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Continuous Business Transformation: The CIO’s Perspective
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Executive Overview

Business transformation has become a continuous process. Customers are using the newest technologies, and they expect you to do the same. Business processes, often driven by customer self-service, are in a constant state of composition, decomposition, and recomposition. Information can be used for much more than completing transactions and informing management—it can lead the way to continuous business transformation. In order to gain competitive advantage, organizations must become lean, driving cost out of the business, optimizing the speed of processes, and improving their quality. They also need to become agile, capitalizing on new insights and implementing them across the value chain.

The role of IT is crucial. IT innovation drives continuous business transformation. From a CIO’s perspective, three factors drive innovation: process, information, and technology.

This paper describes the business transformation model that CIOs should have in mind when plotting their course to IT-led innovation.
Introduction

Businesses innovate in many ways. Innovation can entail developing new products or services, creating new and groundbreaking business processes, and adopting market-changing business models. By definition, business innovation changes the way business is performed. Once introduced, it becomes a license to play and the basis for the next innovative step—leading to continuous business transformation. Continuous business transformation cannot take place without IT acting as an integral part.

A recent McKinsey survey\(^1\) found significant room for improvement for the role of the CIO in this process. Although 50 percent of CIOs surveyed scored themselves as “excellent” in providing basic services in a cost-effective way, only 29 percent felt they were excellent in delivering new projects on time and within budget. Just 26 percent saw themselves as excellent in partnering with the business to develop new capabilities supported by technology, and only 24 percent felt they excelled in proactively engaging with business leaders on new ideas for business processes and systems.

For IT organizations, not being able to proactively engage with business leaders to develop new capabilities supported by IT technology is a huge barrier to innovation. When these barriers and obstacles are removed, IT system capabilities become a way to gain competitive advantage.

IT can support transformation in all aspects of the business, from improving transactional processes to introducing new business opportunities. With the right IT systems in place, businesses can become lean and agile organizations that communicate and collaborate with all stakeholders in new, unparalleled ways.

\(^1\) IT’s Unmet Potential, McKinsey Global Survey Results (December 2008).
For the CIO, three factors are most important in driving transformation.

- **Process**—the systematic definition, automation, and standardization of business processes or transactions

- **Information**—the transformation and exchange of data into relevant and timely information

- **Technology**—applied as software and hardware components

The importance of each factor may vary, but they cannot be seen separately. The combination of process, information, and technology touches every part of the business. Moreover, process, information, and technology drive today’s complete value chain. Today, the CIO’s focus must expand to include transformation throughout an organization’s entire ecosystem of customers, partners, suppliers, investors, and others.

In general, IT-led innovation aims to transform businesses in three distinct stages: building a lean business, shaping an agile business, and driving business innovation. Building a lean organization means automating, integrating, and standardizing IT systems and business processes for optimum speed. Shaping an agile business is done by creating dynamic, flexible, and aligned business processes and accompanying systems. And driving business innovation entails expanding the business, differentiating from the competition, and once in a while, perhaps even changing the market.

For the CIO, continuous business transformation is the ongoing improvement of processes, the exploration of new ways to use information, and the constant evaluation of how to apply technologies. The goal is to improve immediate business performance while securing future business performance.
Toward Continuous Business Transformation

To move from isolated implementations of IT systems to a continuously transforming business, CIOs need to build a model to identify the appropriate next steps for introducing business improvements and innovations.

The business transformation model has three stages. You begin by building a lean business as the foundation. Next you ensure the business is agile to increase flexibility. Finally, IT-led business innovation prepares the organization for future challenges. Figure 1 outlines this process.

![Continuous Business Transformation Diagram](image)

**Continuous Business Transformation**

- **Shaping an Agile Business**
  - Dynamic
  - Flexible
  - Aligned

- **Building a Lean Business**
  - Automated
  - Standardized
  - Integrated

- **Driving Business Innovation**
  - Market-Changing
  - Differentiating
  - Expanding

**Figure 1: Continuous Business Transformation**

Building a Lean Business

With the advent of information technology, the concept of business innovation reached the management and administration levels of enterprises. All activities and functions across and along business processes were integrated into a single process value chain. Through information technology, management gains continuous insight into the operational performance of the business processes and the financial performance of the enterprise. And IT can help business
processes move from manual and fragmented to automated, standardized, and integrated—ultimately creating a lean business.

The CIO's role is to help the business move to the efficiency frontiers—that is, to apply the sum of all available best practices—and build the foundation for future growth.

The CIO must

• Implement information systems to replace manual tasks such as data re-entry and reconciliation
• Improve and benchmark the total cost of ownership of information systems
• Optimize the quality and speed of business processes
• Consolidate and integrate disparate systems and sources of information

‘Oracle E-Business Suite 12 streamlined our order-to-cash cycle. With Oracle, we have an integrated solution for sales, order management, and financials, along with a solid technology platform that supports integration with other systems. This is essential to supporting our rapid growth around the world.’—Kunal Malik, Director of IT, Facebook

Shaping an Agile Business

While lean practices focus on the speed, quality, and cost of the operations themselves, the agile organization focuses on the speed, quality, and cost of changing those operations. But the impact of agility is not limited to operations; it also affects the business model and organizational structure. It is no longer acceptable to limit your change efforts to business and management processes and an annual software upgrade. In an agile value chain, IT systems, business processes, and information sources must be set up in such a way that they offer multiple options for new requirements, rather than just supporting the old, well-defined ones. Agile organizations also need pervasive access to information that can be shared with stakeholders and all other constituents in the value chain.

Management at all levels of the organization needs access to relevant and timely information to support decision-making. Crucial management processes, such as planning, budgeting, and scenario analysis, should be supported by systems that enable the fast and continuous evaluation and adoption of strategic options in order to cope with the increased speed of changes and the volatility of the markets.

The CIO needs to ensure that the IT landscape is dynamic and flexible, can provide multiple options to easily and quickly adapt to changes, and is able to integrate processes and information exchange across the extended enterprise.
Continuous Business Transformation: The CIO's Perspective

The CIO must

- Take an architectural approach to IT, keeping options for future processes and technologies open
- Think beyond current needs for information, and introduce a data warehouse or other means for information supply to be ready for new demands
- Link management processes, such as plan-to-act, analyze-to-adjust, and record-to-report, to operational business processes for quick implementation of new insights and rapid feedback of anomalies

ABN AMRO selected Oracle software to simplify its IT environment. “We wanted to offer new services to customers more quickly and maintain a fast time to market—without encountering massive IT re-engineering,” says Richard Kolkhuis Tanke, enterprise architect for ABN AMRO. “We had a business process management structure in place, but the whole environment was expensive and cumbersome. Creating or adapting applications to respond to business changes impacted many parts of the software infrastructure and thus required major IT involvement. . . . Oracle SOA Suite automates the development cycle and improves visibility into the underlying process. We expect to realize two to three times more productivity in both development and deployment using this SOA technology.”

Driving Business Innovation

IT can support innovation in many areas. For instance, the internet has created a whole new arena. It has changed

- How information is exchanged
- How collaboration is enabled to the extended enterprise
- How retail and distribution is organized, providing unprecedented reach
- How transactions are performed, enabling almost real-time capabilities

Business did not invent the internet—the internet invented new business. New services have been created by the way customers communicate and contribute, leading to a new kind of customer/vendor relationship. Whether it is a car, a coffee machine, or a cell phone, many products today introduce new features through embedded software and hardware. Electronic business (e-business) dramatically improved the performance of transactions within and between business partners.

- New business models evolved, such as online auctioning between consumers
- Web 2.0 capabilities changed the way business partners and customers communicate
- Customers’ experience, good or bad, published on the internet can be as powerful as a whole marketing budget—word of mouth has global reach
The CIO needs to understand business strategy and scenarios, and align them with the IT strategy. At the same time, the CIO must also be an advisor to the business, outlining the opportunities that IT systems provide.

The line between business and technology innovation has rapidly blurred. When business innovations are led by IT, the CIO is in the driver's seat to push business innovations that have the capacity to change markets, establish competitive differentiation, and significantly extend the way business is performed.

The CIO must

- Spend a small percentage of the IT budget to evaluate “edge” technologies and assess new possibilities
- Partner with others, leveraging their unique skills and capabilities
- Run continuous experiments with business processes throughout all customer contact channels, identifying opportunities for improvement

"Oracle Beehive is about to revolutionize the way in which we collaborate and make a lot of the tasks that we take for granted, yet appear to be cumbersome, a lot easier."—Salim Ansari, Head of IT Support, European Space Agency

The Maturity Portfolio

In managing continuous business transformation, CIOs need to have an overview of their maturity portfolio. This portfolio describes all business processes, the stage at which each process exists at the time, and what needs to happen for each process to transform to the next stage. It is important to recognize that after successfully implementing a business innovation, the process will need to evolve and become lean and agile again. Figure 2 is an example of a continuous business transformation scorecard displaying an overview of an organization's processes. This scorecard could also be created to display business domains (such as procurement, manufacturing, and finance), stakeholders (such as customers, suppliers, investors, regulators, and society), or any other informational grouping in the business.
For each process, the gray bar represents how lean, agile, and innovative the process is. The dotted line represents the desired outcome of the transformation. For instance, the Plan to Act process is currently very lean, but not very agile. It needs to become more agile, and it is acceptable if it becomes less lean in the process. To achieve this goal, the company can design an innovative new planning process based on rolling forecasting. Likewise, the Design to Release process is incredibly agile—it is possible to make design changes up to the last moment. However, a myriad of systems is used. By consolidating systems, the efficiency of the process can be significantly increased without a loss of agility.

By monitoring the business transformation scorecard, the CIO keeps track of the complete maturity portfolio. By raising the bar every time an improvement has been achieved, the business transformation process becomes continuous.

### The CIO’s Toolkit

CIOs operate with a number of constraints, such as the existing technology landscape, the IT budget, and the skills and knowledge of their staff. At the same time, the IT strategy needs to be continuously aligned with the business strategy. The business transformation model directs you to apply IT resources in the most effective way. Again, the three factors that drive innovation—process, information, and technology—come into play. The following table illustrates how each of these factors work within the business transformation model.

<table>
<thead>
<tr>
<th>PROCESS</th>
<th>TECHNOLOGY</th>
<th>INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building a lean business</td>
<td>Re-engineering business processes enables complete and integrated business process value chains.</td>
<td>Information technology enables fully automated, standardized, and integrated business processes and transactions.</td>
</tr>
<tr>
<td>Shaping an agile business</td>
<td>Business processes are orchestrated. Process change and adoption is the norm rather than the exception.</td>
<td>The business process platform holds multiple options in readiness. Systems can be integrated despite internal and external heterogeneity.</td>
</tr>
<tr>
<td>Driving business innovation</td>
<td>New business models and business practices are introduced. Transactions flow seamlessly across organizational boundaries.</td>
<td>Service-oriented technology becomes the business model. Electronic business replaces traditional businesses.</td>
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Table 1: Factors within the Business Transformation Model
Process
At the beginning of the last century, F. W. Taylor\textsuperscript{2} introduced the idea of studying work processes to optimize them. He demonstrated that systematically analyzing and optimizing the way processes are performed could lead to significant improvements.

Companies that continuously transform their organization and processes achieve new levels of operational excellence, reducing the cost of transactions, improving the quality of transactions, and increasing the speed at which transactions are performed. Over time, unnecessary processes are eliminated and the remaining ones are standardized, automated, and ultimately integrated. This enables these companies to move closer to their efficiency frontiers and leverage economies of scale wherever applicable.

CIOs look at supporting business processes in three stages.

- Automating specific business functions
- Integrating processes across different functions
- Extending process integration along the complete value chain

The process begins by, for example, automating the procurement process, from purchase order to payment. This process is then integrated into the supply chain, including inbound logistics, warehousing, and production planning. Today, electronic procurement solutions can integrate existing suppliers as well as enable electronic sourcing and introduce innovative new capabilities such as electronic auctioning.

From a transformation perspective, IT systems can introduce capabilities that optimize business processes, and even provide opportunities to perform activities in new ways.

Information
There is little doubt that information has turned into a crucial asset for today’s organizations, and the CIO is ultimately responsible for this asset. Classic production factors, such as labor and machinery, can be acquired globally—and lead to less opportunity to differentiate. But information turns into the key factor to gain and sustain competitive advantage.

**Information as a Competitive Advantage**
Management—and anyone else in an organization who makes decisions—needs timely and relevant information. A critical task for CIOs is to turn data into actionable insight. Many

experts, such as T. H. Davenport\textsuperscript{3}, argue that the way information is analyzed and turned into action is the key competitive advantage today.

For instance, successful companies today combine competitive intelligence with market intelligence, and merge both of those with customer and portfolio profitability analysis. The advantage is derived by identifying the most-profitable segments by using this analysis.

**Collaboration and Communication**

Information is more than just a set of data. Data must be analyzed and interpreted to become information. The value of information increases when colleagues, customers, and business partners use it while communicating and collaborating to make decisions. Not only do IT systems provide valuable information, but they also provide communication and collaboration capabilities for information consumers. The way the new generation of managers shape their work and their environment transforms the way organizations are managed, the processes that are put in place, and the IT systems that support the networked paradigm.\textsuperscript{4}

Today collaboration is everywhere. Teams collaborate in discussions, chat groups, Web and videoconferences, and most recently Twitter. Coworkers and colleagues use wikis, tags, and blogs to share and communicate information. Enterprise messaging, e-mail, tasks, calendars, and contact lists can empower a unified collaboration and communication environment throughout the extended enterprise.

In managing all of this, CIOs contribute significantly to collaboration—and ultimately, to the value of information. Leading-edge companies connect the various information sources and knowledge centers and make them available to stakeholders. Documents, charts, and reports, for example, can be shared during a videoconference, and then made available to all participants to further collaboration.

**Technology**

With the advent of information technology, the concept of technology-enabled business innovation reached all parts of the business. Enterprise resource planning, customer relationship management, and supply chain management solutions automate and standardize transactions with previously unknown speed and accuracy. Databases provide unmatched capabilities to


\textsuperscript{4} *Business Management in the Age of Enterprise 2.0: Why Business Model 1.0 Will Obsolete You*, Oracle white paper (December 2008).
process, control, maintain, and analyze unimaginable amounts of data. Middleware introduces a new dimension of flexibility to integrate and orchestrate business processes and information.

Technology radically changed communication and collaboration. E-mail replaced traditional mail and faxes, providing a new way to instantly communicate with people on a global scale. Intranets, extranets, and the internet enable mass communication, changing collaboration among business partners and customers. Mobile devices enable everyone to interact with anyone, almost any place in the world.

The fundamental IT architecture has changed at a rate of about every 10 years—from host to client/server, then to Web-enabled architecture, and now to a service-oriented architecture. Long investment lifecycles start to conflict with shorter technology lifecycles.

It is crucial to identify which technologies best fit the environment in which a company is operating. The issue becomes “What could be introduced?” as well as “What should be introduced?”

Conclusion

CIOs today have multiple options and great opportunities to continuously contribute to and support business transformation. The new role of the CIO introduces a number of calls to action.

- Proactively engage with business leaders to identify and understand the business strategy
  - Map IT strategy to business strategy to achieve alignment
  - Continuously participate in shaping future business strategies, incorporating IT capabilities

- Build and manage the company’s specific business transformation model
  - Evaluate the maturity of the business at all stages, and develop a plan to transform business operations to be more lean, agile, and innovative

- Manage the company’s maturity portfolio using the business transformation model on a continuous basis
  - Identify new technologies that can innovate the business and drive competitive advantage
The Strategic Fit of Oracle

Oracle’s complete, open, and integrated product strategy provides capabilities that are unmatched in the industry.

**Complete:** Oracle’s product strategy ensures that CIOs have all capabilities they need for today’s requirements and tomorrow’s challenges. Oracle is the only company providing the complete stack from applications to disk, providing the CIO with a complete solution for transforming operations from lean to agile, from legacy to innovative.

**Open:** Unlike proprietary technology, Oracle’s open product strategy delivers value by improving the possibilities for change, creating even more options for CIOs to optimize the heterogeneous landscape step by step.

**Integrated:** Oracle’s integrated product strategy makes it possible for CIOs to build innovative solutions that combine business processes and information in the extended enterprise. We look forward to working with you as you build your business transformation model.