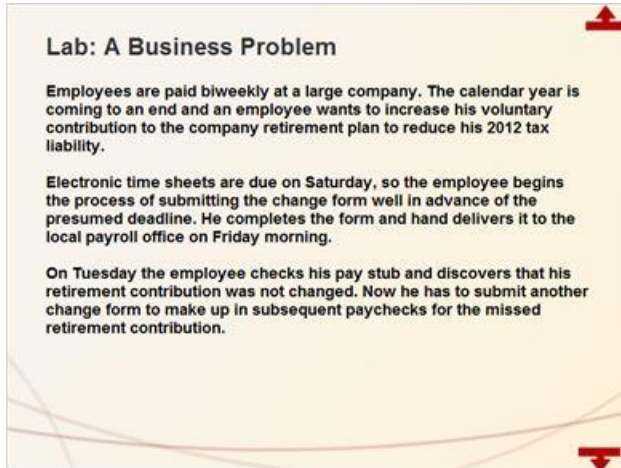


Part 7 - BPMN Lab

1.1 Lab: A Business Problem



Lab: A Business Problem

Employees are paid biweekly at a large company. The calendar year is coming to an end and an employee wants to increase his voluntary contribution to the company retirement plan to reduce his 2012 tax liability.

Electronic time sheets are due on Saturday, so the employee begins the process of submitting the change form well in advance of the presumed deadline. He completes the form and hand delivers it to the local payroll office on Friday morning.

On Tuesday the employee checks his pay stub and discovers that his retirement contribution was not changed. Now he has to submit another change form to make up in subsequent paychecks for the missed retirement contribution.

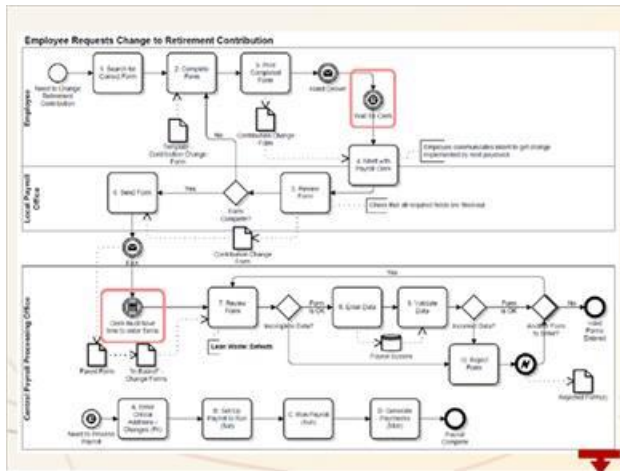
Notes:

Now that you are familiar with the core set of BPMN objects, let's see how you can use your knowledge to identify issues and propose improvements for a business process. Please locate the "Lab - A Business Problem" document, which you printed at the beginning of this material. If you don't have a copy, click on the link on this slide and print the document now.

Take a few minutes and familiarize yourself with the narrative on this slide and the associated process flow diagram. On the next slide I'll share some analysis techniques and then give you time to study the process flow and identify issues.

Click the "Next" button to proceed.

1.2 Process Flows



Notes:

As you read the narrative about the employee, you probably recognized some wasted effort. During the later half of the 20th century valuable waste-elimination techniques were developed by Toyota to improve processes for manufacturing automobiles. These techniques became known as “Lean.” I’ve briefly described the first four Lean “wastes” here: transport, inventory, motion, and waiting. Let’s focus for a moment on the waste of “waiting.”

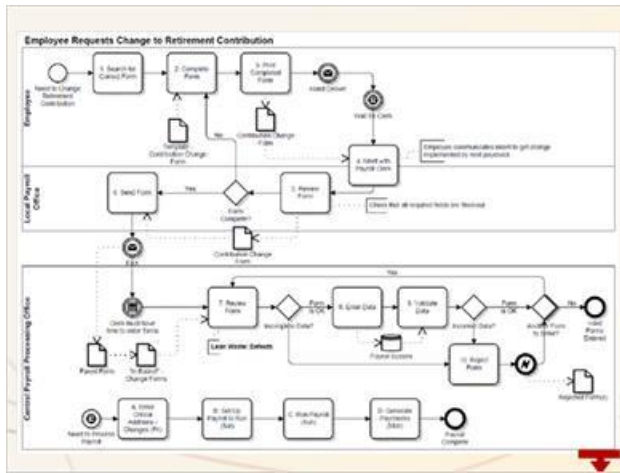
I’ll give you about 15 seconds to review the process flow. Do you see any waste related to “waiting?”

You probably found two Events that require “waiting”. The employee waits for the Payroll Clerk to become available at the local payroll office and then there is delay until a Payroll Clerk has time to enter the batch of payroll forms. These types of waste commonly arise when work material is passed from one person to another.

Take time now to read this slide about the other types of waste. See if you can identify an example of wasteful motion.

When you are ready to proceed, click the “Next” button.

1.3 Process Flows and Lean Thinking



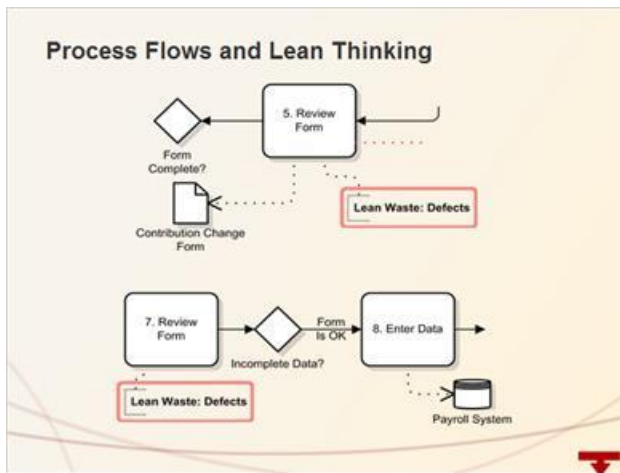
Notes:

The remaining four types of waste are described here: overproduction, over processing, defects, and skills misapplied.

Review the process flow and see if you can identify one or more instances of defect handling and an instance of skills misapplied.

When you have found all of the Lean waste you can, click the "Next" button to see my suggestions.

1.4 Process Flows and Lean Thinking



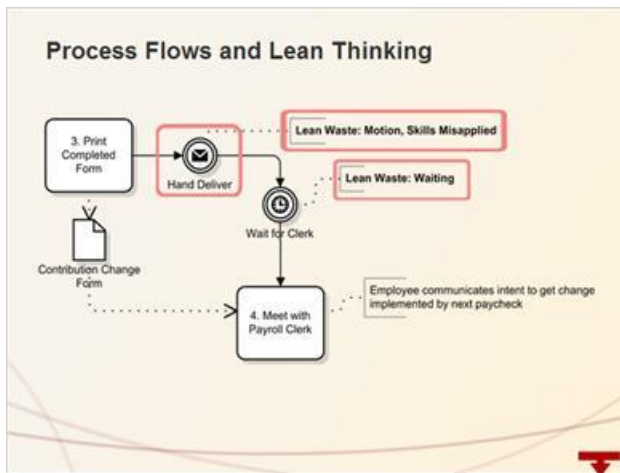
Notes:

This slide shows two sections of the process flow diagram related to defects. Notice the Annotations in bold text. Task 5 and task 7 indicate the form was reviewed for omissions. It seems wasteful to check for defects in the change form after it has been filled out by the employee. It would be best if the employee could be assured of correctly recording the required fields as he or she is completing the form. As you can see in this process, we perform this “downstream” check not once but twice!

Is there a way to eliminate both steps? What if the employee could validate the form’s field values while filling it out? What if we could use some technology to improve this business process?

Please click the “Next” button to continue.

1.5 Process Flows and Lean Thinking



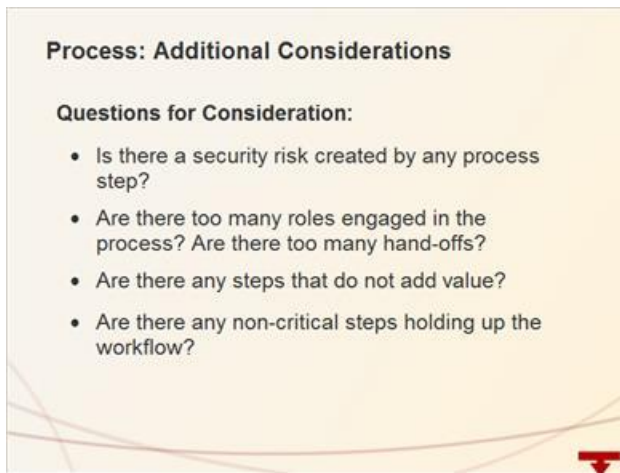
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Please click the “Next” button to continue.

1.6 Process: Additional Considerations



Process: Additional Considerations

Questions for Consideration:

- Is there a security risk created by any process step?
- Are there too many roles engaged in the process? Are there too many hand-offs?
- Are there any steps that do not add value?
- Are there any non-critical steps holding up the workflow?

Notes:

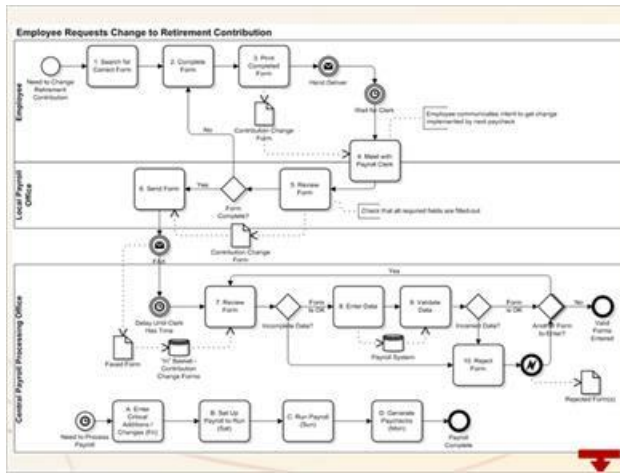
This slide lists some additional questions to consider about this process flow.

Surprisingly, the Fax machine may represent a security risk - if the change form contains restricted information such as a social security number. Is the telephone line between the Local Payroll Office and the Central Payroll secure? What if the Payroll Clerk sends the form to the wrong Fax number? Is the Fax machine at the Central Payroll office in a area that restricts physical access? Are all forms removed from the Fax machine at the Central Payroll Office and secured in a locked cabinet at the end of the workday? Most Fax machines contain a disk drive that captures and retains the image of each scanned document. When the Fax machine is retired, is its hard drive erased or destroyed?

There are other considerations represented in part by the remaining questions on this slide. I'll leave you to think about them. Are there other questions you would ask about this business process?

Click the "Next" button to proceed.

1.7 Assessing Process: More Evaluation



Notes:

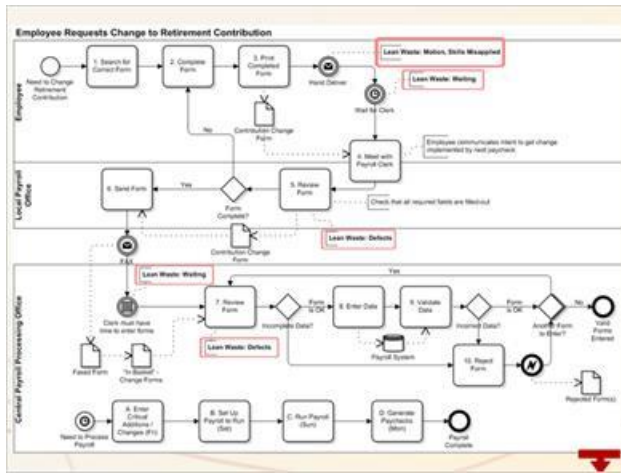
Like many people, you are probably thinking about a technological solution to the challenges faced in this process. And honestly, I've encouraged you to think this way. Imagine the CIO budgeted \$100,000 to design and develop a solution. I'll give you about 20 seconds to think about this opportunity.

What if we created a secure, web-based data entry form that allows the employee to complete the form on-line and have it validated against the payroll system? This solution would eliminate the Lean wastes we identified, minimize errors, and reduce employee frustration with the process.

I'll admit it - I intentionally raised the idea of using technology to lead you astray. Technology is very seductive; we often use it as the obvious solution to a business problem. I'd like you to reread the problem narrative and look again at the process flow. Can you identify the real business problem? See if you can propose a solution that fixes this problem for about \$10.

Click the "Next" button when you are ready to see to the solution I propose, along with the justification for it.

1.8 BPMN Lab - Retirement Contribution



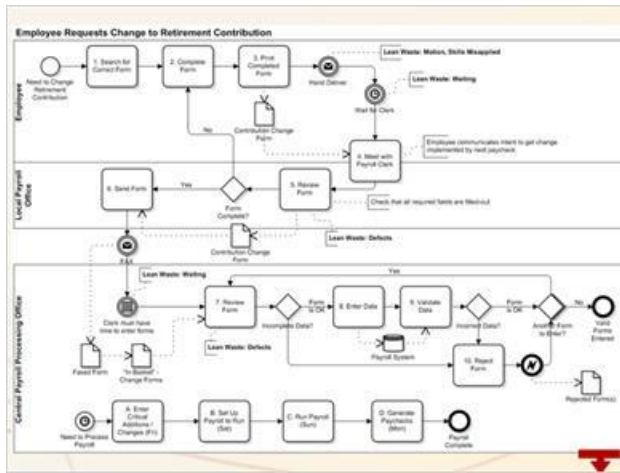
Notes:

Let's think for a moment about the extent of the process problem. It appears that only 40% of employees were making retirement contributions through the company's plan last year. Of those 8,000 employees less than 7 percent (only 520) made any adjustments to their retirement contribution last year. Nearly all these employees made only one adjustment in that time period. Does it make sense to spend \$100,000 on perhaps 600 transactions?

Is there another, less expensive solution? Let's define the business problem differently: how do we help employees submit contribution forms in a timely manner? If we understand the issue in this way, then another solution may become clear to you.

Click the "Next" button when you are ready.

1.9 BPMN Lab - Retirement Contribution



Notes:

What if we update the template for the change form to indicate an early deadline - the Wednesday before timecards are due? This lead time will give the Central Payroll Office several days to process the forms prior to each bi-weekly payroll run. Of course, we'd need to verify that Wednesday gives enough time to enter all of the change forms, but this solution is both very simple and inexpensive.

So what features of the process flow diagram helped identify a solution? Did you notice that:

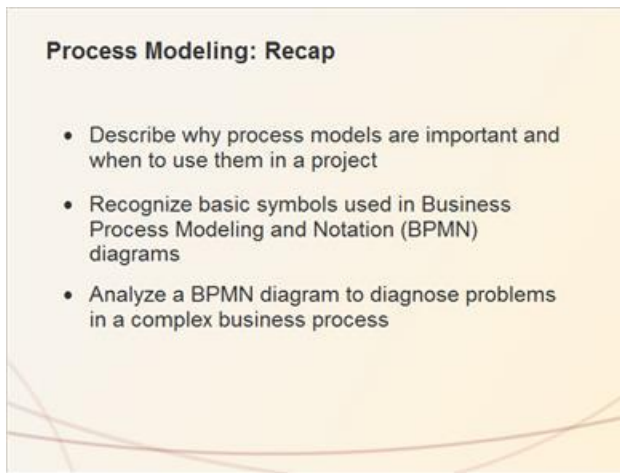
- Payroll processing currently runs independently of the entry process for forms
- Only critical forms are entered before the payroll processing begins
- The employee is not submitting the change form in time for payroll processing on Saturday

These observations may have helped you realize that the company has not set a suitable deadline for submitting change forms. The problem can be fixed for a few dollars by putting a deadline on the change form.

Of course, we haven't fixed the Fax machine issue, which may be part of a larger security problem in this company. As good stewards, we should encourage the CIO to investigate and address that concern.

Click the "Next" button to continue.

1.10 Process Modeling: Recap



Process Modeling: Recap

- Describe why process models are important and when to use them in a project
- Recognize basic symbols used in Business Process Modeling and Notation (BPMN) diagrams
- Analyze a BPMN diagram to diagnose problems in a complex business process

Notes:

This last slide concludes our exploration of Business Process Modeling and Notation. You've had an opportunity to understand why process models are valuable. You now recognize core BPMN objects and understand how to use them to describe business processes. Lastly, you demonstrated your new expertise by using a BPMN diagram to understand a challenging business problem and identify a solution for it. I hope you and your projects will benefit from learning about these topics.