Establish the Process Boundaries

Business processes and project scope

All projects, especially process improvement projects, require a clear scope. Disastrous consequences ensue when a project team jumps in and starts drawing swimlane diagrams and use cases right off the mark. The project spirals aimlessly, implements improvements that actually make things worse, or any of a host of other problems. To avoid this, it is essential that you begin by accurately specifying a business process, its boundaries, and some important facts about the context in which you will be studying it. We refer to this as “framing the process,” and it is arguably the most important phase of your project.

More often than not, when we see a process modeling effort that has gone off the rails, it is because the up-front steps of defining the business process and establishing its scope were not given adequate attention: the process was not framed. In *The Reengineering Revolution*, Michael Hammer identifies process identification and analysis as the second and third top mistakes in reengineering: “Moral: Only (business) processes can be reengineered. Before you can reengineer processes you must identify them.”[1] Let’s use what we learned about business processes in the last chapter to
identify genuine business processes, and establish the boundaries for the process your project will study. Three key lessons from the previous chapter must be kept in mind at all times:

- A process has an event at the beginning, and a countable result at the end, produced for a customer (who quite likely triggered the initiating event).
- Most business processes cross departments and functions.
- Bigger is better.

Guidelines are fine, but what exactly will the project that you are working on encompass? This is sometimes referred to as the scope of the project—exactly what you will include, and just as important, what you’ll exclude. This can be a tricky area, because your scope should be small enough to master, yet large enough to make a difference. If you include too little—a subset of a process—the project will probably be ineffective because you will not be addressing enough of the problem to make any real difference. Your improvements might even make the overall process worse. But if your scope is too broad, you risk dissipating effort or overextending and thus not achieving your goals. Koulopoulos warns that your project scope probably should not extend beyond the authority of your sponsor [2]. If it does, you should seriously consider changing your scope, or enlisting the support of a higher level sponsor (which, of course, will lead to negotiations and scope changes). If you cannot do this, at least be aware of the dangers so you can keep an eye out for problems developing outside the scope of your authority.

It is perfectly reasonable to have project boundaries that do not correspond to business processes—just make sure you don’t damage any processes, and don’t expect the benefits that come from improving a cross-functional process.

The dilemma
You and your organization are convinced—process focus is the way to go. But dilemmas remain:

- You might say, “I know what a business process is, and I know what one isn’t, but the theory and rules aren’t helping. I need some step-by-step techniques to help me identify my business processes.”
- Most of the time, you will be handed a project that was defined from on high before you even heard about it. Probably, almost certainly, the boundaries won’t correspond to a proper business process. You’ll start with something like “Fix our logistics processes” or “Move our customer-facing processes to the Web.” You need to either scope or cope—adjust project scope, or adjust to the situation.

A way forward
Many errors arise in drawing process boundaries, but three are especially common. The first two are the “Goldilocks errors”—the scope is too large, or too small, but not just right. Boundaries often become too large through scope creep, where your project grows to unmanageable proportions one small piece at a time, until it’s so large that forward progress is impossible. This in turn is often caused by a project scope that is actually a function or department that plays a role in many processes. When the project team starts following workflows that cross the boundaries (they will, because processes do!), it is natural to start adding activities to the scope.

The project’s scope can also be too small: if you don’t cover a full business process or a significant chunk of one, you’ll be subject to all the problems associated with local optimization. The third common error is the grab bag, where an unrelated set of tasks is mislabeled as a process; throw in everything that’s been causing you any trouble. These and other problems can usually be avoided using the techniques of process identification and framing that are the subject of this chapter. Three principles underlie these techniques:

- It is easiest to identify processes in “bottom-up” fashion. Participants identify activities or milestones, and then apply guidelines for “stringing them together” and identifying the parts that constitute a process.
- Scope is clearer if you also identify related processes that are outside your scope, and depict these graphically on an “overall process map.” This technique also makes identifying processes easier in the first place.
- Simply naming a process is inadequate for people to understand what’s inside and what’s outside of its boundaries. We employ a
Framing the process: goals

Defining a true business process and articulating it in a way that virtually eliminates misunderstanding are "framing the process." It's really just another way of saying "document the scope of the process." The components of this scope statement or process frame are:

- Process name in verb-noun format;
- Event that triggers the business process;
- Result achieved by the process;
- Customer that receives the result;
- Other stakeholders and the result(s) they expect;
- About five to seven major activities or milestones within the process;
- Actors with a role in the process;
- Mechanisms (systems, forms, equipment, etc.) that support the process;
- Process timing and frequency;
- Related (but out-of-scope) processes depicted on an overall process map.

Two other components will be covered in the next chapter when we look at assessing a process and establishing its goals:

- Assessment of current process performance;
- Performance objectives for the new process.

If all of the above are specified, process scope is far better understood than if the scope statement was simply "our customer relationship management process." Framing can usually be done within a few hours, so it is among the highest value work of the entire project in benefit per hour. When defining scope, whether for a process improvement project or a home improvement project, an important principle is that it is just as important to clarify what's out as what's in. If you don't make it clear to all actual and potential stakeholders what you are excluding, you will inevitably face the wrath or disappointment of those who assumed you were going to help them. The overall process map is an important tool for avoiding this.

The overall process map

The overall process map is simply a depiction of a set of related processes, usually five to seven. By related, we mean that they deal with a similar topic (e.g., all involve maintaining a supply of spare parts) and there are significant flows between them. These flows are typically information, but could be goods or other items. Figure 5.1 shows an example.

The value of the overall process map is that it clarifies what is out of scope as well as what is in. In the process Procure Item, stakeholders might assume that paying the vendor, or establishing an ongoing supply contract for the item, is part of the process scope. In the example, Establish Supply Agreement and Pay Vendor are shown specifically out of scope. Alas, the need for an overall process map is clearest in hindsight, after suffering the delays and conflicts arising from unclear scope. More than once, we have been called on to assist a project that started without one. Often, they have done a fair bit of as-is modeling, and even some to-be models, before the problems start to mount up. Then, there is very strong agreement from everyone—from senior managers to junior analysts—that they need to go back and build a map putting their project in context. Typically, they also feel that they could have avoided slipping into other processes, and could have made their processes big enough to make a real impact.

![Figure 5.1 Overall process map for the Supply Management area.](image-url)
These can be built at various levels of detail, from a map for the entire organization showing the highest level process areas, down to something much more specific. Ideally, an organization should have an overall process map, but most organizations do not. And of those that do, many do it wrong in the sense that the processes they show are actually their major functions—accounting, human resources, sales, manufacturing, logistics, marketing, and so on. Even if your project scope is less than a full process, you should use this technique. Just show other related process "chunks" of about the same size as your project, and you will at least have visually clarified what is out of scope (and possibly where some important flows or interfaces have to be accommodated).

Identifying your processes

Where to start?

Building the overall process map usually goes hand in hand with identifying your business processes. This can be done in top-down or bottom-up fashion, but identifying processes usually works best when done in a bottom-up fashion. That is, identify a whole bunch of individual activities or milestones that have to be achieved, and then string them together into a process. On the other hand, many authorities suggest a top-down approach: from the top (Operate Enterprise) you are told to identify the major processes by progressively decomposing. It sounds easy, but in practice, it is quite difficult. That is why experienced analysts have learned that even so-called top-down analysis usually has a significant bottom-up component: you gather more detail than you need, and then synthesize it into the higher level abstraction you were seeking. Other than just being easier, two advantages of this approach are (a) the clients always give you more detail than you want anyway, and (b) we analysts are actually better at capturing detail than anything else.

In practice, this is an iterative process, with the work from the process mapping changing the definition of the target process which changes the process map, and so on. Do a little of one, then a little of the other, with each activity refining and validating the other.

Let's look at a step-by-step, bottom-up approach for discovering business processes, and for organizing them into an overall process map.

Step by step

The steps in this section are given in a logical order, but you could do them in other orders—consider each situation case by case. Actually, it is an iterative process, in which a later step might alter the conclusions of an earlier step, so we provide a checklist at the end of the chapter. As long as all the steps are completed at the end, everything will turn out fine.

Brainstorming in general

The approach begins with brainstorming, which is an excellent technique for two reasons. Properly handled, it gives everyone a chance to participate, and gets them used to it. Second, it can generate a lot of raw material to work with in a short time. This turns out to be far more productive than agonizingly trying to get it right immediately. Here are the basics of brainstorming:

The first step is to open up. You need to break out of the box, limber up your mind, and even get a little silly. If you are able to do this in a group, a few brain teasers or games might help.  

Perhaps spend five minutes imagining that your company just found itself stuck with 1 trillion coat hangers and needs to think of unusual ways to use them. Have the group generate 25 suggestions as quickly as possible, being sure to get ideas from everyone—quantity, speed, and participation are the essence of a good brainstorming session. Next, in preparation for the real work, review the rules of brainstorming. The first rule is: no criticism or evaluation of any kind is allowed during the brainstorming session. You must not be critical in any way—even absurd and impossible ideas are encouraged. You are after quantity, not quality. It's okay to piggyback, or take another idea and modify or extend it. In fact, plagiarism is encouraged. At this stage, the sky's the limit, and everything is possible. The other rules are one idea per turn and say "pass" if you have nothing to say at your turn. Take turns, because if you go around the room in clockwise fashion (participants are seated in a semicircle or U shape), by giving everyone a turn, you'll encourage balanced participation when the team is forming. After you have listed as many ideas as you can, you might reward the person who contributed the most suggestions, and especially reward the person who suggested the most bizarre idea. Note that the best idea should not be singled out for praise.

Then it's time to work with all that raw material. Combine ideas, possibly by clustering similar suggestions, and remove the absurd, impossible (but make sure they really are!), and out of scope. Look critically to see if you have missed any ideas. Use a technique like multivoting to determine which ideas to pursue.

**Brainstorm milestones**  
Even in an organization that is heavily functionally oriented, people have little difficulty identifying individual activities or milestones, which is what we will use. A milestone is any necessary result, whether it marks the end of a major process or is a step along the way:

- Product is reserved;
- Shipment is packed;
- Inventory is replenished;
- Order is accepted;
- Order is submitted.

Don’t try to put the ideas in any particular sequence. More important, note that participants in a process identification session are more likely to come up with suggestions for milestones than they are to come up with the corresponding processes or steps. We are not sure why this is, but we have observed the phenomenon in many settings. It seems that milestones are like events, and it's easier for people to identify what has to happen (events) than to generalize that into processes. All we know is that it works. A sample is illustrated in Figure 5.2.

**Link the milestones/step together**
Because it has to be done eventually, begin this step by renaming the milestones into steps by rephrasing the name in verb-noun format:

- Reserve Product;
- Pack Shipment;
- Replenish Inventory;
- Accept Order;
- Submit Order.

![Figure 5.2 Partial results from a brainstorm for milestones.](image)

Next, you will link these steps together by matching the output of one with the input of another. Simply ask the group to identify cases when a milestone is generally preceded or followed by another milestone. Stringing them together has another important advantage: it makes steps that were missed during the brainstorm more evident.

Next, we have to identify the ratio for each link: is it one to one (1:1), one to many (1:M), or many to one (M:1)? The example in Figure 5.3 includes each:

- Every time we have an instance of Identify Prospect, we expect to have one instance of Schedule Meeting, so we say they are linked 1:1. It may be that we don't schedule a meeting at all, but we are not worried about the zero cases.
- Every time we Establish Contract, we hope that eventually we will have many Receive Orders, so this is a 1:M link. We might receive no orders, but the minimum case is not what we care about.
- Finally, we may have many Ship Orders before we Calculate Account Due, as would be the case if we did billing on a monthly basis. This would give us an M:1 link. Note that if we invoiced on each shipment, this would be a 1:1.
Assemble processes based on frequency and affinity

The trick in this approach is that a cluster of steps or milestones with 1:1 links generally constitute a well-formed process. This goes back to Eliyahu Goldratt and his work on constraints—if a work item (the object of a process) is intended to flow from one step into the next on a 1:1 basis, then we should try to synchronize or coordinate these steps within a process. On the other hand, 1:M and M:1 connections cannot generally be coordinated, because there are delays while the many build up. These types of links usually signify flows between processes that have quite different timing cycles. This technique doesn’t work all the time, but it has a very high success rate compared to attempts to define processes top-down. An added bonus: this also gives you the major activities or milestones within a process, one of the key parts of framing it.

As shown in Figure 5.4, this approach gives three separate but related processes—Acquire Customer, Fulfill Order, and Collect Account Receivable—that could be depicted on an overall process map. Thus, if your scope was Fulfill Order, it would be clear that signing up new customers and collecting payment were not included.

Name the processes

Naming standards can make a real difference when identifying processes. They tighten up everyone’s thinking, and focus attention on the essence of the process or step: the result it achieves. Business processes, and the individual steps within them, should be named in action verb/optional qualifier/noun format that clearly identifies the intended result. Usually the noun will be the grammatical object of the verb and describe an important business object or entity, for example, Pay Invoice, Receive Shipment, or
Determine Current Shipment Location, Accept Application, and Record Project Task Completion all use active instead of mushy verbs, and convey much more information.

Table 5.1 gives a list of verbs you should avoid in naming your business processes. Once, at this point during one of our educational workshops, a participant said, "Oh, no! All of my steps have mushy verbs!" We took a look, and sure enough, that was the case. And sure enough, the process map really did not tell us what was going on except in a very general way.

- Make sure that you don’t confuse a business process with a function or department. You can count iterations of business processes, but not functions. “How many Legals did you do today?” and “How many Finances did you do today?” are nonsense. “How many lawsuits did you file today?” and “How many invoices did you pay today?” make sense.

- Often there will be a state change, where the status of the noun is different after the business process. After Pay Invoice, the invoice status is paid instead of due; after Receive Shipment, the status of the shipment is received instead of pending.

- In your overall process map, you may be interested in some of your target business process’s neighbors at only a high level. In this case, you might name these business processes with a high-level name in noun-gerund form (e.g., Product Development, instead of Develop Product), but never generalize the business process you are directly working on.

- Include manual processes and steps as well as automated ones; there will often be some impact on your computer records even if the business process has no automation. If not, it will someday, and probably sooner than you expect.

Identify the triggering event

An organization’s core business processes rely on stimuli from outside events as their reason for existing [3]. Supporting processes may be initiated by an internally generated event, although it might be traced back to external factors. You need to identify the event that initiates each business process to establish a boundary and as a starting point for developing your swimlane diagrams. The event is normally an action by an actor. For example, an order is generated from outside your organization and stimulates your business to fulfill the order and invoice the customer. Payments are received and they stimulate you to cash the check and close the outstanding receivable. Some events are time triggered—action is initiated by the arrival of a predetermined date and time. For example, April 15 rolls around and you are stimulated to get your tax return filed, or it’s time to run your biweekly payroll.

An interesting class of events are protocol events. These are events, other than the initiating one, by which we have the customer reinitiate the flow at various stages. They are only required because it is the process’s protocol to require them. Often, they arise when the customer is “walking” the process’s work item from one step to another. This is a major improvement opportunity: any protocol event you can eliminate will probably please the customer. This is also why you should involve selected
customers in your process improvement sessions—often they are the only actors who know about all of these annoying protocol events.

**Identify stakeholders and expected results**

We have stressed results as a critical concept, but don't confuse results with objectives. This is easy given the similarity of the terms. An objective is a performance target, which may have been articulated in the process vision. A result is what you want the process to produce or accomplish. You can point to discrete, individual results, and we can count them. Here are some results:

- Order is taken;
- New product is developed;
- Distributor is acquired;
- Invoice is issued;
- Employee is hired.

Compare those results with some sample objectives:

- Reduce turnover to 4% per annum within 18 months;
- Increase circulation to 150,000 by Q4;
- Increase advertising revenue by 10% this year;
- Decrease average cost of processing an invoice 5% by year end.

Another important idea is that the customer may not be the only stakeholder to receive a result. In addition to asking “What does the customer receive?” we need to consider “What other criteria must be met?” For example, the customer’s order is satisfied (what the customer receives) and paid for (other criteria met). The results of a business process must satisfy the customer, but also satisfy you and the organization you work for. The customer’s order must be filled, which no doubt makes the customer happy, but it must also be paid for, which makes your shareholders happy. For each process, ask “Who are the other stakeholders, and what result do they expect from this process?” One project was helped tremendously by this simple technique. They were providing catering services (running the lunchroom) on a contract basis at various manufacturing facilities. They had correctly identified the people buying meals as customers, but something was missing. Once they identified the other key stakeholder—the organization they were contracting to—they saw that they really had two customers, and both had to be satisfied.

There is often an artificial organizational barrier between operations and finance in corporations, often mirrored in the organization of the IT department. The operational people do a wonderful job fulfilling the company’s operational mission, but a terrible job collecting the needed information to collect payment for the goods and services. Remember: “The job ain’t done until it’s paid for”—as long as it operates on the same timing cycle, you should consider the after-the-fact paperwork as an integral part of a complete business process.

Focusing on the result can often make process mapping easier. Stephen Covey [4] tells us we should start with the end in mind, and so it is with developing the swimlane diagram for a process. It is sometimes easier to work backwards from the end result than to work forward from the event. You will often, but not always, end up back at the same place—the customer who receives the result is often the same actor that triggered the process in the first place.

**Identify the major steps**

Your process scope will be much clearer if you identify the primary steps that represent the essence of the work the process involves. At this point, you don’t care who does them or how—you simply want to list five or so significant steps within the overall business process. These steps could also be called subprocesses, components, activities, milestones, or tasks. What matters is that they represent the critical milestones, internal to the process, which must be reached in order for the process to operate. You probably have most of them identified already, from the steps that you assembled into processes in the last step. If not, you can use “decomposition” to identify the steps—just ask “What five to seven activities must be completed or milestones reached in order for this process to operate?”

Two versions of a Fulfill Order process are shown in Figure 5.5, one of which includes manufacturing and collections activities. If all there was to go on was the name Fulfill Order, observers would make different assumptions about what that meant, so this is a valuable tool for clarifying process scope.
to maintain records (data) about, and ensures that everyone is on the same wavelength about terminology and meaning before getting into the details of process and system design. As introduced in Chapter 3, the core of a data model is the entity-relationship diagram depicting the entities, relationships, and attributes that provide the structure of the record-keeping system. However, our main interest at this point is in the entity definitions—what exactly do we mean by a product, a customer, or an order? Different interpretations will have a significant impact on the scope of related processes such as Fulfill Order, and on the functionality that information systems must provide. Having a data model can also be an excellent aid to process identification. Each of the three entities just mentioned will have at least one significant corresponding business process—Acquire Customer, Introduce New Product, and Fulfill Order.

This is an excellent time to develop a basic data model, which includes a glossary or vocabulary. If you are not familiar with this technique, jump ahead to Chapter 15 for an introduction to the basics of developing a data model.

Choose your process

You would likely to use an objective, analytic approach to defining your project, but in reality the road is fraught with politics, gut feelings, negotiation, and compromise. Usually we don’t pick one, we pick some or all, and agree on a sequence. The process is chosen in one of two ways: by an analytical approach, or by what we call divine intervention. The latter is the most common, so let’s start there.

Divine intervention

Process improvement and application development projects are often defined in response to a pressing business issue or need, a squeaky wheel, or someone with the checkbook, and so it does not meet the definition of a business process that we have recommended you use. Often your project will be scoped by divine intervention, as in: “Thou shalt fix business process X!” And X is not a business process in any sense of the word. In most companies, budget authority does not equate to business processes, and so the executive with the checkbook is unwilling to spend his or her budget to improve the tasks in another department. Remember, processes
have been hidden by decades of organizations, reorganizations, and disorganizations. Business processes cross organizational boundaries—departments, budgets, and authority do not.

New technology drives a surprising proportion of projects. The CEO is on an airplane and meets a consultant, or reads an article in a magazine. We must have (choose one, or some combination) EDI, groupware, Web, imaging, intranet, extranet, e-commerce, and so forth. This tendency is not all bad—first telephones, then computers, then ATMs were that way. Probably no pressing business advantage could have been quantitatively shown, but successful implementations proceeded because there was just a gut feeling that this technology could change things for the better.

Some key issues for you are:

- Is this REALLY a business process?
- Is my executive team expecting cross-functional benefits from a project or process that is not cross-functional?
- Can I repackage this in an appealing way with the boundaries of a true business process?

Confirm your suspicions via the techniques discussed in this chapter. In most actual projects, the team receives some directive, and then iteratively manipulates it to better match a business process. This might not be possible, so if you can't get your project redefined, try to keep the whole picture in mind and remember to focus on the boundaries. That is where you can make gains for the overall process.

Analytic approach
Years ago, there was much more use of formalized strategic planning methodologies to direct an enterprise's improvements, but these have fallen by the wayside while divine intervention has become the norm. Just as well, they were often a once-a-year blitz that produced some weighty shelfware, after which the organization proceeded on whatever course it was already on. Besides, the truly great ideas, whether they spring from the executive or bubble up through the ranks, are just as likely to come from inspiration as from a formal methodology.

What would you do if you wanted to take a more rigorous approach? Gool and Campbell described a good approach several years ago in [5], and we have employed it successfully in a number of planning sessions for organizations that wanted a repeatable, more rigorous method. (We suspected they wanted the rigor to back up their hunches, but that's another story.)

The approach begins with identifying your organization's critical success factors (CSFs). A CSF is one of a small number of things that must go exceptionally well in order for your business to meet its objectives. "Completion of the XYZ project on time and on budget" might be an objective. A related CSF could be "Maintain an exceptionally high level of client involvement in requirements definition." See the difference? Rockart, author of the original article on CSFs [6], would say that you have about five CSFs, but most organizations identify between seven and fifteen. Second, identify your major processes. Again, there might be seven or so, or sometimes more. Note that depending on your interest and authority, you might be looking at the major process areas that comprise the enterprise, or smaller processes within a specific area. Third, build a matrix of processes versus CSFs, and for each cell determine the impact that the process has on the CSF. This could be done numerically from 1 (little impact) to 5 (high impact). Fourth, you will assess the "brokenness" of each process: 1 if it's in good shape, 5 if it's a mess. Finally, you determine where to focus your efforts by building a numerical ranking of each process. What you are looking for is a process that is highly broken and has a high impact on a number of CSFs. In the article they describe a less numerically intensive approach that involves some simple math: for each row (process) in the matrix, add up the number of highly impacted CSFs, and multiply by the brokenness. This will identify the process to work on first, but of course there are other issues:

- How difficult will process improvement be?
- Can the process be tied to the needs of customers?
- Is this large, complex, and "dug in," or is it fairly straightforward with some obvious "low-hanging fruit"?
- Are there political support and sponsorship for the process redesign?
- Is there a natural sequence or precedence? Does one process obviously have to be attended to first?
- Are there other issues driving selection of a particular process, such as regulatory concerns or competitive issues?
Although the approach on its own doesn't produce a definitive answer, it does provide some direction. We have seen it yield surprising outcomes, which leave participants slapping their foreheads saying, "Of course!" That's precisely when a rigorous approach such as this is most beneficial.

However you arrived at it, you now have the scope of your process unambiguously defined—named and framed. Now let's move on to assessment, so we can describe why your chosen process is getting all the attention.

References


Conducting the Initial Assessment

A case for action and a vision

Before you buy a used car, it is a good idea to take it to a good mechanic. Your mechanic won't just stand back and eyeball the car, but will systematically go through the major systems or components—the body and frame, the interior, the brakes, the engine, transmission, the rest of the drive train, the suspension, and so on. And so it is with a business process—you cannot just eyeball it and ask, "How is it?" That might be a good start, but only by systematically inspecting its components and subsystems can you make a complete assessment. The same is true for establishing goals for the behavior of the new process—you must consider a variety of perspectives.

This chapter will describe frameworks to use when assessing a process so you can answer two questions:

- What's wrong with this process, anyway?
- What will be better about it when we're done?
The perspectives we will use are the stakeholders, the enablers, and some general metrics. The initial assessment will look at the process from the perspective of each stakeholder, to determine what, or even if, to change. This assessment will be based more on perceptions than on hard facts, because we will not yet have started a detailed study of the as-is process. That does not mean it won’t be valuable—it will help us establish the improvement goals for the process, and identify specific issues that our as-is study (the next major step) must research and understand. We will also collect available information about process dynamics and metrics—"the numbers." After the as-is analysis is complete, we will perform a final assessment that will use the six enablers (workflow design, IT, motivation and measurement, and so forth) as a framework. We will describe it in this chapter, even though it might not be completed now so you’ll know what kinds of things to look out for while studying the current process.

The assessment will be summarized in a framework called the case for action, and our improvement goals for the project will be summarized in a process vision. We will combine these with the information we learned during framing the process and produce a process summary poster. Publishing and publicizing this will help us explain the project and keep it on track. We must know the metrics that govern our business process, such as volumes, cycles, and costs, because you can’t assess what you can’t measure. Let’s start there.

**Metrics**

Metrics, or key performance indicators (KPIs), will give us a feel for the dynamics of the process before diving into the assessment. Even fairly crude metrics will provide useful guidance to focus our efforts. One of us once got well into an as-is analysis without having captured the numbers only to discover he had wasted time studying a case (a specific type of shipment) that was insignificant in every way—volume, resources consumed, and revenue. If you don’t know how many and how much, do you really know if anything needs to change?

Another important reason to collect metrics is to evaluate success after you have finished—you will need a baseline against which to measure the performance of the new process. In some environments, this is crucial—without hard proof, there’s no “good job!” and no support for your next initiative. But take care not to go after inappropriate measures, those that might encourage local optimization at the expense of overall improvement in the new process. Your organization might be awash in statistics, but most statistics probably relate to the performance of individual functions, not the process. Don’t stake your assessment on those, or you won’t get the results you intend.

For now, collect those metrics that you can, and refine them as you go—you won’t be able to develop accurate metrics until after you have completed the as-is modeling. Often, someone such as a DBA can provide statistics, such as volumes, by transaction type. If your organization has a data warehouse relevant to your process, all the better. You might be able to develop some queries that provide the measures you need. Those metrics will depend on the process and the issues that come up in the rest of the initial assessment. Use the lists below to stimulate your thinking about the measures you’ll try to locate.

**How many?**

The essence of statistics is not standard deviations and Durbin-Watson coefficients, it’s just counting. You must be able to at least count executions of your process at this point, because if you cannot count the process, either you don’t understand it or it isn’t a process.

The most basic counts involve volume, for example, 800 per week. Typically, you will want to determine measures such as:

- Total volume or frequency (e.g., new customer enrollments);
- Proportion of different triggers or cases (e.g., new versus reinstatement);
- Proportion of different paths (e.g., straight through versus credit or background check);
- Proportion of different results (e.g., accepted versus rejected).

**Got the time?**

How much time does it take to complete your workflow? There are three ways to measure its execution: cycle time; work time; and time worked.

1. Database administrators: a title commonly used by the people who are responsible for the design and tuning of your database. To tune, they need accurate counts of various record types, although often only at a high level.
Cycle time is the total elapsed time, end to end, from the time the cycle starts or is triggered until the cycle completes with all results accomplished. It is sometimes called calendar time, or wall-clock time for shorter cycles, because it is the time that would pass on the calendar or clock on the wall during the cycle. It is the time measure most obvious and relevant to the customer.

Work time is the time the process is actually being worked on. Most processes have at least some time during which processes are waiting and not being worked on; if all this nonproductive time could be eliminated, cycle time and work time would be the same. This is the goal of straight-through processing. In computers, work time is often called CPU time because this is the time during which the computer’s central processing unit (CPU) is actually working on the problem.

Time worked counts the actual work hours of work expended on the process; sometimes more than one person (or other resource) is working on the process at a time: this measure would be the total hours paid for if workers are the resource being measured. If only one person at a time works on the process, work time and time worked are the same. Instead of people work time, you might need to measure work time with another resource, possibly time with a given machine or critical resource, especially if it is a bottleneck in your process. A computer with multiple processors would measure time worked as the CPU time of all the processors combined.

You might also need to measure peaks and valleys—your critical load. Throughout the calendar cycle (day, week, month, year), there are usually times that are busier than others. Statisticians usually call these seasonal variations, because the most obvious variations are those that change with the season of the year. You might want to identify these seasonal variations clearly, and compare the difference between the three execution times (cycle time, work time, and time worked) on the peak versus in the valley. Interesting patterns emerge—in a busy time, time worked can go down significantly because everyone is working so hard, yet cycle times can rise dramatically because of queuing.

These patterns will get even more interesting in terms of improvement opportunity when we track the opposite of execution time—wait time. There are four kinds of wait time: idle, transit, queue, and setup.

During idle time, the process is just waiting, perhaps because the work is not on a critical path, or because it has not been routed expeditiously, or just because the process is designed that way. It may be that an actor is working on an unrelated but more important task.

Transit time is the time spent in transit between steps. Strictly speaking, when the work is being moved, that is a step in itself, but no other value is being added other than transport.

Queue time is the time an item is lined up before a critical or bottleneck resource: the work item is ready to go on, but is waiting for the resources for the next step to get to it. In a manufacturing environment, partially finished goods will stack up before a bottleneck machine during queue time.

Setup time is time required for a resource to switch from one type of task to another. This is also most obvious in a manufacturing situation—the operator might need to mount a different bit on a milling machine before beginning work on a new lot of a different product type. It is the same in an office environment when an operator sets up for a new type of transaction, possibly by assembling reference material and supplies, and staying within a specific function on the PC.

After you have done some as-is modeling, you will want to analyze wait time in the different phases of the process, for instance, trigger to initiation (i.e., how long before you even get started on the process) versus the time lapse between steps, concentrating on known delays at first.

With all time measures, you will want to look at several measures: not just average or typical, but best and worst.

Who’s involved?

The number of people, organizations, and places involved in your process is a vital concern: for each new involvement, another handoff is required. And each handoff is an opportunity for something to go awry. Some project estimating techniques recommend that you add some percentage, say 25%, to your estimate for your project for each new location involved. This reflects the additional complexity added by multiple locations. If applicable, consider the number of different languages (natural or computer) and possibly time zones involved. Other factors might be applicable to your process, such as labor unions, countries, and cultures.

You won’t have precise information until after as-is modeling (it’s amazing how many additional actors can be discovered!), but this will be a start. Try listing, and counting, the following for your process:
- People;
- Job classifications;
- Departments;
- Total number of handoffs;
- Labor unions;
- Locations;
- Languages;
- Countries and cultures;
- Whatever else is relevant.

Efficiency

No process is perfect. Typical measures of efficiency and effectiveness include:

- What is the percentage of scrap or rework?
- What is the percentage of errors?
- How many defects are produced, and where are they produced? The later in the cycle they occur, the more costly they are.
- How soon are defects discovered? Early detection is important as it leads to less waste, since all work done on an item that is going to be scrapped is wasted.
- How much iteration does it take to get it right? In the worst case, it is the customer who discovers it.
- How many customer contacts are there to complete the process? Are you contacting the customer to get information you could have collected (or even worse, did collect) before?
- How many compliments and complaints are received?

If appropriate, any of these can be further categorized by type, location, or other criteria.

To count defects and categories, a simple tally sheet is often enough to let you see the problems and opportunities for improvement. Just have the workers have a sheet of paper next to their workspace on which they mark a tally for each type of problem for a few days. Tally as many different ways as you can think of, for example, by type of defect, location, or method. You might be surprised how often the facts, as demonstrated by the tally sheets, were different from perceptions.

Cost

It's not just the bean counters that should be concerned with cost. Consider Goldratt's concept of true cost as expressed in his book, The Goal [1]. If a 5-cent gasket is keeping your most critical machine from running, the cost of that idleness could be millions of dollars, not pennies. Get at least a rough measure of the cost per execution, and the cost of defects, both in scrap and rework and in impact on the overall process. Also consider fixed versus variable cost. Fixed costs are those that you will pay even if you produce nothing; for example, rent and property tax. Variable costs are those that vary with output: materials costs, discretionary labor cost, and so forth.

Summary of metrics

So far, we have looked at the following as measurements you might choose to capture (Table 6.1). Avoid any urge to embark on a crusade for the numbers—the intent is to get an indication of process performance observed by the various stakeholders, and possibly where issues originate. Now that we have some objective measures, let's canvas those stakeholders for their assessment of the process.

Assessment by stakeholder

Everyone's a critic...

A stakeholder is any identifiable individual or group who has an interest in the business process. It is absolutely crucial that you assess the performance of the current process from the perspective of each group individually, and establish process goals for each. Some or most of the assessment will be subjective concerns and impressions, but if you can develop objective metrics, all the better.

Whatever type of process you are studying, there are three stakeholder communities that must be accounted for:
### Table 6.1
Summary of Metrics

<table>
<thead>
<tr>
<th>Executing Time</th>
<th>Waiting Time</th>
<th>Involvement</th>
<th>Efficiency</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle time</td>
<td>Idle</td>
<td>People</td>
<td>Scrap</td>
<td>Goldratt's True Cost</td>
</tr>
<tr>
<td>Work time</td>
<td>Transit</td>
<td>Departments</td>
<td>Rework</td>
<td>Cost per execution</td>
</tr>
<tr>
<td>Time worked</td>
<td>Queue</td>
<td>Handoffs</td>
<td>Defect by type</td>
<td>Cost of defects</td>
</tr>
</tbody>
</table>
|                | Setup        | Job 

classifications | Errors | Fixed versus 

variable costs |
| Labor unions   | Iterations  | Customer 

contacts |
| Locations      | Complaints  | Languages 

Compliments |
| Countries/ 

cultures      | WHatever else is relevant |

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1. Customers (internal or external recipients of a result from the process);
2. Performers (typically employees or contractors);
3. Owners (including shareholders) and managers.
   It may also be appropriate to consider other stakeholder groups:
4. Suppliers;
5. Government or other regulatory agencies;
6. The general public or the community;
7. Industry bodies or trade associations.

Don't guess—ask!
Mentally walking a mile in their shoes would be a good start, but don't assume you know what each group wants—go further and ask! This is especially true for external customers. We tend to focus on the expectations of owners and performers, probably because we have such close contact. In fact, you'll usually hear plenty without even having to ask. Process customers, on the other hand...well, "we know what they want" is a commonly heard and commonly incorrect phrase. Consider the example of a financial services company that invested heavily in redesigning the process for sending transaction confirmation notices (e.g., for stock trades or asset transfers) to their customers, the account holders. They "knew" that the customer wasn't impressed with the three weeks it took for the notices to arrive, and set a goal of getting them in the mail within 24 hours of the transaction. After implementing the new process, it was found that most customers couldn't care less about turnaround time for these documents—in fact, they didn't want them at all, and were irritated by their arrival. If they thought there was any chance their transaction request hadn't been taken care of, they wouldn't have dealt with this company in the first place. Instead, what the customers had wanted all along was a single consolidated statement that reflected all of the activity for all of their accounts. The financial services company dutifully implemented this, but later (after the main competition) and at greater total expense than if they had checked with their customers in the first place.

**The customer**

The customer's perspective is of course of prime importance, but surprisingly, many projects never even explicitly consider the customer's perspective. The fact that most computer specifications are written from the viewpoint of the computer ("accept password") instead of the computer user ("enter password") is symptomatic of this problem.

Consider the process's effectiveness from the customer's point of view, but first ask if the actual product or service itself has the right characteristics. This might indicate that the main issues have nothing to do with the process. Then, check with process customers for their stories and impressions, keeping in mind some of the following questions.

How much effort is required of the customer? Does the process require too many interactions (protocol events)? Does the process require the customer to walk the transaction from one part of the organization to another, possibly reciting everything that has happened to date? Is the customer the only one monitoring the process?
Case Study: The lousy laptop

One of us (Alec) recently ordered a replacement for a damaged laptop from one of the top direct-sales computer manufacturers. A trip was coming up which included a lot of time set aside for writing this book. The new laptop was beautiful, but unusable on delivery because of a minor problem. This quickly became serious because the manufacturer’s problem resolution process was not supported by any mechanism for internal communication (e.g., between sales, customer service, accounting, and shipping), and had no provision for monitoring follow-up. Other than by the customer, that is. For instance, if the message wasn’t received properly by shipping that they were supposed to ship a part, there was no reaction until Alec eventually called asking, “Where is it?” Or the replacement was held pending payment arrangements because accounting didn’t know it was a no-charge replacement, and no one knew until—you guessed it—Alec called. A total of about a dozen problems like these arose while days stretched into weeks and months. Ultimately, weeks of time were lost, which had to be made up during the family vacation. This is not the kind of process that creates customer loyalty! Needless to say, when the other one of us needed a new laptop, he ordered from the manufacturer’s competitor.

Do the rules and requirements seem reasonable? Could you explain them, with a straight face, to a customer? Do customer-contact staff appear to know what they’re doing and have appropriate support? Is information about you and your transaction available to them? Consider your sensitivity to the customer, who asks: “Do these people appear to care about me?” or “Can they adjust service to suit my needs?”

The performers

Consider the viewpoint of the workers or the performers of the tasks that make up the process. A few years ago, we might have referred to this group as “the employees,” but now they are just as likely a contracted organization, which can raise its own issues of information availability, process workflow, and measurement. In any case, you might ask “Is this how you’d do it if you had a choice?” or “Does this process help you meet your goals, or does it thwart you?” At one organization, the design of the process ensured, unnecessarily, that an accounting group predictably cycled between total overload and boredom. Customer service was then kept busy resolving errors that had been introduced because of the overload.

But remember, the workers are not the customers. If streamlining the work negatively impacts the customer, or improves a step at the expense of the process, it won’t make sense to do it. There is always a tradeoff between the stakeholders’ interests, but often on a project the workers are represented while the customers aren’t. There is therefore a danger that we will design the best of all possible processes for the workers to no avail since customers desert us.

Managers and owners

Managers and owners (shareholders) must be considered—the process must be efficient and profitable. In a government or not-for-profit setting, the process must still be fiscally responsible. Does the process consume resources that would be better allocated elsewhere? Consider the opportunity cost as well as the actual cost. Opportunity cost is the gain not realized had you done something else with the resource. For instance, while the sales force is correcting errors, it is not selling. The lost sales are opportunity cost. Resources include people, time, money, equipment and facilities, and material and supplies. Does the process generate issues for management to deal with that distract from the important goals of the organization? Owners and managers need to ask: “Is this process contributing to my personal goals, my department’s goals, and the enterprise’s goals?”

Suppliers

A simple lunch involves products from two dozen or more countries, produced, transported, and processed by what amount to literally thousands of people. The degree of interconnectedness is amazing, and sometimes a small change in one process can bring unexpected changes elsewhere, like a butterfly in Brazil causing a cyclone in the Indian Ocean. Your organization’s processes likewise exist in a web of interdependencies, and require the cooperation of suppliers, vendors, and subcontractors. You might ask a supplier questions like “How easy is it to do business with us compared to your other customers?” or “What errors or actions on our part cause difficulties for you?” Flexibility and responsiveness are prime in today’s extended supply chain, so how quickly you and the supplier can establish an agreement is critical. You might even find yourself competing for the services of a supplier, as we saw in a Silicon Valley manufacturer recently—for them, supplier service became as important as customer service.
Other groups

The general public has many concerns: ethics, safety, privacy, and the environment. In the end, overlooking these viewpoints can be more costly than addressing them, if only because of public relations and legal considerations. The community may have issues with your involvement in local initiatives. Regulators may seek improvement in how swiftly and accurately your organization responds to information requests, or the number of complaints they handle. Consider the viewpoints of whatever other groups have a legitimate interest in the performance of your process, and above all—don’t assume, *ask!*

**Look at the process in terms of enablers**

Next, we will consider the six enablers that collectively determine how our process behaves, or misbehaves, as the case may be. Generally, we don’t look closely at the enablers until *after* modeling and analyzing the as-is process, but there’s no harm in conducting a quick assessment beforehand. You need to be aware of the enablers so you know what to look out for during your study of the current process. Let’s consider each of the six enablers in turn.

The workflow design

First, consider the current flow of the work. Look at the steps, precedence, flow, handoffs, and decision points to find any bottlenecks, losses, or inefficiencies. At this stage, you probably can’t collect enough data to study the problem through complete and careful analysis, but you can ask those involved, “What is the one thing you would do to improve this process?” or “What aspect of this process causes you the most problems?” Much of the book discusses workflows and gives examples of their use, so we won’t look at any examples right now.

Information technology

Two watchwords for the twenty-first century—information and technology. Information technology is primarily manifested as systems, including the interface design, functionality, and information provided. In many cases, the interface includes embedded devices, remote sensing, smart cards, or other technologies unimagined a decade ago. The resulting systems have become critical to businesses at all levels; in many cases, the system is the business process.

You must consider the old and the new. What’s old and doesn’t work. What’s new and might work, or has become a necessity. ATMs did not exist two decades ago, but they became a competitive advantage, and then essential—no retail bank would retain its customers without ATMs. The same is true of e-mail and voicemail—they went from nonexistent to essential in a few years. Computers are essential to many companies, and the Internet is not far behind. Cisco Systems processes three-quarters of all orders untouched by human hands. Charles Schwab’s major competitor is not other traditional brokers like Smith Barney any more, it’s Internet day trader companies.

And computer systems have no lack of downright dumb designs. Unintelligible error messages, confusing layouts, and navigational dead ends are distressingly common. A misplaced concern with machine efficiency has led to many of these: “the greatest programming sins have been committed in the name of computer efficiency.”

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**Case Study: Numbers Efficiently Inefficient**

In one case, numbers were substituted for mnemonic letters for the coding of ships in the computer system at a transportation company on the advice of a major accounting and consulting firm. This was in the mistaken belief that “computers are more efficient with numbers.” The ship President Kennedy that might have been coded JFK became the 311, and the President Roosevelt, that might be the FDR, became the 113. You can imagine the human and machine time lost to correct items from the Kennedy that were accidentally placed on the Roosevelt—errors that had never been seen when the letter codes were used. And of course Y2K [2], is the classic example of mistaken efficiencies. Although it is true there was once a good argument for storage savings, two-digit years continued to be used long after that argument held.

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2. In fact, both codes were stored as Cobol Picture X, which means they were characters to the computer and treated exactly the same in any event.
We not only need to do things right, we need to do the right thing. Many application development projects automate the root cause of a problem, for example, batching, a poorly designed workflow and its paper forms, or an unused report, thereby making it even harder to fix. As always, it's useful to look at a question from multiple perspectives. In this case, the bottom four tiers of our five-tier framework provide a useful guide. From the bottom:

1. Is the right data maintained in the record-keeping (data management) layer, and is the right information being captured from and presented to each step that receives automated support?
2. Are the right activities automated, or receiving automated support?
3. Are the user interfaces, including passive reports or queries, appropriate for the task and for the person using them?
4. Is the flow of work automated (and instantaneous) wherever possible and appropriate?

Motivation and measurement
This enabler includes how people are motivated to perform in a particular way, and how they are measured, which effectively become one and the same thing. C. R. Luigs, the former CEO of Global Marine Drilling, once said something to the effect that people don't pay much attention to what management says; they pay attention to what management measures. Measurement brings with it reward and punishment, which of course people respond to. Within the scope of this enabler, we also include how the process as a whole is measured, if it is at all.

We will spend a little more time on this one, because this is the most important enabler. As long as the other enablers are even barely adequate, this has the most impact on the performance of the process performers. In turn, if this impact is properly directed, it will have the most impact on process performance. We will look at a few examples of how the motivation and measurement schemes affected process performance:

1. At a major metropolitan radio station, sales representatives are measured and rewarded, via the commission check, for the number of ad orders they get. They are not measured (or "punished," via decreased commissions) for errors in the order specs or pricing, nor are they measured on timely submission of ad orders for production. The consequences are predictable: late, incomplete orders. If there were measurements and rewards in place for landing new customers and for timely submission of ad orders, their behavior, and therefore the behavior of the whole process, would be different. As long as it is adequate, and doesn't distort behavior as it did in this example, nonmonetary measures are usually more important.

2. In one of our favorite examples, seen with minor variations at two different telecommunications corporations, an elaborate new customer service process was implemented, along with supporting information systems. The plan was that this would enable customer service representatives (CSRs) to better deal with the customer's issue, and more important, to "up sell," "cross sell," or even "down sell" service packages or options. Unfortunately, the effort failed because the company didn't change two key motivation and measurement factors. They continued to penalize CSRs who spent more than 120 seconds on a call (guess how many calls were abruptly—sometimes in mid-sentence—terminated just before the magic 120-second mark). And they continued to pay the CSRs a clerical salary, even though they had to go through extensive sales training to meet their new responsibilities, and were under substantially higher pressure.

3. An internal Quality Control group was measured on the number of defects they discovered. Naturally, no matter how much the rest of the process improved, this group managed to find an ever-increasing number of defects, each of which introduced delay and expense in dealing with it. Copyeditors who are paid or rewarded based on the number of changes they make to an author's manuscript are also an example of this problem.

4. An IT executive once complained to one of us about the poor attitude of the company's Computer Services group, who were responsible for installing and tuning new database applications in a large, high-volume, transaction-processing environment. His complaint: These people seemed to be determined to prevent the
implementation of new applications that were essential to the business plans of the corporation. Their uncooperative attitude became a lot clearer when it was pointed out that these folks were measured on two, and only two, variables: system response time and system up time. Statistics were captured, charted, and distributed to the entire corporation on a daily, weekly, and monthly basis. And what’s the surest way to negatively impact response time and up time? You guessed it—install a new application.

Obviously, the question for you is whether the measures of the performers support or impede process goals. This doesn’t mean that the new process can simply replace individual measures with process measures—designing a new measurement scheme is subtler than this. Deming warned against mixing performance indicators for the process with evaluation measures for the workers. Just about any crude measure can be a good measure, and adequate to evaluate a process. The danger is when you start motivating individuals based on it. It skews numbers, and ruins the measure. Workers will perform to the measure, not the process, and may even cook the books. Worse, you will skew behavior adversely. Goldratt tells a story of a group that threw out some old machines because of “bad efficiencies” when they were still critically needed to keep production going. And we have all heard of the problems caused when there are incentives to pump up orders close to the end of a financial quarter—too many of them turn out not to be true orders, or orders stolen from coworkers.

Human resources
How do organizational structures, job definition, and skills impact the process? Organizational boundaries may introduce handoffs or segmentation that’s undesirable, in the same way that excessively narrow job definitions can. Are people struggling to handle tasks for which they have no training, or worse yet, no natural aptitude?

Looking ahead, will the workforce need to change? Sometimes the only way to change people is to change people. Will new staff skills, training, and job responsibilities be required? Will selection and placement strategies need to change? Will the organizational structure and physical location of the new process be different from the old? Anything that impacts people’s definition of themselves (“I am my job”) or their network (peers, customers, suppliers, managers, direct reports) can be amazingly disruptive. If redeployment or layoffs might result from your new process, you might face severe morale and then productivity impacts throughout the organization, not just in the process you’re working on. Make sure these concerns are addressed honestly and compassionately.

Don’t forget the labor unions. In unionized companies, keeping the union involved can be critical. In some airlines and transport companies we’ve worked in, the work rules were positively Byzantine, impacting the ability to respond to short-term opportunities or temporary changes in conditions. These rules cannot usually be changed without union agreement. You’ll need to take into consideration the effect of shifting work from one union to another, or changing the work of the individual workers, especially if it reduces total employment of a union’s workers.

Policies and rules
Processes are usually guided by business rules and policies, many of which are now obsolete or for which the original rationale is long since forgotten. Some of these business rules are insidious because they are implemented in systems, while others are implemented in the workflow where they are more visible. “Bad” rules have an effect, because they need to be maintained, make jobs more complex, frustrate customers, and slow down the process. For some examples, just pick up any of Scott Adams’ Dilbert strips.

These rules and policies don’t exist in isolation—they reflect the bias of the organization, or at least they did at one time, and they impact process workflow, IT, and other enablers. For instance, a retail operation might have a bias towards customer service on one hand, or fraud prevention on the other. This will surely lead to different rules, and in turn different workflows. We’ll examine this a little more when we look at the environment in the next chapter, but for now, consider a couple of cases.

In our example of the retail operation, there could be a policy that “refunds up to a certain amount can be handled by a sales associate on the retail floor, at their discretion, whether or not the customer has a receipt, and even in cases where we don’t carry the product in question.” This will have a very different effect than a policy that “all refund requests must be accompanied by a sales receipt and a completed refund reason form; they will be processed by the customer service and AP departments, and a check will be mailed.”

Another example would be “requisitions over $1,000 must be approved by a department head, and requisitions over $5,000 must be
approved by a department head and a vice president.” Both rules manifest themselves in the workflow. These are typical examples of the kinds of rules that are in place. They degrade the process, because the system developers have to know all these, and system changes become a nightmare because the code is unbelievably complex. Customers are frustrated because they never get consistent answers, and so on. Imagine some of the rules in place at your government agencies for taxation, social welfare, and so forth, and imagine the impact on process workflow. In some government agencies we’re familiar with, no amount of process redesign can improve customer service above a certain level because the rules established over the decades by successive governments are collectively incomprehensible, inconsistent, and incredibly difficult to implement and maintain.

Facilities
At last, workplace design and physical infrastructure (equipment, furniture, lighting, storage, ventilation, and so forth) is getting more attention. Many offices seem to be designed for anything but getting work done. In fact, for much of the activity in a contemporary organization, you could not design anything worse than a cubicle. There’s too much noise and interruption for work requiring intense concentration. A one-on-one meeting or telephone conversation requiring privacy is equally hopeless; the cubicle gives the illusion of privacy, but no privacy—everyone can hear your conversation, but since you can’t see them, you’re worse off than if you were in the open. And in the age of highly collaborative group works, where discussions and meetings take up most of the day, the cubicle is useless. Meanwhile, the universal shortage of properly equipped meeting rooms continues to grow.

DeMarco and Lister talk about the “Furniture Police” and point out, “...for most organizations with productivity problems, there is no more fruitful area for improvement than the workplace. As long as workers are crowded into noisy, sterile disruptive space, it’s not worth improving anything but the workplace.” They talk of workers who come in early, stay late, or even call in sick in order to get work done [3]. Space, quiet, privacy, and the ability to avoid interruptions are key productivity enablers that are frequently ignored in modern office layouts.

From what we’ve seen, you can design and redesign workflows and information systems until the proverbial cows come home, but if you don’t address the other four enablers—motivation and measurement, human resources, policies and rules, and facilities—it’s all for naught.

Establishing rationale and direction
Everyone involved and affected needs to know what the project is planning to do, and why. That is really all we are going to do here—tell them. And, by making the reasons and goals of the project visible, we will tap into valuable feedback. The _process case for action_ is a concise statement of why the current process cannot be left as-is, and the _process vision_ articulates the goals for the to-be process. With minor variations, we follow the simple format first described by Hammer and Champy in [4]. Even though they are simple and short (both can fit on a single page), they are extremely useful in uniting people behind the goals of a process improvement project. Of course, at this time it’s a good idea to assess whether the project is even feasible or desirable and make a go or no-go decision.

A case for action
Remember the question “Why are we looking at this process, anyway?” —the case for action gives the answer. It is essentially a problem statement, or rationale of what must change and why it must change. The larger and more entrenched the process is, the more essential this step. A good case for action will force an honest appraisal of the current situation—you’re trying to sell the project to many people who’d rather not deal with the stress of change, or who honestly think things are fine the way they are. The case for action, as its name implies, encourages movement because it clarifies where you are, and why you can’t stay there. It’s persuasive, even gripping, but it must also be factual and unexaggerated. Otherwise, your audience will recognize that and discount the project accordingly.

The case must lay out each of the following five points—you can’t skip any since the logic will be incomplete if you do. Fortunately, you did a lot of the work when you assessed by stakeholder.

1. _Business context_. What are the changes in the environment that make it necessary to change now? If you have gotten along the old way since the founding of the company, why must you change? Note that we’re focusing attention externally, and asking what factors _beyond our control_ necessitate change. This is crucial because the effect is that you avoid seeming to blame the current performers or managers. Remember, you must be careful how you describe shortcomings in the process—today’s senior managers might have been the process designers! Besides, the process may have worked
just fine when it was implemented, but the environment has changed around it. Perhaps a new Internet-based competitor is gaining market share, or foreign competition is making your price unappealing, or employees are leaving for start-ups, or your business has grown tenfold, or you used to be a division of a conglomerate but now are a separate company.

2. External problems. Using the assessment you just completed, what are the problems perceived by the customers or other external stakeholders such as suppliers or regulators? What new requirements are you unable to meet?

3. Internal problems. In the same vein, what problems and unmet requirements are described by internal stakeholders, process performers, and owners/managers?

4. Diagnostics. What causes the problems you are facing today, and what can you change to eliminate them? Admittedly, this might require deeper investigation, and discovering root causes might become one of the goals of your project, but if you can make some inferences as to causes, you'll be ahead of the game.

5. Consequences of inaction. Perhaps most importantly, what will happen if no action is taken? What will happen if you don't do anything? As we've discussed earlier with respect to kaizen, in the competitive economy of today, companies that don't continually adapt and improve face the real possibility of extinction.

A vision
You need to articulate your vision of the new process for all to see. By its nature, the vision is a little fuzzier than the case for action. At this point, we can really only provide an image without detail, although we want to be as specific as possible. Some aspects of the vision are easy to produce, because they are simply the opposite of the assessment that was summarized in the case for action. That is, the vision will describe the perceptions of the stakeholders—the customers, performers, managers, suppliers, and so on—after the new process is in place. On the subjective side, it will also provide an image or feel for what you need to become—the kind of organization you'll be, how you'll operate, and how people will feel about being associated with it. As Hammer and Champy point out, a great vision will complete the phrase “won't it be great when...” Try to be quantitative as well as qualitative—for instance, how will you measure success, and what is the time frame for achieving it.

Another element that's extremely useful is the strategic differentiation of the process. What you're looking for is the answer to the question "Why choose us?" Assume that your process customers could select among several competing processes. You must be able to articulate what would make them select your alternative. Will your process be more flexible, more cost-effective, more convenient, more able to customize the product or service, or what? As it turns out, all processes need to have a style, and knowing this can have a profound effect on design choices later on. This is called "the improvement dimension," because it's the dimension or aspect of your process that will always take precedence when designing improvements. If you're interested, refer ahead to the section in the upcoming chapter.

And finally, don't promise (too much) more than you can deliver. Here's a sample from the "approve customer credit request" process we mentioned earlier:

Case for action
Our Credit Approval process has become a liability. We are now losing market share to our competitors because they can offer fast, hassle-free credit to new or growing customers. Our credit reps spend most of their time on applications from small customers, who generally pose no credit risk; and little time on large applications, where their expertise is really needed.

The specific failings of the current process are that approval takes far too long (up to seven elapsed days), we can't tell the customers where their application is in the process, we have to go back to the customers for additional information, and our most senior resources aren't used where they are needed most.

These deficiencies stem from a paper-based workflow that involves many departments and many stops and starts, policies that force all applications through the same process, and incomplete initial data capture.

Unless this process is improved, our market share will continue to decline until we are forced to withdraw from the market.
Vision
Small customers will receive instant credit approval, up to a predetermined limit, secured by a bank card. Further credit processing will take place after the customer has been set up to place orders. Applications involving higher credit limits will be handled within two days.

Automated support will be developed to provide improved communication with customers, track current applications, and provide supporting information.

Credit administration clerks will receive additional training to enable them to handle smaller applications in their entirety. Credit representatives will spend the majority of their time on applications from large customer and other high-value activities.

Staff will have more responsibility for and control over their work. All customers seeking initial or additional credit, whether large and small, will perceive us as the most responsive supplier, and the easiest to do business with.

One poster is worth a thousand words

Summarizing findings
Now that you know what you are going to do, and why, it is time to evangelize—to go on a road show to explain it to all concerned individuals. A useful tool is the process summary poster, which takes the main elements of framing the process, the case for action, and the vision, and puts them on a single piece of paper or image. The reasons to do so are threefold:

1. A certain percentage of people you need to reach are not going to read more than a one-pager anyway.
2. If you provide contact information, it can encourage valuable feedback.
3. If it's well done, it will be posted in cubicles, halls, notice boards, Web pages, and meeting rooms, where it will help to keep participants on track and in scope.

Prepare your poster in a professional manner, and then distribute it far and wide. Variations on the quadrant format in Figure 6.1 work well. Note that in the lower left, we've listed actors and mechanisms—the systems,
forms, reports, and equipment that support the process. Sometime, we have listed potential enablers (possible improvements) instead, to trigger discussion, but in many environments, it’s a bad idea. It can stir up fear and uncertainty, and give people the idea that the outcome is decided, so there’s no point in participating. On balance, we’d stick with actors and mechanisms, or whatever factors are relevant in the situation.

Where to now?

Now that we’ve framed the process, we could move on to studying the current process in detail so we have the understanding to improve it appropriately. That’s the goal of Part III.

However, before we get to that, it would be wise to go through one more step, which could have gone just about anywhere up to this point. Just as we assessed the process, we will assess the environment within which the process operates. That way, we will know which factors are beyond the control of the process team—issues such as culture, beliefs, mission, and corporate strengths and weaknesses.

References


Considering the Environment

_Everything is deeply intertwined._
—Ted Nelson, inventor of hypertext

_Time for a front-end alignment._
—Anonymous mechanic

_Everything is connected to everything else._
—The First Law of Ecology

Why bother?

We’ll try to keep this short, because when the discussion turns to “squishy” topics like culture, mission statements, and corporate values, a few eyes are certain to glaze over. We notice this especially in our more technical or detail-oriented friends, the ones likely to fidget uncomfortably while the earnest HR executive proudly unveils “our latest statement of vision, values, and aspirations.” To be sure, too much posterware, shelfware, and meetingware has been produced around topics like these, but the fact is, they do matter to the business of process improvement. A process that is designed without regard to the skills, attitudes, and behavioral norms of an
organization will fail just as surely as one with a poorly designed workflow or information system. A few examples usually have even the hardest-headed technicians nodding in agreement—here is an obvious one that comes to mind:

An example

A consulting firm spearheaded the development of a new process for resolving disputes at a government licensing organization. The bright, young consultants working on the project were inexperienced in the ways of large government organizations, but were convinced, having just taken the course, that empowered work teams were the way to go. That became the basis for the new process, which was a complete failure. The process design looked just fine, but it was totally at odds with the culture of the agency. People were used to working alone, applying very prescriptive policies in narrowly defined jobs, under close supervision. There was nothing in their background that would prepare them for working collaboratively on creative solutions that do the right thing for all stakeholders. These were all intelligent people who wanted to do a good job, but you can’t just sweep away the conditioning that comes with 10, 20, or even 40 years of working in a particular environment. Perhaps the Change Management course the consultants had been on did not make clear just how difficult issues of culture really are. Just as ineffective are processes that don’t align with the strategy and goals of the enterprise, but we will skip further examples for now.

What we will cover

This chapter covers an array of topics, showing how to identify the basic issues of environment and culture that will affect a project. We will cover:

1. Mission and strategy, especially strategic differentiation;
2. Organizational culture;
3. Core competencies;
4. Miscellaneous questions for establishing business context and focus.

The thread that unites these topics is that they look outside of the process. They encourage a little soul searching and investigation so you understand the business environment, and how your project will help your organization achieve its goals. Having process goals is vital—to get where you want to go, you need to know where that is. But you also need to know what support and resistance you’re likely to encounter along the way, the skills and attitudes of the people you are working with, and the grand scheme into which your process will fit.

These topics will be critical when you get to process redesign and implementation, but also in earlier stages. They provide a context for establishing process goals, and are essential for understanding the current process. For instance, a process design feature that would make no sense at all in one organization may prove to be the best choice at another.

Because there isn’t a specific point in our methodology where you will “study environment,” we had trouble placing this chapter. That reflects how you will use this material on your project—not at a single point, but as questions that you’ll keep in mind throughout, recording information as it arises. In Chapter 3’s overview, we suggest looking at the mission and strategy of the enterprise while framing the process, and then documenting culture, core competencies, and strategic discipline while understanding the as-is process. The information you gather will be critical when you are characterizing the to-be process, when improvement suggestions have to be evaluated in the context of skills, culture, goals, and so on. If you are familiar with the organization (e.g., you work there), you will be able to document the environment earlier in the project. If you are new to the organization (e.g., this is your first consulting assignment there), you will do this later after you have had more exposure to the environment.

And now, the disclaimers. Each topic could span volumes on its own, so our brief treatment will not be at the level you’d get in, say, an M.B.A. class on strategy or organizational development. And we’re not pretending to be experts in these areas—we barely qualify as dilettantes. We can, however, say that the simple questions and frameworks provided here have helped immeasurably in guiding us on process improvement, application development, and other consulting assignments.

Mission, strategy, and goals

Business mission, strategy, goals

In general, what you need to know is why the business exists, what it hopes to achieve, and what it will do in order to hit those targets. This is a broad
area, and many terms and concepts arise: mission, mandate, values, vision, goals and objectives, strategy and tactics, critical success factors, differentiation, stakeholder analysis, shareholder value, and so on. We will just provide an indication of the main questions that need to be considered, for two reasons:

1. The project team must share a clear understanding of the mission, strategy, and goals of the enterprise that the improved process must support.

2. Each individual process has its own mission, strategy, and goals, which also must be articulated, clearly understood, and aligned with those of the enterprise.

Now, let’s get a little more specific with our terminology.

**Mission**

The mission articulates why the business exists in a more specific way than make money, fulfill legislative mandate, or promote special interests. In their Articles of Incorporation, corporations claim their purpose is “to engage in any lawful act or activity for which a corporation may be organized under the Law,” but whether stated explicitly or not, every organization exists to do some things, and, just as importantly, not others. The essence of the enterprise’s mission is a statement of “what we do, and who we do it for”—specifically, the products and services provided and the markets and customers served. There may also be an indication of the style in which the enterprise conducts business, or there might be a specific statement of style for each stakeholder group: customers, employees, owners, investors, communities, and so forth.

**Strategy**

Closely related to the mission is the way we define strategy, which is the specific competitive space the enterprise intends to occupy. Any enterprise should ask itself the following questions: Why would a customer choose us in the face of similar offerings? What strategic discipline do we use to differentiate our products and services? Is it low price, convenience, flexibility, innovative products, or what? Without knowing the answers, how can you focus your business processes? Surprisingly, we can also apply this concept in monopolies and government organizations where there doesn’t appear to be a choice. We also use it in specifying the improvement dimension or philosophy for individual processes.

**Goals**

In order to focus its efforts and gauge its progress, an organization will establish goals (overriding performance targets) and objectives (intermediate targets). Try to make these as specific as possible, using the topic, target, time frame framework mentioned earlier.

**Applying MSG to your project**

Mission statements come in all styles and formats. Some follow the format we suggest, and others are very different. Here are a few examples that get their point across nicely, even if they don’t follow the format we suggest:

*Bill Gates: A computer on every desk running Microsoft software.*

*Infantry: Seek out, close with, and destroy the enemy.*

*Intel: Do a great job for our customers, employees, and stockholders by being the preeminent building block supplier to the worldwide Internet economy.*

Your organization may have a well-formulated mission statement, one that is too ambiguous to be useful, or none at all. The actual mission statement is not as important as knowing what your enterprise is all about, and what differentiates it from others. Using whatever resources are available, your team has to be able to answer the following questions:

1. “Which customers or markets do we—or should we—serve?”
2. “Which products or services do we—or should we—serve them with?”
3. “What differentiates us?” or, more clearly, “Why choose us over competitors or alternative providers?”

Given that there probably is not a lot of confusion over services and customers, our interest is primarily in the third question, “Why choose us?” which is the essence of strategy. Different strategies call for entirely different processes, with very different characteristics. The underlying
information systems will also require different characteristics. Consider a couple of examples:

1. Two organizations were each in the business of providing corporate training, and many individuals have attended workshops and seminars from both. However, they were highly differentiated. One was a mass-marketer of $99-a-day seminars for administrative and support staff, while the other specialized in developing and delivering customized training for high-tech sales forces.

2. Two transportation companies were headquartered in the same West Coast city, and other than ostensibly being in the same industry, that was where the similarity ended. One specialized in cross-border trucking of agricultural products. The other specialized in “secure, discreet, worldwide” handling of small shipments—not necessarily fast, but secure from the prying eyes of competitors.

In both cases, the organizations were in the same industry but they certainly weren’t in the same business. And of course, they had totally different business processes operating with totally different styles.

**Strategic discipline**

A particularly useful framework for looking at this issue was provided by Treacy and Wierema in [1]. In studying the leading companies in a variety of industries, they discovered that the leaders had specifically chosen to excel in one of three disciplines. The “also-rans” had made no such choice, or tried to be great at all three. The choices are:

1. Operational excellence—Wal-Mart strives to provide the lowest cost product and convenient shopping experience through efficiency of operation.

2. Product leadership—Sharper Image provides a variety of leading-edge specialty and electronic products.

3. Customer intimacy—Nordstrom spends time with each customer to ensure they get what they need or want, and will tailor the shopping experience to individual customers.

Table 7.1 summarizes the three disciplines [2]. Market leaders choose one discipline to concentrate on, and build around it. Of course, organizations should be good at the other two as well, but it is important to understand it is not possible to be great in more than one discipline at a time, and certainly not all three. By knowing which discipline they are focusing on, organizations have a wonderfully clear signpost for decision-making. This is another concept that applies to the enterprise but scales down nicely and applies to individual processes. Understanding the intended strategic discipline of a process makes design decisions far easier; otherwise, discussions can go back and forth endlessly. That’s what had happened in the following example.

**Table 7.1**

**Strategic Disciplines**

<table>
<thead>
<tr>
<th>THE THREE DISCIPLINES</th>
<th>Operational Excellence</th>
<th>Product Leadership</th>
<th>Customer Intimacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core business processes that...</td>
<td>Sharpen distribution systems and provide no-hassle service</td>
<td>Nurture ideas, translate them into products, and market them successfully</td>
<td>Provide solutions and help customers run their business</td>
</tr>
<tr>
<td>Structure that...</td>
<td>Has strong, central authority and a finite level of empowerment</td>
<td>Acts in an ad-hoc, organic, loosely knit, and ever-changing way</td>
<td>Pushes empowerment close to the point of customer contact</td>
</tr>
<tr>
<td>Management systems that...</td>
<td>Maintain standard operation procedures</td>
<td>Reward individuals' innovative capacity and new product successes</td>
<td>Measure the cost of providing service and of maintaining customer loyalty</td>
</tr>
<tr>
<td>Culture that...</td>
<td>Acts predictably and believes &quot;one size fits all&quot;</td>
<td>Experiments and thinks &quot;out of the box&quot;</td>
<td>Is flexible and thinks &quot;have it your way&quot;</td>
</tr>
</tbody>
</table>

1. By the way, this isn’t a "forever" decision—at least one of our clients had clearly mastered one of these disciplines, but in a maturing market has chosen to excel at another.
Strategic discipline in action

We had an experience with a large medical services organization where a major reengineering project had stalled. We were called in to determine what caused the decided lack of progress on the project. The first day, suspecting conflicting goals were a factor, we took the project team through an explanation of the three disciplines, and then asked, “Which of the three disciplines has your organization historically concentrated on?” There was unanimous agreement—product leadership. There was also unanimous agreement the focus had to change as a result of market pressures and government regulatory involvement, and the new, core process they were working on had to stress the same discipline. However, exactly half the team felt the new concentration should be operational excellence—provide standard health care as consistently and cost-effectively as possible. The other half felt it should be customer intimacy—provide the most flexible, personalized health care for each individual patient. As they say in the consulting business, “Sometimes you earn your pay the first day.” Without further prodding, it was obvious to everyone why the project was stalled—every proposed feature of the new process seemed to yield a discussion that went around in circles, back and forth, over and under, but never towards a decision. There had been such poor progress on the project because the goals were essentially at odds with themselves.

If your project team does not agree on the project’s strategic goals, some or all of you will be disappointed in the results. If your differences are great enough, the entire project will likely fail as you tear it apart pulling in opposite directions.

If this topic interests you, you owe it to yourself to read [3]. It takes a long-term look (often spanning more than a century) at pairs of companies in the same business that were once in similar circumstances but where one is now far more successful. This book has been able to isolate a number of habits or behaviors of the great companies that are consistent across time, industry, and geography.

Faster, cheaper, better, or what?

This is a good place to address one of the most common mistakes we see, because it relates directly to the differentiator or style of a process. That mistake is assuming that the goal is simply to make the process faster and cheaper. However, like quality, that’s almost a given. Don’t assume that your goal is necessarily to lower costs, increase efficiency, and reduce cycle time. That might be the goal, and in some projects, it is the goal. But in many competitive environments, simply doing the same thing faster and cheaper will not make anything better. Even the most efficient blacksmith shops have been unable to thrive since the appearance of the automobile—don’t buy a new bellows when you should get a gas pump! If your competitive environment has changed drastically, you might need to fundamentally rethink what you are doing, not just how you are doing it. A process that does the wrong things faster doesn’t really help—we don’t need rack-and-pinion steering and disk brakes on the horse buggy.

One of our colleagues has recently encountered two situations where the goal was to increase cycle times. Both were in similar areas—legal settlements and arbitration—and both had recently been the subjects of a process redesign that squeezed the cycle time down to the minimum. Unfortunately, the professionals involved also found out that the think time and cooling-off time had been squeezed out as well. As often as not, this escalated the dispute to the point that it actually took longer than it would have before the redesign, and participants were less satisfied with the outcomes! A classic example of haste makes waste.

Along with faster and cheaper, other process improvement goals that we have seen include:

- Flexible in meeting needs of individual customers;
- Easier for an entry-level workforce to adopt with relatively little training and support;
- Fewer customer interactions;
- Absolute auditability and adherence to applicable regulations;
- Accessible anytime, anywhere, via any medium;
- Easier to standardize and maintain at international locations;
- Less time and effort to integrate new suppliers or customers into the process;
- More suitable for support by commercial off-the-shelf (COTS) software.

2. Actually, only one of us was involved, but we will use the royal “we” in this tale, and throughout the book.
So, you must set aside the notion that squeezing time, cost, and effort out of the process is automatically the goal, and identify the differentiator or strategic discipline for the process that best fits the enterprise’s mission, strategy, and goals. Then ask, “What specific process characteristics will yield a significant advantage in achieving this differentiation?”

Think about a process you work with. Does it have a clear differentiator? If so, is it appropriate for current conditions, or should a new focus be established? And finally, what process characteristics (think in terms of the six enablers) would be most helpful?

Of course, once you have established the initial goals, you have to make success measurable by establishing relevant goals in topic, target, time frame format. For instance, for the goal of integrating new customers or suppliers, we would expect to see a goal that quantified how long it will take to integrate a new customer, and when that goal will be achieved.

Beliefs and culture

Another huge topic we’ll reduce to a few paragraphs and a list of questions. Let’s begin with a definition—French and Bell offer a good one: “By...culture...we mean prevailing patterns of values, attitudes, beliefs, assumptions, expectations, activities, interactions, norms, and sentiments (including feelings) and as embodied in artifacts. By including artifacts we include technology in our definition.” [4] All organizations have a culture, whether it is explicitly stated or unconscious. You might regard it as negative or positive, as did one client who stated, “At our organization, culture is spelled with a K.” In any case, you ignore it at your peril.

We have already given an example where a process didn’t match the culture or skills of the organization, and therefore failed. But cultural misalignment can derail a project well before then. If the methods you employ in a project don’t match the culture of the organization, any number of problems will arise. For instance, in one organization, it was a career-limiting move (CLM) to disagree publicly with anyone further up the hierarchy, even if everyone present knew that a statement was patently untrue or sheer fantasy. Clearly, the extensive use of facilitated sessions that we generally rely on was not going to work.

In a similar situation, one of us made a misstep that almost resulted in a project being canceled. A vice president of operations was in attendance, and everyone else seemed to be particularly docile. The vice president then made a statement that was so clearly wrong-headed, we thought he must have made it in order to stir up some discussion. We obliged by offering some alternative ideas. Whoops—wrong move. The vice president exploded in anger, and began walking out after noting, in colorful language, that the project ought to be canceled if we couldn’t get our heads screwed on straight. Only a brave finance manager was able to calm him down. But in another organization, youthful and high-tech, with an almost opposite culture, we were initially startled by the constant challenge of ideas by everyone at a project initiation meeting, no matter whose idea it was. Again, that was just the culture in action—challenge, sometimes for its own sake, was considered the best way to develop the best ideas.

Clearly, culture has a huge impact, and—let’s face it—it’s not going to change without a huge effort championed by the most senior executives. So, you should take at least a few minutes to describe it. Not a big study—in some cases, a mere 30 minutes of work is all it takes to get real benefits. Sometimes, there’s a bit of a chicken-and-egg situation—if you’re an outsider, you need to know something about the culture before you can decide how to go about discovering it. If so, observe for a while or arrange a discussion with a few trusted insiders. Then, based on your findings, you might either arrange a session with your project team or conduct a series of private interviews. In either case, don’t fall into the trap of believing, without verifying, official statements on the subject. We worked with an insurer that professed to have “an open, inclusive culture that embraced informed risk-taking and valued the ideas and contributions of all...” As it turned out, it was a risk-averse, exclusionary, command-and-control hierarchy that wanted everyone to keep quiet and do as told.

Everything stems from beliefs

Behavior at the aforementioned organization was motivated by a small number of central beliefs, including “management thinks, workers do.” We find time and again that organizational behavior—what it does and how it does it—stems from a few basic beliefs, which we can also call assumptions or paradigms. Identifying these assumptions is so important that Chapter 1 of Peter Drucker’s recent book [5] is “Management’s New Paradigms.” The first paragraph states: “BASIC ASSUMPTIONS ABOUT REALITY are the PARADIGMS of a social science, such as management. They are usually held subconsciously by the scholars, the writers, the
teachers, the practitioners in the field. Yet those assumptions largely determine what the discipline—scholars, writers, teachers, practitioners—assumes to be reality." Drucker goes on to explain about paradigms: "They decide what a given discipline is being paid attention to and what is neglected or ignored." And most important to our point here—"Yet, despite their importance, the assumptions are rarely analyzed, rarely studied, rarely challenged—indeed rarely even made explicit."

Drucker is dealing with the entire discipline of management, and outlines seven prevailing assumptions that need to be challenged. Our focus is a little narrower—make explicit whatever beliefs, guiding principles, or paradigms you can at the organization you are working within. This shouldn’t be—it can’t be—a major undertaking that distracts from the purpose at hand. But it will indicate areas of opportunity or constraint. If some of the beliefs are "there’s always a better way," "we have a bias towards informed action," and "decision-making should be close to the action," then you are looking at an interesting project with many opportunities.

On the other hand, at one organization we ran an executive planning session, and the beliefs that emerged were "our clients are trying to cheat us, the public misunderstands us, and the media is out to get us." Unstated, but evident, was "and our employees couldn’t care less." Whew! That certainly constrained the improvement options. At another session, the guiding principle was that above all, process and procedure (in the negative sense) had to be followed. That meant everyone could be engaged in the proverbial death march towards certain failure, and fully aware of it, but that was fine as long as protocol was obeyed.

Other cultural traits
After you have considered the issue of beliefs, you can ask a short list of questions to identify cultural traits that will impact both the methods you use on your project, and the characteristics of the new process.

1. Are there stories or corporate legends that provide instructive examples? These might not be the stuff of Greek mythology—perhaps it's the tale of the killer product developed in the skunk works, but it just as well could be the story of Ernie working all weekend, writing checks by hand, to get the payroll out after a catastrophic system failure.

2. What factors continually get in the way? Examples that we have encountered include the slow pace of decision-making, political interference, the motivation and reward system, fear of change, a headlong rush to action, or the urge to study every point to death.

3. What factors are seen as expediting progress? This is often a shorter list than the preceding one, but might include being free to make the right decision to satisfy a customer, never focusing on the short term at the expense of the long term, or always being given adequate time, resources, and authority to complete a job.

4. How are decisions made? From the top, as in the classic hierarchy, or is there more empowerment? And is there a greater emphasis on intuition or facts?

5. Are all employees free to offer opinions or challenge decisions made by their managers?

6. Is the orientation towards the individual or the group? This can have a huge impact on the pace of decision-making—in some group-oriented organizations and cultures, progress can seem glacial because every decision requires soliciting everybody’s input or calling a meeting. On the upside, rash decisions made without critical information can be avoided, and once a decision is made, it is implemented smoothly.

7. Whose opinion is valued? In one company we worked at, we were reminded daily that "We’re a marketing organization," and those who were close to customers and markets were the opinion leaders. At a different, techno-centric organization, we were told, "The geeks shall inherit the earth."

8. Are there any identifiable behaviors that are rewarded or punished? Note that reward (like punishment) can be explicit: positive job evaluations, promotions, raises, awards; or implicit—praise, attention by management, input solicited for decisions, plum assignments.

9. Is there a high tolerance for ambiguity? If there is low tolerance, then activities must be tightly scheduled, jobs well defined, lots of facts assembled for decisions, and so on.
10. Does the organization favor results or following procedure?

11. Is the organization cautious or will it take risks? Collins and Porras note that one of the habits of visionary companies is that they set BHAGs—Big Hairy Audacious Goals.

12. Is the emphasis on relationships and social interactions, or on tasks and getting on with the job?

You do not need to answer all of these, and they are not the only questions. After you get a feel for an organization, use this list as a starting point to develop your own inquiries.

**Core competencies**

*What are we really good at?*

C. K. Prahalad and Gary Hamel introduced a new phrase—core competencies—into the language of business in their landmark *Harvard Business Review* article [6]. In it, the authors demonstrated that world-class organizations had up to five or six core competencies that formed the platform on which their core products and services were based. Some of their observations parallel the advantages of process-orientation over functional-orientation:

- “Core competence is the collective learning in the organization, especially the capacity to coordinate diverse production skills and integrate streams of technologies. It is also a commitment to working across organizational boundaries.” And...

- “Organizing around strategic business units is problematic because they under-invest in core competencies, imprison resources, and bind innovation.”

A good example is 3M, with products like Scotch tape, Post-Its, diskettes, sandpaper, and many others that are thin and involve coatings. 3M’s core competencies, as described by Hamel and Prahalad, are:

- Substrates;
- Coatings;
- Adhesives.

Canon’s core products are based on core competencies in:

- Precision mechanics;
- Fine optics;
- Microelectronics.

Again, we will take a concept that applies at the enterprise level and scale it down to the level of processes or areas within the enterprise. The people, departments, functions, and jobs that will “work” the process have areas of strength—core competencies. We remember the CEO of a manufacturing company bemoaning, “I don’t think we have any core competencies,” but he was wrong. Even in widely criticized government organizations like the one cited at the beginning of this chapter, there are areas of strength. In that case, it was high-volume transaction processing, as long as the right transaction got to the right job function. They were also very good at internal administrative processes. That was not likely to change in our lifetime, so the only sensible path was to design processes that played to the strengths of the performers and minimized the impact of weaknesses.

As in the section on culture, we suggest developing an explicit list of strengths (and weaknesses, if you’re feeling brave) for the areas your process will span.

**Some questions to get started with**

**While we’re on the topic of making lists...**

As you can tell, we love frameworks and lists, especially at the outset of a project. They certainly aren’t the only questions we ask, but they help to get the conversation started and to be sure we cover the bases. So, whether you are experienced or not, you might find some interesting ideas in two additional lists, both of which fit in here because they help to understand scope and context for your project.

**Questions for establishing scope, objectives, and constraints**

This next one is our default list of questions for getting started on a new development project. It started as seven questions to start a project—we analysts are always trying to get things into lists of seven—but it has grown over the years:
1. What is the primary business objective driving this project?
   - Business improvement, regulatory compliance?
   - How will benefits be measured? Using the topic, target, time frame method, for example, "throughput time will be reduced 25% within six months of implementation"?

2. What is the current situation?
   - Is there a particular problem or factor that motivated this project?
   - In general terms, how does the operation currently work?
   - Why is that not good enough anymore?

3. Is this essentially a business process improvement project? If so...
   - Which cross-functional business process(es) will or will not be supported?
   - What triggers the beginning of each business process, and what is the result (the completion criteria)?
   - How would stakeholder groups (especially customers, performers, and managers) each assess the current process for both strengths and weaknesses (specific areas to consider include cycle time, quality, employee satisfaction, flexibility, consistency, or whatever other variable may be important)?
   - Are there aspects of the current process that work especially well?
   - Are there areas that clearly need improvement, including job definition, tools and facilities, use of IT, information availability, performance measures, workflow design, training, or anything else?
   - What would be the main characteristics of the improved process, and what would differentiate it from a similar process at another organization?
   - How would success be measured? (Use the topic, target, time frame framework wherever possible.)

4. What is the technical or project objective?
   - Is a new application to be developed, existing ones enhanced or integrated, a commercial off-the-shelf (COTS) application selected and installed?

5. Which business data will or will not be involved?
   - Business data areas (topics independent of current files or databases)?
   - Specific files or databases?

6. Organizationally, who will be impacted by this?
   - Which departments, job functions, or specific operating locations?

7. What areas outside of the process will be impacted, or will require interfaces?
   - Sources—where will data or work arrive from?
   - Sinks—where will data or work be passed to? Note—the earlier you can determine how much integration (interfacing) and conversion work will be needed, the better. Experience shows that these two areas often account for 70% to 80% (and even more!) of the development effort. If you don’t budget for this work, you will end up in trouble!

8. Are there other initiatives we should be aware of?
   - Related projects?
   - Previous efforts (has this application been attempted previously? —if so, why didn’t it succeed the first time, is there resistance to the initiative, and is there existing material we can utilize)?

9. What could go wrong?
   - How would we deal with it?

10. What could go right?
    - Would unexpected success or growth cause problems for us (e.g., inability to scale up the process, application, or platform)?

11. Have any significant issues or difficulties arisen?
• Conflict, policy decision required, technical difficulty?

12. Are there any constraints we need to take into account?
• Deadlines, regulations, strategy, security, audit, control?
• Resources: staff, space, equipment, budgets?
• Of the three main variables—scope, time frame, and resources—which are fixed, and which are elastic?

13. Have any important decisions already been made?
• Approach, hardware or software platform, system integrator?

14. Have project structure and personnel been identified?
• Project leader, analysts, business representatives, etc.?
• Who is involved versus who should be involved?

15. Are you really the sponsor? (Be careful how you word this!)
• Do you have the final say on scope, resources, acceptance?
• What is the priority of this project—how important is it to you?

It matters!
We hope that this chapter has illustrated the importance of considering factors outside the strict scope of your business process—the environment. And further, we hope that although brief, it has given you some tools to clarify the environment you’ll be working in, because it really makes a difference!

And now, at long last, let’s get into the central topic of modeling the workflow of business processes.

References


