



UNIT-6

The Design Phase

Learning Outcomes

By the end of this unit the learner will be able to:

- ✓ Understand how to design or enhance an existing process using the business process life cycle.

Unit 6

The Design Phase

Gathering Information

You've created and shared your vision. Now what? The next phase of the business process life cycle is the Design phase. In this stage, you need to begin collecting information about the process you would like to create or enhance. Based on this information, you need to then identify the problem or challenges facing your organization. Then, you can start thinking about the process solution(s) you want to implement.

Gathering Information: Where to Look and What to Consider **Amount of Human Interaction with Technology**

When designing or enhancing a process, you usually need to blend technology with human interaction. To figure out this mix, you need to consider the amount of human involvement in the process. Ask questions such as:

- What type of work are people doing to complete the process?
- Are they working collaboratively or alone?
- Who will be involved with the process?
- What level of involvement will they have?

Answering these questions will help you determine the design of technological solutions and how work will be allocated within these systems.

Additionally, you will need to determine who will be monitoring the technology. What will be their role and level of involvement with the system to ensure the tool is operating correctly and serving its function?

Level of Automation

When designing your process, you need to consider the amount of automation that will be involved. How much of the process will be performed by people and how much by workflow engines? Additionally, if you have multiple IT solutions operating within a process, you need to figure out how these tools will communicate with each other. Does the information that needs to be communicated between systems happen automatically, or does it need a person to monitor it and ensure this information is shared?

For example, let's say that you have chosen a technological solution for data gathering. However, your process requires the retrieval and use of many documents. You decide to figure out a way for your new solution to integrate and communicate with your Enterprise Content Management system.

Questions you will need to answer include:

- What documents need to be accessed from your Enterprise Content Management system?
- When do they need to be accessed?
- What is the volume of transference of information between the two systems?
- Will the exchange of data be a single event between systems or continuous?

Answering these questions will enable you to tailor your level of automation to get the most from your technology and fit the needs of your process.

Role of Content

When examining the role of content in your process, you need to determine if your process is document-driven, meaning it relies on the content of a document to determine the workflow. For example, let's say that you are working at a bank and you receive forms with the financial information of your customers. In order to process them for a new service, such as a line of credit, you need this information. The content of the document is vital to allow the process to continue. Without this document, you are unable to complete the transaction and give the customer the product.

The role of content will impact the design of your process and the choice of IT solutions.

Volume of Work

The next thing you will want to gather information about is the volume of work that will be going through your process. Processing one million transactions per day is very different from processing one hundred transactions per month. Your process will need to be designed to support the volume of work it will see.

You will also need to think about what methods you will use to distribute work within your process. Ensuring that work flows well will ensure efficiency and prevent bottlenecks.

Complexity of Process

When designing your process, you need to examine how complex the process will be. Mapping your process and breaking it down will enable you to see the steps needed to carry out your task. Additionally, by mapping the process, you will be able to see who is affected and needs to be involved in the process, what information you have, and what you need to figure out to implement the process.

Defining Your Problem

Once your information has been gathered, the next step is to define the problem clearly. We have eight suggestions to help you do this as easily, efficiently, and effectively as possible.

Rephrase the Problem

Sometimes what we want to see is not what other people see. When the boss sees sales drop and he tells his team to work harder, he's not likely to see much of a result. He's telling people what to do for his benefit. Unfortunately, this approach does very little to engage people.

Instead, he could rephrase the problem and ask people what they feel connects them to their work. He can take an interest and ask what they can do to make their jobs easier or make work processes more efficient. In this way he engages people, finds out what could be affecting their sales, and encourages them to come up with solutions instead of just telling people to be "more productive." By showing people what's in it for them and involving them in the problem-solving process, the boss is motivating his employees to find creative solutions.

If you have a hard time with wordsmithing, grab a dictionary and thesaurus (or look at online versions) and play with your problem statement by changing it several times. Start with one word or short phrases. If you don't enjoy word games very much or feel yourself struggling, ask for help from a colleague or friend.

Here's an example. If the problem seems like "Our production costs have increased," start replacing words to become clearer about what's going on:

- "Our sales are down slightly from last year."
- "Our customer volume is down from last year."
- "Wages have stayed the same."
- "Production costs are the same from last year."

By doing this type of rewording, you can narrow things down and determine that the real problem isn't that your production costs, it is the decrease in sales. Finding out why will be your next step.

Expose and Challenge Assumptions

We assume a lot. It's human nature. Unfortunately, assumptions can really interfere with getting an accurate problem statement.

When defining your problem, write a list of as many assumptions you can think of, especially the obvious ones. This helps to clarify the problem. Then, test each assumption and find out if some of them are actually wrong, or if you imposed them on yourself.

One common assumption is to say, "We've never done it that way, so we won't be allowed to do it in the future."

Use Facts

Sometimes we see a problem and just want to jump in and fix it. However, we are also generally responsible for things like time and money, so it's important that we look at the details and determine

what the problem really is. Find the data you need to define the problem. If you need creative aids to help with your thinking, use them. Draw a picture or a graph to help gather and focus your thoughts. Ask questions and gather information that honestly describes the problem so that you can get specific about it.

Grow Your Thinking

Problems are often related to other problems. They can be a small element of a larger issue, so this element of problem definition includes considering the problem as part of something larger. To do this, you make the problem more general.

Ask questions such as

- “What’s this connected to?”
- “What is this an example of?”
- “Where have we seen this before?”

Leverage word play and replace specific words with more general ones. “Budget” becomes “finances,” “office desk” becomes “furniture,” “mouse” becomes “pest.”

Shrink Your Environment Temporarily

Since each problem is likely made up of smaller problems, one way to figure out the issue is to split it into smaller pieces. Break the problem down into subsections. This allows you to consider specific details about each factor involved in the issue. This will help you gain an understanding of the bigger problem, as well as the effect that the smaller problems have on one another.

An example could be that you need to increase your income by \$2000 a month. Break this problem down into manageable chunks.

- I have been spending \$1000 a month on home renovations. I can cut this back to \$200.
- I can put in extra hours at work.
- I can ask for a pay increase.
- I can do odd jobs like cleaning to generate income.
- I can stop going out for coffee and save \$100 a month by making coffee at home.
- I can prepare lunch at home instead of eating out. This will save me \$300 a month.

Shrinking your environment is also very effective when you have a problem that is overwhelming. It allows you to focus on something tangible. You can again use word play to great benefit here, using words that are more accurate in their definition. “Vehicle” becomes “taxi” or “car.” “Budget” becomes “our department’s budget” and then “our department’s travel budget.”

Practice Multiple Perspectives

Although the problem may be very clear from where you are looking right now, that may not be the case from everyone else’s perspective. If our sales are decreasing, we may think it’s because our sales team is

not being effective, but maybe our competition has dropped their price and added a feature to their product that makes them more appealing than we are.

Rewrite the problem from several different perspectives. How does your customer look at this problem? What about your sales team? Your courier? Add perspectives for people in different roles. How would your spouse see this? A former teacher? A local business association? The people at the café down the street?

Turn it Upside Down

One powerful technique for defining your problem is to look at it from the reverse direction. If you want more of something, figure out what you get less of as a result. Investigate what happens to decrease sales, or to sell fewer products, or to lose more games. If you feel that sending an employee to a conference is too expensive, consider what happens when you do not send them.

Change your perspective and examine things from angles you had not yet considered, and consider the consequences. What about setting up a bare bones product that does not have all the same elements as the fancy items people are buying from your competition?

Frame the Problem Purposely and Positively

This is something we borrow from goal setting. Our brains will focus on things that are positive and exciting. Even more effective is to reframe what you think is the problem into a positive and engaging question.

Our subconscious loves to ponder questions and will start working on them immediately, even if we don't think we're thinking about it. For example, instead of thinking, "We need our employees to quit smoking because smokers are driving up costs of our benefit plan," try, "How can we encourage our employees to live long, healthy lives and be happy people?"

Summary

When you can describe the problem clearly, the solution often presents itself. However, failure to identify the problem properly can send you off fixing things that may not ever resolve the actual problem. Don't create a situation where you are looking at the same problem three months from now; use these eight essential elements in your favor to create and enhance a process that provides tailored solutions for your business' needs.

Identifying Existing and Future Processes

Once you have gathered information and correctly identified the challenge facing your organization, you need to examine your existing and future processes. Looking at where you currently are and where you want to be enables you to see the gap between now and the future. This gap analysis will help you determine what you need to implement to get the most from your processes.

For example, imagine that you are working for the claims department in an insurance company. You are an adjuster (the person who goes to see the damage on the vehicle) and the process for you to get out and see a customer to assess damage usually takes five days. You have thoughts on how to shorten your response time, but before a solution can be implemented, you need to identify the steps that need to be completed to meet this objective.

To bridge the gap between existing and future processes, follow these three steps.

Identify Your Future State

To identify your future state, you need to ask yourself some questions, such as:

- Where do you see the process going?
- What is your ideal vision of the process?
- What improvements would you like to see?

Answering these questions allows you to envision your process' future state. It allows you to set goals for where you want to be once you have made the necessary improvement to your process.

Let's go back to our insurance claims example. A simple way to map your gap analysis is to create a table that outlines your future state, current state, and steps to bridge gaps.

Future State	Current State	Steps to Bridge Gaps
Adjusters will respond the same day of the accident.		

Analyze Current State

The next step in identifying existing and to-be processes is to analyze the current state of your process. To do this, gather information by considering the following questions:

- Who in your organization do you need to speak with in order to get an accurate representation of where your process is now?
- What is the best way to access the information you need? Should you brainstorm? Conduct interviews? Review documents?

Once you have gathered the required information, you can create an accurate depiction of where your process currently is.

Future State	Current State	Steps to Bridge Gaps
Adjusters will respond the same day of the accident.	Adjusters have to wait for forms and clerical processing	

	before they can be dispatched to assess damage. On average, they are responding five days after the incident.	
--	---	--

Steps to Bridge Gaps

Once you see where you want to go and have defined where you are, you need to think of the steps to achieve your desired future state. Use your vision and the information you gathered about your current state to propose potential solutions to bridge the gap.

Future State	Current State	Steps to Bridge Gaps
Adjusters will respond the same day of the accident.	Adjusters have to wait for forms and clerical processing before they can be dispatched to assess damage. On average, they are responding five days after the incident.	Look at who and what is involved in the process. See if we can cut down on the clerical process and give the adjusters more of a role in processing the client to speed up the process and offer same-day response.

This method is a great way to analyze both your existing and future processes. By examining both the present and ideal situations, you are better able to figure out the steps needed to bridge the gap between where you are now and where you would like to be.

About Process Mapping

Test Your Knowledge

Why might we map out a process?

What is Process Mapping?

Process mapping involves visually breaking down your process into its components. These components include a clear start and end point, the decisions involved in the process, the documents needed to carry out the process, and the steps or activities to complete the process.

Steps for Creating a Process Map

The first step to creating a process map is to assemble the information you have gathered about your process. With a team, write down each step of the process on an index card or sticky note. The steps you write can be as detailed or as basic as you need.

The second step to creating a process map is to put the steps in the order they occur.

The third step to creating a process map is to draw the map in a digital form, using shapes as symbols. Inside the shapes, you describe that step of the process.

The fourth step is to review your map. Make sure your map matches what was originally described in steps one and two. Additionally, you may want to review your map with people who directly work within this process. What do they think? Is it an accurate representation of the steps involved?

Tips and Important Points

Start and End Point

Before mapping out the steps in your process, make sure you have a definite, agreed-upon start and end point. This helps set up the parameters of your process and focus your thinking.

Map As-Is

When mapping your process, be sure you are mapping the process as it is, not as it should be. If you are not directly involved with the process, review it with someone that is.

Benefits of Process Mapping

Process mapping aids our understanding of processes and allows us to see where we can improve on our performance. Some additional benefits of process mapping are listed below.

In-Depth Understanding

Drawing a process map gives you the opportunity to have a more in-depth understanding of the process. Words can only communicate so much, but a map can help you understand the intricacies and interactions involved in a process.

Identify Problems

Seeing your process mapped out can help you better identify problems or potential obstacles. Understanding and identifying your problem will enable you to create the right solution.

Identify How to Implement Your Process

By seeing your process, you are better able to identify how you will implement your new or changed process. You can see who is involved and will be affected by the upgraded process and make the necessary preparations to help support them through the change.

Eliminate Redundancies and Waste

Seeing your process can help to increase efficiency because you can identify steps that add value and steps that do not. Eliminating duplications, redundancies, and wasteful activities helps give your process more value.

Process Achieving Outcome

By mapping your process, you are better able to identify whether or not it is actually achieving the outcome it was designed to achieve. If the process is not producing the desired output, you have a visual aid to help identify why the process is not performing to its optimal level.

Symbols and Their Meanings

Here are some of the basic symbols and their meanings in process mapping.



Indicates Step
in Process



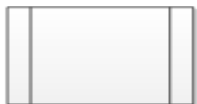
Indicates a
Decision to
be Made



Indicates Start/
End of Process



Indicates a
Document
that needs
to be Used



Indicates a Sub
Process



Indicates the
Direction or
Flow of
Process

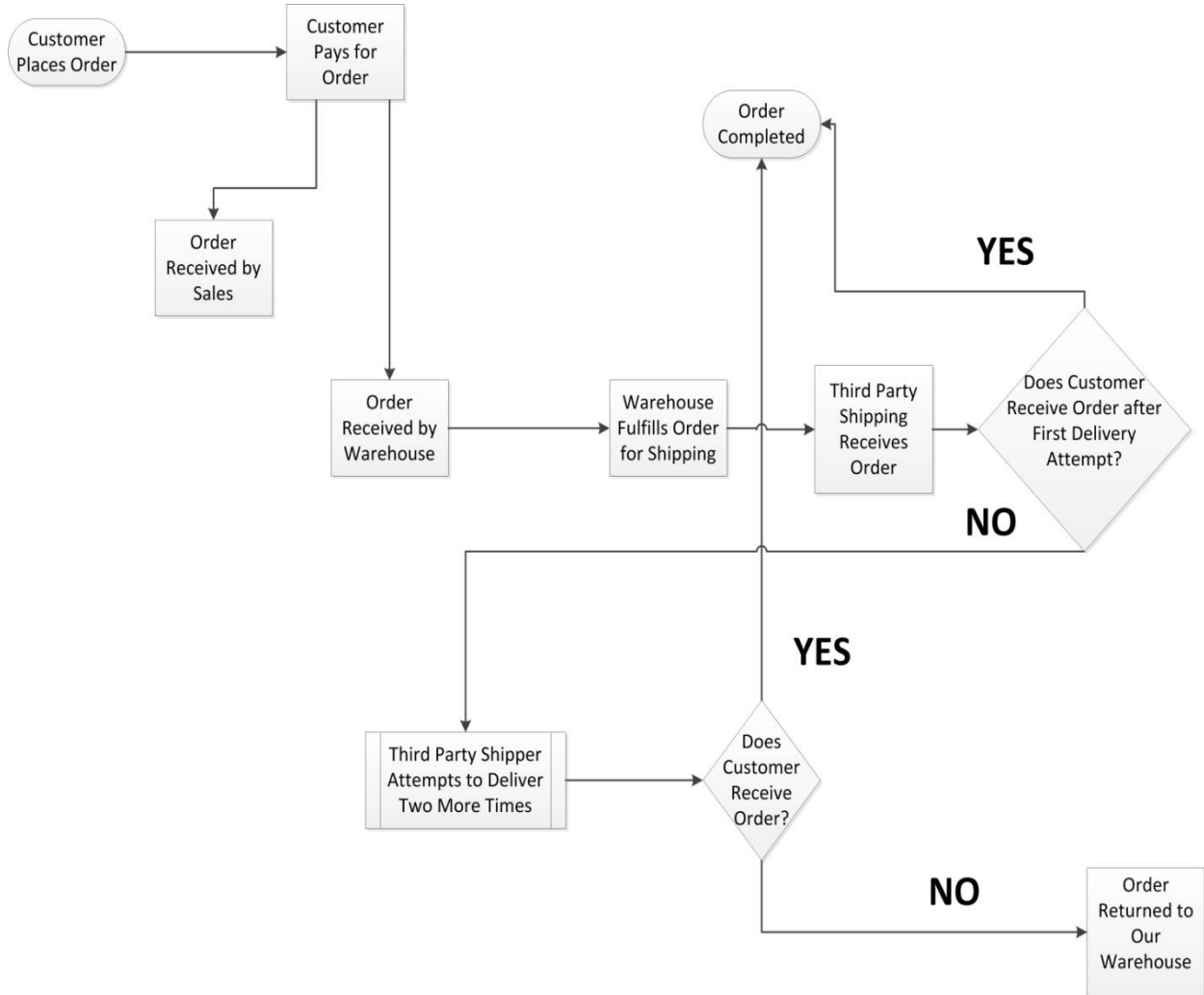
These symbols can be changed to suit your needs. Or, you can have all of your symbols the same shape and use color coding to symbolize different aspects of the process. Always include a legend so anyone viewing your map can understand its contents.

Creating a Process Map with a Flow Chart

Let's have a look at a process map to better explain the concept. Earlier in the course, we talked about the process of delivering books to a customer. Let's assume our business is to do just that. Take a look at the below process map that details the steps involved from when a customer places an order to when they receive the order. Pink sticky notes are used to signify the beginning and end of the process, blue notes indicate direction, and orange notes outline the steps involved:



Here is a digital copy of this process map:



Test your Knowledge

What do you think about this process map? Is it confusing or clear? Why?

Did the process map outline the process it was intended to outline?

Would you add any more detail to this map to help clarify the process?

Would you take away any steps to help clarify the process?

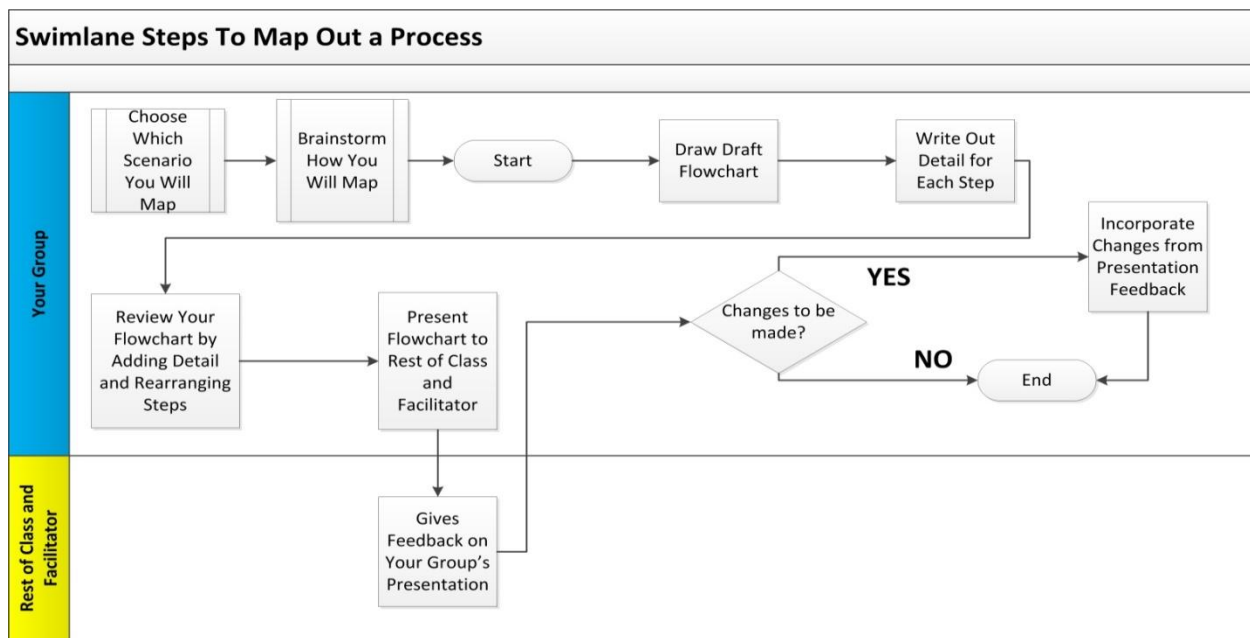
Creating a Process Map with a Swimlane Diagram

What is a Swimlane Process Map?

A swimlane process map distinguishes the responsibilities for steps within a process. The steps of the process are placed in lanes or categories which are labeled with the step owner.

In the example below, the horizontal direction represents the sequence of events in the process while the rows represent who will be performing the events. The arrows between lanes represent the transfer of information or material passed between different parties involved in the process.

Sample Swimlane Process Map



Map it Out

Choose one of these processes:

- A mailout detailing a change in service to all of your customers
- Preparing for a new product launch at your shareholder’s gala
- Opening a new plant for product manufacturing

Map this process as a flow chart.

Defining Improvements

Test your Knowledge

What is an improvement?

Is an improvement the same as a goal?

Why is it Important to Define Improvements?

It is important to define improvements when designing your process in order to imagine your process’ ideal state. This roadmap gives your process direction and will help you evaluate its success.

Furthermore, defining improvements builds accountability. By highlighting problem areas and developing a clear, concise plan to address these areas, you are also defining roles and how the process should be carried out to achieve the desired outcome. This makes people responsible and accountable for making the process work.

As well, you need to define improvements in order to be able to measure the success of the implemented process. You cannot measure the process without a clear idea of what improvements will be made and how these improvements will benefit your business.

Measuring your process is also important for justifying why the process needs to be enhanced or created. Remember, implementing a process within an organization is not done in isolation. A change in the way you conduct business affects everyone (employees, customers, and management) and can therefore cost a significant amount of time and money. You will need to prove that the process will recoup that investment and continue to generate savings.

Case Study

Think about a manufacturing process and imagine that you are changing an aspect of how you manufacture your product. You may need to design machinery to accomplish your idea. You will also need to provide training to employees on these updates. You may need to contact your suppliers and customers to alert them of these changes. Finally, you may even need to close your plant in order to install this new equipment. This could be an expensive project! You need to be clear about the results of the process improvement to show that the use of company resources is justified.

Establishing Functions and Identifying Function Leaders

What is a Function in Relation to a Process?

A process is a combination of many functions working together. A function includes a necessary step in the process and the role that either technology or humans play in achieving this step. These functions can be carried out in one department or they can be the culmination of efforts from individuals throughout the organization.

Let's say that you walk into a bank looking to acquire a new line of credit. You speak with a Customer Service Representative (CSR) and they make an appointment for you to speak with a Financial Services Representative (FSR). The CSR's role represents one of the functions involved in the process. The next function in this process will be your meeting with the FSR. During this meeting, the FSR takes your financial information and inputs it into the bank's financial screening system to see if you qualify for the service. This inputting of information represents a third function within the process. Finally, you receive confirmation or are denied the service. This represents the final function within the process.

In order for this process to be completed, interdepartmental cooperation and communication are required. Furthermore, the process requires a tailored IT solution. The CSR's function is not the same as the FSR's function and they operate within different departments of the organization; however, each of their contributions is equally important for the successful completion of the process.

Identifying Function Leaders

The successful implementation of a process requires the careful selection of skilled, knowledgeable function leaders. The role of these leaders is to assess the function and ensure that it is performing at its optimum level. This means that function leaders must understand and be able to implement the necessary actions to carry out their function within the process. They need to understand what is expected of them and ensure that those expectations are met as efficiently as possible.

An additional role of the function leader is that they are responsible for delegating different aspects of a process and making sure that each person completes their share of the work. The function leader may even perform particular parts of the process themselves.

To identify a function leader, consider the following:

- How much experience does the person have with the process?
- Is the person capable of leading a particular part of the process?
- What is the person's level of expertise on the particular function you would like to assign them? For example, if your process involves a high use of technology, is the person you would like to make a function leader capable of the duties you need them to carry out?
- How analytical is your function leader? Do they have the ability to recognize gaps in their part of the process and make suggestions on how to bridge these gaps?
- Is your function leader an effective communicator? Can they work in a team?

When you are choosing a function leader, you need to consider their disposition as well as their level of expertise. The person you choose will be a vital part of ensuring that your process is performing at an optimal level.

As well, choose personnel who do not mind being in the spotlight, are effective communicators, and are team players. If they possess the level of expertise, but do not possess the ability to be a leader, you may want to consider choosing someone that can acquire the skills and knowledge for the position and be a great team leader.

Further Reading:

- ✓ *Ravinder Singh Mann, Design Phase, 2018.*