Unleashing the power within
Analytics-driven process design

The foundation of an idea

The idea of improving business processes was introduced by Michael Hammer after massive restructuring and downsizing of U.S. companies had left them unprepared to operate in the 1990s. The restructuring focused on automating processes by embedding information technology (IT) into them. Hammer, however, believed that businesses should be reengineered, thus the term business process reengineering (BPR), by using "the power of modern information technology to radically redesign our business processes in order to achieve dramatic improvements in their performance."

The purpose of BPR is to break from current processes, to devise innovative ways of organizing tasks and people and to utilize IT systems so that the new processes will better propel the organization forward. BPR is performed by identifying, analyzing and redesigning critical business processes. According to Vidgen et al., the central tenets of BPR are:

1. radical change and assumption challenge;
2. process and goal orientation;
3. organization re-structuring; and
4. exploitation of enabling technologies, particularly IT.

The present

Since the 1990s, various BPR methodologies were developed by both academia and the consulting industry. There are similarities and differences in each of these methodologies. Nonetheless, quality, time, cost and resources are always the main components in the reengineering equation.

Three of the most common methodologies are Six Sigma, Kaizen and the Theory of Constraints. Each methodology has its own objectives and organizations need to match their expected outcome with the purpose of the methodology that they will be employing.

The main focus of Six Sigma is to identify and eliminate defects in a process. It can be utilized on both a strategic and an operational level. Properly applying it on an operational level allows firms to reduce process variability and improve critical measures of operational efficiency and effectiveness such as delivery time, cost of poor quality, and defects per unit. Improvements in these areas then allow organizations to have sufficient grounds in pursuing strategic initiatives such as investment relationships, customer satisfaction and business growth.

Kaizen, on the other hand, is based on the philosophy of gradual and continuous progress where problems are seen as positive opportunities for improvement. It is a process that encourages each person in the organization, across all levels to identify improvement suggestions regularly. The main objective of Kaizen is continuous improvement by eliminating waste or activities that add cost but not value.

Meanwhile, the Theory of Constraints (TOC) views an organization as a system composed of multiple interconnected links that contribute to how an organization functions. The performance of the system is limited by the strength of its weakest link. The main objective of the TOC is to identify and improve the weakest links, or constraints.

Aspect	Six Sigma	Kaizen	Theory of Constraints
Objective	Eliminate variations or defects	Continuous improvement	Manage bottlenecks
Premise	Variations in processes result in inefficiencies	Multiple small changes improves performance	Problems always exist and have to be exploited
Duration	Project with a defined beginning and end	Never ending	Never ending
Degree of change	Radical	Incremental	Incremental or radical
Basis of redesign	Systems, statistics and organizational structure	Suggestions of people	Process flow
Expected Outcome	Decrease in defects and increase in efficiency through standardization	Incremental and continuous improvement	Increase in throughput

Table 1. Comparison of Existing Methodologies

Case study: rising to the challenge
Deloitte has been engaged by leading national and multinational companies across a range of industries to assist them in different transformation projects aimed at improving their business processes.

Recently, one of the world's largest life sciences and health care firms engaged Deloitte on a project to assess their procurement-to-payment and travel-and-expense processes in terms of control design and effectiveness and regulatory compliance. With ethical standards being a driver in the dealings with customers, consumers, suppliers and the entire ecosystem in the life sciences and healthcare industry, there is an increasing need to manage the risks and compliance of business processes, many of which are increasingly global in nature.

Deloitte assessed and understood its client's processes, how data was captured and the type of data that was captured. Although substantial data was being captured by the client's processes, the reports being generated provided management with neither an organization-wide view nor clear insights on the state of its regulatory compliance.

Analytics Applied
Deloitte utilized its analytics capabilities on all available data for the procurement-to-payment and travel-and-expense processes. This showed that the company's dimensions of people, process and technology intersect, but are not aligned. The governance structure is also not robust because company policies and regulations are not embedded in the processes and systems.

The future

The BPR methodologies of the past have significantly contributed to the development of today's organizations. However, today's business landscape has become increasingly complex and fast-paced. The regulatory environment is also constantly changing. Consumers have become more sophisticated and have easy access to information, on-the-go.

Staying competitive in the present business environment requires organizations to go beyond process efficiencies, incremental improvements and enhancing transactional flow. Now, organizations need to have a comprehensive understanding of its business model through an objective and realistic grasp of its business processes. This entails having organization-wide insights that show the interdependence of various internal functions while taking into consideration regulatory requirements and shifting consumer tastes.

Data is the basis on which fact-based analysis is performed to obtain objective insights of the organization. In order to obtain organization-wide insights, management needs to employ analytical capabilities on data that resides both inside and outside its organization. However, an organization's analytical capabilities are primarily dependent on the type, amount and quality of data it possesses.

Organizations that have undergone BPR in the past using the methodologies listed above may not be well-equipped with analytical capabilities. The Kaizen and TOC methodologies do not utilize data during process redesign. Although Six Sigma utilizes data and statistics, emphasis is placed on eliminating variations and/or defects and streamlining processes. Regulatory compliance, reporting requirements and consumer tastes are not given equal importance.

The integration of an organization's three key dimensions of people, process and technology is also critical during process design. The people are the individuals responsible and accountable for the organization's processes. The process is the chain of activities required to keep the organization running. The technology is the suite of tools that support, monitor and ensure consistency in the application of the process. The integration of all these, through the support of a clear governance structure, is critical in sustaining a fact-based driven organizational culture and the effective capture, movement and analysis of data.

Designing processes would then be most effective if it is based on data-driven insights and when analytical capabilities are embedded into the re-engineered processes. Data-driven insights are essential in gaining a concrete understanding of the current business environment and utilizing these insights is critical in designing business processes that are flexible, agile and dynamic.

From Intersection to Integration
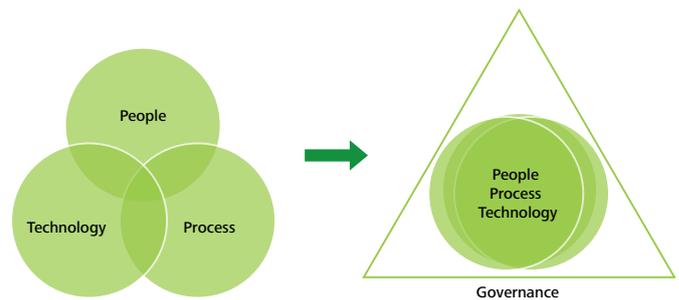
Given the client's business environment, Deloitte assisted by:

- Assessing the client's data and establishing a baseline on its quality;
- Determining the suitability of the client's current environment for analytics capabilities;
- Performing analytic reviews, identifying process gaps and developing fact-based and objective recommendations on aligning the three dimensions of people, process and technology within a clear and robust governance structure; and
- Developing a framework that allows analytics capabilities to be utilized and embedded in the system for continuous monitoring of its business operations using real-time information.

Analytics also showed specific areas in the process where data should have been captured and what type of data should have been captured.

This understanding created avenues for automation and system or process redesign to align the three dimensions of people, process and technology, incorporate a robust governance structure and embed analytics capabilities in the redesigned processes.

The results of Deloitte's analysis made management reflect and ask the following questions:

1. If our company policies and regulatory requirements are not effectively embedded in our processes and systems, are our employees aware of them and do they comply with them?
2. Are our processes designed to optimally support our business and still be flexible, agile and dynamic to cater to the changing business landscape?
3. Are we employing the right technologies for our business?

Making Analytics Work

As the business environment constantly evolves, aligning the three dimensions of people, process and technology requires companies to embrace change. At Deloitte, we have developed proven methodologies on process redesign and organizational transformation through analytics. These methodologies require companies to constantly evolve and adapt to the business environment. Every step in that journey would involve some form of process improvement, automation, resource re-allocation and policy updates, among others. The task may seem daunting. However, if analytics capabilities were appropriately designed, employed, and embedded into an organization's DNA, its benefits are countless.

Based on our experiences with clients, alignment among the three key dimensions of people, process and technology within a robust governance structure are critical to effectively utilize analytics and remain competitive in the current business environment. It is able to open doors to growth through market analysis resulting in the identification of industry white spaces. It enhances operational efficiency through process improvements based on relevant and fact-based data. It is able to enrich human capital through workforce analysis resulting in more effective human capital management. It is able to mitigate risks by identifying areas of regulatory and company policy non-compliance before actual damage is done.

Current technologies are only able to put information into the hands of the user: it is transactional or operational at best and only views organizations from an angle where the data is stored and reports are generated. Analytics capabilities, on the other hand, allows for near time to real time analysis of information. This new approach unleashes the potential of an organization by putting the facts and the reality into the hands of the decision makers.

Find out more

To find out more about how analytics-driven process design can help your organization, contact one of our Deloitte specialists:

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