Optimizing Outcome-Driven Change:
It’s About the Process, Not the Technology

The fundamental principle for achieving desired outcomes and user satisfaction is a recognition that technology is just one of the levers that can be pulled to create more efficient and effective processes.

Executive Summary
No business can afford IT initiatives that don’t deliver significant improvements in business performance. Yet a 2012 McKinsey study revealed that 17% of IT projects miss the mark so badly that their failure threatens the company’s very existence. Further, large IT projects (budget exceeding $15M) deliver 56% less value than predicted.

While IT enablement, digitization and automation remain critical elements for implementing processes that are more cost-effective and bring greater value, technology can only produce benefits if an organization fully understands its existing processes’ pain points and how to rectify them.

This white paper lays out a clear approach for optimizing a business process prior to digitization — helping to ensure that the digitization effort leads to significant improvement in the business process and a clear and quantifiable return on investment.

Why IT-Driven Transformation Fails
Too often, organizations embark on automation and/or digitization strategies before they have completely dissected the deficient process, and identified precise pain points and their causes. In these situations, digitization and/or automation can become ends in themselves. Typically, they are not.

To deploy technology effectively, it is necessary for companies to take a comprehensive, structured approach to understanding what activities, data, workflows, training, etc., must change in order for a transformed process to deliver the desired results.

By clearly defining and deconstructing inefficient processes, organizations can begin to reconstruct them — helping to ensure that new digitization and automation initiatives bring the best outcomes from their investment and avoid failure (see Figure 1, next page).
When technology becomes the focal point of a transformation initiative, organizations often fail to do their basic homework, such as gathering insights from business users, which is necessary in order to fully understand why a process is ineffective. Without this intelligence, it's all too easy for them to simply automate existing inefficiencies.

Lean philosophy methodology (applied from the Toyota Production System) posits that three elements exist within any business process: non-value-added activities, value-added activities and value-enabling activities. In the book *Staying Lean – Thriving, Not Just Surviving*, the authors state that research shows that any business process is comprised of 49% to 60% non-value-added activities and 35% to 50% value-enabling activities. Hence, value-added activities only make up 1% to 5% of a process.²

An organization must take the time to identify value-added vs. non-value-added elements in a process targeted for transformation. If not, the automation or digitization of that process typically leads to non-value-added activities that continue to exist in the process, albeit in an automated fashion. So a step that actually qualifies as “waste” would not be eliminated, but automated — likely contributing to end-user frustration and disappointing efficiency gains.

To achieve true transformation, processes should be assessed and optimized/reengineered before turning attention to IT enablement. Through a structured process-reengineering exercise using Lean and Six Sigma tools, non-value-added elements can be identified and eliminated to the greatest extent possible, which can subsequently improve the efficiency of value-enabling and value-added activities.

For example, in the accounts payable/invoice process, many organizations require multiple levels of approval to initiate payments to vendors. When that process is automated, requests for approval are automatically granted, according to an approval matrix. However, if the existing pro-
cess is analyzed before it is automated, it would become clear that:

• The process requires approvals for invoices submitted against pre-approved purchase orders. This step adds no value.

• Approvals are required for all invoices, regardless of their amounts. The value added is minimal compared to the extra time required for the approvals.

Ideally, this process should be redesigned to eliminate approvals for PO-based invoices. Further, the approval matrix should be restructured so that approvals are sought only for invoices above a certain value. These steps would streamline the process before it is digitized.

Re-engineering Before Automating: A Structured Approach

Described below (abbreviated later as DCBA) is a straightforward approach for identifying the value-added and enabling process components, and defining outcomes to ensure they inform the transformation initiative. The steps include:

• Defining business objectives.
• Conducting current-state assessment.
• Building the future-state process.
• Assimilating process changes into business requirements.

DCBA is a structured methodology organizations can use to assess and redesign any business process before it’s automated. It stresses the importance of outcomes-based transformation and ensures that objectives are clearly laid out, with quantitative performance measures in place to gauge success. Business user involvement and input are critical throughout DCBA to ensure the solution is comprehensively defined.

Defining Business Objectives

The first stage in the DCBA approach is to determine the purpose of automating a specific process or the steps within it. To do this, leaders of transformation initiatives must:

• Determine the objective and related performance indicator(s)/metrics. Project sponsors, business owners and other key stakeholders should be interviewed to define and reach agreement on the objectives of the transformation initiative. The underlying principle here is that automation is not an end in itself; rather, it should be evaluated as a means for achieving the desired objectives.

• Typical objectives could be to:
  › Make the process faster/quicker → TAT (turnaround time) reduction.
  › Make the process better → Error reduction.
  › Make the process “cost effective” → Cost reduction.
  › Make the process less risky → Risk reduction.
  › Make the process easier/simpler → End-user satisfaction (the end user could be a business user or end client).

Multiple objectives for an initiative may require multiple performance indicators. In the accounts payable process we examined, objectives could include faster invoice processing and elimination of duplicate payments, for example.

• Define a target/goal for each performance indicator/metric. Once the focus metrics are defined, set a quantifiable target, such as “reduce TAT by 25%.” The success of the entire initiative can then be determined based on achieving these objectives.

Historical performance data should be assessed to define the current baseline. Targets can be set for improvement against this baseline. Industry benchmarks can also be leveraged as a guideline. For instance, the 2013 Aberdeen e-Payables: Payment Automation for Operational Excellence Survey showed that best-in-class (top 20%) organizations took 3.7 days to process an invoice, whereas the industry average is around 8.8 days.4

Given the broad goal of faster invoice processing, the target could be to complete invoice processing within 10 days of receipt of an invoice. An alternate target might aim to ensure that at least 90% of the invoices are processed within 10 days of receipt.

Conducting the Current State Assessment

The second step in the DCBA methodology is to assess the end-to-end process to identify improvement areas. A variety of tools and methodologies, including Six Sigma and Lean principles, can be applied here.

This phase entails the following:

• High-level and detailed process mapping. A high-level process map captures the key steps in the process. Figure 2, next page, illustrates the steps that represent our accounts payable process.
A detailed process map is then prepared through workshops with business users to capture the following information:

- Sequence of steps/activities.
- Time taken at each step.
- Volume details.
- Details of departments/roles involved in the end-to-end process.
- Overall turnaround time.

Figure 3 below presents a comprehensive picture of the end-to-end process.

- **Process assessment.** The end-to-end process should then be analyzed to identify scope for improvement. Process assessment is done across two dimensions:
  - Process analysis. Organizations can use Lean value stream mapping to identify non-value-added steps in collaboration with business users.

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It’s critical to create an extremely detailed process map to understand all the potential outcomes for an invoice, including all the users and other processes and systems touched by it. Such mapping helps reveal bottlenecks, non-value-added activities, and potential effects of process changes on users and other workflows.
In a value stream mapping workshop, business users from various teams that participate in the end-to-end process objectively assess every step of the process to gauge whether it adds value and whether it is performed in the most efficient manner. Rework, delays, waiting time, excess inventory and over-processing are typical “wastes” found in a process. All improvement areas are highlighted using Kaizen bursts.5

Figure 4 above represents a sample value stream map.

- **Data analysis.** This involves assessing historical process performance data to identify trends/variation sources. Past data covering transactional volumes, invoice processing time per region, incomplete invoices by vendors, duplicate invoices, etc., should be studied in great detail in order to arrive at key sources of variation and identify areas for improvement. A few vendors may be responsible for a majority of incomplete, inaccurate and/or duplicate invoices. In these cases, a pre-defined template could be shared with these vendors to ensure they provide all details tagged as “mandatory.” An online portal for invoice submission can also resolve this problem.

When the current-state assessment phase is complete, the organization will have a detailed list of areas for improvement throughout the process.

**Building a Future-State Process**

The third stage in the DCBA methodology is to design a future-state process that addresses all the identified improvement areas for achieving
more efficient and effective performance, per the identified metrics. This phase entails:

- **Improvement recommendations.** All improvement areas should be assessed in greater detail; brainstorming with business teams can lead to solutions/ideas to overcome key pain areas (see Figure 5). In our accounts payable example, if the approval process is tedious and has been identified as needing improvement, the team could brainstorm ways to simplify this. Multiple tiers of approval could be introduced based on invoice value. Then, only high-value invoices would require senior management approval, thus assuring faster turnaround.

- **Creation of a detailed “to be” process map.** This process map will highlight the process and technology changes necessary to optimize it. Simulation tools (for instance, ProModel or SIMUL8) should be deployed during this phase to gauge the impact of these changes on overall process performance. A process simulator can help define the impact of suggested process changes. If the future-state process design eliminates a few steps, the simulator calculates the overall impact of this action on end-to-end turnaround time and resource requirements.

This enables stakeholders to envision the benefits of the proposed future state and helps win their commitment and sponsorship. In many cases, business users are neither engaged in the analysis of current processes nor in the design of future-state processes. So when they are required to migrate to a new process, they typically show strong resistance. That’s why the DCBA approach places great emphasis on involving the business in every step of the transformation journey (see Figure 6, next page).

### Assimilation of Process Changes into IT Business Requirements

The final step in the DCBA structure focuses on mapping the process changes to the business requirements. This involves creating the business requirements document with details of the revised process.

In the accounts payable example, the future-state process recommends automated invoice verification. In this case, parameters must be defined and databases identified to enable verification. Rules may need to be defined to specify a course of action in case voice verification fails.

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**Sample Cross-Team Brainstorming Agenda**

**Technology**

- Automate invoice mailroom services through OCR with business rules.
- Standardize invoice formats in collaboration with vendor teams; enable online invoice submission.
- Introduce an online, rule-driven workflow tool to streamline approvals, returns, automatic invoice posting and exception processing.
- Harmonize PO and vendor master data to improve extraction rate and auto-posting of invoices.

**Process**

- Improve accuracy of the vendor master database.
- Define standard operating procedures for internal usage and for vendors.
- Define a prioritization matrix for invoice payment.
- Improve coordination between various teams/parties involved in the process (vendors, accounts payable, accounts receivable and finance teams).

**People**

- Study effectiveness of resource alignment by vendor/invoice type and simplify as necessary.
- Train resources on standard operating procedures and monitor adherence.
- Study past performance to identify sources of variation and ensure consistency in performance/output across the entire team.

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*Examples of solutions user teams could brainstorm to improve accounts payable.*

*Figure 5*
These detailed requirements then become the basis for the IT design documents the software development lifecycle follows. At this point, the transformation team must determine the extent of customization and the development effort necessary to align the technology deployment to the future-state process.

**Looking Ahead: Focus on Outcomes First**

The outcomes-driven approach to transformation not only results in a more robust IT design and smoother implementation, but also contributes to overall program success through intense end-user involvement, greater commitment and sponsorship, and empirical assessment of its impact on the business. Defining key success factors, base-lining and target-setting before deploying any technology helps in assessing and projecting the impact of the project (see Figure 7, next page).

The insights uncovered by the DCBA structure create a strong business case, and help ensure that supporting automation and digital technologies directly address specific pain points. In this way, a reengineered process can truly operate better and deliver more value to its users, inside and outside the company. That’s an outcome that reflects well on an organization’s IT professionals.
The key to achieving this and other outcomes-driven transformations is making sure that technology is always a means, never an end in itself. Focus on outcomes first; the technology will follow.

To create a strong base for outcomes-driven transformation, organizations need to:

- Evaluate every IT project/spend against the business impact/benefit it would create.
- Involve key business/process owners throughout the prioritization and execution of IT projects to ensure their support and collaboration.
- View the time and effort recommended by this approach as an investment and indemnity to keep failure at bay and ensure that IT projects deliver true business value.

Footnotes


3 TAT is the period for completing a process cycle (such as repair or replacement of a component or equipment), commonly expressed as an average of previous such periods. Read more at: [http://www.businessdictionary.com/definition/turnaround-time.html#ixzz3UkQV5yjHk](http://www.businessdictionary.com/definition/turnaround-time.html#ixzz3UkQV5yjHk).


5 Kaizen bursts are used to indicate improvement areas in a process during value-stream mapping workshops. Each Kaizen burst may then be analyzed in greater detail. (Kaizen, also known as continuous improvement, is an approach to work that systematically seeks to achieve small, incremental changes in processes in order to improve efficiency and quality).
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