

The Golden Rules of Business Process Modeling

“I’d like to promote transparency of our company’s business processes.”
“I want to thoroughly discuss the ultimate *ideal business flow*.”

Discussions on the improvement of business processes is never easy, regardless of the scale of improvement. In fact, you may have had experience with disastrous discussions, ambiguous decisions, and an overall lack of gain in proportion to the energy spent. So what steps must be taken to define a business process?

In this section, we describe the methods of efficiently defining white-collar business processes.

1. Define the Deliverable of the Business Process

Define the deliverable of each business process, and envision the cost you can allow for each deliverable.

- 1-1 First, envision the output.
- 1-2 Define the final output.
- 1-3 ALWAYS define the final output.
- 1-4 Anticipate the QCD of each output.

2. Establish the Trigger of the Business Process.

Define the way each business process starts, in accordance with the organization’s structure.

- 2-1 Begin with *leader-initiated*.
- 2-2 Consider the possibility of *member-initiated*.
- 2-3 Prepare several starting points.
- 2-4 Define the input format.

3. Divide the Business Process into Roles and Tasks.

With the trigger and the deliverable established, the business process can be divided into tasks (with consideration to cost).

- 3-1 Divide by specialty.
- 3-2 Divide the process as much as possible.
- 3-3 Make sure the leader is responsible for deliverables.
- 3-4 Evaluate the cost structure.

4. Arrange the Order and Route of Tasks.

After deciding each task, assess the business process and set the flow.

- 4-1 Consider concurrent processing.
- 4-2 Prepare shortcuts.
- 4-3 Try combining with other business processes.
- 4-4 Think of the business process’s operation goal.

1. Define the Deliverable of the Business Process.

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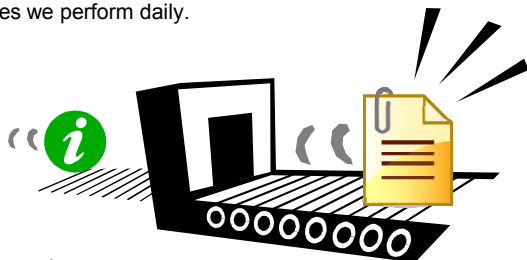
1-1 First, envision the output.

For example...

When you send *data* to a printer, you get a *printout*.

When you give a vending machine *money* and your *wish*, you get a *product*.

What exactly is the output of the business process (workflow) you are in charge of? This can be a difficult question to answer, even with processes we perform daily.



Some examples...

When you make an *inquiry* at an *information desk*, you get an *answer*.

When you inform a salesperson of *what you want*, you get an *estimate*.

When you submit a *job application* to HR, you may go through various exchanges in between, but in the end you get an *acceptance/rejection letter*.

There may be complicated transactions involved within an organization, and some things may be concluded arbitrarily by one member, but there is always some sort of processing followed by some sort of output. When designing business processes, it is important to first grasp each process objectively and think of *what the output should be*.

1-2 Define the final output.

"The materials are the input, and the balance sheet and Profit & Loss statement are the outputs."

Although this is a bit extreme, it is, so to say, a correct statement. However, the moment you try to grasp processes too macroscopically, you begin to lose the efficiency of the discussion. The greatest aim of BPM is consistent improvement, and we want to talk about improvement in units that appropriately divide the company.

This brings us to the question: What is the optimum way to divide a company? Let's use a website production company as an example.

We can think of various deliverables in a website production company, such as estimate sheets, websites, setup manuals, etc. Naturally, it is not conducive to define a business process for every single possible deliverable.

For example, the website and setup manual are both managed by the production team, and created at the same stage in a one-on-one work environment. These should be thought of as outputs of the single *Website Production process*. In this case, a data CD could be envisioned as the final output of the Website Production process, and the website and setup manual can be created at various tasks within the process.

This is why it is important to define the deliverable—the final output—when establishing business processes.



1-3 ALWAYS define the final output.

There are many business processes for which the deliverable (final output) is difficult to define. For example, what would be the deliverable of a "Respond to request for deletion of personal information" workflow?

Generally, business processes that entail mere browsing, updating or deletion of stored information rarely create new information, so defining the deliverable is challenging. Of course, we can demand a "performance record" or some such output, but in some cases security measures limit the information that can be included in the record. Also, these processes tend to end before the generation of the deliverable (final output) because the main objective has already been fulfilled.

Still, it is important to define the deliverable and make sure it is generated each time the process is completed. Why?

1. To clarify the condition for ending each process.

2. To be able to refer to the past records of each process.

It is particularly valuable for an organization to keep records. This way, we can optimize new process operations based on past performance, or use records as reference when discussing the improvement of business processes.

It is preferable to define deliverables for all business processes—including those that prove to be difficult to define—such as records of operation time and content, or comments and evaluations of performance. And there are many ways to consider better efficiency, such as automatic recording and system coordination.

1-4 Anticipate the QCD of each output.

In many cases, business processes are evaluated by comparing the QCD (quality, cost, delivery) of deliverables. It goes without saying that the higher the quality of deliverables the better, the lower the cost (labor) of operation the better, and the shorter the time until delivery the better.

However, QCD analysis usually signifies a tradeoff situation, as in, "the quality improves in proportion to the cost invested." So it is important to keep a comprehensive view on the "ideal QCD."

Let's look at some business processes and corresponding deliverables of a website production company.

1. Client Meeting Report (Record of proceedings)
2. Proposal Preparation (Proposal)
3. Estimate Preparation (Estimate sheet)
4. Finalization of Order Agreement (Agreement)
5. Negotiation of Specifications (Specifications)
6. Production, Quality Management, Delivery (Data CD)

Let's say that 5 and 6 are business processes managed by the production team, which consists of 20 staff members, and 1 through 4 are managed by the sales team, which consists of 5 members. Say, for instance, if the overall business goal is "to achieve 4 regular website production orders each week," then an average order ratio (from experience) may imply the necessity of "6 estimate sheets a week," "10 proposals a week," and "20 records of proceedings a week," giving clear goals for each deliverable. Thus, the cost and quality to be allotted to each regular order can be hypothesized.

Record of proceedings: A quality that ensures 50% lead to proposals, about 5 hours per case

Estimate sheet: A quality that ensures 50% lead to orders, about 2 hours per case

If we anticipate the QCD of deliverables beforehand, in accordance with the specific business environment of the organization, this will ensure more efficient discussions in the future.

2. Establish the Trigger of the Business Process.

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2-1 Begin with leader-initiated.

Once you establish the deliverable (final output) of the business process and the QCD of each deliverable, the next effective step is to think about how to initiate the process.

In contrast to the deliverable (final output), which is the condition for ending the business process, we are now talking about the condition for starting the business process. The funny thing is that discussions about business processes tend to exclude considerations on *how to initiate a process*.

It is true that in some cases the trigger of a process is already fairly clear, for example responding to external inquiries, or processing applications from outside the organization. These can be considered *passively initiated processes*, and in most cases do not allow the possibility of not starting the process.

On the other hand, submitting proposals is an *actively initiated process* within an organization. For instance, if we envision an output as "Proposal for company A," several people can potentially be in charge of initiating the process. For example:

1. Sales member in charge of company A
2. Sales leader in charge of sales division
3. Decide by majority rule in a meeting



When operating business processes, it's good to focus on a goal such as "consistently completing 10 proposals each week." In this case, an effective initiator of the Proposal Preparation process could be the leader, who selects 10 appropriate cases to be worked on, and assigns appropriate staff members to each.

2.2 Consider the possibility of member-initiated.

Alas, there are always problems with a system that does not allow the creation of a proposal without the leader's initiation. For example, a sales member that just finished meeting with a prospective client will most likely want to start creating a proposal as soon as possible. He/she may come up with great proposal ideas while writing up the record of proceedings, and regardless of business rules may not be able to wait for the leader's orders.

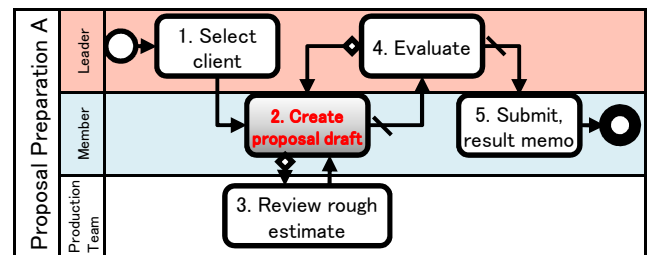
A process owner should contemplate the trigger of each process with an understanding of the whole, including the:

1. Characteristic of the business process,
2. Level of the organization's maturity,
3. And progress of the organization's business

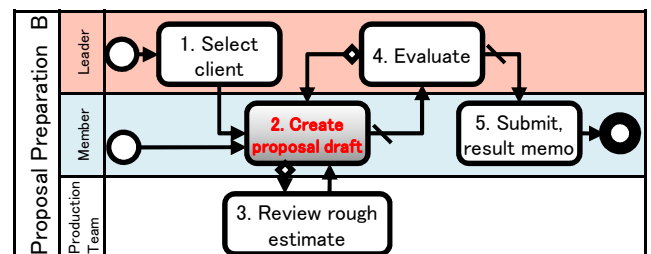
It may be necessary to change the process to member-initiated, in order to realize a more maneuverable business process.

2-3 Prepare several starting points.

Within one organization, there can be members who are good at actively and independently creating projects, and those who contribute by performing work provided by their supervisors. In reality, there are many business processes where it is not realistic to limit the initiator of the process to only the leader or only members. In these cases it is good to define a business process in which both can initiate the process.



<Proposal Preparation Process: Leader-initiated>



<Proposal Preparation Process: Leader/member-initiated>

In the above Proposal Preparation process, we can think of some tasks that fall under the management of divisions other than the sales team, such as reviewing the rough estimate and judging the feasibility of the proposal. (In the above figure, this applies to 3. *Review rough estimate*.) It is questionable whether the utilization of the production team's resources should be allowed every time a sales member has an idea.

Even in an Estimate Preparation process, we can think of some tasks that significantly use the production team's resources, such as preparing detailed estimates and assigning resources to each factor.

We need to consider who can start the business process, and whether or not to limit how many times one is allowed to start the process, with an overall understanding of the process's characteristic.

2-4 Define the input format.

Establishing the trigger of a business process includes not only "WHO starts the process," but also "WHAT to start the process with."

In other words, we need to define the input format for starting the process, regardless of whether it is initiated by the leader's whim or by a member's desire to meet his/her quota.

For example, the input format for creating a proposal may include:

1. Name of client
2. Expected date of proposal submission
3. Rough estimate

In reality, there may be many cases where proposals are initiated with too little information; therefore, to avoid this and to clarify the generation of tasks, it is important to clarify the trigger of a process.

3. Divide the Business Process into Roles and Tasks.

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3-1 Divide by specialty.

An estimate sheet is a document that is submitted during meetings with the client. In general, an Estimate Preparation process is managed by the sales team, and the sales team should be the main participant in deliberating the ideal state of the process.

Let's define the input format of this Estimate Preparation process as:

1. Name of client
2. Expected date of estimate submission
3. Range of expected estimate

In this case the data entered at this point may be:

1. Company A
2. April 1, 2010
3. 1-1.5 million yen

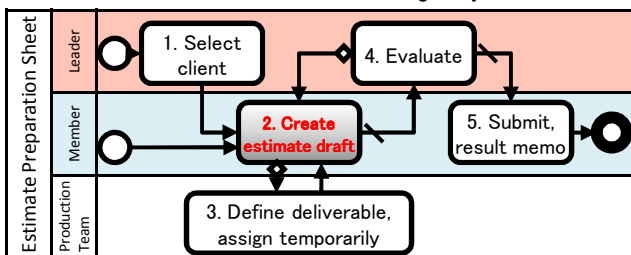
The actual estimate sheet may include:

1. Website specifications for company A
2. Expiration date of estimate: April 15, 2010
3. Expected delivery: May 31, 2010
4. Items for delivery: Data CD (website, setup manual)

Including internal information may also be helpful, such as:

5. Estimated production requirements, time and person in charge of the estimation
6. Expected production members
7. Person in charge of settlement, date of settlement
8. Specification evaluation by person in charge of settlement

In this case, creating the estimate sheet inevitably falls to the production team, and all other tasks are managed by the sales team.



<Estimate Preparation Process: Leader/member-initiated>

As in this case, business processes that straddle multiple teams are naturally divided into "specialized tasks."

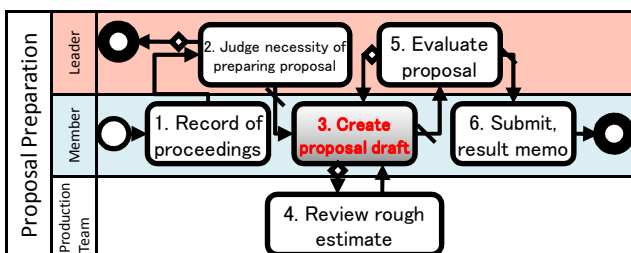
3-2 Divide the process as much as possible.

Dividing tasks offers the additional benefit of permitting downstream workers to check the tasks. So how can we divide business tasks that are executed within the sales team, such as the Client Meeting Report process? Here are a couple suggestions:

1. Divide by sales team members, and improve quality of output
2. Divide within sales team by abilities, such as *composition* and *design*.

In the former case, the tasks may be divided into *Prepare rough draft*, *Peer review*, and *Evaluation*, and the sales members can support each other with tips and advice on writing records of proceedings and recording methods.

Alternatively, if we conclude that this job doesn't need to be divided, it can be made into one task within the Proposal Preparation process.



<Example with record of proceedings of client meeting included into Proposal Preparation process>

3-3 Make sure the leader is responsible for deliverables.

The leader should be responsible for the number and quality of generated outputs. When dividing business processes into tasks, it is best if the responsible person speculates the placement of evaluation and review tasks, in the route to finalizing the deliverable (final output).

One effect of this is stricter conditions for ending the process. In other words, members are not allowed to end it half-heartedly. Dividing execution and supervision does slow down the process to an extent, but the quality is guaranteed to improve.

Another effect is Knowledge Management. If you grade deliverables at the point of completion, this will promote the assessment of best practices when performing similar processes in the future.



3-4 Evaluate the cost structure.

When we define the end and beginning of a business process and divide it into tasks, we can then specifically calculate the cost (production requirements) necessary for completing a standard process. Let's look at a sales team task within a business process regarding the acquisition of an order. We can calculate the following costs:

1. Client Meeting Report (Record of proceedings) <Goal: 20 cases a week>
 - 1-1 Meeting, create original documents: 2 hrs x 20
 - 1-2 Comments by other attending staff: 1 hrs x 20
 - 1-3 Leader review of record of proceedings: 0.5 hrs x 20
2. Proposal Preparation (Proposal) <Goal: 10 cases a week>
 - 2-1 Create proposal draft: 2 hrs x 10
 - 2-2 Brush-up design of proposal: 1 hrs x 10
 - 2-3 Review proposal: 0.5 hrs x 10
 - 2-4 Leader evaluation of proposal: 0.5 hrs x 10
3. Estimate Preparation (Estimate sheet) <Goal: 6 cases a week>
 - 3-1 Define estimate outline, explain specific case: 2 hrs x 6
 - 3-2 Production team review of specifications: 2 hrs x 6
 - 3-3 Leader review of estimate: 2 hrs x 6
 - 3-4 Explain estimate to client: 2 hrs x 6
4. Finalization of Order Agreement (Agreement) <Goal: 4 cases a week>
 - 4-1 Create agreement draft: 1 hrs x 4
 - 4-2 Leader review of agreement: 0.5 hrs x 4

In reality, a lot of time is spent on atypical tasks aside from those in clearly defined business processes, such as dealing with tasks within business processes managed by other divisions, or discussing the improvement of business processes.

In the above example, the total execution time is 158 hours per week, but it should be assessed whether this can be performed by the actual number of personnel.

If you carelessly divide a task into too many pieces, you may be stuck with a process in which the goal cannot be achieved with the current number of personnel. You may even have to redefine the deliverables.

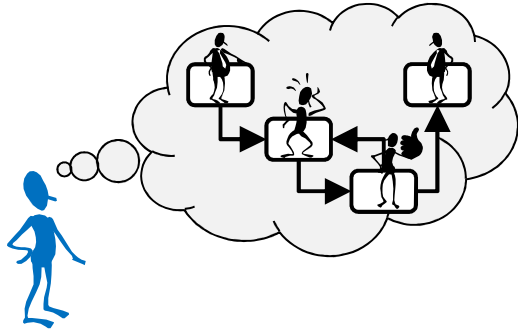
4. Arrange the Order and Route of Tasks.

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4-1 Consider concurrent processing.

Once you have defined the “trigger (start),” “deliverable (end),” and tasks that compose a business process, we can say the business process is roughly established.

The final step is to arrange the order and route of tasks.



Here are some things we need to consider when discussing the order and route of tasks:

1. Minimizing the chances of stagnant tasks
2. Minimizing the chances of held up tasks
3. Assessing the probability of risk

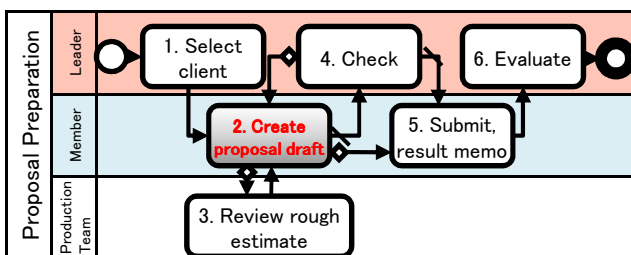
In reality, it is often more effective to put a business process into operation and improve the problems afterwards, instead of to theoretically discuss improvement points before starting.

However, one method that is surprisingly effective for many problems, although not often implemented, is “concurrent processing.” For example, having several members of the production team simultaneously and independently estimate the production requirements will ensure a safer and more definite average of the estimation. Also, even if one member is not able to execute the task soon enough, the production requirements can be decided on as long as at least one member makes it in time, and a harmful delay can be avoided.

4-2 Prepare shortcuts.

When a business process is in operation, one problem that occurs more often than not is “neglected tasks.” This may seem synonymous to “stagnant tasks,” but it indicates a state in which there is no longer any reason to execute the task.

There are various causes for this, as well as different tendencies in each organization, but a common one involves deadlines. That is, tasks that were started with every intention to complete validly, but that could not continue to be processed regularly because of an increasingly impending deadline. For example, there is no reason to have a leader review a proposal that has already been submitted.



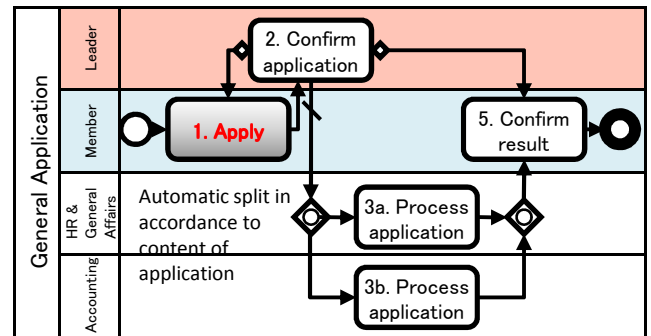
<Proposal Preparation Process: Leader’s check can be omitted>

For these cases that involve time limitations, it is often more effective to prepare a route that allows omitting middle tasks than to stop processes midway each time.

4-3 Try combining with other business processes.

It is often not necessary to divide an “Apply for Paid Leave” process from an “Apply for Long-term Leave” process.

Although there may be some differences in the applications, it is fairly reasonable to combine them into an “Apply for Paid or Long-term Leave” process, because of their similar flows and number of tasks. Also, an employee that submits this application only a few times a year would probably appreciate being able to apply for different types of leaves with one business process.



<Example of General Application Process>

In reality it is not smart to blindly promote common or general business processes without contemplating who will be given authorization to browse past data or how past data will be searched. What we want to say is that when you are creating new business processes it is important to also keep in mind the business processes currently in operation.

4-4 Think of the business process’s operation goal.

More often than not, a business process is destined to be redefined countless times even after being put into operation. We want these improvements to focus on the ideal QCD of deliverables and the number of completed processes, and we want to be able to share this information within the organization.

For example, when contemplating matters such as:

*What can we do to ensure the completion of 10 proposals a week?
How can we maintain a quality of proposals that ensures a 60% success rate?*

...perhaps someone will come up with a new goal of, say, “completing each proposal within 1 week after writing up the record of proceedings of the client meeting.”

Defining business processes is the most important activity in BPM (Business Process Management). We must be able to design them with adequate deliberation on key performance indicators.

<Key Performance Indicators>

1. Record of proceedings
Goal: 20 a week
2. Proposal
Goal: 10 a week
3. Estimate sheet
Goal: 6 a week, estimate total of ¥10 mil. a week
4. Agreement
Goal: Receive 4 orders a week, total of ¥6 mil. a week

