



TRAINING,
LEADERSHIP
CONSULTING

PROCESS MAPPING

PCB Lean Forum – 7 March 2017

Facilitated by Martin Ost

How to make a Paper Plane

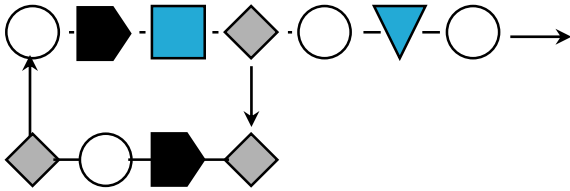
Write a process on how to make a paper plane and build a prototype.

- **Time: 5 Minutes**

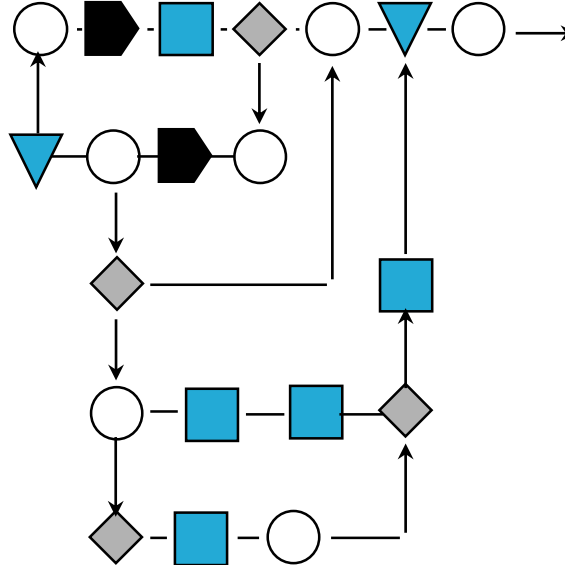


The 3 Versions Of A Process

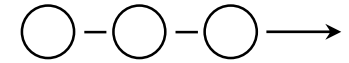
What You Think It Is...



What It Actually Is...



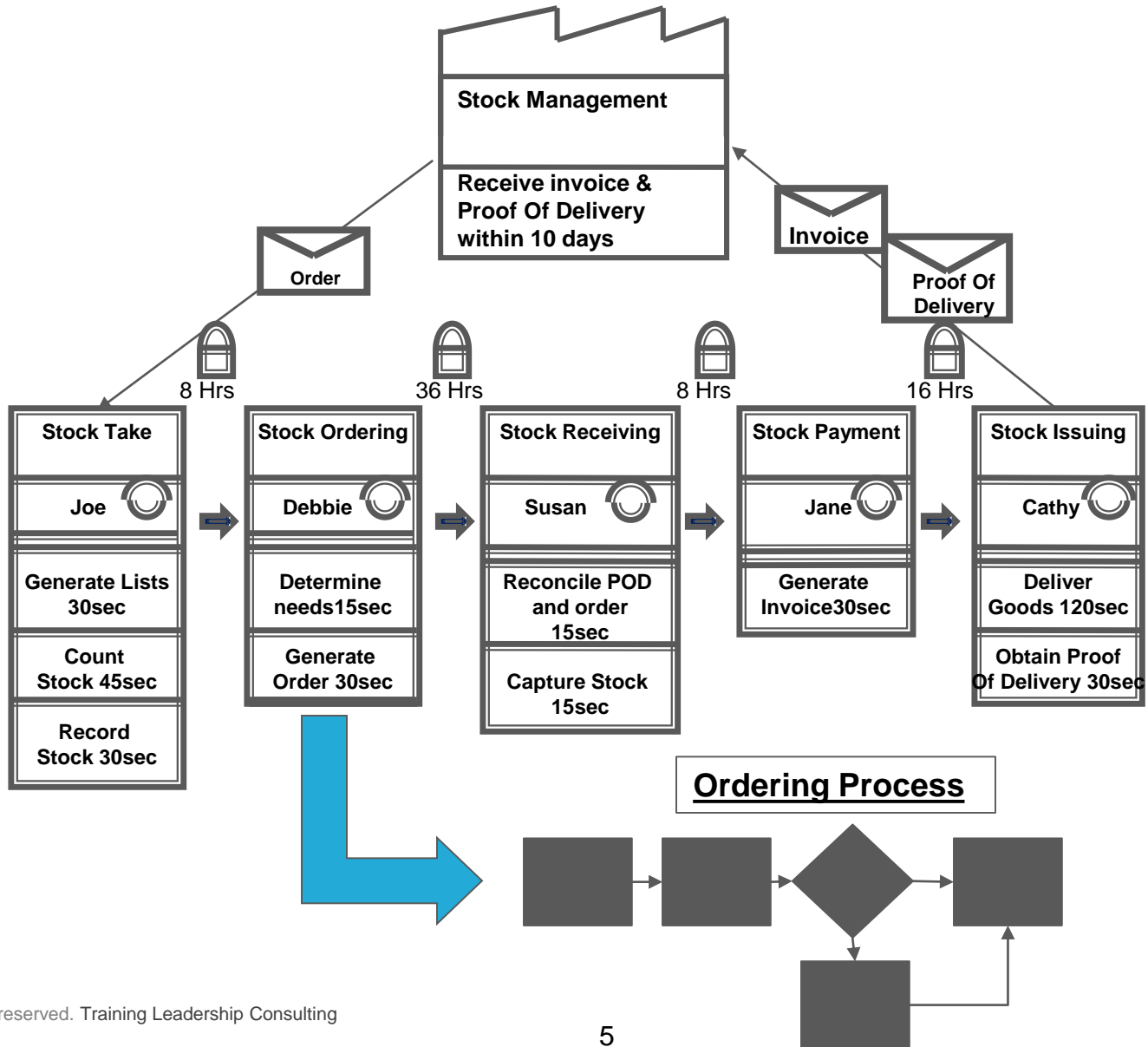
What it could be with Lean...



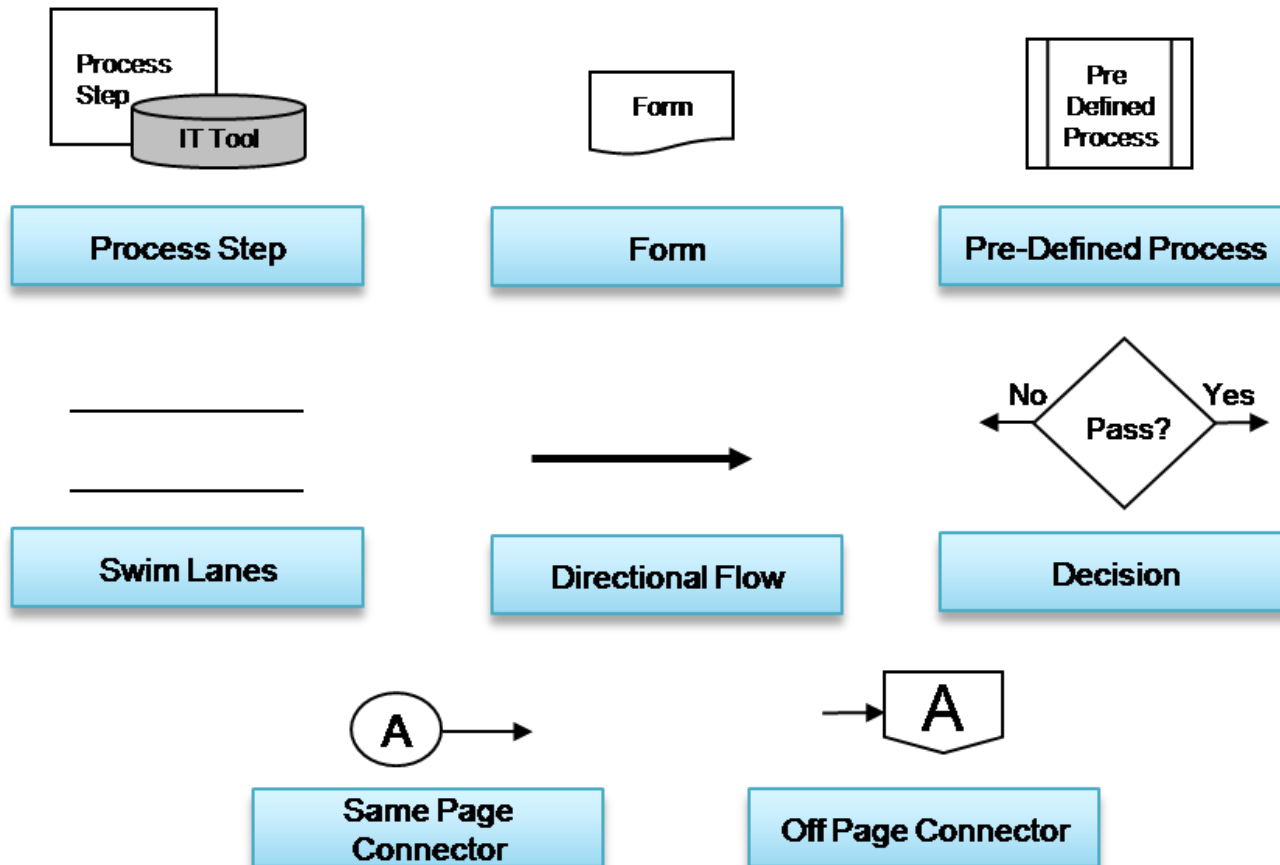
Process Mapping Steps

1. Ideally - start from the Value stream map.
2. Identify all Process Steps, Decisions and Documents required in the process.
3. Get the “Right People” who are part of this process together in one venue with plenty of Post-Its and wall space.
4. Determine and assign process steps into swim lanes by Process Users / Role or Function
5. First map out the Current State, then conduct a Value / Non-value Analysis.
6. Finally map out the improved future state Process Map ensuring consensus has been found on this amongst the team.

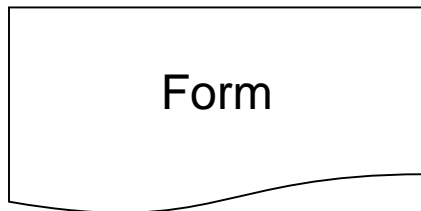
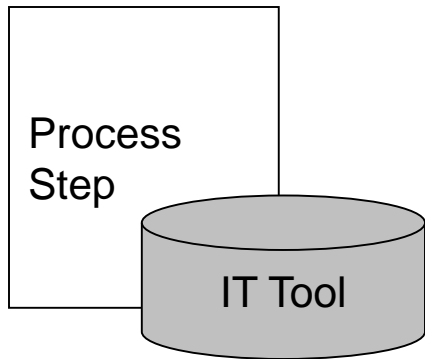
Step 1: Create the Value Stream Map



Step 2: Identify Process Steps

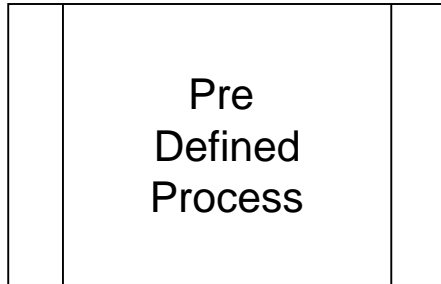


Step 2: Identify Process Steps



- Each process step has a series of numbers that indicates the level within the process and describes the action that should take place at this stage in the process.
- Activities are named with a verb followed by a noun.
- Use of IT tools can also be indicated as shown here with a database symbol and name of the database
- This symbol indicates that a form / document / template is required to perform the attached process step.

Step 2: Identify Process Steps



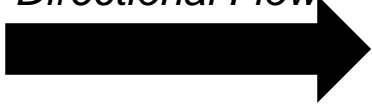
- This indicates that another process must be performed at this point.
- The process to follow will be already defined in another process map.

Swim Lanes

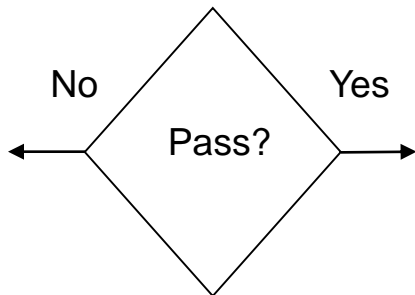
- Process steps are placed within swim lanes to indicate department/role responsible for the activity named within the process box

Step 2: Identify Process Steps

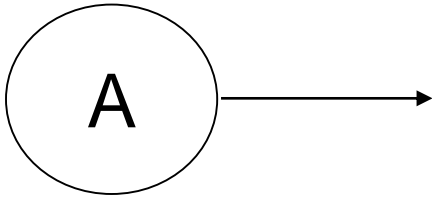
Directional Flow



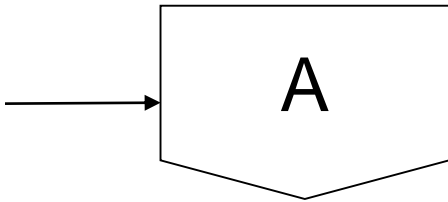
- All process symbols are connected with a directional indicator that illustrates the flow of the process steps.
- A diamond indicates that the activity is dependent upon a decision.
- The answer to the decision determines the next process step one should follow.



Step 2: Decision

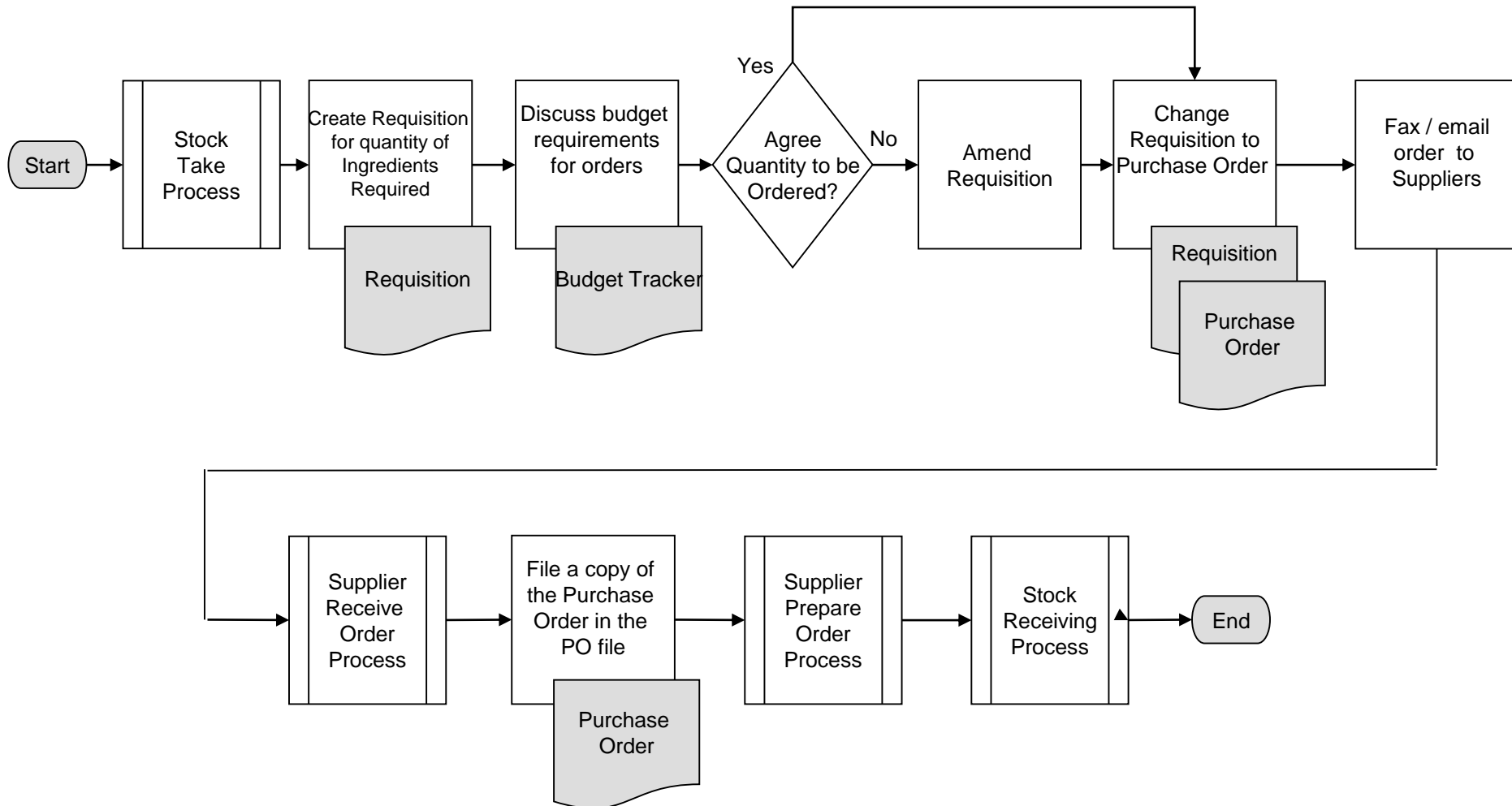


- A circle is used to connect outputs with inputs at various stages in the process..



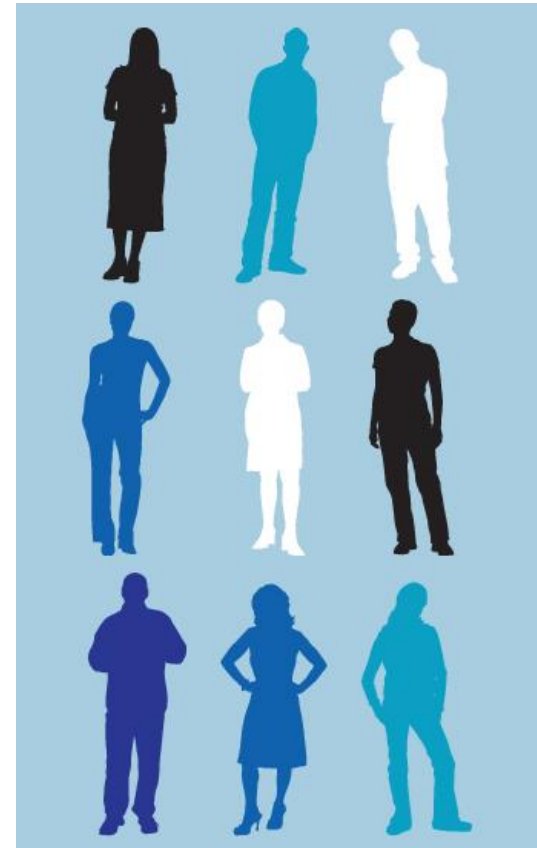
- This symbol is used to indicate that the process is continued on a different page.
- Look for the letter in the symbol on the following pages to pick up where this process continues.

Example – Step 2: Identify Process Steps



Step 3 & 4: Determine Users and Swim Lanes

- **Swim Lanes** are used to separate process steps by each process user, responsible for performing a given set of process steps.
- This graphically depicts how each Process User's work impacts the next Process User in the value chain.



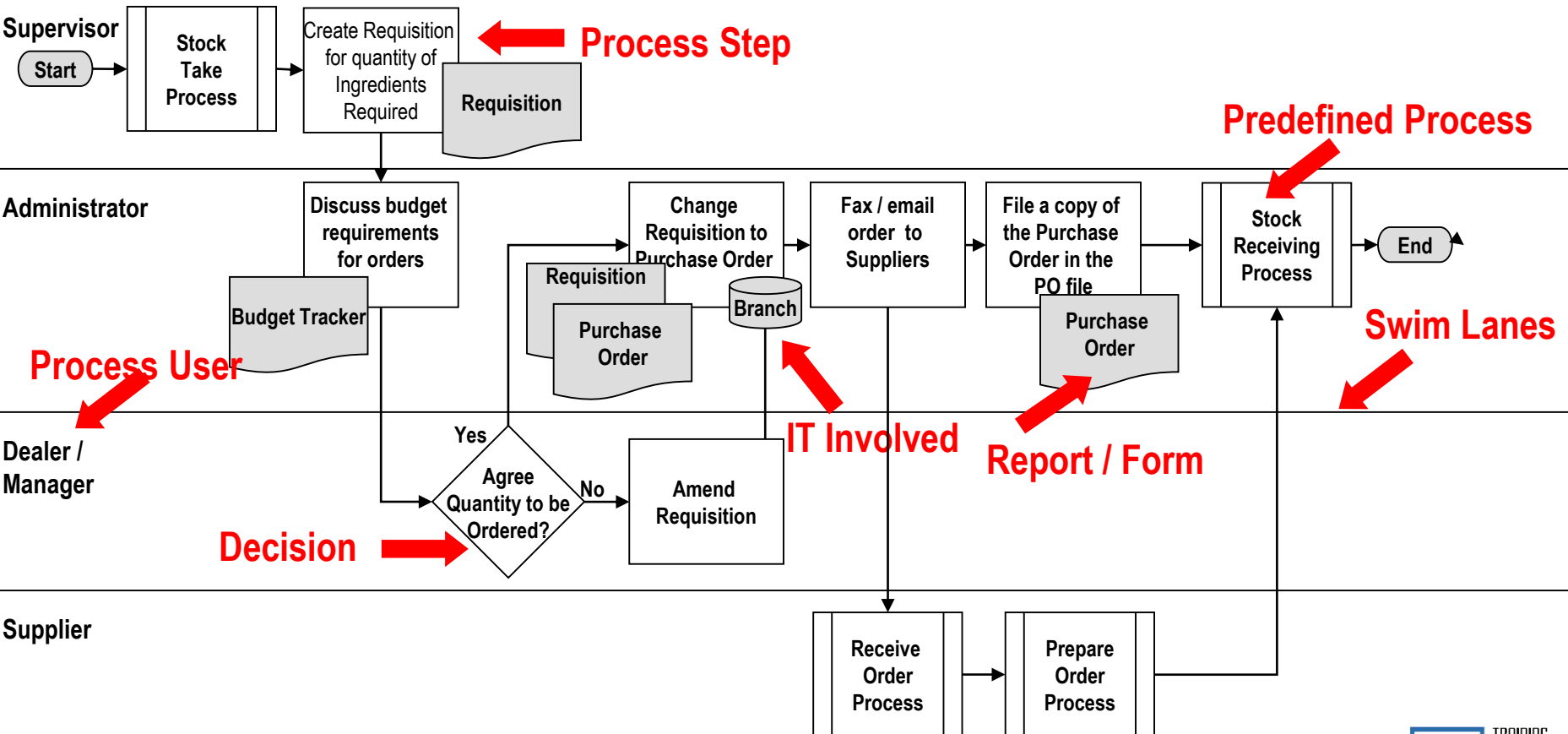
Example - Step 3 & 4: Determine Users And Swim Lanes

Predefined Process

AS IS – Stock Ordering Process

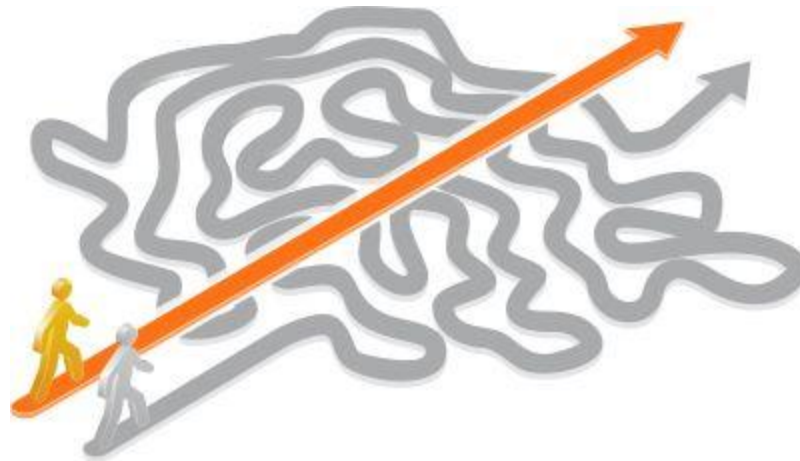
Who is responsible →
What you are measuring →

Process Owner	Supervisor
Metric	Number of products with Stock Outs

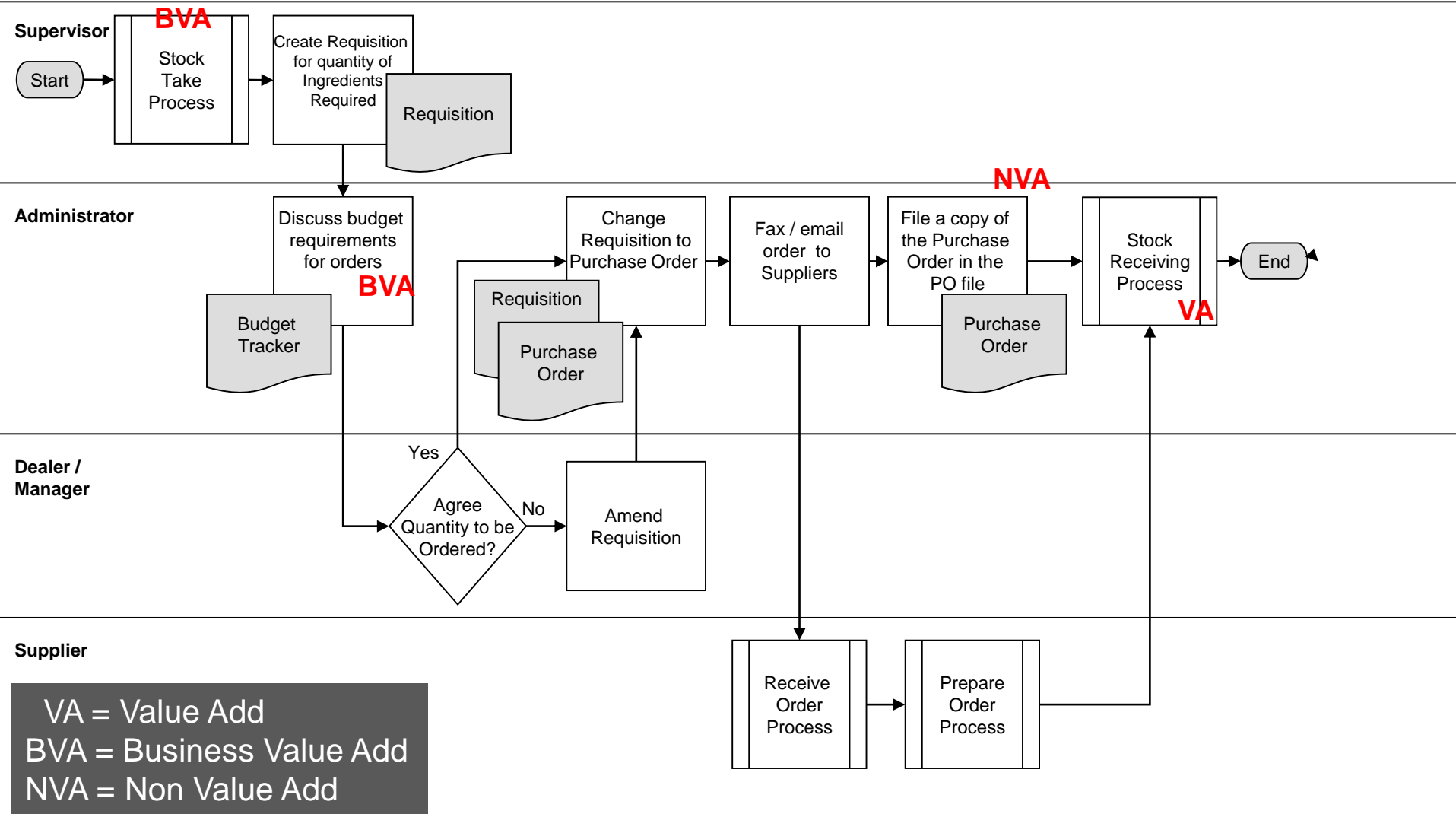


Step 5: Conduct a Value/Non-value Analysis

- Each process step is now assessed in terms of value
- This exercise is performed considering the overall customer requirements from the process
- The process team players and SMEs (Subject Matter Experts) assess the value of each step
- Steps that are considered as NVA or BVA are candidates for improvement/elimination



Example - Conduct A Value/Non-value Analysis



Value Assessment Questions



Customer Value-Added (CVA) Questions:

- Does the task add a desired feature to the product or service?
- Does the task enable a competitive advantage (reduce price, faster delivery, fewer defects)?
- Would the customer be willing to pay extra or prefer us over the competition if he or she knew we were doing this task?



Business Value-Added (BVA) Questions:

- Is this task required by law or regulation?
- Does this task reduce the financial risk of the owner(s)?
- Would the process break down if this task was removed?
- Recognize that these activities are really non-value-added but you are currently *forced* to perform them. You need to try to eliminate or at least reduce their cost.



Non-Value-Added (NVA) Questions:

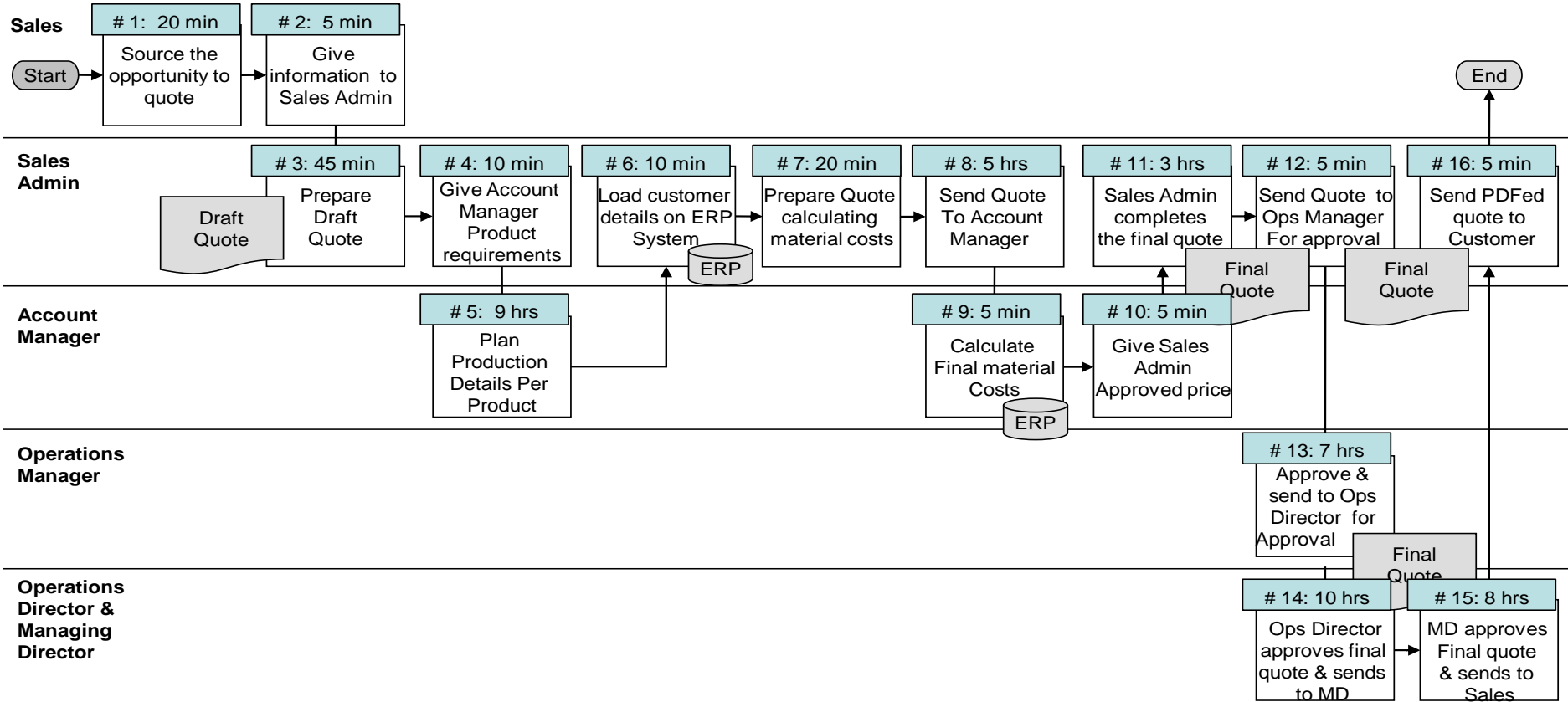
- Does the task include any of the following activities: counting, handling, inspecting, transporting, moving, delaying, storing, all rework loops, expediting, multiple signatures?

Example 2 – Measuring Value: Transactional Environment



AS IS – Quoting Process

Version	1	Page	1
Print Date	26 March 2014		
Approved By			



Process Owner	Sales Admin	Critical To Quality (CTQ)	Time	Unit Of Measure	Minutes
Metric	Time Taken from Request to Quote until Customer receives Quote				
Method	Time Stamp on ERP system				

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Example 2 – Measuring Value: Transactional Environment

Process Step	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total Mins	% Total
CVA										5						5	10	0.4%
BVA	20				540	10			5								575	21.7%
NVA																	2065	77.9%
Passing of Information		5		10				300			180	5						
Duplicate Work			45				20											
Approvals													420	600	480			

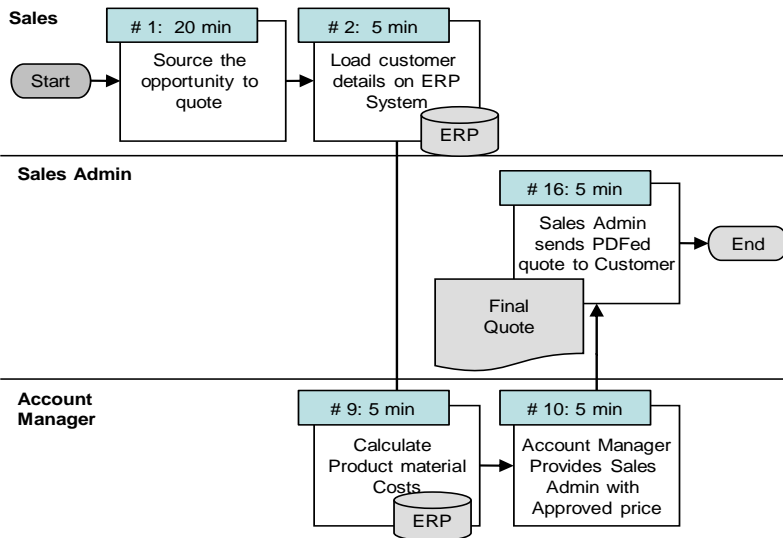
Example 2 – Measuring Value: Transactional Environment



TO BE – Quoting Process

Version	1	Page	2
Print Date	26 March 2014		
Approved By			

	AS IS	TO BE
Steps	16	5
Cycle Time	2590 min	40 min
NVA %	98.4%	0%



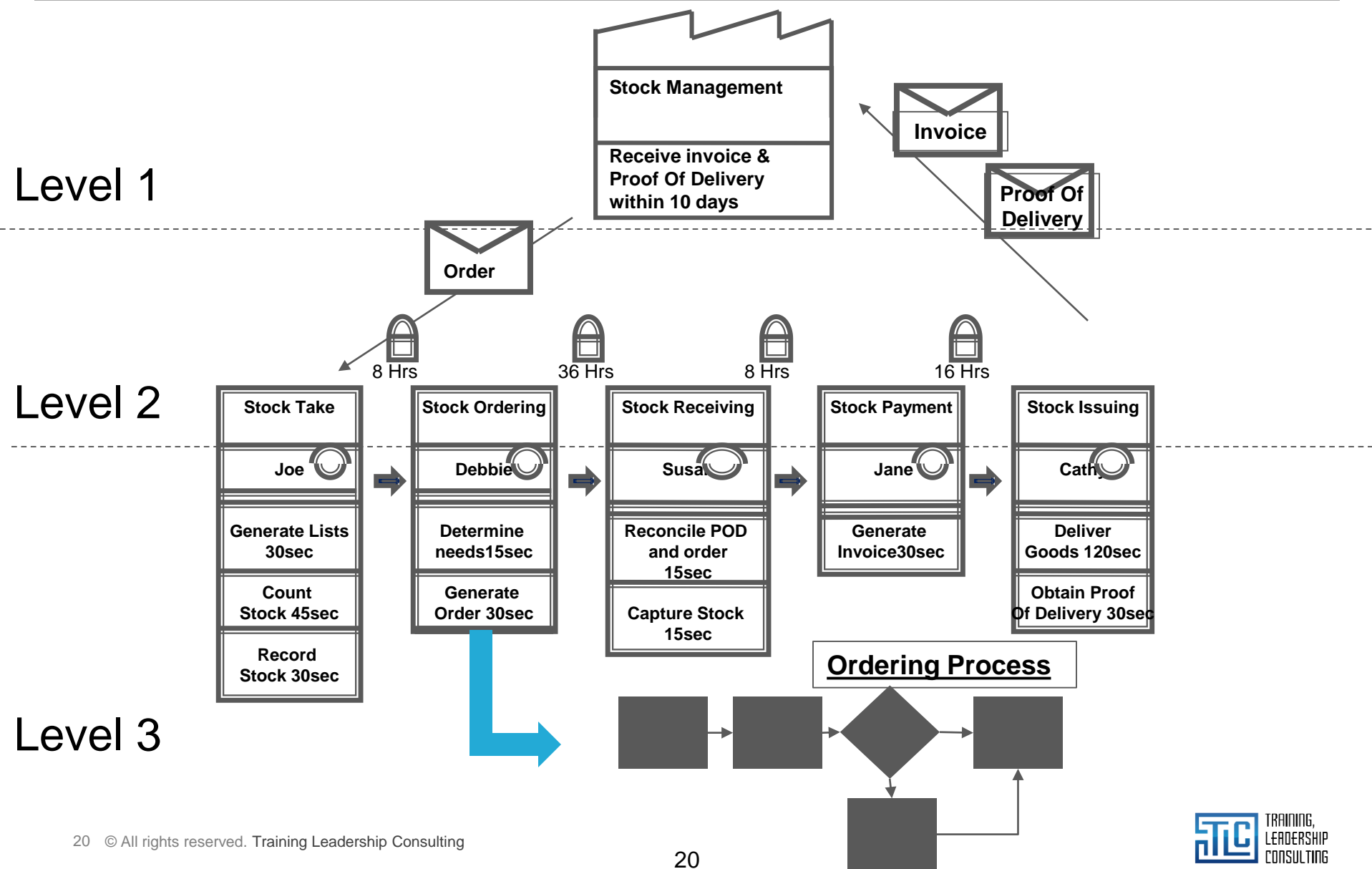
Operations Manager

Operations Director & Managing Director

Process Owner	Sales Admin	Critical To Quality (CTQ)	Time	Unit Of Measure	Minutes
Metric	Time Taken from Request to Quote until Customer receives Quote				
Method	Time Stamp on ERP system				

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Determine The Levels For Your Process Map



Step 2: Determine The Level Of Detail To Map

LEVEL 1

- High-Level Organisational Process
- e.g. Develop Product

LEVEL 2

- Mapping Sub-Processes
- e.g. Develop concept, Develop Designs, Build Prototype, Price Product

LEVEL 3

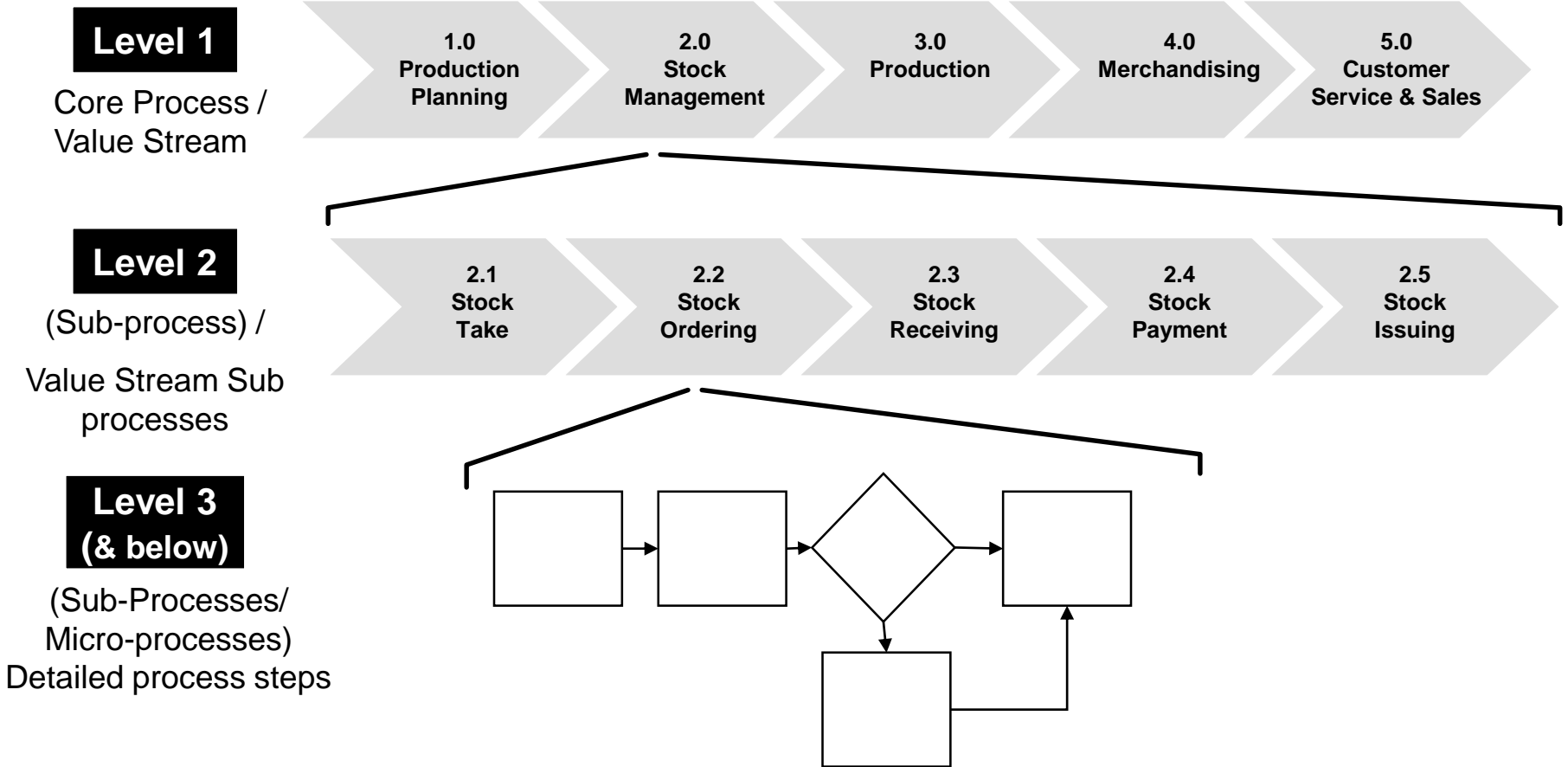
- Activities (identify value and non value added activities)
- e.g. Attach Price Tag

LEVEL 4,5

- Procedures and Tasks
- e.g. Input stickers into pricing gun

Example - Step 2: Determine The Process

Levels



Summary

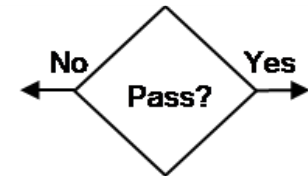
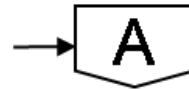
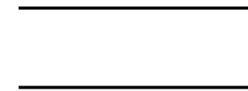
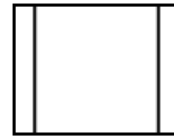
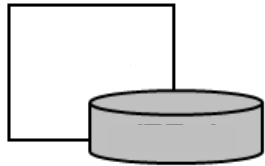
In summary, in this lesson you have learned how to:

- Describe what a process map is
- Apply the process mapping steps
- Map a process in swim-lanes
- Perform a Value add Analysis on the process map



Lesson Quiz

1. How many steps are there when process mapping?
2. What are swim-lanes in a process map?
3. What do the following symbols denote?



Quiz - Answers

1. How many steps are there when process mapping? **5 process mapping steps.**
2. What are swim-lanes in a process map? **Swim Lanes are used to separate process steps by each process user, responsible for performing a given set of process steps.**
3. What do the following symbols denote:

