Process by Design

By Ray Schneider

"No matter how hard individuals work, they cannot overcome a flawed process design, much less the burden of no design at all."

Michael Hammer, co-author of Reengineering the Corporation, in his book The Agenda.

Introduction

Well designed and managed business processes are critical to achieving sustainable growth and a culture of quality and continuous improvement. They are action-oriented manifestations of management's philosophy and messages about quality and business goals.

When something goes wrong in an organization, the root cause of the problem can typically be categorized into one or more of the following 6 categories: people, environment, policies, equipment, information and process. The first category, people, is the one most cited as the cause of a problem. And the least often recognized category is the last one, process. This is unfortunate since in actuality, "bad process" turns out to be the most common root cause of typical organizational problems.

All businesses, large and small, can fall victim to a belief that formalizing work processes is a waste of time, a purely bureaucratic exercise that does not add value. Don't let your organization be one of the lemmings, marching toward the cliff. Well characterized processes leverage the intentions of individuals and enable groups to accomplish what individuals alone cannot. And as Michael Hammer, author of *Reengineering the Organization*, once said, "no matter how hard individuals work, they cannot overcome a flawed process design, much less the burden of no design at all."

All business processes will benefit from a degree of formalization and documentation that is appropriate to the scale and complexity of the process itself. As the process becomes more complex and more people are involved, there will be a natural need for additional process definition and clarification. The act of formalization will uncover opportunities for innovation, streamlining, improved customer service, profitability and continuous improvement.

Small to medium sized organizations can often function very effectively with ad-hoc work processes, informal communications, and undefined quality measures -- the operation of these organizations is very person-centric: "John is the only one who can do that job well and if he gets run over by a bus, we're all going down the tubes" is a common refrain in these types of organizations. In situations like this it is difficult to transfer process knowledge to others because little is written down and it is "all in the mind" of key individual(s). It can also be difficult to introduce innovation into these processes because they are so tightly "owned" by the individual, not the organization.

As organizations grow and become more complex, with more and more people working in an interdependent fashion, this situation represents significant business risk to the operational effectiveness, and in some cases, the life of the business.

The existence of well defined business processes, and the associated infrastructure that supports them, can drive alignment and coordination. They also support continuous improvement initiatives because they encourage "process-owners" to unambiguously discuss how the process is currently working and what needs to change in order to effect measurable improvement.

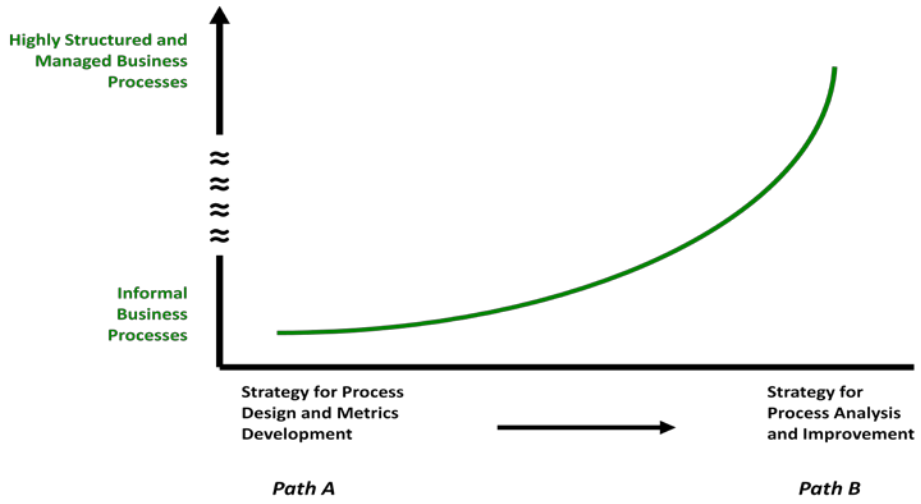

Figure 1 – Strategy Options for Process Design and Improvement

So What Should I Do Now?

Some organizations rely almost exclusively on the initiative of individuals to "get the job done" with little or no formal business process to define the path. And some operate at the other end of the spectrum, utilizing well defined business processes to manage work flow and drive continuous improvement.

If your organization is best characterized by the first case, you should consider a path forward that includes the formal identification and design of your critical business processes and accompanying performance metrics. If, on the other hand, your organization has already defined and designed a comprehensive set of core business processes, then it may be time to ensure that these processes are operating as efficiently and effectively as possible. But since most organizations are somewhere between these two extremes, following a path that is a blend of these two strategies is also commonplace. Figure 1 illustrates these strategic options.

Path A, the methodology described in this white paper, is most appropriate for organizations fairly new to the use of standardized, documented business processes with associated metrics and who are at a stage in their evolution that requires more formalization of the systems and processes through which the business is managed.

In addition to the formalization of business processes, Path A organizations will also find it valuable to transition to a more inclusive decision making process, use of employee teams to address business goals, and develop well defined quality criteria and clarify organizational roles and responsibilities.

Organizations more mature with respect to the use and continuous improvement of business processes and their associated metrics may find Path B makes the most sense -- an improvement strategy that employs the methodology and tools of continuous improvement.

Business Process Definition and Design - The Methodology

The use of this methodology will transform informal and sometimes ad-hoc work flows into true business processes at a level of detail appropriate to the current size, complexity and strategic need of the organization. Before discussion of the methodology for process design let's take a look at one definition of a process.

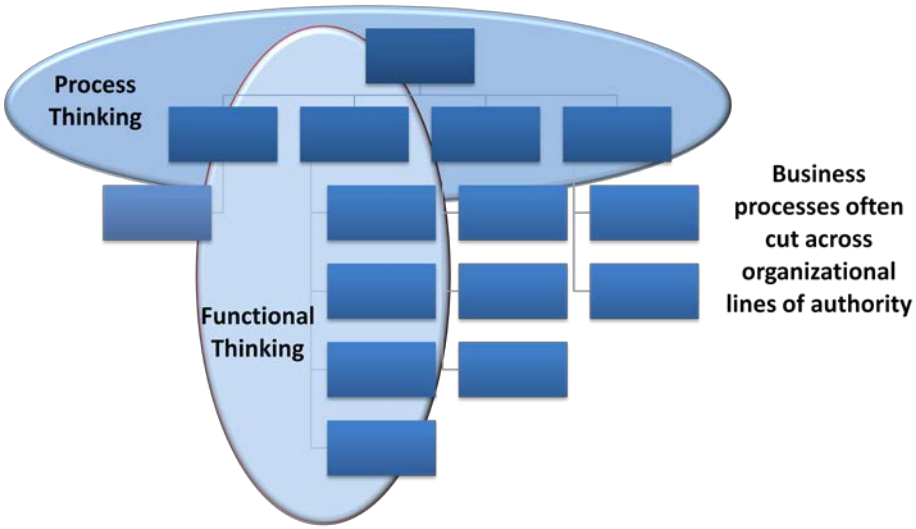

Figure 2 –Process Design Requires Process Thinking

A process is an organized, planned, stable and predictable series of activities or actions performed to accomplish a desired outcome. A process typically also has other attributes including but not limited to:

- Process flow charts that illustrate how the steps in the process relate to each other
- Defined measures of success or quality at intermediate points in the process and at the end of the process
- Temporal relationships between steps (e.g. how much time does each step take and in what order are the steps performed)
- Defined roles and responsibilities
- Defined inputs and outputs to each process step
- Milestones
- Written procedures that describe the dynamics of the process

It is also worth noting at this point that business processes typically cut across organizational lines of authority and therefore the design of these processes will typically need to involve people from different departments and functions. Figure 2 illustrates this concept. The process design methodology has a series of 8 steps:

Step 1:
Identify Core Business Processes
critical to the success of your business.

Step 2:
Describe Current State
for each process by constructing detailed "as-is" process maps illustrating how the process is currently being operated including issues and problems with the current process.

Step 3:
Measure Baseline Performance
of the processes as they are currently being operated.

Step 4:
Identify Best Practices
for each process based on experience, research, brainstorming etc.

Step 5:
Define Future State
for each process by integrating best practices into design of the new process and constructing a detailed process flow diagram of the "to-be" process.

Step 6:
Establish Process Metrics to focus attention on expectations, goals and performance – the basis for efficient and effective business processes.

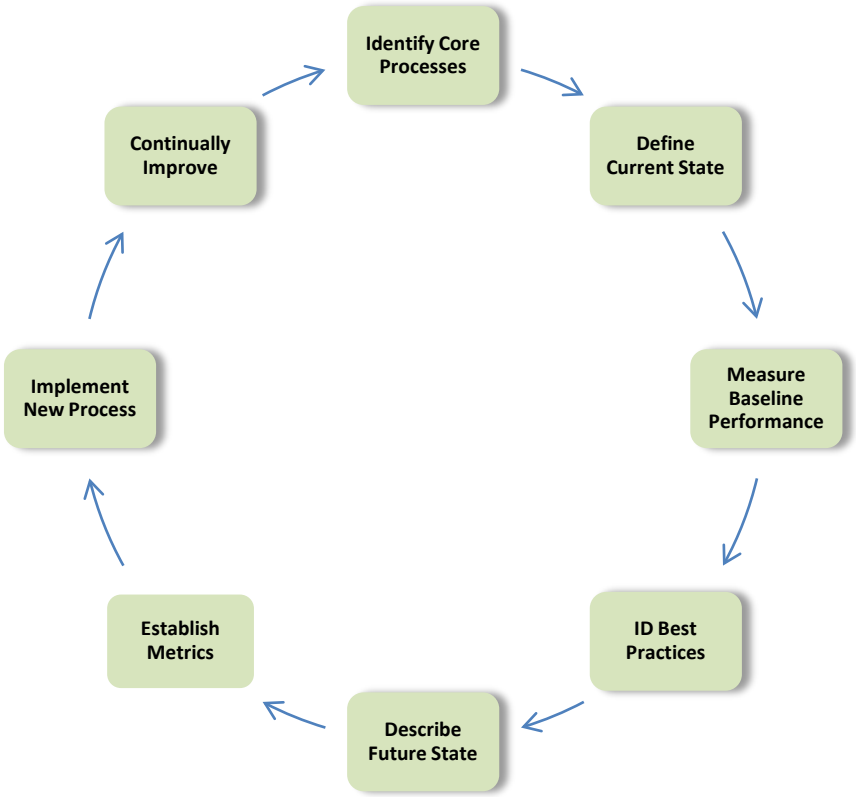

Figure 3 –Process Design Methodology

Step 7:
Implement the New Process
and integrate it into the daily operation of the business. This often requires that the organization become more disciplined and less "free-wheeling" with respect to how work gets done.

Step 8:
Continually Improve
the performance of the process.

Let's take a look at each step of the methodology, as illustrated in Figure 3, in more detail.

Step 1: Identify Core Business Processes

Every organization depends on the efficient and effective operation of a host of business processes. Categorically speaking, there are processes in accounting, manufacturing, research, distribution, shipping, human resources, marketing, sales and more. Over time all business processes deserve at least a degree of definition and design. But design resources are limited so you will need to prioritize and time phase your process design efforts. All processes are important, but some are critical, and a select few are in urgent need of attention. To prioritize your business processes, you will first need a list of business processes to prioritize. Then develop a set of prioritization criteria such as: importance to profitability and impact on customer service, to name just two possible criteria. Now you're ready to score each of your processes against the criteria and see which ones are most critical and in need of design and/or improvement attention.

Step 2: Describe Current State

This step involves construction of a current state process map (flow chart) as well as identification and documentation of the problems, quality issues and inefficiencies with the process as it is currently being run.

Process maps are fairly simple to construct but are an invaluable tool for:

- creating a picture of the process including the sequence of activities and tasks
- facilitating common understanding of what is actually happening in a process
- facilitating consensus about what should be happening in a process
- identification of opportunities for improved effectiveness and reduced confusion
- developing agreement on where there is need for standardization and where the process needs to remain flexible

There are many different ways to develop the current state process map but at a minimum it will require that one person be assigned responsibility for either completing or facilitation the completion of the map. Inevitably, the leader of the effort will have to involve a cross functional group of people to complete the mapping effort and problem identification activities. Figure 4 illustrates a basic process map.

The most effective process maps answer the following questions:

- What event(s), or triggers, represent the beginning and end of the process you are flow charting?
- Think sequentially. What actions do people take? Where does the information come from? Where does the information go?
- Do the activities in the process occur without interruption?
- Who is typically involved? Who are the internal suppliers and customers to the process at each step?
- Do some events occur simultaneously?
- Are there points in the process where performance monitoring takes place? What is measured at these points?
- Does the process always work as designed? What happens when there is a problem?
- Where are the points in the process where decisions are made?
- What opportunities for improvement are indicated as a by-product of the flow charting process?

Construct the flow chart with a level of detail that allows for the identification of opportunities for improvement.

Step 3: Measure Baseline Performance

Measuring baseline performance will enable you to know objectively and unambiguously that the new process is functioning at a higher level of performance than the old. However, if the process being designed is new, it is possible that there is no prior performance to measure so you may decide to skip this design step. It is more likely, however, that tasks are being performed and results generated even though it is not a "formal" process. So try to measure the current performance of this "process".
This does not need to be an exhaustive data collection effort but, in the ideal world, will at least include:

1. Data that is collected over a period of time long enough to be representative of the current process
2. Performance that is measured for both lead indicators (up-stream process parameters) as well as lag indicators of performance (results).

Step 4: Identify Best Practices

As the current state process map is being developed during Step 2, conversations invariably digress to include thoughts and ideas about how the process should work, or could work better. Coral these valuable ideas and record them in an organized fashion.

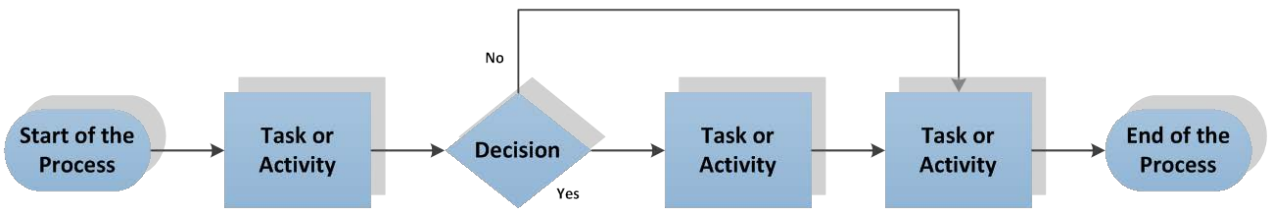

Figure 4 –Basic process map

Build on these ideas with research, discussions with people across your organization and even possibly with experts outside of your organization. The key is to collect as many good ideas as possible prior to beginning the next step in the design process, describing the future state.

As with the construction of the current state flow chart, develop the future state flow chart to a level of detail appropriate to your needs. If the process is new, without a prior track record of performance, it might make sense to design the new process with progressively more detail over time. If on the other hand, the process has been

owners to think about their process at a high level before diving into the details. Next identify the milestone event(s) at the end of each stage. Taking this step will be helpful later when it is time to identify process measures.

Adding more detail to the design, identify the inputs and outputs to

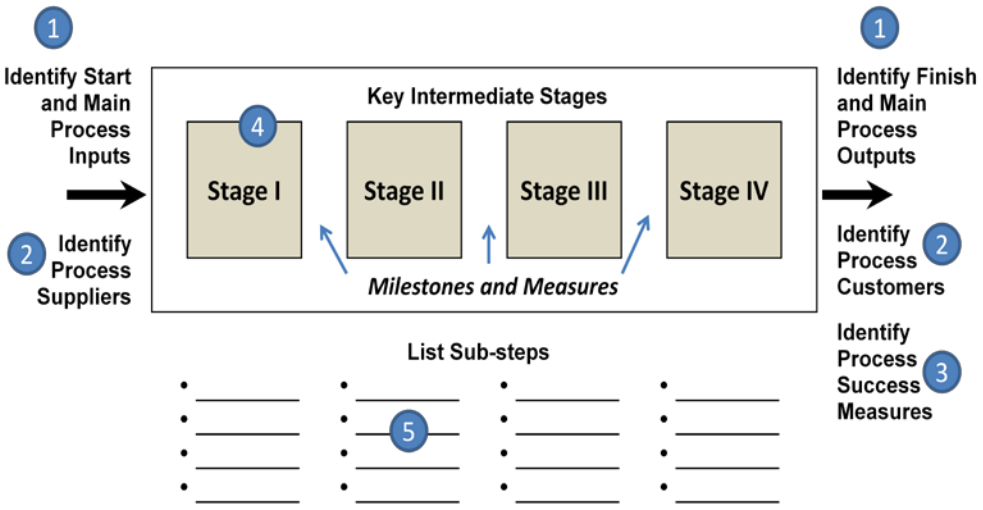

Figure 5 –Five Core Elements of a Future State Design

Step 5: Describing the Future State

Describing the future state is the heart of the design methodology. This is when you put a stake in the ground, saying in effect, "this is how we want the process to operate and we expect everyone involved in the process to follow it." Some may feel that this is too restrictive, and they would be right if there was no avenue to continually improve on the original design. That is why Step 8, continually improve, is so important.

functioning for a while but at less than optimal efficiency, then start by including a level of detail that exposes steps in the process where problems occur and quality issues originate.

Develop a clear picture of the future state by including 5 core elements in the design, illustrated in Figure 5:

- Stages
- Milestones
- Inputs
- Outputs
- Measures

Process stages are comprised of groups of activities that have a natural affiliation and allow process

each stage. This is important to do because problems with process effectiveness (and frustration) are often the result of lack of agreement on inputs and outputs – also known as hand-offs. Inputs and outputs can be things such as pieces of information, documentation or communications.
The final core element of future state design is establishment of performance measures – a topic worthy of its own section of this paper coming up next.

Step 6: Establish Process Metrics

The ideal time to establish process measures is when the process is first being designed. Focus on process measures drives discussion about expectations, goals and performance – the basis for efficient and effective business processes. Process measures will objectively communicate the degree to which expectations are being met at important points in the process such as milestones, and provide a common language for the discussion.

The best process measures are ***valid*** and ***reliable*** indicators of process performance. Validity is the degree to which the metric is truly measuring what we intend for it to measure (e.g. does the "width" of the car include side mirrors?). Reliability is the degree of consistency in the measure (e.g. you step on the bathroom scale three times in quick succession and it indicates the same weight each time).

For each process measure clearly state the measurement criteria (also known as the operational definition). This is especially important for subjective measures (e.g. the table is defective, but exactly what makes it so) as opposed to numerical measures which there are generally less open to interpretation. Also important to define is the frequency and responsibility for data collection, as well as a description of how the data will be used to improve process and overall business performance.

Step 7: Implement the New Process

The best process designs can languish without an effective implementation plan that is both appropriately resourced as well as assigned a high level of importance by leadership. New process designs will invariably require adjustments and close shepherding until the new work patterns become second nature to the organization. Don't leave implementation to chance – document it. A good plan should include answers to a host of questions including but not limited to:

1. Who will be responsible for ensuring that the new process is followed?
2. Will there be an opportunity to "pilot" and de-bug the new process? If so, describe how the pilot will be conducted including timing, roles and responsibilities.
3. Will staffing levels or assignments need to change in order to implement the new process?
4. Will there be "new" cost associated with the operation of the new process? If so, describe. Will they be one-time costs or recurring costs.
5. What are the documentation requirements for your process in your organization?
6. Will there be policy implications for the new process? If so, describe.
7. Will the new process impact stakeholders outside of your organization? If so, describe who, in what way will they be impacted, and what is your plan to ensure, communication, understanding and compliance.
8. Who within your organization need to know about the new process and their role in implementing it? What is your plan to orient/train them to the new process?
9. What is the implementation timeline?

Step 8: Continually Improve

Processes should not be static because your business never stops evolving. The paradox of designing good processes is that just when you think you're done, it's time to improve. And so the best process design initiatives are continuous, stopping only occasionally for a coffee break. New products and services, new customers with more demanding requirements, new competitors trying to steal market share, new employees with fresh ideas, all converge on only one conclusion – continuous improvement is not an option, it must be a business imperative that's fundamental to your strategy and culture.

It is not important how you do it, just do it. Whether you determine that a formal continuous improvement (CI) process such as Six Sigma is for you, or you decide that a less formal CI effort will be more appropriate to the size and complexity of your business, don't delay.

The most successful CI efforts are inclusive, leveraging the experience and insights of staff, management and customers alike. Allocate the time and commit the resources to a consistent and forward looking CI effort.

In Conclusion

All organizations benefit from people working consistently towards common goals in a coordinated fashion, and "good process" is an important key. It is good process that facilitates consistent and high quality customer service, drives alignment of valuable resources, encourages communications and creates a sense of interdependence among team members. Good process is the foundation upon which an organization can build a sustainable growth culture ready to respond to the next big thing.

Ray Schneider is the Owner and Founder of Process and Quality Consulting dedicated to improving the quality of its clients products and services through business process improvement, improved customer focus, performance measurement systems design and implementation, and leadership alignment.

Visit: www.rayschneiderconsulting.com