

Applying Six Sigma to Business Process Excellence

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In the complex, competitive, and global world of business, there is but one certainty . . . in order to remain competitive we have to find ways to significantly accelerate productivity, as the pace of business continues to rapidly change year after year. Shortened and shrinking industry cycle times will only add to the challenge. Given the economic and competitive pressures facing companies today, it is essential that we have business processes that can be designed, developed, and implemented quickly. And, the ability to measure and control the effectiveness and efficiency of these processes is essential to understanding the value they deliver.

Given this framework, Six Sigma provides both a tool set and an operating discipline that can and should be used to effectively drive and support the quest for business process excellence in our respective organizations.

There are several business process design parameters that integrate very nicely into a Six Sigma design framework.

- Able to leverage existing tools
- Able to integrate well with other processes
- Adapts to changing business conditions
- Delivers a more streamlined operational flow of activities
- Reduces variability and provides a “standard” for the way to do work

As we strive for continuous productivity improvements, there are many tools and processes available on the market. I would suggest that Six Sigma is emerging as a leading tool and the process of choice. The primary reason for this claim rests in the fact that from conception to delivery, Six Sigma is data driven and provides the measurement and control mechanisms necessary to monitor continuous improvement. The ultimate goal for both process design and Six Sigma are the same: Reduce variability and standardize workflow.

One misconception regarding Six Sigma is that it is only useful for improving an existing process. While it is true that DMAIC (Define, Measure, Analyze, Improve, and Control) is and should be used to improve existing processes, there is methodology that can be applied as new “innovative” processes are designed and implemented. This methodology is called Define for Six Sigma (DFSS), and it builds from the improvement methodology but it includes an “explore” step, hence, DMEDI (Define, Measure, Explore, Develop, and Implement).

So, having established that Six Sigma can support both the development of new processes and the improvements to existing processes, there is another concept to discuss that will drive even faster value to the bottom line. That concept is called Implement MET or “Most Effective Technology.” MET is comprised of three levels:

- Corporate leverageable technology, referred to as MET-1
- Business leverageable technology, referred to as MET-2
- And, location specific technology, referred to as MET-3
- For the purposes of this model, technology encompasses both the process and the underlying technology to support the process.

Each process owner is responsible for the MET supporting his or her particular operations. As an example, if accounts payable has delivered a process and supporting technology that can be executed identically anywhere in the world, then that would be declared MET-1. If a business unit requires a variation for some specific reason, then that variant becomes MET-2. If legal or government regulations require specific modifications, then that variant becomes MET-3. In this

example, both MET-2 and MET-3 became “variations” of the MET-1 design. As a result, the accounts payable organization would be supporting “3” MET processes vs. “1” (due to specific business, legal or regulatory requirements). The ultimate objective is to design, build, and manage only MET-1.

So, how does Six Sigma apply to the MET model? When the accounts payable process was initially developed, it was done so using Design for Six Sigma methods; hence, we were “innovating” a process solution. The deliverable was an MET-1 solution for accounts payable. At some later time, a business with legitimate needs came forward with requirements. Based on these requirements, a charter was written, and an “improvement” project was launched using DMAIC tools and techniques. The deliverable was an MET-2 solution. In this case, the objective would have been to improve MET-1; if this were not possible, then the outcome would have been an MET-2 solution. The MET-3 example would follow the same logic as described above.

The concept of MET provides a third process which deals with the “implementation” of MET and works as follows. As an opportunity for improvement is identified, the first step is to determine if MET exists in the company that can be leveraged to provide the desired results. This process is designed to prevent duplication of effort and to leverage best practices, processes, and technology that have already been declared MET somewhere in the organization. This not only saves time, but also saves money in that you are not re-investing or re-inventing the wheel.

What I have described above can be illustrated in what is called the 3i model: Implement, then Improve, and then Innovate. This is the order in which identified opportunities should be addressed. The model in Figure 1 illustrates how these elements fit together.

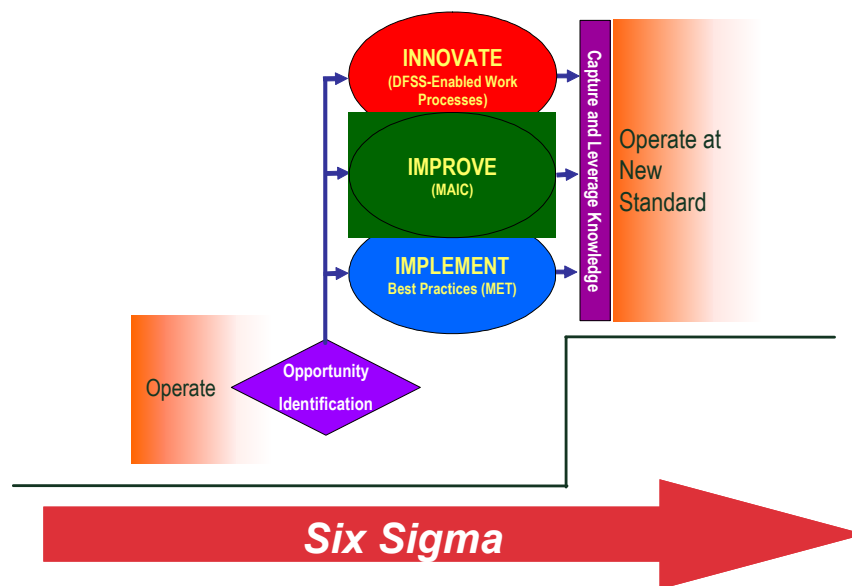


Figure 1.

Based on business needs, employees in your organizations either **implement** documented best practices and systems, **improve** on those best practices, or **innovate** new MET solutions. Each of the 3i's is enabled with the skills, tools, and rigor of Six Sigma. Therefore, each provides the basis by which all businesses and functions can enhance performance.

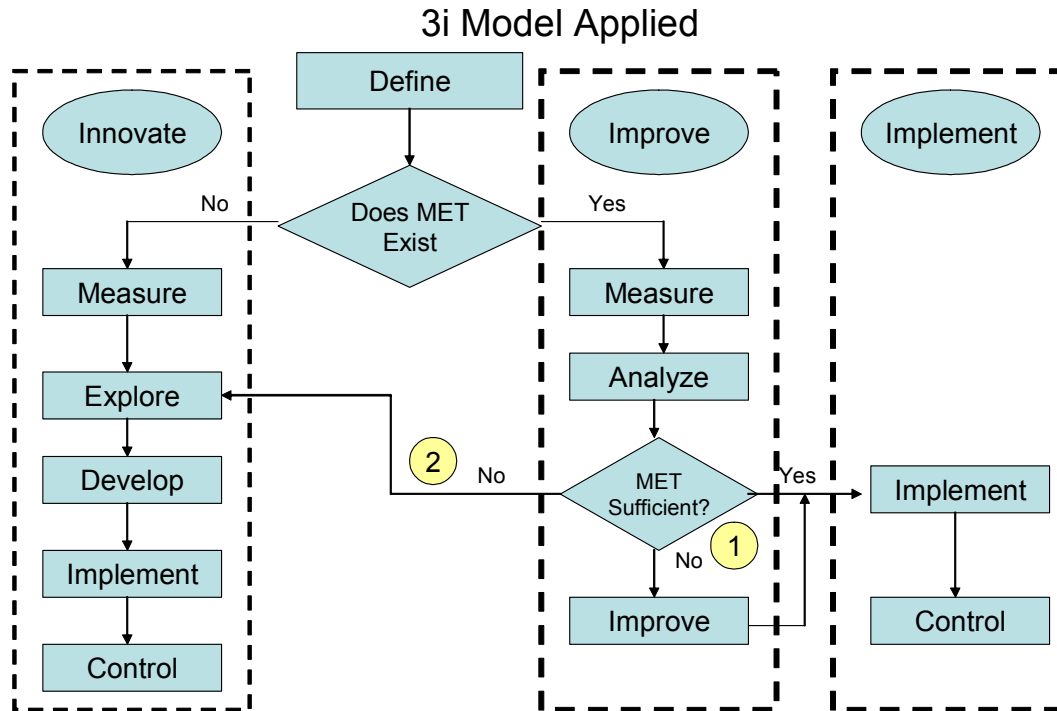


Figure 2.

The process flow around the 3i model is fairly straightforward. The project charter is handed off to the appropriate expertise center for evaluation. At that point, a determination is made as to whether MET exists somewhere in the company that might satisfy the requirement. If the answer is “no,” then it is classified as an “innovation” project. If the answer is yes, then it moves to the “improve” space where measure and analyze is performed to determine if the targeted MET will work with no modifications. If modification is unnecessary, then it moves directly to the implement space, and a team is assigned to implement. If modification is required, a determination is made if improvements to an existing MET will meet the requirements. If the answer is “no,” (2) then it is shifted over as an “innovate project.” If the answer is “yes,” (1) then improvements are made after which it is passed to a team to implement. Note, at this point an improvement could mean one of 4 options:

- Modify an existing MET-1 (generation 1) to MET-1 (generation 2)
- Modify an existing MET-2 and convert to MET-1
- Modify an existing MET-3 and convert to MET-2 or MET-1
- Or, it could take an existing MET-1 to either an MET-2 or MET-3

The call to action that all of us have experienced over recent years has been to deal with a push to continuously streamline operations. This call to action has also brought many difficult decisions in terms of staffing and resource allocation. However, it has also provided opportunities for leaders to reflect on structure and ask the fundamental questions:

- Is the company structure designed to leverage?
- Are processes repeatable?
- Can we expand and contract as needed?
- Is the organization designed to deliver the best possible service and support to the customer base?
- Is it aligned in a way to bring your company through the current challenging times?

The bottom line is that we are continually challenged with the concept of “capturing value.”

Understanding the value proposition is a critical deliverable before any resources are allocated to an opportunity. Writing a detailed charter and utilizing the Six Sigma tools of “Measure and Analyze” will provide that clarification. Understanding the relationships between business, functions, work process, and centers of expertise are critical in managing operating discipline around the 3i model.

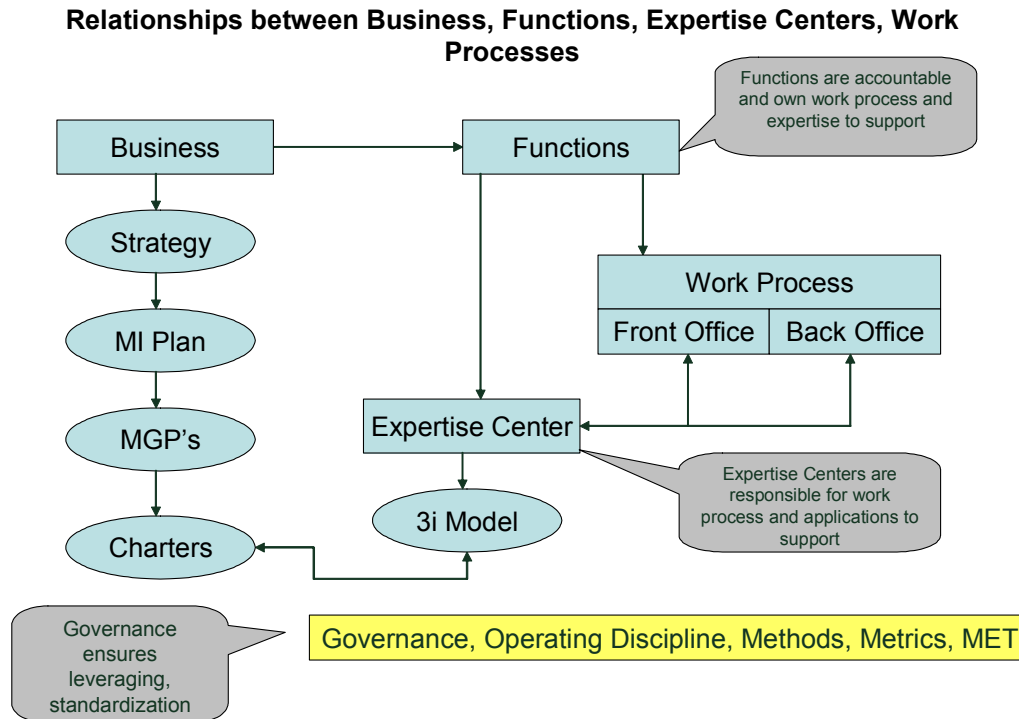


Figure 3.

Having the correct organizational alignment and structure is a critical enabler to the 3i model. The **businesses** are responsible for delivering results to the company, and they do that by executing MET. This process starts with strategy development from which detailed plans called MI plans are constructed to guide activities across multiple years. Typically, each major activity will drive a multi-generation plan (MGP) that allows for formal “stage gates” at selected points to monitor progress. The MGP is used to measure “gaps” from the starting point to the desired end point. For each “gap,” there is a charter written which is fed into the 3i model. This step is the starting point for resource deployment and value identification.

The **functions** exist to support the businesses and to provide necessary leveraged support activities for the corporation. The functions are accountable to the businesses and are the owners of the work process to support the function. In short, functions are the owners of the expertise required to run the work process. It is important to note that “work process” is not a formal organizational entity. Instead, it is a component of the sponsoring function.

The purpose of the **work process** is to enable the execution of activities. There are typically two components to a work process. The first is what I will call “front office.” The front office is the leveraged intersection point to other functions and to the business. The second component is the back office, where activities are exclusively within the function and, regardless of changes to the back office, from which there will be no cross-functional or business impact.

Each function also has what is known as an “**expertise center.**” These centers align to and are owned by the function. Expertise centers exist to support the operational aspects of the function. This is where the subject matter experts reside. The primary responsibilities of expertise centers are to maintain, develop, and support the operation of the work process and any associated

technology required.

As depicted in the diagram above, **the 3i model** is the primary intersection point between business requests and functional actions. Each request has a formal Six Sigma charter, written, which includes common elements such as description of the project, opportunity statement, goal/objective, scope/boundary, defect, definition, customer loyalty attribute linkages, leveraging opportunities, and targeted net value (EBIT) delivered.

Providing oversight to the structure is a **corporate work process governance team** that is comprised of three senior leaders of the company. They are responsible for the definition of the governance structure that all expertise centers will follow, including principles, operating discipline, methods, measures, and MET structure and definition. They are the owners of the 3i model and also own Six Sigma tools and methods. This structure ensures alignment across the company, enables prioritization and resource deployment, and provides an escalation channel for resolution of issues that may arise between businesses, between business and functions, or between functions.

The key message here is that Six Sigma is not separate, on the side, or only for unique projects. It is the “way to do work.” It can and should be integrated into core implementation, improvement, and innovation activities. The journey to achieve full integration may take between 3 and 10 years, depending on factors such as the size of the company, executive leadership support, cultural diversity, geographic reach, degree by which standard work processes are currently being used, and other factors. The first step is to utilize Six Sigma as a tool to improve existing processes. Once the concepts of Six Sigma have become more recognized in the organization, you can then leverage Six Sigma for innovation opportunities. The final step is to migrate to full adoption of the 3i model using MET as the enabling foundation to drive work. The critical success factor is when Six Sigma is fully recognized as an enabler for work process improvement.

In closing, the demand for business process discipline is greater now than ever before. The ability to measure and control effectiveness and efficiency is essential to understanding the value they deliver. Six Sigma is emerging as a leading tool, and the process of choice as evidence proves that data-driven process design yields consistently better results. The 3i model is designed to manage the boundaries between Implement MET, Improve MET, or Innovate MET. Most Effective Technology is the foundation from which business processes should be managed. Having the correct organizational alignment and structure is a critical enabler of the 3i model. If deployed properly, then employees in your organization are either implementing documented best practices and systems, improving on those best practices (MET), innovating new best practices (MET), or running those processes in support of stated business objectives. Done correctly, the payoff could range from ½ to 1% EBIT as a percent of gross sales when a steady, sustainable state is attained.

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