived by the digital revolution. The merger of the real and the virtual world, together with business intelligence and technology, have impacted how business is done. Hence, companies need to define their digital strategy. If not, they will be left behind.
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Many companies today believe they have a digital strategy because they have developed their IT infrastructure and adopted technologies such as cloud computing, mobile applications, social media, analytics, cloud, remote sensing and location. However, these companies are confusing having an IT strategy with a digital strategy – the difference is that while IT strategy is defined in isolation, digital strategy fuses the digital and virtual world. The digital strategy is meant to define the plan of action and approach to digitalization to stay competitive in the market.

Understanding the digital strategy

Digital strategy has been considered by many as the introduction of e-commerce and, by others, as the usage of current trends such as social media, mobile applications and cloud services, while still others focus on the future and the digitalization of services. Organizations have digitally substituted strategies and processes to create digital copies of the real world’s business models and processes. However, while this kind of digitalization may be efficient, it results in a greater commoditization of the channel – and, as a consequence, only a small associated profit. Thus, a better strategy is needed when organizations look for a profitable channel in the virtual world.

In order to create value for customers through digital technology, it is necessary to transform processes, business models...
Mexico is facing a significant lag in the adoption of information and communication technologies (ICT): according to the Organisation for Economic Cooperation and Development's (OECD) digitalization index. The country occupies last position within the organization’s members. In order to address this, the Mexican State developed a National Digital Strategy to drive the adoption and development of ICT and maximize the economic, social and political impact.

The National Digital Strategy has objectives in five areas: government transformation, the digital economy, quality of education, universal and effective health, and security. There are also five main enablers that will have to be developed prior to implementation: connectivity, inclusion and digital skills, interoperability, a legal framework and open data. The Government also published a strategic plan to define the politics and proposed guidelines to transform the country into a “Digital Mexico.”

As part of the effort to implement these enablers, EY developed a conceptual framework of the shared services strategy for the Mexican Government. By implementing this strategy, the Government will be able to use its current ICT capabilities to face the challenges in achieving a truly digital context.

However, there are some hurdles that need to be overcome before the National Digital Strategy can be implemented:

► Establishing current capabilities: in order to avoid duplicity of efforts, the country’s current capabilities need to be determined.

► Delivering services among government dependencies: the regulatory framework needs to be defined, including ensuring administrative rules are addressed, along with the mechanisms to offer relevant services.

► Implementing the governance scheme: a framework needs to be established to ease the delivery of high-quality ICT services.

► Implementing the shared services model: economic resources must be aligned as well as trained and skilled human resources that will fulfill the National Digital Strategy.

As a consequence, the conceptual framework for shared services proposes to make agreements among federal and other entities to take advantage of the available infrastructure. For example, there are some federal entities with underused capabilities that could be offered for use by others. Some of the services that could be offered include emailing, servers, data centers and telephony.

The framework would also deliver benefits including ICT cost reduction, email administration, use of available space at data centers, clouding services and a reduction in the related costs for the adoption of technology. In addition, relevant entities would avoid releasing bids in order to acquire the services, making the procurement process more efficient.

Digital strategy: merging the real and virtual world

and customer experience through the digital connections among systems, people, places and things. The result will be the development of digital capabilities, instead of just introducing devices such as smartphones, tablets or applications to replace catalogs, or using social media and applications to replace traditional marketing and sales efforts.

Until now, investing in technology has been viewed in isolation by many companies. For this reason, it has been thought of as a trend that requires significant resources and delivers a limited outcome. Yet, it has been proven that adopting technology has helped companies to outperform peers who have not. Many companies evaluate a technology venture in isolation, rather than assessing the real impact, i.e., capabilities that will be developed by the implementation of a certain technology.

The organization’s digital strategy should include diverse elements that would guarantee the company’s transformation through a sustainable model, aligned to the corporate strategy. This strategy should arise as a need to transform the operative areas, taking into account the technological capabilities available within the company (see Figure 1).

Figure 1. The diverse elements of a digital strategy aligned to corporate strategy

**Digital strategy** translates the corporate strategy into the desired digital experience for clients, employees and partners.

**Digital technology** covers the web, mobile or social media to provide clients, employees and stakeholders with accurate tools to control and execute operations. These can be developed in-house or supplied by specialized external partners.

**Technological capabilities** are required to support the development and management of the business’s digital solutions. The solutions can be provided by internal or external suppliers.

**Initiatives** must be prioritized and should take into account their nature, mutual interdependence and the need to assure a complete and sustainable transformation program that provides short-term benefits and minimizes business risks.
Therefore, a digital strategy should focus on specific outcomes. It should orchestrate digital connections among systems, people, places and things through the use of technology. The result of a digital strategy should be the creation of customer value, embedding the same customer experience across all available channels, whether virtual or real-world (see Figure 2).

Figure 2. How a digital strategy orchestrates connections
Companies often confuse an IT strategy with a digital strategy – the difference is that while IT strategy is defined in isolation, digital strategy fuses the digital and virtual world.

Why is it important?
Countries are moving to a digital economy in order to serve the e-consumer. Internet usage has been growing at an amazing speed, and, based on 2014 figures and a 12% compound annual growth rate of 12%, there are currently an estimated 3 billion users, accelerated by the rapidly growing population of emerging countries and their adoption of mobile phones and smartphones. In 2015, the number of mobile phone subscriptions is forecast to be slightly over 7.1 billion. Within that, the number of smartphone connections is expected to reach 2.7 billion, and in addition, the number of active mobile social accounts will grow to 1.68 billion.

However, the acceleration in usage of digital channels greatly depends on the penetration of technology in each country. Developing countries, such as Brazil, China, Mexico, Vietnam and the Philippines are rapidly improving their readiness. These countries will play an important role in the development of the digital economy as the next billion consumers to come online will originate from them, and will use different practices to current users. However, it will be necessary to improve infrastructure and accurately meet customers’ needs.

Furthermore, it is evident that the economies are traveling at different speeds in the digital economy race, and, for this reason, businesses will have to innovate and customize their approaches, while governments will have to work on the development of infrastructure and financial inclusion.

Megatrends: what is driving this accelerated growth?
There are certain megatrends that are triggering the development of digital strategies throughout industry. These trends consider consumer behavior, shift in distribution channels, digitalization of governments and IT developments that help companies create value for their customers. The drivers for digitalization are pushing companies to adopt a digital strategy. It is up to the companies to decide whether to join the wave of digitalization and define a digital strategy that merges physical and digital resources in innovative ways for their customers and business.

The new consumer purchase-decision process
Consumers are now making smarter purchase decisions as they are better informed by the greater amount of available information from television, internet, social media and other communication channels that have changed from unilateral to bilateral, and now to interactive. As a consequence, the internet is becoming part of the buying cycle for information gathering (e.g., via online reviews and bloggers), price comparison and, finally, purchase.

The main consumer groups might no longer rely on traditional types of consumer products companies’ advertisements to make purchase decisions. They are now more willing to trust information sources on the internet than any statement on packaging or commercials. This represents an opportunity for companies to become an active voice in the social media universe and engage their customers by joining the conversation.

The shift in distribution channels
Distribution channels and retail are transforming: modern retail outlets are rapidly expanding and more traditional stores are slowly losing market share. Hypermarkets, supermarkets, discount stores and convenience stores are starting to target consumers in suburban and rural areas, who in the past had only limited access to large retail chains. For example, convenience stores with sophisticated business models are expanding all over Mexico, competing with small, traditional stores.

Additionally, in order to fulfill customer needs, companies are adopting an omnichannel strategy, offering a consistent and perfect purchase experience across channels and devices. For instance, many customers may use multiple channels – from mobile, to desktop, to tablet – and still have a personalized experience. This strategy could be confused with the multichannel focus, but the experience offered in each of them is very different.

The result of a digital strategy should be the creation of customer value, embedding the same customer experience across all available channels, whether virtual or real-world.
It is up to companies to decide whether to join the wave of digitalization and define a digital strategy that merges physical and digital resources in innovative ways for their customers and business.

Figure 3. What are the benefits of a digital strategy?

- Develop new services and products
- Create new categories and channels
- Innovate services and the customer experience
- Improve margins
- Increase the business's effectiveness and efficiency
- Optimize costs

- Promote the company’s image and brand
- Enhance the company's market positioning
- Increase the company’s ROI in the market
- Improve the customer experience
- Enhance customer satisfaction
- Increase the company's market share
- Increase customer loyalty


transactions, affecting both customers and suppliers.

The shift in distribution channels is a trend that could have a huge impact on a business’s distribution strategy, especially in the consumer products industry. Today, distribution is one of the main capabilities and core strengths of any business, and therefore it is important to consider these changes in order to be able to get products to customers at the right time, both in terms of place and price.

**The digitalization of governments**

Governments are meeting their citizens’ needs through the digitalization of all their services. Thus, they are using information and communication technologies as an integrated strategic element in order to deliver value. The digital government network comprises public entities, non-governmental organizations, business, associations and individuals, all of whom have access to data and interactive services with the government.

The implementation of a digital strategy within government delivers several benefits, such as:

- Demonstrating greater transparency, openness and inclusiveness of government processes and operations
- Promoting financial inclusion
- Encouraging engagement and public participation
- Creating a data-driven culture in the public sector
- Strengthening governance

**IT trends creating value in the market**

There are certain trends in the IT world that are pushing for digitalization of every aspect in the physical world, and an increased emphasis on serving the needs of the mobile user in diverse contexts and environments:

- The internet of things
- Advanced pervasive and invisible analytics
- Cloud and client computing
- Software-defined apps and infrastructure
- Risk-based security and self-protection

**How to define a digital strategy**

In order to create a digital strategy, companies should define it by focusing on three main phases:

1. **Identify the opportunities**: evaluate the client’s technological demands by means of a business case in order to justify the investment.

2. **Define the digital strategy architecture**: develop a diagnosis based on the development of:
   - Multichannel strategy
   - Implementation road map
   - Business case aligned to the corporate strategy, clients and the central and multivariable operating model.

3. **Evaluate the maturity of the company**: perform a diagnosis that considers the company’s current capabilities and their clients’ experiences and execute a benchmarking analysis with the industry and best practices.
The EY Advisory team in Stockholm has just completed an 18-month engagement with a Swedish food retailer. EY’s Per Skallefell, Erik Edvardsson and Hanna Löfgren talked to *Performance* about changing routines, stacking shelves and inspiring confidence in their quest to reduce waste and improve efficiency.

**Taking stock: targeting food waste at a Swedish retailer**
Early in 2013, a long-standing Swedish retail client approached EY to ask for help with reducing food waste, which it had identified as a major opportunity for performance improvement. With extensive experience in retail and efficiency improvement, and building on strong capabilities in store operations, supply chains and sustainability, the EY Advisory team in Sweden was well placed to help. From the outset, the project involved very close collaboration to identify the right tools and tackle the right issues. The project has been a great success for the client – food waste is still falling even now that the 18-month engagement has come to an end.

“EY undertakes all kinds of performance improvement projects, but addressing food that is thrown in the bin is unusual – and something for the future,” says Erik Edvardsson, an EY manager who worked on the project. It was a positive experience for EY to be involved in an initiative to help improve profits and also help the environment. It is likely that, as businesses become increasingly conscious of their social and environmental responsibilities, this kind of project will become more common, explains Edvardsson.

Going to waste
The client is one of Sweden's biggest food retailers, with more than 300 stores across the country, and EY has been working with it in various capacities for many years. “Together we realized that a significant cost was food waste and related issues,” Edvardsson explains. So the Advisory team started investigating the issue of food waste at the retailer.

Rather than just cutting costs, sales and customer satisfaction are also being improved. Goods that are performing badly are replaced, rather than just removed.
It didn’t take long to see that the issues of food waste and shrinkage (unexplained loss of products) occurred throughout the retailer’s value chain. “Food waste was the ultimate measure of efficiency. All activity in the value chain, from planning and buying, to selling and disposing, comes down to what gets thrown away,” explains Hanna Löfgren, a senior EY consultant involved in the project.

Food waste and shrinkage were occurring throughout the client’s business—from supplier right through to the shop floor. Deliveries to the stores were the first problem. “Many stores were experiencing logistics problems,” explains Per Skallefell, EY’s senior manager on the engagement. “This caused a difference between what was ordered and what was actually delivered to the stores. This led to shrinkage, but also disturbances in store operations.” The sheer volume of goods being delivered to the client’s supermarkets and hypermarkets meant that checking these stock orders was very difficult. Ultimately, discussions with store managers and detailed analysis demonstrated the need for improved goods-reception and error-handling processes.

A second problem was a lack of adequate planning when it came to scheduling orders and matching supply with demand. The client’s ordering schedule was not adjusted for the typical sales distribution. For instance, grocery stores frequently see a sales spike toward the end of the week, as customers stock their cupboards for the weekend. Meanwhile, earlier in the week, sales are much lower. But the client took deliveries according to a rigid schedule, such as receiving its main deliveries on Mondays, when sales are slow. This resulted in significant wastage, as many products were not sold before they reached their expiry dates.

Quick wins inspire confidence

The retail environment and the specific nature of the retailer’s problems meant that the Advisory team and the client felt it was best to take a ground-up approach, visiting the stores and working directly with the shop managers and staff. The EY team visited around half of the stores in Sweden. Often they spent time stacking shelves with people while they discussed their jobs and suggested areas for improvement. Early on in the process, the team also conducted early morning “raids” on the stores to assess protocols and controls during stock delivery.

The team conducted interviews and ran workshops with shop staff. Rather than simply implementing changes, they took a “train-the-trainer” approach, working with managers to show them how to identify problems themselves and then train their own staff.

The EY team also saw that it was important to win the client’s confidence. The retailer knew that it was facing some real problems, but there was also fatigue throughout the business because it had seen so many improvement initiatives over the last 10 years or so.

In order to tackle these wary attitudes, the Advisory team and the client decided to implement two “quick wins.” They focused on two main problem areas: goods delivery controls and purchasing routines and aimed to deliver real change in a very short time period.

By going into stores and helping them to tighten up their goods delivery systems and make their ordering processes more sophisticated, the project team was able to deliver real and tangible improvements very swiftly. The work did involve some extensive data analytics on EY’s part, but, again, collaboration was the key. Much of the work involved talking to store managers and staff to help them be more effective with the ordering software that was already in place and to understand supply and demand curves for their products. This helped the managers to take a more subtle approach to goods ordering than simply arranging for everything to arrive on Monday.

Building long-term solutions

The quick wins showed how much positive change could come from simple behavioral changes. But of course, there was scope for deeper improvements that would reduce waste and improve margins on a stable, long-term basis for the client. In parallel with the implementation of the quick wins, the Advisory team conducted a more far-reaching analysis into food waste and shrinkage throughout the retailer’s operations. Over the course of a year, six sequential improvement initiatives targeted at central category management, procurement, logistics and in-store practices were identified, designed and implemented.
Six in-store food waste improvement initiatives

1. Goods delivery controls
 Initially introduced as a quick win, this was the first step in tackling the client’s food waste problem. This initiative aimed to tighten up control of goods deliveries to stores. Before the engagement started, the client was struggling to get the right quantity and quality of goods delivered. The Advisory team helped the client to establish a control process and a set of routines for claims on, and returns of, sub-standard deliveries.

2. Matching order volume with customer demand
 The second of the quick wins was also integrated into the set of longer-term solutions. This initiative aimed to improve purchasing routines so that store managers and staff would be better able to order the right quantity of goods to their stores on the right day of the week, in order to match customer demand and reduce wastage caused by food exceeding its sell-by date. In the longer term, this initiative largely focused on correctly configuring the shops’ automated ordering system and increasing awareness of sales patterns among staff.

3. Assortment analysis
 The assortment of goods that arrive in each delivery is also a factor in food waste levels. This analysis aimed to help the stores to identify the goods in the various assortments that are most likely to go to waste (for instance, highly perishable items). The second part of this initiative made sure that food waste was a key consideration each time the assortments were adjusted.

4. Scorecard
 This was a practical initiative designed to provide clarity on food waste on the shop floor. This system allocates each section of the store a weekly scorecard that gives a “food waste number” to every item and explores the associated costs, making it clearer for shop staff to identify problems and work on improvements. This helped department heads to understand how much waste they were experiencing. It also introduced an incentivizing element of competition between different departments. The scorecards were balanced to include sales as well as waste (and other cost) measures. This helped ensure that food waste really was being reduced, rather than just appearing to have fallen thanks to lower orders (which would ultimately result in lower sales).

5. Purchasing routines
 The second part of the improvement to purchasing routines was designed to help managers simplify and develop their ordering processes and improve campaign orders – taking food waste into consideration at every phase.

6. Food waste: measure, monitor and act
 This final step developed a new stocktaking process to minimize food waste in this area and to improve waste monitoring. The project team introduced better routines and food waste reports, and helped set targets for food waste in different goods categories.

Putting theory into practice
 Quick wins were being implemented in stores within two months of the project kicking off. From then on, initiatives targeted at stores, as well as central functions, were released and implemented in waves, every two or three months, until toward the end of 2014. This required the team to be ready for implementation, more or less, from day one.

Working in close collaboration, the Advisory team and the client selected 50 stores that had the greatest potential to reduce food waste. For each of the 50 “problem” stores, a customized action plan was put together. It was decided that an educational, training-based approach would be most effective. The project team spent a lot of time working with individual store managers, helping them to understand the new purchasing routines and see the limitations of the old system. All in all, each one of the problem stores was visited three to five times during the latter part of 2014, on top of numerous conference and training calls.

At this stage, the importance of the quick wins became even more apparent. “We started every meeting, during this phase, by presenting results from previously implemented solutions. And that was a big inspiration,” Edvardsson says.
Achieving lasting success

The sheer scale of this 18-month project—implementing extensive changes across more than 300 stores nationwide—presented enough challenges. Other problems were more specific to the retail environment. “One of the key challenges was the need to know a lot on a very detailed level about working on the shop floor, if you want to train store managers and staff,” Löfgren explains.

But this challenge ultimately became one of the team’s core success factors. “We tried to talk to the people working in the shops in their language—to really understand their business. We never wore suits in the stores; we helped unpack goods. We got a great deal of credit for not just seeming like people sent down from head office,” Edvardsson explains.

The project team’s focus on recording progress and performance was also crucial to success. Löfgren explains, “We tracked and monitored progress very closely. For every store, for every category, we knew where to focus our efforts. And we knew which stores were performing well and which ones were doing badly, allowing us to give help where it was needed, as well as find examples for motivation.”

Another key factor in the success of this engagement was the integration of reporting on food waste with the reporting of sales activities. “This created a sense of holistic thinking at the client, and also gave the project a more positive feel,” Skallefell explains. Rather than just cutting costs, sales and customer satisfaction are also being improved. Goods that are performing badly are replaced, rather than just removed. And optimizing deliveries not only helps reduce waste, it also helps stores to avoid running out of stock and improves the freshness of groceries.

Beyond this, it was also important to change broader attitudes toward food waste at the client. Throughout the food retail sector, many store and regional managers see low levels of food waste as a threat to sales, believing that a well-filled store will have better sales than a poorly stocked one. This inevitably means that some food is wasted. “The analysis conducted at the client found that, although this is a valid point for minimum waste levels, high food waste is actually a symptom that sales are being lost,” Skallefell says. In fact, food waste indicates poor prediction of customer demand. It suggests that another product may have been understocked, that too much room is allocated to goods that aren’t in demand, or that items are more likely to be close to their expiry dates (meaning that they are less appealing to customers).

Beyond the details

Although the details of this project formed the key to success, there are plenty of lessons to learn for those operating elsewhere in retail—and indeed any other sector. The solutions that EY helped the client to build boiled down to controlling the supply chain. “In today’s world, customers are demanding instant access to products,” says Edvardsson. “So for any business, having good control of the supply chain is crucial.” If a business has insufficient or inaccurate knowledge of its demand and supply curves, or if it has poor controls over its delivery infrastructure, waste will build up.

Edvardsson concludes, “Nowadays and in the future, if businesses can’t handle the complexity of being able to sell goods to clients or customers almost instantly, and do it in a way that reduces waste, then it will cost them a significant amount of money.”

Nowadays and in the future, if businesses can’t handle the complexity of being able to sell goods to clients or customers almost instantly, and do it in a way that reduces waste, then it will cost them a lot of money.
Commercial activity and corporate performance is based on relationships, particularly collaborations between buyers and suppliers. During a macroeconomic recession, it is considered critical to reassess these collaborations in terms of strategic importance, target alignment and perceived risk of opportunism to improve the operational or financial performance of both parties. This article explains how to undertake such an assessment.
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During the past three decades, there has been a fundamental shift in the perceived importance of buyer-supplier relationships (BSRs) in terms of financial and operational performance, as well as assumed level of risk between buyers and suppliers, especially across the supply chains of the consumer goods industry.

**BSR: definition and importance**

A typical BSR is defined as the interconnection of an economic collaboration of many commercial transactions, based upon the mutual trust of the two parties participating in this economic exchange. By focusing on such interfirm relationships within a supply chain (SC), various theoretical models have been developed for classifying and managing BSRs. These include market-hierarchical governance approaches, portfolio models, simple tier-structure models, relationship type matrices, and partnership models. In addition, BSRs can be characterized by different forms and levels of collaboration. These are mainly determined by “hard” and, more difficult to quantify, “soft” factors.

Hard factors include such elements as resources, information and technology. Soft factors mainly relate to commitment, joint knowledge and goals’ congruence.

These factors can also define the type and level of collaboration. Consequently, buyer-supplier engagement performance can be measured either in terms of operational effectiveness and efficiency within various SC activities (e.g., demand forecasting, procurement and lead time), or in terms of combined buyer-supplier financial performance (e.g., higher turnover, reduced costs and better working capital). This performance, of course, is not solely affected by these inter-SC drivers but also by external forces, such as industry conditions and competition as well as the domestic and global macroeconomic environment.

**Buyer-supplier target alignment and its link to the potential risk of opportunism**

Target alignment between buyers and suppliers is the extent to which they
Figure 1. The buyer-supplier relationship landscape

Global and domestic macroeconomic environment (e.g., political, governmental or social condition changes)

<table>
<thead>
<tr>
<th>Hard factors that determine the form and level of buyer-supplier collaboration:</th>
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<td>1. Resource allocation and sharing</td>
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<td>2. Management and process control and delegation</td>
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<td>3. Information availability, quality and sharing</td>
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<td>4. Enabling technology (e.g., IT and networks)</td>
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<td>5. Legal status and agreements (laws and contracts)</td>
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<td>6. Dependency level</td>
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<tr>
<th>Soft factors that determine the form and level of buyer-supplier collaboration:</th>
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<tr>
<td>1. Commitment (management and personnel)</td>
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<td>2. Type and level of communication and interrelationships</td>
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<tr>
<td>3. Level of joint knowledge (existing and created)</td>
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<td>4. Congruence of incentives and goals</td>
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<td>5. Willingness and ability to adapt and trust</td>
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<td>6. Organizational and cultural differences</td>
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Macroeconomic recession (acting as a moderator between factors and collaboration aspects)
- GDP contraction
- Reduced commercial activity
- Lower consumer purchasing power
- Reduced private sector bank credit

Type and level of buyer-supplier collaboration

Buyer-supplier engagement performance

Main buyer-supplier collaboration aspects
- Strategic importance
- Strategic target alignment
- Risk of opportunism

As measured by:
- Operational performance
- Financial performance

8. Trust is defined as a positive belief, attitude or expectation of one party concerning the likelihood that the actions or outcomes of another will be as expected and thus satisfactory. R. D. Ireland and J. W. Webb, “A multi-theoretic perspective on trust and power in strategic supply chains.”, Journal of Operations Management. Vol. 25 No. 2, pp. 482-97, 2007.
perceive and agree that their own independent strategic incentives and objectives are in common and will accomplish the SC objectives.

Establishing aligned strategic targets guides the nature, direction and magnitude of the efforts of the two parties. This could reduce the likelihood of conflict and improve the joint engagement’s operational and financial performance because parties perceive the synergistic potential of the relationship.

However, even in periods of growth or stability, at least some level of functional conflict (e.g., differing viewpoints) or dysfunctional conflict (e.g., dysfunctional behaviors, dissatisfaction and poor individual or group performance) is almost inevitable, as a consequence of the two firms trying to maximize their returns from the business relationship.

Nevertheless, conflict can only be considered a lagging indicator, contributing to the nature and level of collaboration. The leading aspect is the risk of opportunistic behavior, as perceived by both parties. Risk of opportunism can be defined as an overall estimated potential loss (financial or non-financial), derived by a weighted average probability of a range of potential behaviors (multiplied by their respective estimated negative impact) that would violate the explicitly agreed terms (economic-based or relational) of a collaboration between a buyer and a supplier.

Therefore, assuming relatively stable macroeconomic conditions, the higher the level of strategic alignment, the lower the risk of opportunism, either in relation to the type and number of potential damaging behaviors or in terms of the probability of occurrence as well as the estimated net loss per occurrence.

**Strategic importance of buyer-supplier collaboration and derived performance**

According to academic research, an SC strategy could be based on efficient processes for functional products (where the demand is predictable, sold volumes are relatively high, margins are relatively low and product life cycles are long), or on responsive processes for innovative products (where demand is unpredictable, sold volumes are relatively low, margins are relatively high and product life cycles are shorter).

Having implemented the appropriate SC strategy, a buyer-supplier collaboration (BSC) could range from a typical market transaction (where transaction cost economics apply), to a strong cooperation, where aligned strategic targets drive joint performance and result in mutual benefits.

The level of strategic importance of BSCs is often measured by four parameters:

1. Level of specific investments being made in various resources (e.g., funds, time, effort, proprietary knowledge)
2. Differences in industry or sector power that are broadly captured by market share, and business criticality (mostly in terms of supply or demand exclusivity level)
3. Degree of financial dependency, frequently translated as the contribution to turnover, profit margins and cash position
4. Level of trust, satisfaction and evaluation in terms of quality of services or products provided

Thus, it could be stated that the higher the level of BSC-specific investments, power, financial dependency, trust, satisfaction and positive evaluation, the more such a collaboration may be characterized as a strategic one. In our experience, for BSCs that are considered strategic in nature, the perceived level of strategic alignment as well as the risk of opportunism between the two parties should be given significant attention. Moreover, it should be reviewed on a periodical basis, as the evolution of these aspects is quite dynamic, complex and contributes, to a great extent, to the collaboration performance, as measured by operational objectives and financial outcomes.

**The moderating effect of a macroeconomic recession**

The importance of both buyer-supplier strategic alignment and risk of opportunism becomes critical when a macroeconomic crisis and prolonged recession occurs. This is because it not only rapidly deteriorates the general macro and microeconomic environment, but it also considerably alters the strategic targets of both parties, leading to a higher risk of opportunism and, frequently, a disruption in the BSC, resulting in reduced performance.
Consider the Greek economy for example, where over the 5-year period of 2010 to 2014, Greece recorded a macroeconomic crisis with numerous negative and severe consequences to most of its domestic industries and sectors. To provide an indication, the country’s nominal GDP fell by 23%, while the gross debt reached 175% of GDP on an approximated basis. In addition, private sector bank credit contracted by more than 15%, private consumption decreased by roughly 31%, imports of goods and services declined by 34%, and unemployment reached 27%. When a national economy is facing such a prolonged macroeconomic recession, there are undoubtedly direct and indirect negative implications, not only on the overall macroeconomic performance of each sector but also on the BSR, collaboration and operational and financial performance. Consequently, beside the phenomenon of delayed payments by both the public as well as private sector (which causes cash flow problems for many companies, ceasing their operations and leading eventually to macroeconomic losses), there is also increased disruption to the BSC.

25. Conflict is defined as the process that begins when one party perceives that the other has unfulfilled, or is about to frustrate, some concern of theirs. K. W. Thomas, “Conflict and negotiation processes in organizations,” In M. D. Dunnette and L. M. Hough (Eds.), Handbook of industrial and organizational psychology 2nd ed., pp. 651 – 717, Palo Alto, CA: Consulting Psychologists Press, 1992.
For example, within the domestic SC of dairy products, there were cases where suppliers either postponed payments to their producers or canceled their deliveries to retailers due to payment delays. In addition, even in other European economies where the macroeconomic conditions were, and continue to be, better since 2010, such as the UK, there were many incidents of supplier maltreatment (e.g., 20% of suppliers reported experiencing mistreatments from large retailers, mostly in the form of longer payment terms, higher or retrospective discounts for prompt payment, and requested pay-to-stay fees, as well as up-front collaboration investments of different types).

Based on these examples as well as our experience, during such a macroeconomic recession, one of the most beneficial reactions by buyers or suppliers is to map and reassess the strategic importance and target alignment with their counterparties as well as the perceived, altered risk of opportunistic behavior. Subsequently, depending on the potentially adjusted strategic importance of each BSC, the next step is to define all necessary actions that may either reduce the gap in strategic alignment or minimize the perceived risk of opportunism, with the aim of increasing the resilience of their SC or improving its operational and financial performance.

### Proposed project framework, methodology and collaboration aspect matrix

The recommended methodology for initiating and managing this kind of project during such turbulent times is based on EY’s engagement approach and includes five subsequent phases, each of which has specific objectives with explicit questions to be answered and respective decisions to be taken before moving to the next phase (see Figure 2).

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Figure 2. The five phases of the recommended project engagement approach

**Phase 1: Identify**
- Define project scope and focus
- Understand moderator’s effect
- Understand supply chain
- Decide on representative sample of buyers or suppliers
- Collect relevant information

**Phase 2: Diagnose**
- Define project scope and focus
- Understand moderator’s effect
- Understand supply chain
- Decide on representative sample of buyers or suppliers
- Collect relevant information

**Phase 3: Design**
- Define BSC factors
- Develop respective questions per factor
- Define measures and metrics
- Categorize questions across three aspects
- Standardize metrics across each aspect’s questions
- Design final questionnaires

**Phase 4: Deliver**
- Conduct the research
- Assess the current status of each buyer or supplier in relation to the three aspects
- Develop action plan and road map
- Define financial and operational KPIs that measure performance
- Initiate PMO activities for action plan implementation and monitoring
- Record and measure related KPIs, ex- and post- implementation
- Test BSC hypotheses

**Phase 5: Sustain**
- Define financial and operational KPIs that measure performance
- Initiate PMO activities for action plan implementation and monitoring
- Record and measure related KPIs, ex- and post- implementation
- Test BSC hypotheses

---

**Objectives**
- Define project scope and focus
- Understand moderator’s effect
- Understand supply chain
- Decide on representative sample of buyers or suppliers
- Collect relevant information
- Define BSC factors
- Develop respective questions per factor
- Define measures and metrics
- Categorize questions across three aspects
- Standardize metrics across each aspect’s questions
- Design final questionnaires
- Conduct the research
- Assess the current status of each buyer or supplier in relation to the three aspects
- Develop action plan and road map
- Define financial and operational KPIs that measure performance
- Initiate PMO activities for action plan implementation and monitoring
- Record and measure related KPIs, ex- and post- implementation
- Test BSC hypotheses

**Key decisions per phase**
- What should be the scope and focus of the project in relation to the three major collaboration aspects as well as any external dynamics?
- What is the company’s supply chain strategy, types of buyer or supplier collaborations and the operational or financial performance (on an ex- and post-crisis basis)?
- Which sample of buyers or suppliers is considered to be a representative one (to be included in the project)?
- What type of supply chain quantitative and qualitative information or data is relevant and useful in relation to the representative sample examined?
- Which hard and soft BSC factors are important to the three major collaboration aspects of the company’s supply chain?
- Which sets of questions will more accurately capture the essence of each factor and consequently the validity and relatability of the three aspects?
- What should be the measure or metric for each question, depending on its nature (e.g., Likert scale or open text for qualitative questions, or absolute volume, value or percentage for quantitative questions)?
- How should the questions be categorized in relation to the three aspects measured?
- How should the metrics for each aspect’s related set of questions be standardized?
- What should be the final form and length of the questionnaire (to be used to select buyers or suppliers)?
- How should the research be conducted (e.g., form of communication, responsible executives to fill in the questionnaires from both the supplier as well as buyer side, handling of confidential information)?
- How should a high response rate be recorded?
- How can response confidentiality, independence and reduced cognitive biases be achieved?
- How can the data from questionnaire responses be cleansed and combined (given two responses per supplier or buyer) with existing quantitative or qualitative information for each?
- What is the current mapped position, within the four quadrants, of each buyer-supplier, as assessed by the three aspects?
- Depending on each quadrant, what should be the most appropriate actions per supplier or buyer for reducing any strategic alignment gaps and risk of opportunism?
- What are the most appropriate operational and financial KPIs that define the BSC performance?
- What are the initial hypotheses in terms of causality between selected actions and performance improvement?
During a macroeconomic recession, one of the most beneficial reactions by buyers or suppliers is to map and reassess the strategic importance and target alignment with their counterparties as well as the perceived, altered risk of opportunistic behavior.

The representative sample should be mapped within the four quadrants of the three collaboration aspect (3CA) matrix, as Figure 3 indicates.

Depending on the number of buyers or suppliers positioned on each of the four quadrants (A–D), the actual position of each buyer or supplier, as well as the project’s strategic scope, focus and priorities, specific appropriate actions should be developed per quadrant and buyer or supplier with the aim of reducing strategic misalignment and risk of opportunism.

For example, for those suppliers or buyers positioned in quadrant A, the company should develop a set of appropriate actions for improving their overall 3CA position, while for those positioned in quadrant B, it could implement directives for maintaining these positions by focusing on those suppliers or buyers whose relative risk of opportunism should be reduced. Moreover, for those positioned in quadrant C, it could consider the relative risk of opportunism before deciding on whether or not it should initialize any actions for increasing the strategic alignment of those suppliers or buyers, or consider alternative collaborations. Finally, for those positioned in quadrant D, the company could consider in which cases it is feasible, and makes economic sense, to implement any action plan for increasing their strategic importance.

As our methodology indicates, following the finalization of policies, directives and action plans, significant attention should be given to the selection of appropriate KPIs that can act as direct or indirect indicators.
for quantitatively measuring and monitoring BSC performance improvement. These can be used during, and following, the implementation of the respective actions and should result in adjustments in strategic importance as well as improvements in target alignment and risk of opportunism.

The main reason why these KPIs are considered critical is because they form the basis for testing initial hypotheses regarding each buyer-supplier adjusted collaboration type and level. Their use has value both during, and after, a period of macroeconomic recession, and, in particular, they can show the causality direction and strength between implemented action plans and the 3CAs.

Conclusion

Undoubtedly a macroeconomic recession can have numerous negative effects on any BSR. Frequently, its impact on collaborations not only reduces overall performance but also disrupts the sustainability of existing supply chains’ competitive advantage.

Our experience suggests that, during such periods, BSCs should be reassessed based on the three major collaboration aspects of strategic importance, target alignment and risk of opportunism, as defined by hard and soft collaboration factors.

Furthermore, the recommended methodology for such a project is a structured approach for conducting the respective mapping and assessment as well as developing and initiating applicable and suitable actions for improving, on a selective basis, the BSC’s performance. By doing so, companies can improve the resilience or sustainable competitive advantage of their supply chains, following the radical changes recorded in their industries and sectors due to a macroeconomic recession.
Over the past 10 years, accounting shared services centers (SSCs) have become an integral part of companies’ structures. But what about other functions such as controlling (or management accounting)? Are shared services one way for controlling to strike a balance between enhanced quality and greater efficiency?
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Controlling, or management accounting, was developed as an answer to macroeconomic turbulence in the 1920s and 1930s. A burgeoning global economy led to the steady growth of companies that found themselves facing a host of new challenges in the field of communication, coordination and management. This led to the development of controlling as a means to regulate a company’s entire operating activities.

Global financial crises and an unabated trend toward globalization have decisively shaped and altered the economic and global structures of the 21st century, transforming major industries, e.g., power and utilities, and pharmaceuticals. In today’s economy, tougher competition, high market volatility, shorter innovation cycles and significant pressure on margins are forcing companies to do business faster, strategically and operationally, in order to stay ahead. Therefore, controlling today faces the significant challenge of breaking with traditional and historically evolved structures in order to become an effective and efficient business tool for managers.

Shared services as a foundation
The introduction of SSC structures is an important building block toward overcoming these challenges. Driven by cost pressure and the opportunity to save money, companies started to pool and outsource their finance transaction activities more than 20 years ago, with financial accounting and IT being the pioneers. The rationale for SSCs is to pool and centralize activities and processes in order to attain a higher level of standardization, harmonization and automation and thus benefit from economies of scale, synergies and efficiency gains. This means that process specialists can perform tasks for all companies in a group and know-how can be bundled in a central location. In recent years, most DAX companies and many mid-market companies have established shared services centers on a regional or global level to manage a wide range of activities. The reasons for this include:

► Global expansion, particularly toward Asia for closer proximity to emerging markets
► Process extension to encompass value-creating business areas such as procurement, but also management-related functions such as financial control
► “Multi-tower” approach where existing SSCs are expanded in order to consolidate multiple locations

The organizational model of shared services provides, particularly for group and local controlling, support for senior management, realizing cost savings, minimizing redundancies and streamlining historically complex processes. As a basis for controlling SSCs, a clear definition of the controlling operating model is needed, which provides the foundation

1. DAX is an abbreviation for Deutscher Aktienindex, the German stock index.
and the strategic orientation of the whole controlling organization. As a result, the three essential building blocks of controlling define the future orientation (see Figure 1).

Development of shared services centers
Based on our experience, the introduction of shared services in controlling should follow the principle of “structure follows strategy.” The fields of strategy, governance and organization, processes and systems are the key elements of any project, and are examined separately together with top management and financial control. Ideally, the customers of controlling – the business functions – are also involved in an evaluation. Here, we explore the key elements and outline the key factors.

1. Strategy, factors and frameworks
Before controlling shared services can be set up, the controlling function itself needs to have a clearly defined vision and mission. What is the role of controlling within the company? What are the functions of controlling and what values and principles should guide it? In practice, these questions are often underestimated, yet they are the foundation for fundamental decisions and any reorganization.

Companies with an already established shared service organization generally aim to move more activities into it. In most cases, these companies employ a clear SSC strategy (prioritizing goals such as creating transparency, optimizing costs, improving quality). Experience has shown that many companies prefer to bundle certain controlling activities, or streamline processes through strategies such as lean budgeting or smart reporting, relocating controlling activities to a SSC. This, too, simplifies the actual relocation because the basic elements of bundling have already been analyzed and initial process efficiencies have been leveraged.

2. Governance and organization
In any company, group controlling is senior management’s primary starting point for all finance- and performance-related decisions. It develops strategic guidelines and targets for the rest of the company’s controlling function and passes them on to the respective SSC or Center of Expertise (CoE) and local financial controllers. It equips group management with the ability to coordinate, react and adapt in order to achieve the overarching group objectives. In our experience, this is the reason why most controlling SSCs and CoEs sit directly below the group financial control function.
In recent years, the terms SSC and CoE have been frequently heard in boardrooms worldwide in connection with controlling. Both organizational elements share the same basic premise: to standardize and bundle activities, harness synergy effects and eliminate redundancies. However, we see that companies draw a clear line between them:

► SSCs are highly efficiency-driven and are able to generate the greatest benefit from the centralization of highly transactional processes (e.g., standard reporting and analytics), ideally at a cost-effective location.

► CoEs centralize special knowledge in areas such as company consolidation, procurement, supply chain or controlling. CoEs also define central guidelines for the functional financial control, set standards and uphold them.

For CoEs, this kind of governance allows for the greatest possible transparency, particularly for global companies. In general, functional CoEs are embedded in a type of matrix organization, often reporting directly to the function for disciplinary purposes and to group financial control on a technical level. The activities of CoEs play a significant role in strategic and operative decision-making and are therefore often located close to the group controlling function.

SSCs can manage 80% of all accounting processes (see Figure 2). However, controlling requires a more differentiated treatment as it has fewer transactional processes than financial reporting.

Complex activities that require experience in operational business, or should be standardized throughout the company, are better suited to being bundled in a CoE.

Figure 2. What SSCs and CoEs can manage: accounting vs. controlling

Like reporting and accounting, controlling has to meet the challenges of internal rationalization and realignment.
3. Location
Apart from the organizational strategy and the allocation of activities, location also plays a significant role. While the primary motive behind the introduction of SSCs for accounting, HR and IT is to reduce costs by arbitraging price differences in the global labor markets, the main reason for implementing SSCs for controlling is to enhance the quality and the productivity of the services rendered. Regions considered during the search for a controlling SSC location should therefore have substantial experience in shared services and be able to demonstrate stable productivity and a high quality of service. To start with, it is also advisable to select a near-shore (within the same continent) location in order to ensure proximity to senior management. In our experience, European companies favor Poland, Hungary and Ireland as shared services locations.

For bundling controlling activities in a CoE, it is advantageous to choose a location in the same country as the company headquarters. Controlling activities require a broad knowledge of the company itself as well as of the relevant areas, and quality of service is the number one priority for a CoE.

4. Processes and systems
Again, it is evident that finance and controlling processes call for a more sophisticated analysis than is needed for highly transaction-based activities such as accounting. As controlling is subject to relatively few regulatory guidelines, standards that cross national and divisional borders must be implemented first by group controlling. However, generally speaking, the following areas of financial control are particularly suitable for relocation to a SSC:

► Management reporting and consolidation
► Operational planning, budgeting and forecasting
► Cost and profit accounting
► Analytics and big data in functional financial control

The same rule applies as with accounting: the more transactional an activity and the greater the potential for standardization, the more viable it is to provide these services through a SSC. For management reporting, many companies have already implemented a reporting center which, using consistent data as a basis, generates reports – and often commentaries – for different levels of management. However, companies are now beginning to shun standard reporting in favor of ad hoc reporting, which is being increasingly transferred to SSCs.

In operational planning, budgeting and forecasting, there is a trend toward the centralization of preparatory activities, e.g., master data management or preliminary costing. This is corroborated by our experience that companies are increasingly concentrating on forecasting and optimizing planning cycles and the related reconciliation processes. Similar patterns can be observed in the area of cost accounting.

The functional and value-added activities of companies harbor great potential for the relocation of controlling processes.
Controlling as a shared service: driving efficiency and effectiveness

Figure 3. Example split of controlling activities: group vs. local vs. SSC or CoE

<table>
<thead>
<tr>
<th></th>
<th>Decision-making processes</th>
<th>Transactional processes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Finance management</td>
<td>SSC or CoE</td>
</tr>
<tr>
<td></td>
<td>Reporting and consolidation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cost accounting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Planning, budgeting and forecasting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Analytics</td>
<td></td>
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<tr>
<td></td>
<td>60%</td>
<td></td>
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<td></td>
<td>20%</td>
<td></td>
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<tr>
<td></td>
<td>45%</td>
<td></td>
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<tr>
<td></td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>35%</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>15%</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>10%</td>
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</tr>
<tr>
<td></td>
<td>5%</td>
<td>75%</td>
</tr>
<tr>
<td></td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>70%</td>
<td></td>
</tr>
</tbody>
</table>

- **Group**: Development of finance vision and strategy, Analysis of the financial figures, Definition of balanced scorecards, Definition of group KPIs, Preparation of income statement, Execution of closing activities (monthly, quarterly, annually), Analysis of profitability.
- **Local**: Localization of balanced scorecards, Definition of KPIs on a local and business level, Analysis of local deviations, Comments, Pre-costing of prices and goods sold, Preparation of budgets on a local scale, Input for planning and forecasting, Local analysis of smart analytics results, Comments.
- **SSC or CoE**: Administration of master data, Execution of standard reporting, Preparation of defined reports, Provision of data, Calculation of cost center accounting per unit and per hour, Calculation of fixed costing, Execution of plausibility checks, Preparation of profit and loss forecast, Preparation of planning, Administration of master data, Consolidation of budget, Execution of plausibility checks, Maintenance of master data, Analysis of mass data, Execution of smart analytics.

Source: EY, 2015.
Big data, predictive data and smart analytics, e.g., the analysis of customer behavior and social media activity, are further areas that are becoming increasingly relevant for companies and that may also be efficiently handled by a SSC or CoE. Some companies are already setting up data analytics teams within their SSCs to develop a group-wide, overarching “one-data-source.” Units are currently being created within CoEs to deal with the modeling and simulation of complex data analyses.

A great number of companies regard management reporting processes as easily standardized and therefore consider them ideal candidates for relocation to a SSC. On the other hand, functions that report directly to the management board and deliver information on the group’s strategic alignment are deemed to be unsuited. The best solution is for them to remain local or to be centralized in a CoE that reports directly to the management board (see Figure 3).

**Conclusion**

As companies face fast-changing global and economic challenges, it is time for financial control to tread new paths.

Essentially, controlling is like team sports: a well-organized and effective team will meet the objectives it sets out to achieve. In sport, success is heavily influenced by external factors such as the fans, the weather and teammates. For companies, the influence of customer behavior, trends and the competition plays a key role and sharply increases the focus on the core competencies of each team member. Frequent performance checks and the optimization of the team lineup are factors that have a major bearing on success and companies should not shy away from them.

We can take this comparison between sport and controlling further and learn from how sports benefit from the continuous development and integration of technology. What top football or basketball teams and successful companies have in common are the huge gains to be made from the introduction and application of individualized, real-time data and mass data analysis. In sport, it is important to adapt a training program in order to maximize players’ performance yet without overstretching them, thereby ensuring they remain able to play to the best of their abilities. Controlling, too, has to deal with changing conditions and accordingly must become more flexible, agile and efficient while simultaneously improving its quality.

With the integration of controlling into SSCs and CoEs, companies are taking another step toward multifunctional shared services, and further still, toward global business services in order to efficiently and effectively prepare internal processes for the challenges of the decades to come.

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**Key lessons for SSCs and CoEs (from practitioners, for practitioners)**

- Obtain strong support from senior management. This is essential if the project is to be successful.
- As the first step, always define the future operational model. Remember that “structure follows strategy.”
- Use smaller regional or business units for a pilot project.
- Control project management centrally, not locally.
- Monitor and analyze processes from end to end, including interfaces to other functional areas.
- Keep in mind that the potential for relocation is not confined to transactional processes.
- Communicate all changes early on.
- Support sustainable change management.
India’s growth is highly promising, and this is heightened by the consumer market potential of a population with a median age way below 30, as well as the low cost structures of its growing workforce. Recent policy changes are further fueling India’s development, offering vast potential for investment in high-tech manufacturing. This article examines these opportunities in more detail and offers insights into the prospects for Indo-German collaboration as an example of how countries could make this work.
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India is understood to be the highest performing of the BRIC countries, i.e., Brazil, Russia, India and China. And according to CEOs and CFOs of leading German high-tech companies, India currently offers a better investment climate than the other BRIC countries (see Figure 1). This is just one of nine key findings that our study, *Prospects on Indo-German collaboration in high-tech manufacturing*, drew from a survey of 92 C-level respondents from international high-tech companies, who are responsible for investment decisions in emerging markets.

Of those surveyed, 94% predict India’s growth rate will increase significantly in the near future, and 51% believe the foreign direct investment (FDI) policy will further relax. Combined with India’s obvious addressable market size, acknowledged by almost 100% of respondents, this creates a very positive investment climate. It is even more significant in the context of increasing regulation in Brazil, Russia and China, for example, relating to customs and tax, export and imports, as well as the forecast reduction in their economic growth. In the case of Brazil and Russia, a majority of those surveyed even predict a decreasing growth. India, however, is expected to be back on the recovery track.

Investment in education and skill development is a basic instrument, but effective at empowering India’s population to achieve sustainable growth through a wide, robust middle class.

1. The report is available for download at www.de.ey.com/HighTech-India.
Figure 1. BRIC countries – comparison of investment climate

<table>
<thead>
<tr>
<th></th>
<th>Brazil</th>
<th>Russia</th>
<th>India</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic growth rate</td>
<td>39 decreasing 48 stable 13 increasing</td>
<td>92 decreasing 6 stable 12 increasing</td>
<td>0 decreasing 2 stable 94 increasing</td>
<td>10 decreasing 69 stable 21 increasing</td>
</tr>
<tr>
<td>Adressable market size</td>
<td>1 decreasing 17 stable 51 increasing</td>
<td>13 decreasing 77 stable 10 increasing</td>
<td>0 decreasing 2 stable 98 increasing</td>
<td>1 decreasing 19 stable 55 increasing</td>
</tr>
<tr>
<td>Price level</td>
<td>0 decreasing 49 stable 51 increasing</td>
<td>51 decreasing 7 stable 88 increasing</td>
<td>41 decreasing 78 stable 19 increasing</td>
<td>14 decreasing 48 stable 38 increasing</td>
</tr>
<tr>
<td>Cost of labor</td>
<td>0 decreasing 25 stable 75 increasing</td>
<td>1 decreasing 6 stable 93 increasing</td>
<td>41 decreasing 78 stable 18 increasing</td>
<td>14 decreasing 48 stable 38 increasing</td>
</tr>
<tr>
<td>FDI regulation</td>
<td>5 decreasing 83 stable 12 increasing</td>
<td>14 decreasing 48 stable 38 increasing</td>
<td>11 decreasing 59 stable 40 increasing</td>
<td>6 decreasing 20 stable 74 increasing</td>
</tr>
<tr>
<td>Export or import control</td>
<td>41 decreasing 82 stable 14 increasing</td>
<td>14 decreasing 48 stable 38 increasing</td>
<td>14 decreasing 48 stable 38 increasing</td>
<td>6 decreasing 20 stable 74 increasing</td>
</tr>
<tr>
<td>ROC or starting a business</td>
<td>1 decreasing 59 stable 40 increasing</td>
<td>14 decreasing 48 stable 38 increasing</td>
<td>14 decreasing 48 stable 38 increasing</td>
<td>6 decreasing 20 stable 74 increasing</td>
</tr>
<tr>
<td>Customs</td>
<td>41 decreasing 78 stable 18 increasing</td>
<td>14 decreasing 48 stable 38 increasing</td>
<td>14 decreasing 48 stable 38 increasing</td>
<td>6 decreasing 20 stable 74 increasing</td>
</tr>
<tr>
<td>Tax</td>
<td>21 decreasing 57 stable 41 increasing</td>
<td>14 decreasing 48 stable 38 increasing</td>
<td>14 decreasing 48 stable 38 increasing</td>
<td>6 decreasing 20 stable 74 increasing</td>
</tr>
<tr>
<td>Competitive intensity</td>
<td>0 decreasing 22 stable 78 increasing</td>
<td>14 decreasing 48 stable 38 increasing</td>
<td>14 decreasing 48 stable 38 increasing</td>
<td>6 decreasing 20 stable 74 increasing</td>
</tr>
</tbody>
</table>

In % ■ Positive impact for the stimulation of FDI ■ Negative impact for the stimulation of FDI

Source: EY Delphi survey, 92 CEOs and CFOs from leading German high-tech companies.
To fully unlock the existing potential of high-tech industries in India, it is important to further stimulate collaboration between mature countries and emerging Asian countries.

India’s advantage – an ever-growing workforce
The global economy is transforming into a multipolar world, and emerging markets are center stage when it comes to future business decisions. On the one hand, they offer a vast potential for economic growth and, on the other, they tackle challenges that developed markets have conquered already.

The BRIC economies continue to outpace the growth of mature economies. Among these, during the last decades, India has demonstrated the ability to grow rapidly. With a population of 1.24 billion and a median age of 27 years in 2014, India has a more favorable demographic profile than its BRIC peers. By 2050, the median age in India is expected to be 37, combined with a population of working age (i.e., between 15 and 64) that is expected to top one billion, i.e., some 68% of the total. In addition, the average consumption of India’s households is expected to increase. This also indicates a rising middle class, leading to a growing private consumption and domestic demand. The expansion in the workforce and the emerging middle class fulfill two important conditions for India’s future growth. Furthermore, a stable Government has brightened the prospects for India’s economic recovery.

Identifying India’s high-tech potential
India’s significant market readiness for high-tech products is another key finding of the study. The expected increase in disposable incomes, combined with a high demand for technologically advanced products and applications, create an attractive environment for high-tech manufacturing. All investors need to do is make products that fit Indian or Asian needs.

The study identified and evaluated the 13 most relevant industry sectors for India that are also most promising for foreign investment:

- Electronic System Design and Manufacturing (ESDM)
- Photonics
- IT
- Automotive
- Civil aviation and airports
- Transportation infrastructure
- Water
- Renewable energy
- Heavy engineering
- Biotechnology
- Pharmaceuticals
- Defense manufacturing
- Space

Each sector profile considers the current status, expected growth and sector-specific trends, as well as the perception of experts from international companies. It is designed to help potential investors understand all the factors critical for investment decisions, based on German companies’ typical processes for such decisions. Of these 13 sectors, 7 offer the greatest convergence for Indo-German collaboration: the ESDM
Prospects for Indo-German collaboration in high-tech manufacturing

This study was a collaboration between EY and the Embassy of India in Germany to explore the potential areas of cooperation in high-tech sectors. The scope was to identify sectors with maximum potential and the challenges limiting the flow of investment from German companies into India in those sectors, and to recommend appropriate policy instruments.

To deliver an integrated picture of Indian high-tech industries, the study combined the personal perception of key market players with robust economic data. In order to capture a realistic reflection of experts’ views, we interviewed CEOs and CFOs from 92 German high-tech manufacturing companies that are already operating in BRIC economies, or are considering investments in the near future.

The aim was to get the C-level view on India’s potential and its attractiveness for investment, as well as expected drawbacks and barriers. In addition, in-depth interviews were conducted with a number of German key stakeholders, such as VDA (Germany’s automotive industry association), VDMA (the German engineering association), ZVEI (German association of the electrical engineering and electronics industry), Deutsche Bank and KfW Bank Group. This helped to form the right context between primary data insights and market facts. As a result, it was possible to identify sectors that are most attractive for German FDI, and to draw conclusions as to how to improve the economic and business environment in general and support future bilateral FDI activity in particular.

sector, the automotive sector, civil aviation and airports, transportation infrastructure, water, renewable energy and heavy engineering.

Challenges to overcome

Of course, investors might need to tackle some specific challenges that are influencing investment decisions and may hinder sustainable business for high-tech manufacturing sectors and investor groups. These include a need to address improvement in infrastructure, simplification of regulatory procedures, liberalization of FDI and simplification of the tax system.

However, these challenges are being addressed: stimulated by far-reaching government programs, India is reshaping its infrastructure and opening further to global markets. This development is being powered by the program “Make in India,” which has been initiated by the Government to:

► Significantly liberalize FDI
► Simplify administrative processes and increase transparency by introducing web-based solutions
► Start skill development initiatives, in particular for the manufacturing trade
Taking a chance on India: why it is the leading future market

India’s economy is currently in a process of deep transition into an open and investment-welcoming country.

► Stimulate projects such as infrastructure and smart city development through public push-up investments
► Finally implement the goods and services tax reform facilitating indirect tax structures
► Establish international standards with the “national IPR mission” (intellectual property rights) in order to ensure safeguarding of intellectual property of investors

This initiative is the most comprehensive economic reform India has seen since its independence. Investment in education and skill development is a basic instrument, but effective at empowering its population to achieve sustainable growth through a wide, robust middle class. The improvement of infrastructure, such as the “smart cities program” and sustainable water and power schemes, will not only attract foreign investors, but their successful implementation will also support India on its way to sustainable growth and the creation of millions of new jobs.

Enabling the financial sector to provide investors with better access to equity and debt will offer a wide range of instruments to finance new operations. India’s movement toward membership of the international export control regimes and the new national IPR strategy will facilitate and promote international trade and the transfer of high technology from across the world. In consequence, to fully unlock the existing potential of high-tech industries in India, it is important to further stimulate collaboration between mature countries and

Sector profile and analysis: heavy engineering

The heavy engineering sector comprises three major sub-sectors: heavy engineering and machine tools, heavy electrical, and automotive. It presents one of the greatest opportunities for Indo-German collaboration as engineering goods and machine tools dominate German exports to India.

Key characteristics
► The Indian heavy engineering sector is dominated by three types of company: the “central public sector enterprises” (large, government-owned companies), privately owned companies and major foreign companies.
► The Government of India has realized the high importance of foreign capital inflows and has allowed FDI for machinery and machinery tools up to 100%, and reduced the customs and regulations that were significant investment hurdles in the past.
► Beyond that, India offers a 15% tax exemption for heavy engineering companies if they invest over 1b Indian Rupees in plants and machinery.

Why is this sector interesting?
► The heavy engineering sector in India is expected to experience steady market growth. CAGR was 14% between 2010 and 2014, and is expected to be 17% between 2014 and 2020.
► There is limited domestic availability of high-tech manufactured engineering goods: about 70% of domestic demand in this field is met by imports.
► The growing consumer market is set to have a positive impact on heavy engineering. The sector will benefit from the accelerating development of the transportation and automotive sectors, ESDM and energy infrastructure (the heavy electrical industry).
► The Government of India is investing €264.8 billion in India’s energy infrastructure.
► India’s employee pool can cover the lower and very top end of the labor market, but struggles to provide non-academic, but formally trained, workers.

Sector trends
► A major source of growth for India’s heavy engineering sector is its emerging domestic market. Several upcoming public projects should lead to large-scale investments in industries such as rail and road construction, electric power generation and distribution.
► Private investments in construction and in the automotive industry, should stimulate high demand for heavy engineering.
► Rising demand for electric power supply, and consequent demand for higher capacity in both power generation and transformation and distribution, will also generate activity.
► The trend toward outsourcing of engineering services is forecast to become an €880 billion market by 2020. India is expected to bring home around 25% to 30% of this outsourced revenue.2

The Government of India has realized the high importance of foreign capital inflows and has allowed FDI for machinery and machinery tools up to 100%, and reduced the customs and regulations that were significant investment hurdles in the past.

**Conclusion**

India’s economy is currently in a process of deep transition into an open and investment-welcoming country. The high market readiness of Indian society to a wide range of diversified India-made high-tech products is forcing investors to develop products that are adapted to the Indian market and beyond, opening up the huge potential of different surrounding markets. Some investment-related challenges remain, but they can be mastered through bilateral collaboration and partnerships. With an evergrowing workforce, the world’s largest democracy is transforming itself into an up-to-date industrial economy with a strong services sector – widely open for foreign investors, economic and political partners.
Improving project delivery in oil and gas: managing the megaprojects

The oil and gas sector is increasingly dominated by megaprojects, typically characterized by their complexity and highly technical nature, with budgets running to billions of dollars. Megaprojects usually involve many organizations, e.g., governments, oil and gas companies and contractors, and they are often politically and environmentally sensitive. It is perhaps no surprise, therefore, that overruns and delays frequently occur. This article offers practical advice on improving megaproject development and delivery.
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Recent research suggests that megaprojects have a tendency to run late and over budget. In fact, 64% of the projects surveyed in our study were facing cost overruns, and 73% were reporting schedule delays.

These overruns can prove very expensive. Our study showed that the average forecast completion cost across our database was 59% above the initial estimate.

Increasingly high oil prices have meant there was limited pressure on the industry to improve; a higher priority was output and production. But the recent price crash has meant that there is now an urgent need to address the industry-wide weaknesses in megaproject delivery.

What are the consequences of overruns?
Companies that fail to deliver projects on time, on budget and within environmental and regulatory requirements can face serious consequences:

► **Project economics:** If projects miss critical milestones, they typically lose momentum. They can end up in a vicious cycle of overruns and underperformance, ultimately eroding project value.

► **Company performance:** The nature and size of megaprojects mean that participating companies must commit enormous resources and take on significant risk. If targets are missed on big projects, it can have a major impact on a company’s financial performance, either through increased demand on capital or loss of revenue through missed production dates.

► **Shareholder expectations:** Stakeholders increasingly demand improved return on investment and capital discipline, and reduced risk and exposure. Companies that fail to meet these demands risk losing shareholder confidence and face an increased cost of capital.

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Increasing complexity

Megaprojects are by their nature exceptionally complex, involving the combination of new technologies, operations in new geographies and multiparty governance. And a number of trends are pushing the level of complexity even higher:

The end of easy oil
New sources of easy-to-access oil and gas are running out. As a result, industry players are looking to exploit unconventional oil and gas, such as shale and coal seam gas, and to explore frontier areas, such as the Arctic. To commercialize these opportunities requires technically and operationally demanding projects.

Joint ventures (JVs)
JVs are common across the industry, especially for complex projects in challenging environments. JV agreements tend to be complicated, and the participation of different parties brings the risk that the needs and aims of those involved may diverge over time, or at key project decision points.

The oil price crash has further increased this risk as, in some instances, companies that, before the crash, were planning to build state-of-the-art facilities, may now need to complete projects as soon as possible in order to start getting a return.

Building infrastructure
Megaprojects increasingly take place in countries with less-developed infrastructure, in areas away from population centers. This means that companies must often invest in developing water, power, transportation and accommodation projects to gain access to resources.

The remote nature of many of these projects often means that they are in environmentally sensitive and extreme environments, thereby adding another level of complexity.

Getting through the final investment decision (FID) gate
For oil and gas companies, megaprojects present a huge commitment, not only in terms of the high level of investment required, but also in the time it takes to completion.

And it is in the efforts of project teams, leading up to investment approval at FID, that the seeds of project overrun and overspend are frequently sown.

Too often, project teams set unachievably low budgets and short schedules. There are two main reasons why this happens:

1. Price pressure
Project teams are frequently under great pressure from senior teams to pitch projects at a low price for sanction at FID – often at a lower price than the project can actually be delivered. This puts teams under pressure to build schedules and budgets based upon overly optimistic or simplistic scenarios, where project delivery faces minimal challenge.

Compounding this desire for a low cost at sanction is a drive to move to sanction
Improving project delivery in oil and gas: managing the megaprojects

Project teams should focus more on engaging the right contractors and incentivizing them in a way that satisfies the needs and aims of both parties.

Advice for investors

Investors tend to focus too strongly on the viability of projects at sanction price rather than the more critically important question of “How certain can we be that the sanctioned cost and schedule estimates are realistic?”

There are two significant changes that investors – particularly those not involved in the running of projects – should make to address these problems:

1. Get a closer understanding of the planning and development process

Investors need to understand more closely how the cost and schedule forecasts have been produced, what the key risks are at each stage of the project and, crucially, how they will be mitigated. Developing this understanding can help them to assess the reliability of the forecasts they have been given, and to gain a more accurate view of the potential for delay and overspend.

Those who lack in-depth understanding of the development processes behind oil and gas projects (and the risks inherent within them) will need to consult advisors with knowledge of the industry.

2. Put pressure on project teams to deliver the right price, not the lowest price

Investors should redirect the pressure they put on project teams to offer projects at a low price. Instead, they need to invest time into making sure that the project team has as great a level of certainty as possible on exactly what it is about to build and that the price and schedule forecasts are appropriate for the delivery of that project.

In fact, the uncertainty in many of these projects means that it may be best not to look for a single price, but rather for a best price, a likely price and a worst-case price (each clearly defining the risk scenarios they are based upon). Doing this will give investors greater transparency and more certainty about approved cost, schedule forecasts and the risk to project delivery success.

Better planning

Because of the high complexity of megaprojects, even relatively small changes can lead to substantial delays and costs. And that complexity – along with the many unknowns involved in any big project – means that there will always be changes during delivery.

Mismanagement of the change process is one of the key causes of added costs. By planning for likely changes and building adequate incentives into key contracts (so that contractors are encouraged to...
Megaprojects performance: the numbers don’t lie

**Investment by segment**

**Upstream**
- US$1.08t
- 163 projects
- Average size: US$6.6b

**Pipeline**
- US$348b
- 46 projects
- Average size: US$7.6b

**LNG facilities**
- US$539b
- 50 projects
- Average size: US$10.8b

**Refining**
- US$607b
- 106 projects
- Average size: US$5.7b

**Key challenges**

- 65% Soft skills (people, organization and governance)
- 21% Management processes and contracting and procurement strategies
- 14% External (government intervention or environmental mandates)

**Post-FID project performance**

- 35% Overrun
- 65% On budget

- 75%-100% 3 projects
- 50%-75% 1 project
- 25%-50% 4 projects
- <25% 5 projects
- On budget 7 projects

Source: Spotlight on oil and gas megaprojects, EY, 2014.
Results by region

**North America**
- 58% Proportion of projects facing cost overruns
- 55% Proportion of projects facing schedule delays
- 51% Average project budget overruns

**Latin America**
- 57% Proportion of projects facing cost overruns
- 71% Proportion of projects facing schedule delays
- 102% Average project budget overruns

Improving project delivery in oil and gas: managing the megaprojects
Project teams often overlook the fact that their project will take place in a broader oil and gas ecosystem. Better procurement
Project teams often make procurement decisions based too heavily on cost, with insufficient emphasis placed on quality. This can have a sizable impact on cost and schedule performance later in the project life cycle when quality issues become apparent.

Project teams should focus more on engaging the right contractors and incentivizing them in a way that satisfies the needs and aims of both parties. If they do this, there is potential for oil and gas companies to see higher-quality work and greater alignment across their contractors — with everyone focused on delivering value, rather than on clawing back their own costs.

Improving project delivery
Project teams often do not fully understand how changes in one area of a project can affect the schedule of other work activities. The challenge of working with multiple contractors, each carrying out separate but often interlinked work, makes this planning problem even more challenging. Compounding this, it is often difficult to get real-time data, which makes it difficult to model or assess performance and the impact of change.

At the outset of projects, teams should invest appropriately into developing interlinked work breakdown structures with real-time data input and supporting this, a clear set of KPIs to be implemented across the project to ensure collective, aligned effort from contractors. Doing so can improve performance and reduce the risk of cost overruns and schedule delays.

Better human capital management
Project teams often overlook the fact that their project will take place in a broader oil and gas ecosystem. A rise in demand for workers in the oil and gas industry (or in specific regions where there may be multiple projects under development) can cause an escalation in personnel costs, especially at key project stages (such as start-up or commissioning) where resources are particularly specialist.

Managed services are a potential solution to many of these challenges as trained resources can be accessed more easily and moved readily between companies and projects. However, in the long term, the project team must learn to model more appropriately the impact of the wider ecosystem of projects into their planning and forecasts.
Oil companies need to pursue supply chain efficiency improvements in a collaborative spirit, rather than seeking only to secure the lowest prices.

Reduce costs, but protect your supply chain

The crash in the price of oil has led to a fall in the number of projects being sanctioned for development. This has reduced the demand on suppliers and contractors and so has opened the way for oil and gas companies to seek savings through renegotiation of supplier contracts.

However, if this is done too aggressively, the result could be that many of the companies within the complex supply chain on which oil and gas organizations rely may go out of business, causing long-term damage to the industry.

The last time there was a serious downturn in the oil price, back in 1980, it took around five years before the major oil companies recovered. But it was decades before the oil and gas supply chain (including oilfield drillers and the builders of refineries) recovered its previous strength.

Ask for a low price, but a sustainable one

Since the 1990s, the level of efficiency has actually fallen in the sector, in contrast to the big rises we have seen in most other industries. This decline, while impacted by a number of factors, has been facilitated by the way that contracts are structured and the apportionment of risk within them.

It is clear that there are substantial efficiency savings to be made and that the low oil price provides a clear case for change. With that in mind, oil companies need to pursue supply chain efficiency improvements in a collaborative spirit, rather than seeking only to secure the lowest prices.

If, instead of simply demanding lower prices, a company offers to work with its contractors to reduce costs and also offers to share the benefits, it will not just enjoy lower costs. In the current market (where the supply chain is under significant strain), it may also establish itself as a client of choice for contractors keen to remain profitable and to share in the benefits of efficiency improvements.

The opportunities for those who can deliver

Oil and gas megaprojects are likely to continue to grow in size and complexity in the coming years, so the ability to deliver them successfully to time and budget is going to be a key differentiator for companies in the sector.

Most projects are now delivered through JVs. Companies that develop a reputation for delivering these projects well will be able to establish themselves as a JV partner of choice, gaining easier access to capital and expertise and preferential access to national oil company (NOC) controlled reserves.

Similarly, where a company consistently delivers projects within regulatory requirements and with due care for the environment, it will gain the trust of stakeholders and improve its opportunities when seeking to access new, or environmentally sensitive, reserves.

Finally, where a company is able to build strong long-term relationships with contractors and suppliers, it will be able to find efficiencies that increase project value, while also helping to secure the long-term future of the industry.
Flame war management: handling crises in the social media age

Flame wars represent crises of the social media age and have become a regular occurrence. Consumers have realized that with web 2.0 they are on an equal footing with companies and organizations. Increasingly, therefore, they are turning to the social web to apply pressure on issues that they feel strongly about. The resulting network effects can rapidly develop into a flame war, which can affect anyone. This article examines what precautions organizations can take to limit the potential damage.
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A flame war is a chorus of outrage on the internet. A relatively large number of critical comments are directed at individuals, institutions, products or brands. At least some of these comments deviate from the original topic and are aggressive, insulting, menacing or attacks of another form. Apart from companies and individuals, political parties and other public entities can also be affected. It is irrelevant whether the target of the outcry is active on social media. In fact, the refusal of those parties, who can potentially be affected, to be active in the social network environment further fans the flames.

The basic phenomenon is nothing new. Well before the internet, cries of protest have been forcefully and effectively made. The difference is that, in the present day, Web 2.0 combined with social media act as catalysts leading to a situation where even the most mundane of topics can receive a high level of attention. The tighter the participants’ network is, the greater the speed and reach of the wave of protest.

Users of social networks display the feared substitution of cognitive effects with network effects: a “like” is quick to post; the critical assessment of a topic takes longer, particularly with emotionally loaded topics.

What are the common causes?
While social crises can be instigated by other parties, more commonly they stem from the organization itself: for example, inappropriate behavior of employees, negative customer experiences, inadequate care of customers and influencers, violation of ethical principles, along with apparent injustices and inappropriate reactions.

Flame wars that have been initiated with a strategic background, such as attacks on non-governmental organizations (NGOs) or deliberate falsifications, can cause major damage due to their systematic nature.

The six phases of a flame war crisis
The normalized course of a crisis (see Figure 1) is divided into six phases:
1. Calm
2. Breeze
3. Strong breeze
4. Storm
5. Hurricane
6. Post-critical phase
Seventy percent of all social media crises have their source either in a Tweet (53%) or Facebook post (17%). Dependent on the reach and reputation of the author, the language used, the credibility, the potential for emotionalism or the relevance of the content, networked users will seize on an article and retweet it. Phase 1 (calm) develops to phase 2 (breeze).

Dependent on the level of outrage, the topic will be seized upon by other media such as Facebook, blogs and other social networks — gale force (phase 3) has been reached. If the affected parties are active on social media, they will be informed about current developments. The crisis becomes a storm when classic or online media pick up the topic.
The penetration reaches exponential values in phase 4, caused by the renewed take up of the topic across social networks. The flame war reaches a final peak in phase 5 (hurricane) when offline media such as daily newspapers and television channels take up the topic. In the post-critical phase 6, the storm recedes after all the hype.

Measuring the damage

Loss of reputation or damage to an organization's public image can have far-reaching consequences, while a weakening or reduced confidence in the brand can be observed in almost every flame war. However, the overall effect is difficult to measure financially, for example, in terms of lost revenues.

Sometimes, quantifiable material damage can be more easily identified. For example, a company's share price could suffer a significant fall in the millions of dollars as a direct result of one individual's very poor customer experience being made public. Or the financial damage could be in the form of lost business or contracts due to an internal management issue being brought to the attention of consumers worldwide.

Figure 1. Normalized course of a social media crisis

Source: Author's own.

Exit strategies
The speed of identification and reaction to a potential crisis can have a decisive effect on its overall impact. In an optimal situation, potentially critical articles would be recognized early and stemmed by specific measures. The exponential leaps in the phases can be counteracted. Various options are available at each phase of the flame war that would enable an appropriate response, for example, the extension of call center employees’ authority, mobilizing external bloggers and influencers or an early apology from the responsible party or parties.

   Rapid, authentic and honest answers from all employees at the customer contact point are essential, but require dedicated training.

   The real skill is in the differentiation between a storm in a tea cup (i.e., something that will pass unnoticed) and a flame war that impacts the company. The right decision, and the use of appropriate means at the right point in time, is the most effective de-escalation for crises in the social media age.

Prepare the organization
The first step in professional flame war management is to protect the organization such that knowing how to deal with a potential crisis becomes engrained in the corporate culture. This begins with raising employees’ awareness and introducing clear guidelines for them to follow. Relevant processes must be adapted and topics critical to the company analyzed in depth so that all risk areas are identified.

Crisis multipliers in social networks
   ▶ Communication is happening in real time.
   ▶ Network effects replace cognitive effects, i.e., it’s too easy to post comments to the network that are based on first impressions rather than considered assessment.
   ▶ Stakeholders are on a level footing with the target organizations.
   ▶ The nature of social media means that speed, penetration, simplicity and transparency help accelerate a crisis.
   ▶ Consumers are prosumers.
   ▶ There are high numbers of new participants with an affinity for online media (referred to as digital natives).
   ▶ Exceptional amounts of information are publicly available.

At the same time, the company needs to identify baseline measurements and risk assessments for the potential endangerment of the organization, its products and its employees. The current state can be evaluated and documented by applying techniques such as a strengths, weaknesses, opportunities and threats analysis (SWOT) or a failure mode and effects analysis (FMEA).

   Based on these analyses, preventive measures can be developed and a contingency plan created or existing contingency plans can be amended.

   The processes described must be embedded in the organization and the relevant responsibilities, which often need to be extended, defined.

   In the next step, a flame war knowledge base should be created and built that will be fed with all possible countermeasures. In the case of a crisis, it will support employees in making balanced decisions.

   All social media channels used by the organization should be prepared with potential content for use in the event of an emergency. Rapid access to further channels should be ensured, in case these also need to be employed.

   External forces to help in a crisis situation, such as bloggers and social media editors, can be briefed up front and agreement secured that they will be available on call.
Tools — it won’t work otherwise

An early warning system is core to professional flame war management. Comprehensive monitoring forms the foundation, as in all social media measurement activities. The source set should not just include the usual social media channels but must contain the Twitter Firehose. However, the API that is generally available — the Gardenhose — only delivers 10% of all possible Twitter posts. This means that, during an emergency, the feared storm could be brewing but its full force undetected because monitoring via the Gardenhose is only giving initial indications.

Efficient automated analysis tools are indispensable. Such tools provide structure to the otherwise unstructured data obtained during monitoring and allow the organization to process that data. Modern tools are able to achieve standardization through root word formation, spelling correction and acronym conversion. Clauses are separated and entities such as volumes, units of measure or characteristics are automatically singled out.

Rapid, authentic and honest answers from all employees at the customer contact point are essential, but require dedicated training.

The linguistic analysis available using part-of-speech tagging (POST) offers enormous evaluation potential. POST is software that reads text and assigns a tag to each word based on its categorization as, for example, a noun, verb or adjective. With this preprocessing, the essential semantic analysis gains a stronger foundation and expression than the usual monitoring tools that rely on lists of key words.

Apart from the quantitative analysis, a powerful tool must also be able to provide the qualitative classification, grouping and visualization of the results. In advance of a crisis, no one can say which terms will be relevant. But through the automatic output of clusters and the definition of thresholds, spontaneous alarms can be generated for terms that are not in the monitoring set. The consequence is a significant speed advantage in a flame war.

Individually tailored dashboards and cockpits form the communication center of the early warning system. Moreover, by applying monitoring and analytics, it is possible to identify Influencers in order to directly communicate with them. Similarly, it is conceivable to recruit and acquire an unpaid “army,” which can be asked to support in the event of a crisis.

Nonetheless, in order to be prepared for the emergency, it is strongly recommended to provide regular training and perform fire drills, i.e., practice drills, with all involved parties in the organization.

5. Firehose is the name given to the enormous volume of real-time Tweets that flow from Twitter each day. Access to this firehose can be obtained from Twitter.
6. API is the Application Programming Interface. It allows external developers to develop technology that rely on data from a specific source, in this instance, Twitter.
The right decision, and the use of appropriate means at the right point in time, is the most effective de-escalation for crises in the social media age.

Detection and prognosis

If an alert is raised as a result of the monitoring activity, an individual assessment of the situation is necessary. The alert can be prompted by, for example, a previously defined growth rate for certain clusters or a predefined blacklist of words. Typically, blacklists are used but we favor the addition of growth rates, i.e., we look for words or word combinations where the growth of hits on social networks is faster and higher than the average. The reason why we recommend monitoring growth rates is that no one is able to predict the future and so nobody knows which words or word combinations will cause problems, so every fast-growing topic should be analyzed.

Initially, a review takes place to determine if the object that caused the alarm is in fact a “flame.” The ensuing identification of the source is either performed by mathematical interpolation or by phase identification, applying tipping points and phase descriptions.
A further decisive factor is the flame war prognosis. First and foremost comes the question of what can be expected in terms of reach and latency. The important questions such as “who posted what and where, with which facts and in which tonality” can be clarified with the help of professional analysis tools. Important factors such as credibility, relevance or potential for emotionalism can be analyzed in a semiautomatic fashion. These factors all lead to a reliable storm prognosis. The stronger the characteristics are, the greater their effect on the future course of the flame war.

Crisis management and countermeasures
Assessment of the measures depends on the identified location and the storm prognosis. If the factors indicate a flame war is likely, an automatic situation assessment appears in the cockpit. Options for action, ranging from further observation to a statement from the CEO, together with a selection from the package of measures are displayed.

Following these recommendations, it is possible to detect and react accordingly and professionally with support from the tools mentioned.

Post-crisis management: after the storm is before the next storm
Every flame war should be seen as a rare opportunity to sharpen a company’s profile. Extensive vulnerability analyses, along with SWOT or FMEA analyses, will assist any organization in being able to react better to future crises.

The output from all of this analysis should lead to the setting of integrated measures and recommendations for action. The results should be stored in the flame war knowledge base, created as part of preparing the organization, mentioned earlier in this article. By following this approach, the organization will find it is able to react quickly and appropriately.

Positive side effects
It is worth keeping in mind that a flame war can have positive side effects. As the reach and prominence of the object in question grows, so do the number of fans and followers on the social networks.

Professional flame war management, as described here, also delivers valuable information on customers, products and markets that can be used in a variety of ways across the whole company.

All social media channels used by the organization should be prepared with potential content for use in the event of an emergency.
How can business planning activate your purpose?

Businesses continue to transform at pace to stay competitive. The reasons behind business change are well understood — increasing global consumer expectations, challenges concerning resource scarcity and increased regulatory oversight.

To navigate change, businesses are rethinking their purpose to drive innovation and growth. A strong purpose focuses the business strategy on delivering value and meaning for customers, employees and other stakeholders. Ultimately, this delivers value for all stakeholders. However, organizations’ planning capabilities are not keeping pace with the speed at which businesses are transforming. Businesses cannot capitalize on opportunities created by their transformations if they are not able to quickly realign plans, budgets and forecasts continuously reallocating resources.

Put simply, in order to deliver their corporate purpose, organizations need to rethink their planning processes to help make it happen. They need to use purpose as a mechanism to activate positive change.

What can go wrong?

If financial forecasts or plans are not reliable, the consequences for a business can be profound, leading to poor decision-making by executives and destroying credibility with investors. Across the globe, the number of profit warnings is rising. Thirty-eight alerts were released by FTSE 100 companies in 2014, the highest number since EY started recording data on warnings in 1999. For example, shares in one major US automobile manufacturer dropped by more than 5% after it issued profit warnings in Europe. This trend looks set to continue.
1. Why are current planning approaches failing organizations?

Many organizations approach planning as a treadmill process — repeated every year — rather than as an integral part of decision-making and driving the dynamic allocation of resources.

The focus of the planning process is often on a protracted annual target-setting negotiation, rather than on business strategy and continual performance improvement (i.e., outcomes). Often, it doesn’t conclude until late in the year, only for the same process to start again a few months later.

This approach does not make any provision for the pace at which markets move. For example, a dramatic drop in oil price impacted a major oil and gas company, whose annual planning process and target setting took more than nine months. The organization had to make a number of urgent interventions (taking up significant time for finance and business teams involved) and the agreed plans and forecasts were abandoned and not revisited.

Cost management: penny-wise, pound-foolish

To control costs, many finance functions require their cost center managers to budget all activities in detail, typically adopting a “one size fits all” approach. This leads to the creation of wish lists that later become a license to spend. The result is a failure to understand the linkages between different types of expenditure, and the purpose and benefits to the organization. This creates conflicts and negotiations with the business in agreeing cost budgets. Procurement functions look at sourcing strategies but are sometimes disconnected on quality and strategy from the business that is looking for flexibility.

A senior executive at a global consumer goods company proudly talked about the effectiveness of their lean manufacturing operational excellence program. Only later did they admit that the biggest cost items of marketing and promotions had remained untouched. Cost management is, ultimately, hindered by the silos between finance, procurement and the business.

Embedding a planning capability aligned to the organization’s purpose should be a key part of any business transformation initiative.

Reporting and planning capabilities should be a key enabler to the vision for performance management

Starting with the wrong assumptions

The rate at which planning assumptions are becoming invalid is accelerating at the same pace as the changing business environment, and has caught many businesses by surprise.

For example, the initial response by a leading consumer products company to planning problems was to create more detailed forecasts, more frequently. Needless to say, this made things worse, rather than pausing to gain a deeper understanding of underlying trends, the organization became lost in a torrent of irrelevant data points.

Technology alone is not the answer

Many organizations find the number of options for technology overwhelming. They struggle to find the right tool and then fail to successfully embed that tool. All too often, they transform the planning capability around the new tool, rather than transforming the planning capability itself, enabled by the new tool. Nothing changes but the technology.

One business services organization purchased new planning technology, only to replicate existing processes from existing spreadsheets. By doing so, it missed the critical need to transform the planning process to keep pace with the business, and failed to drive the accountability on decision-making it had sought to achieve.
Failure to capitalize on the wealth of data created by the ongoing digital revolution
The digital revolution has resulted in an explosion of data, but many organizations are yet to understand the opportunities this creates to enhance planning and forecasting. One of the sectors that first felt the impact of “digital” on its business models has been the life sciences market. Data is the new currency in today’s health care ecosystem, but many life sciences companies have been slow to exploit this.

2. How is effective planning embedded in an organization and the benefits realized?
Organizations need their planning processes to continually reflect how the business is reacting to changes in the market
This has implications that go beyond planning and forecasting – to the heart of how the business is run and the decisions made that drive performance.

Align business planning to your organization’s purpose
To achieve exceptional performance, many companies are setting purpose at the heart of their strategy. Research has shown that using purpose as a mechanism to activate enables organizations to develop premium brand positions, create customer loyalty and advocacy, outperform the market and attract the best people and keep them motivated.1

Embedding a common understanding of purpose across the organization — which must be driven by senior leaders – is critical. Embedding a planning capability aligned to the organization's purpose should be a key part of any business transformation initiative. Effective planning processes enable the relentless focus on performance improvement and risk management to achieve the goals of that purpose.

Stop using the planning process as a license to spend — spend with purpose
Organizations must look holistically at costs and benefits, with a view to challenging the levels of spending across all areas and categories, and avoid simply scrutinizing major ticket items, matching historical levels of spend or taking costs out through organization restructuring.

To achieve this, organizations should approach budgeting from a “zero basis.” This does not mean “start from scratch” budgeting of all future activities, which is a daunting, administratively complex process that consumes more energy than the potential benefits can justify. In practice, sustainable cost reduction does not require companies to budget in detail for every future activity. Refer to “The five steps behind cost reduction” on page 4 to find out more. In addition, advances in analytical tools provide depth of insight into the organization’s costs, transforming tasks that were deemed overwhelming in the past into simple and manageable activities.

Leadership, accountability and cultural change are also critical. A senior executive at a consumer products company noted that the mindset had shifted from “justifying spend because it is in a budget” to “even though I can spend, it does not mean that I will.”

The five steps behind cost reduction

Companies do not need to budget in detail for every future activity in order to realize sustainable cost reduction. This can be achieved by implementing five simple repeatable steps:

1. **Understanding your spend.** Organizations should have insight into the structural level of spend for each category (direct, indirect, operating, sales and administrative costs). Information such as who has incurred the cost, what was it for, where was it incurred, with whom, how much and how often should be understood. Further analysis should show whether there are any discrepancies across business units, functions, geographies, products, brands and customers etc.

2. **Implementing the right policies and procurement sourcing strategy to drive the right behaviors.** Use the evidence obtained by analyzing trends and patterns (i.e., from the insights obtained in the previous step) to define sourcing strategy and set effective policies that encourage and endorse the right behaviors aligned to the organization’s purpose.

3. **Target setting.** Set aggressive targets for the key performance measures. Many organizations confuse target setting with detailed activity budgeting. To incentivize the right behaviors, reduce consumption and build a mindset of innovation and continuous performance improvement. Aggressive targets can be set independent of budgeting.

4. **Accountability.** Set clear accountability to drive the discipline of review and challenge that is needed to make cost management work.

5. **Continuous review and monitoring.** Continually monitor, review and challenge performance against targets and refine policy setting as required. Many organizations worry that aggressive cost reduction may impact the topline performance, the “brand” and future success, but with continuous monitoring and review, these concerns can be alleviated.

The digital revolution has resulted in an explosion of data, but many organizations are yet to understand the opportunities this creates to enhance planning and forecasting.

**Use data and technology to inform decision-making**

Low cost, commoditized analytical technologies have the power to revolutionize planning. They can help businesses automate planning processes and produce increasingly sophisticated forecasts. They can make planning faster, more accurate and more flexible than ever before by enabling organizations to automate the analysis of large volumes of data at the appropriate level of detail. By using statistical approaches (understanding trends and patterns) to get forecasts, it is possible to improve accuracy, be more efficient and reallocate resources faster.

Similarly, low-cost collaboration tools (designed for a range of consumer devices from smartphones to tablets and laptops) significantly improve communication across teams, driving decision-making, action and accountability.

It is important to remember that transforming the planning process is about far more than simply the introduction of a new tool. It is about bringing people and insight from data together to drive agility in decision-making.

**Disrupt the traditional way of doing things and effect a mindset change**

The effort required to achieve behavioral change should not be underestimated. This impacts accountabilities, the way targets and incentives are set and, ultimately, consequence management. It resembles a game of identifying and rewarding the right behaviors. A clear understanding of the degree of change, and the potential disruption this can cause the workforce, is vital to ensure engagement and commitment to success.

**The fruits of purpose-led planning**

Many organizations are using purpose as an engine to drive superior performance. By redefining the purpose of their planning and forecasting processes, enabled by analytical and collaboration technologies, organizations will be able to sustain the right streamlined planning processes to optimize resource allocation and thereby drive performance. This, ultimately, activates delivery of corporate purpose for both growth and innovation.

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