
LEARN BY DOING FROM THOSE WHO DO

## Problem Statement: Too much silo thinking!

- Lack of common understanding of:
  - Overall performance
  - Biggest constraints / pain points
- Lack of alignment (across the organization) of:
  - Where to improve
  - Allocation of resources (time, technology, money)
- No one responsible for “the whole”

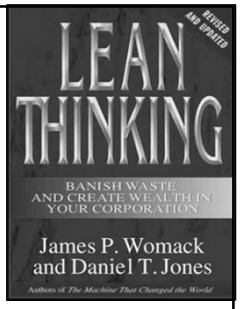
 

# Workshop Objectives

- Understand how Value Stream Mapping (VSM) is used to build leadership consensus and engagement for developing a strategic-level transformation plan
- Provide the foundations to broaden VSM as an effective management practice throughout your organization
- Learn how to properly scope, plan, socialize and execute effective VSM activities
- See how to address unique issues in office-based value streams

4

# Roots of VSM

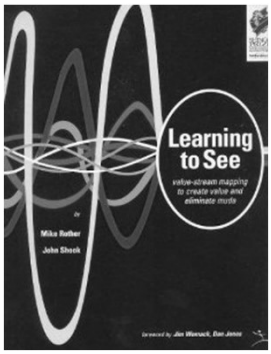


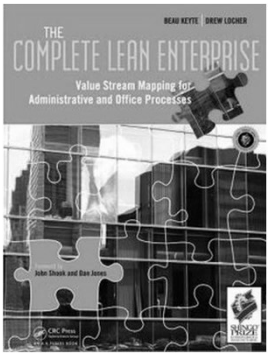

1. Specify value from the *external* customer's perspective
2. ***Identify, understand & manage the value streams***
3. Create flow
4. Pull at the demand of the customer (or where flow is not possible)
5. Pursuit of perfection

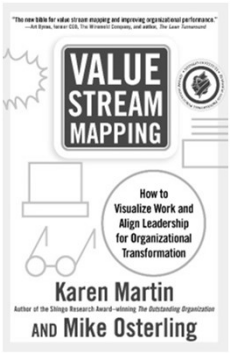
Lean Thinking, Womack & Jones

7

# Roots of VSM



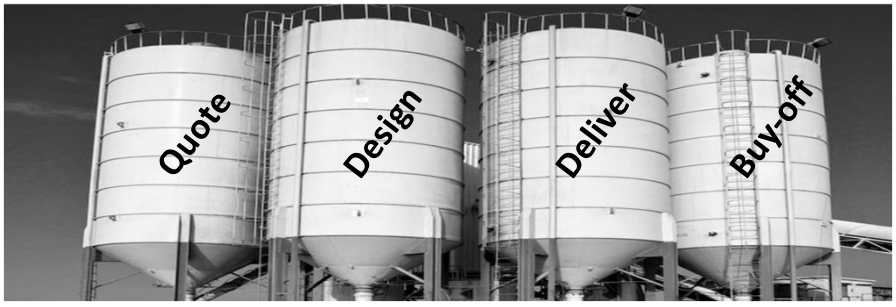




Whenever there is a product (or service) for a customer, there is a value stream. The challenge lies in seeing it.

Mike Rother & John Shook, *Learning to See*

# What is a Value Stream?

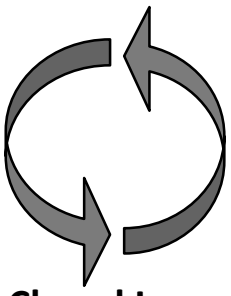
All the activities required to transform a customer request into a good or a service




Customer Request

Customer Receipt

**Value Stream**



**Closed Loop**

11

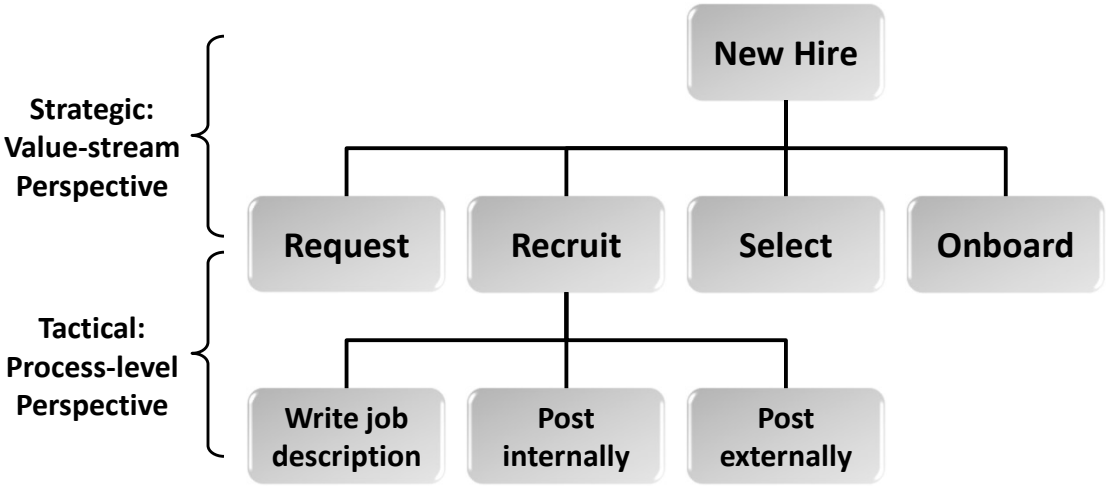
# Types of Value Streams

- Good or Service (**Core** Value Streams)
- Value-Enabling Work (**Support** Value Streams)
  - ***–Not part of the core VS!!***
  - –Examples: new- hire process; RFI; new-equipment acquisition…

12

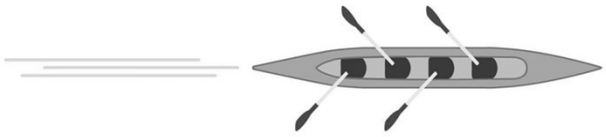
# New Hire (Support) Value Stream

**Degrees of Granularity**




13

# VSM → System Thinking



**System Efficiency & Effectiveness = Optimal Value Stream Performance**

**Departmental Efficiency ≠ System Optimization**

14

# What is Value Stream Mapping?

High level, **strategic** perspective of a process

1. Understanding the **current state**, following the process from beginning to end and visualizing:
   - Primary transformation **steps**
   - **Information** flows
   - Process flow / **delays**
   - ***Pain points*** */ Barriers to flow*
   - Key **metrics** (time, quality, and…)

2. Designing a "**future state**" of how value should flow
3. Creation of a transformation ***strategy & plan***

18

# Improvement: Strategy Before Tactics

**Where are we?**

**Where do we want to go?**

**Which route should we take?**


**I-80**

**I-40**

**Route 66**

19

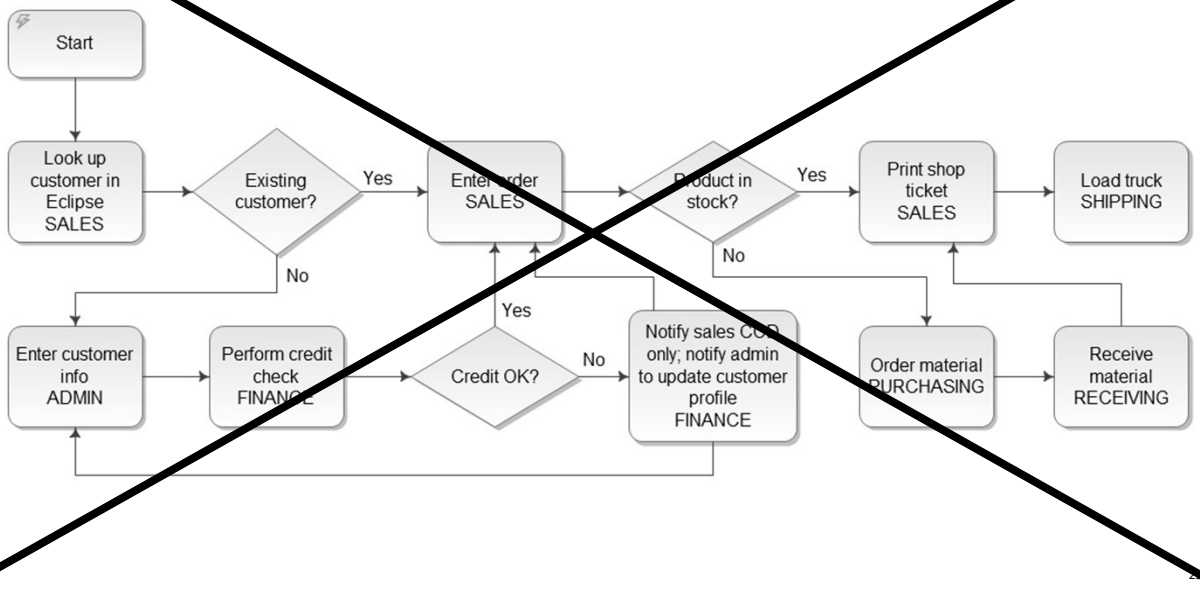
# VSM: Macro-Level View of Work Flow

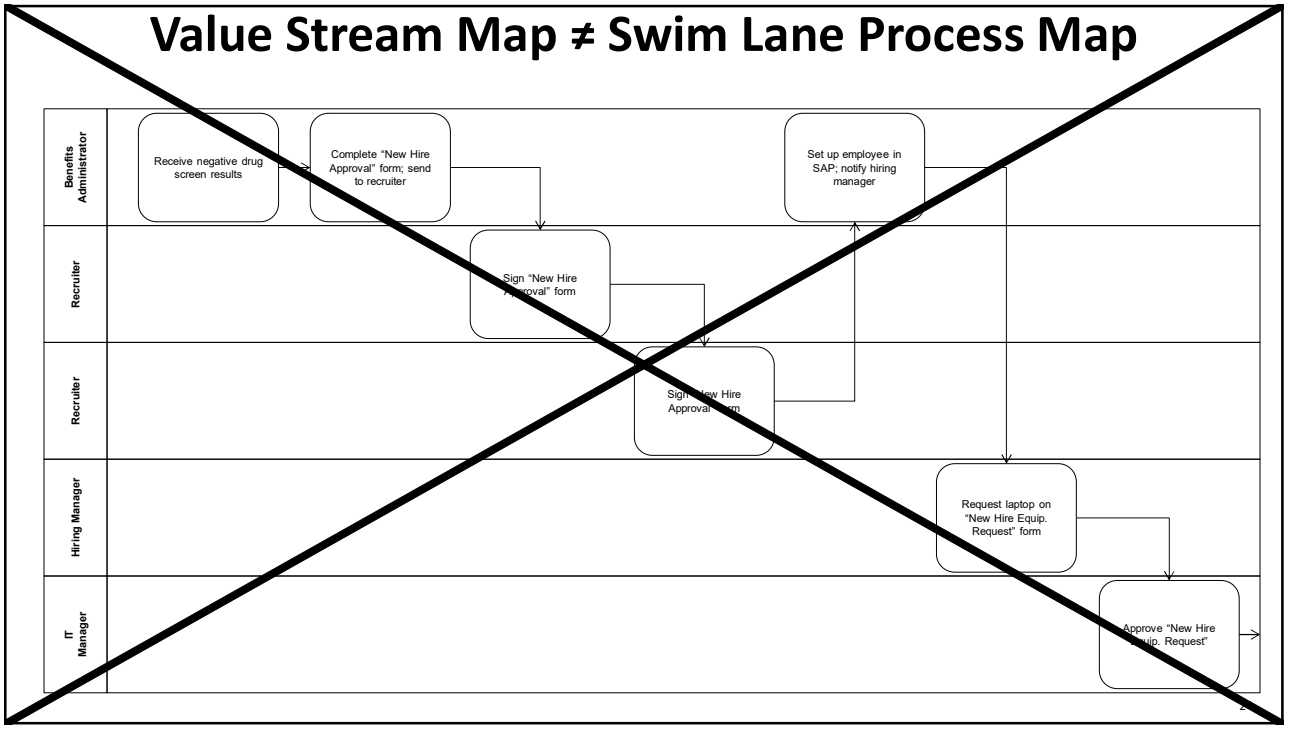
20

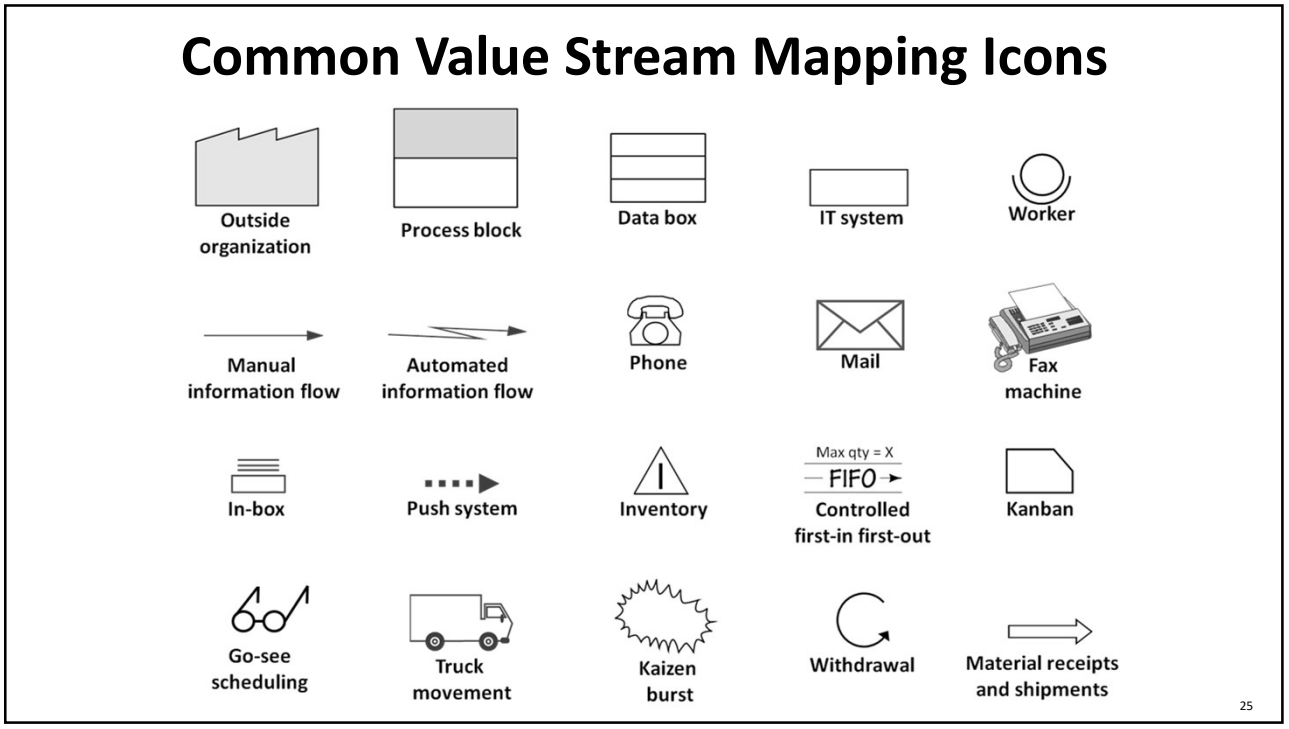
**Facilitates Leadership Consensus and Accelerates Improvement**

22

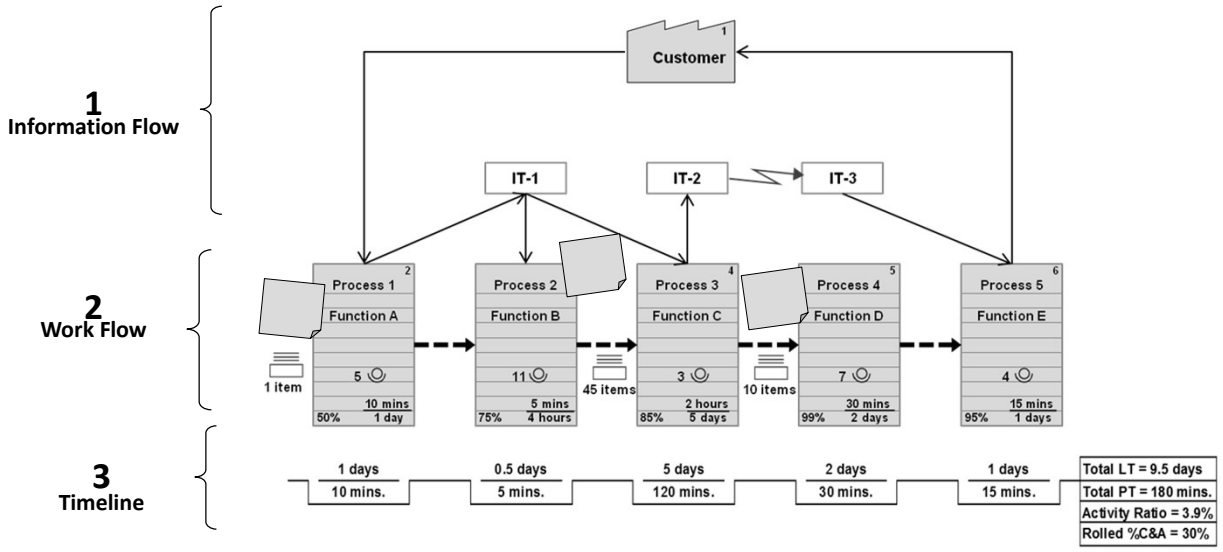
## Value Stream Map ≠ Process Flow Chart



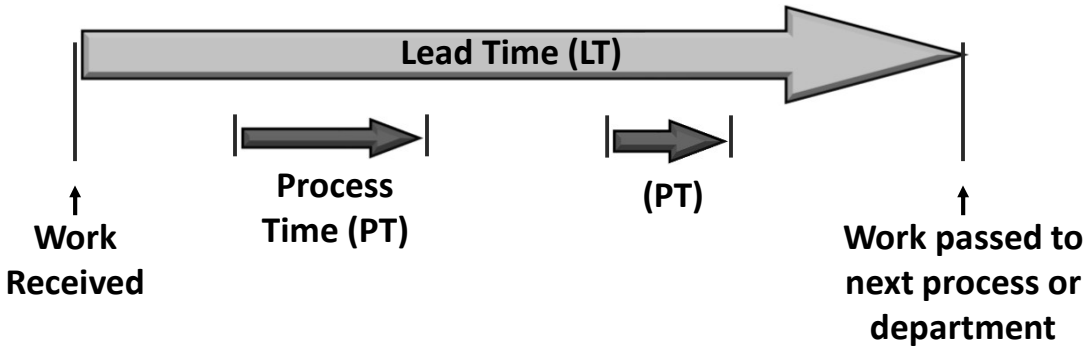


# Basic Value Stream Map



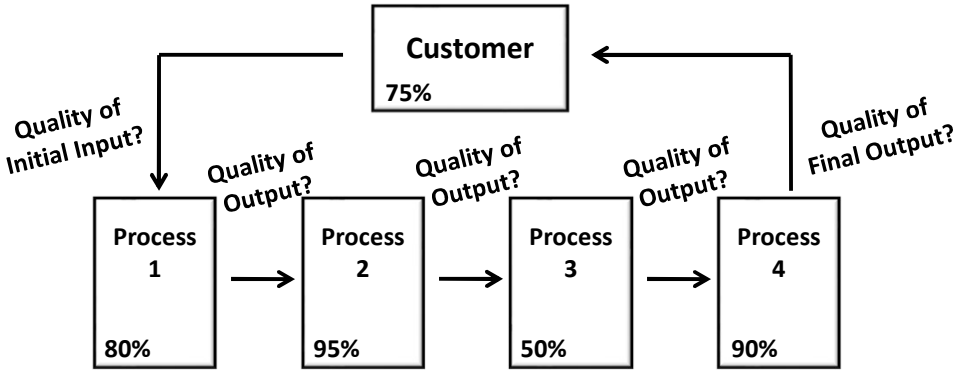

# Key Metrics: Lead Time & Process Time




**Lead Time** = Elapsed time; throughput time; turnaround time
**Process Time** = Touch time; work time (for one "thing")

27

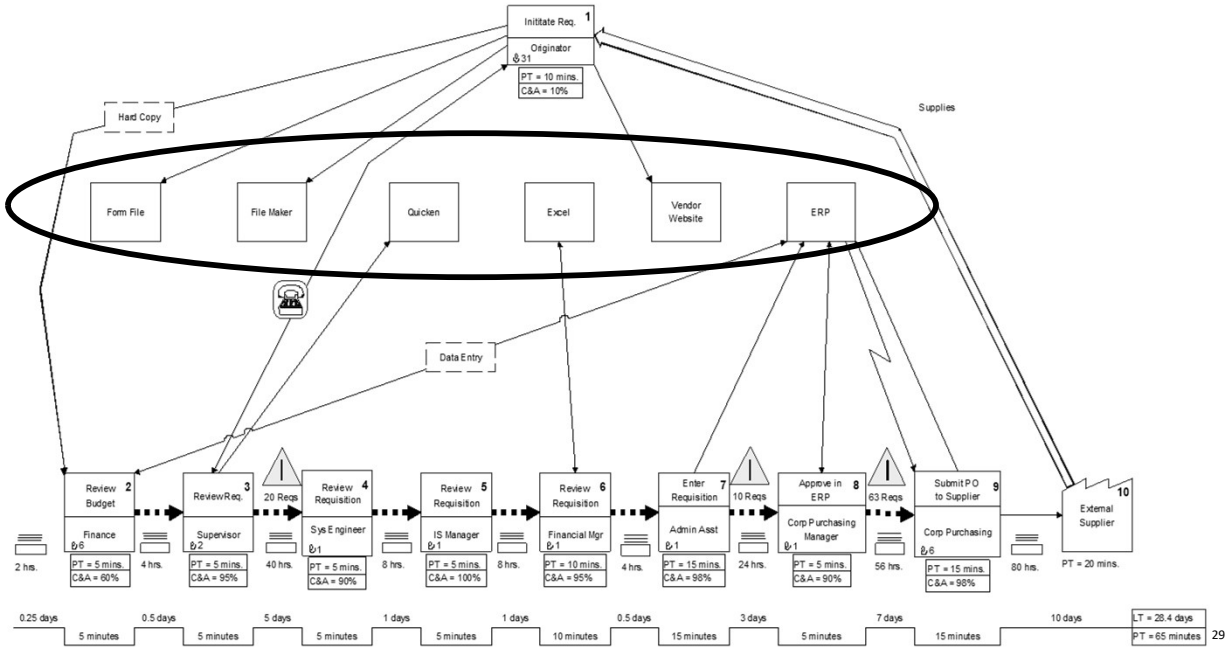
# Key Metric: Percent Complete & Accurate (%C&A)




## Correcting, Adding, Clarifying = Rework

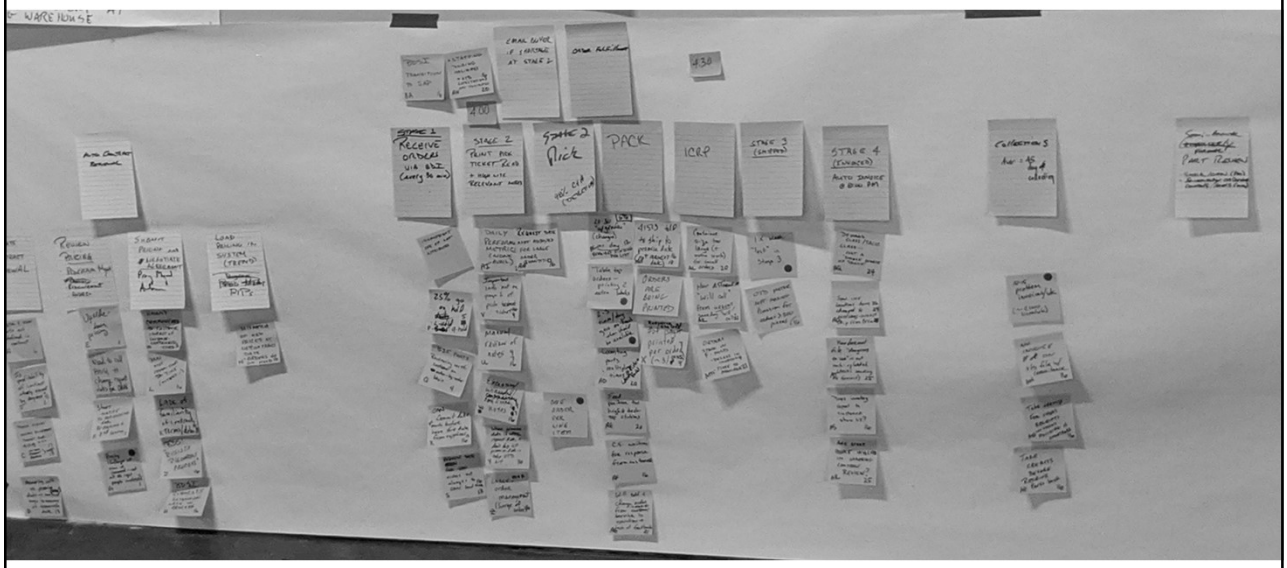
- Similar to first pass yield in manufacturing
- %C&A is measured by **downstream** process(es)

# Current State - Purchase Requisition Value Stream




29

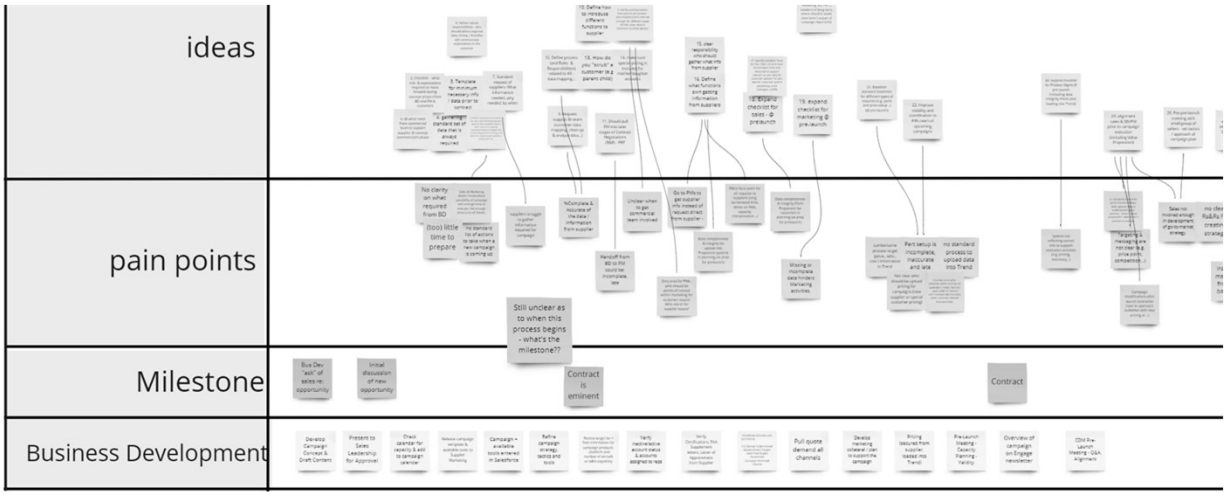
## Current State VSM



Start: Contract negotiation
End: Receipt of payment

30

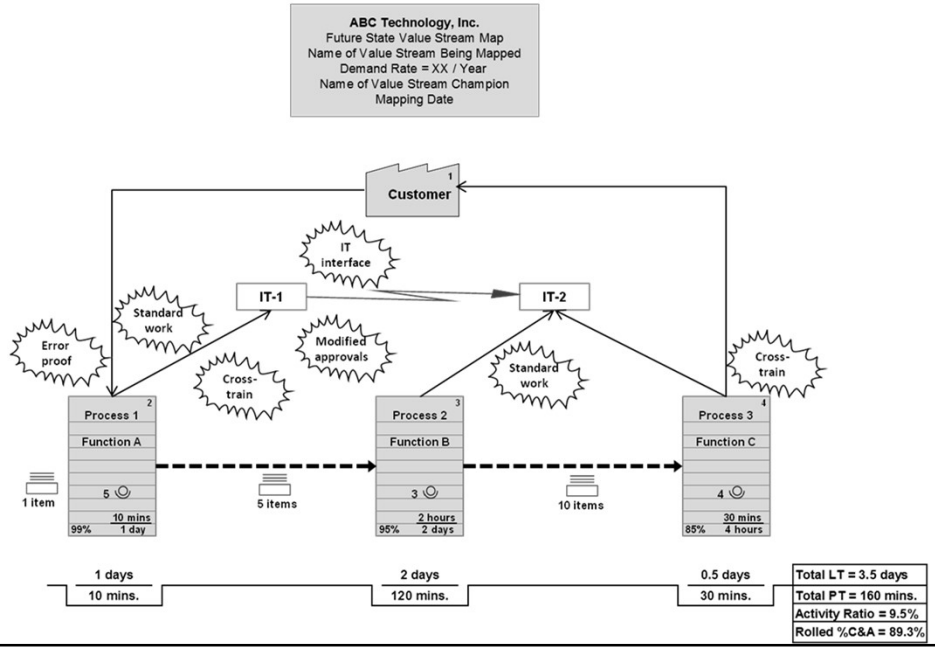
## Current State VSM




Start: Identification of opportunity / need for Sales Campaign
End: Post-campaign review of results & effectiveness

31

# Basic Future State Value Stream Map

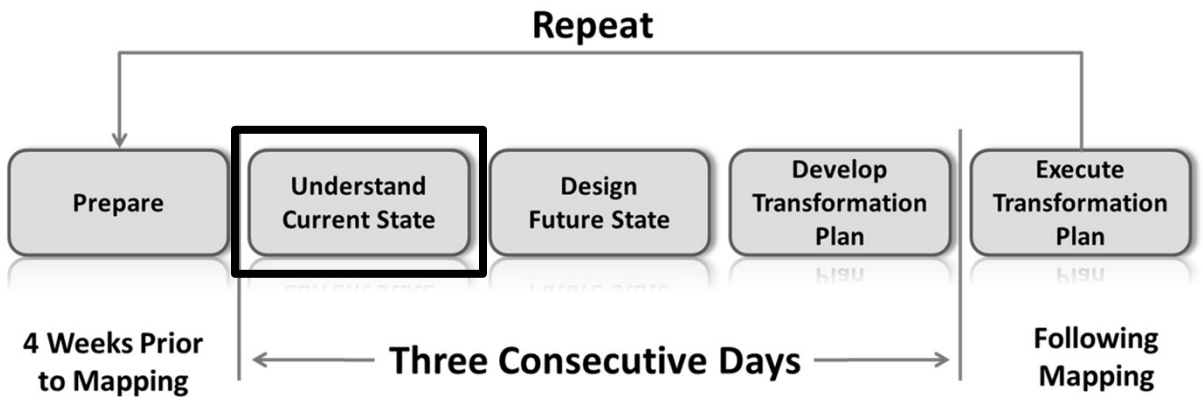



# Value Stream Performance

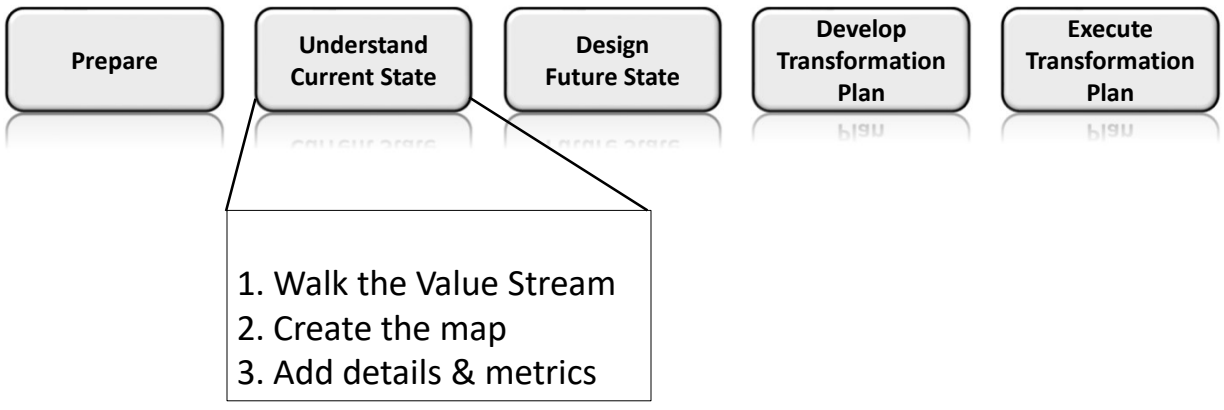
| Metric | Current State | Projected Future State | Projected % Improvement |
|---|---|---|---|
| **Lead Time** | 9.5 days | 3.5 days | 63% |
| **Process Time** | 180 minutes | 160 minutes | 11% |
| **Activity Ratio** | 3.9% | 9.5% | 144% |
| **Rolled % Complete & Accurate** | 30% | 89% | 198% |
| **User defined** | | | |
| **User defined** | | | |

33

## Value Stream Mapping Activity Phases and Timing




## Creating the Current State Map



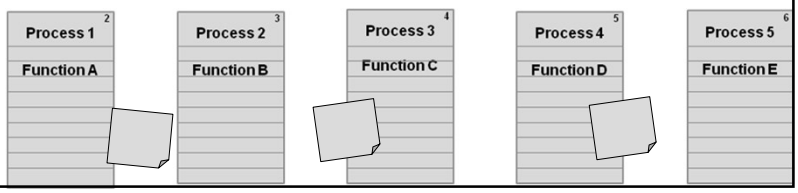

35

## Go to Gemba!

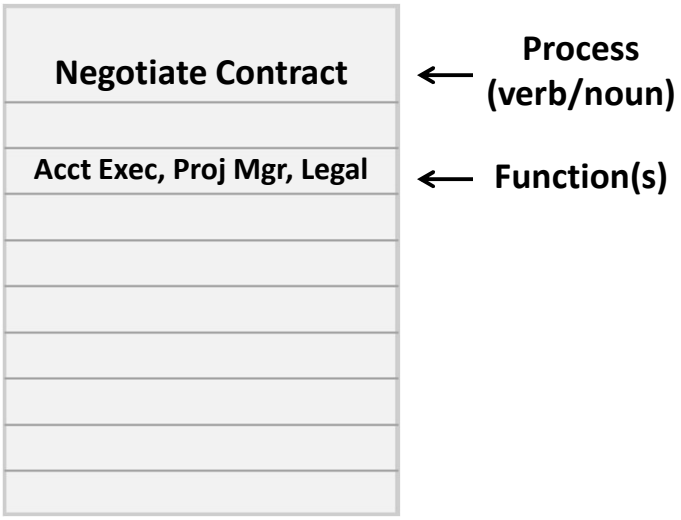
- Observe the work. Talk to the workers – what's really happening???
- Get key metrics: LT, PT, %C&A
- IT systems and applications used
- *Identify significant barriers to flow & pain points*
- **Don't improve the process yet – first understand it**

**Creating the Map…**

- Discuss gemba observations
- Post-its on mapping paper
  - Consensus on number of Post-its (where does "flow" stop?)
  - Create a map that works for 80% of the work.
  - ~20 blocks maximum
- Where are the "pain points"?

## Post-it Note Convention – First Pass




39

## Case Study/Simulation Intro – ABC Millworks

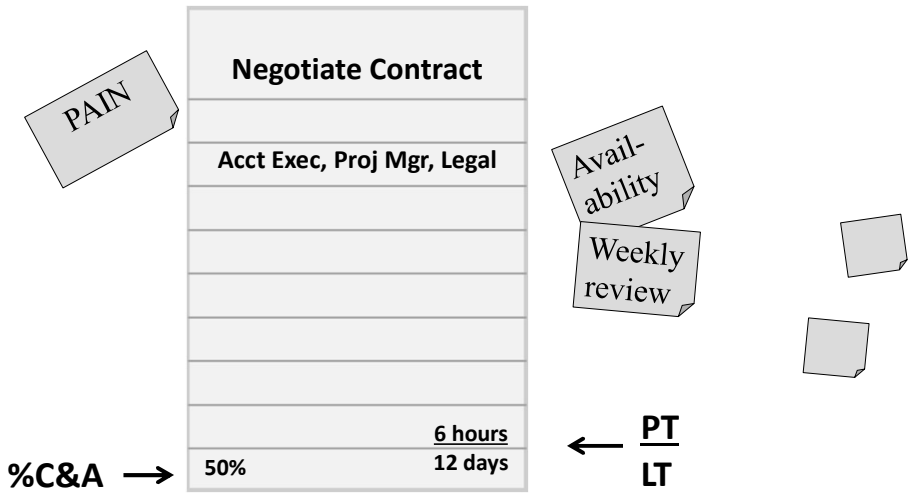
- Size & growth
  - $300M annual sales; 10-15% annual growth
  - 1200 employees; 8 plants
- ***Problem:*** *losing sales due to long quote response times, late deliveries and issues @ installation.*
- Two major value streams:
  1. Residential doors & windows– standard, config to order, and custom
  2. Commercial doors & windows – all custom
- **Target value stream** for improvement: Windows
- **Specific conditions:** Custom commercial windows. (30% of their revenue and 10% of the incoming orders.)
  - 2500 orders per year
  - Good progress in manufacturing (activity ratio = 83%) and inventory management (25 turns per year)
  - Supply base is stable; 98% of their parts and material is reliably managed via kanban pull systems
- 4 years on the Lean journey
- Operates five days per week (250 workdays per year); one 8-hour shift; 1,950 available work hours per employee per year

40

# VSM Next Pass – Add Details to the Map

- Record process metrics
  - PT and LT
  - %C&A
- Information systems and applications; and related information flow arrows
- WIP and push arrows as appropriate
- Any additional pain points
- Summary metrics

# Post-it Note Convention - Completed




43

## Documenting % C&A From Multiple Downstream Customers

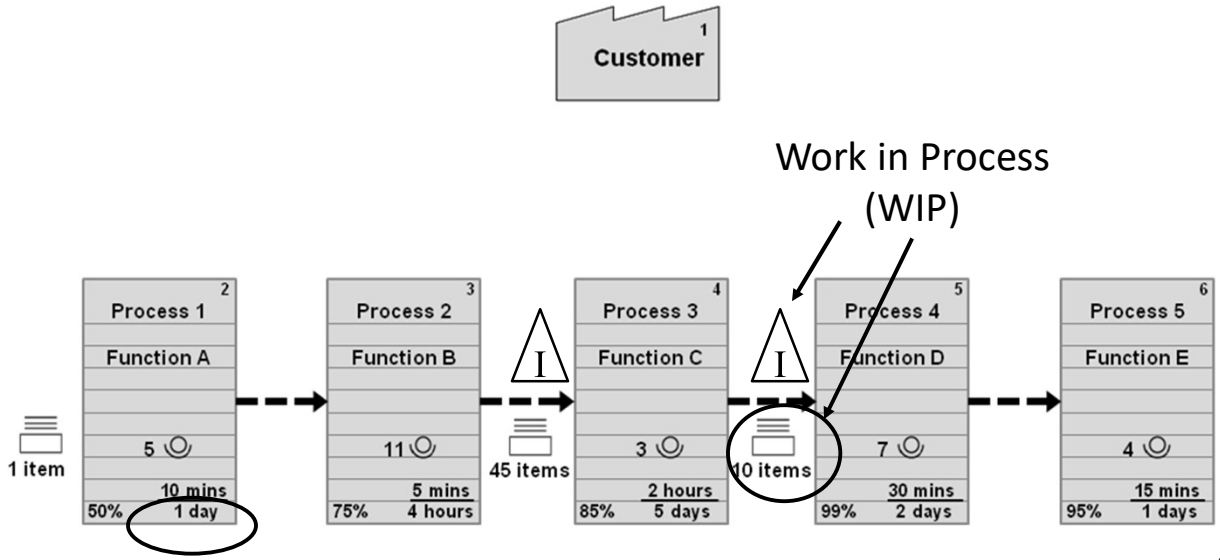
Block 5 reported that they rework Block 4's output 25% of the time

Block 7 reported that they, too, rework Block 4's output 50% of the time.

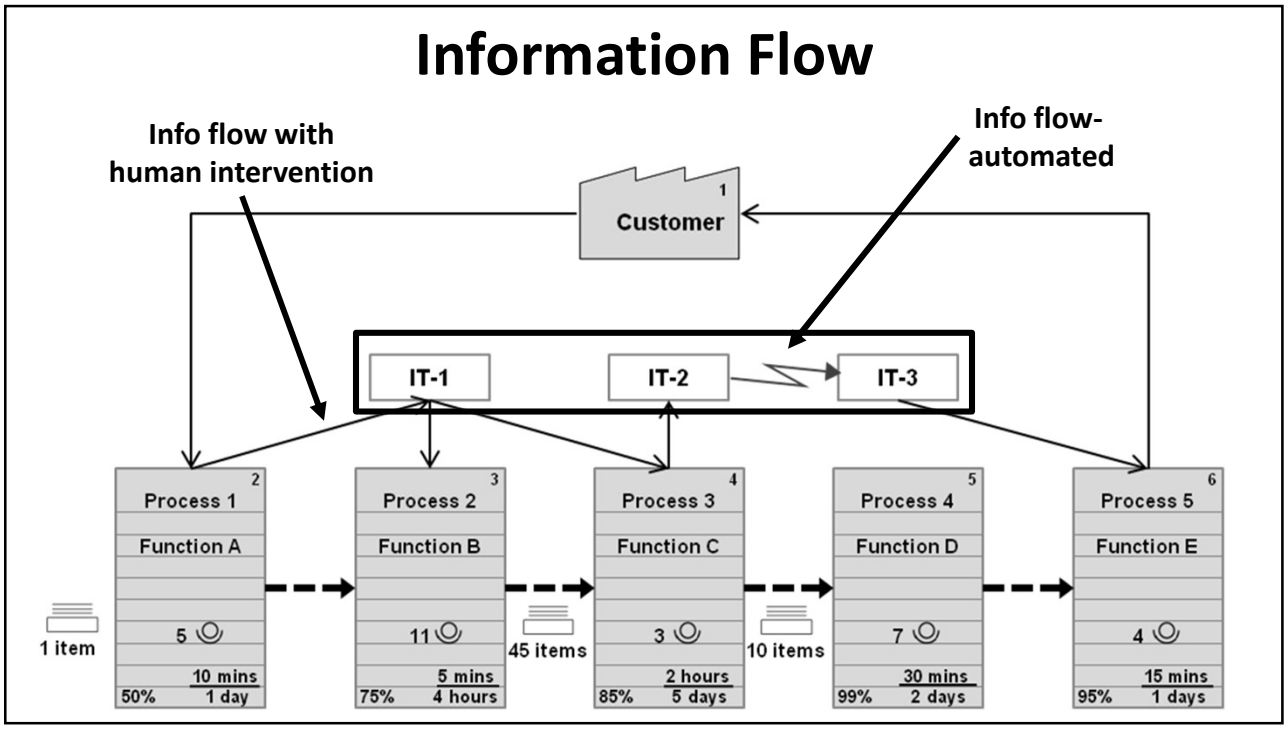
**(0.75 x 0.50) x 100 = 37.5%** **37.5%**

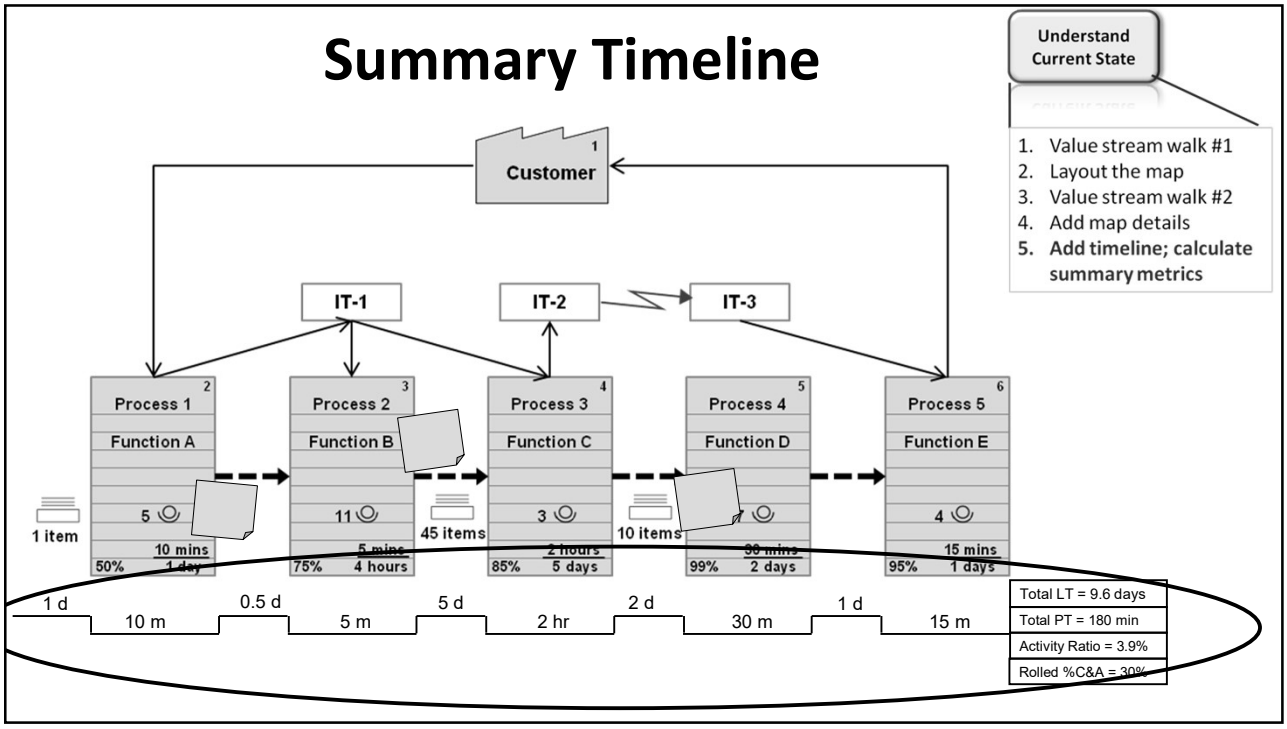

44

## Typical LT (or Amount of WIP)

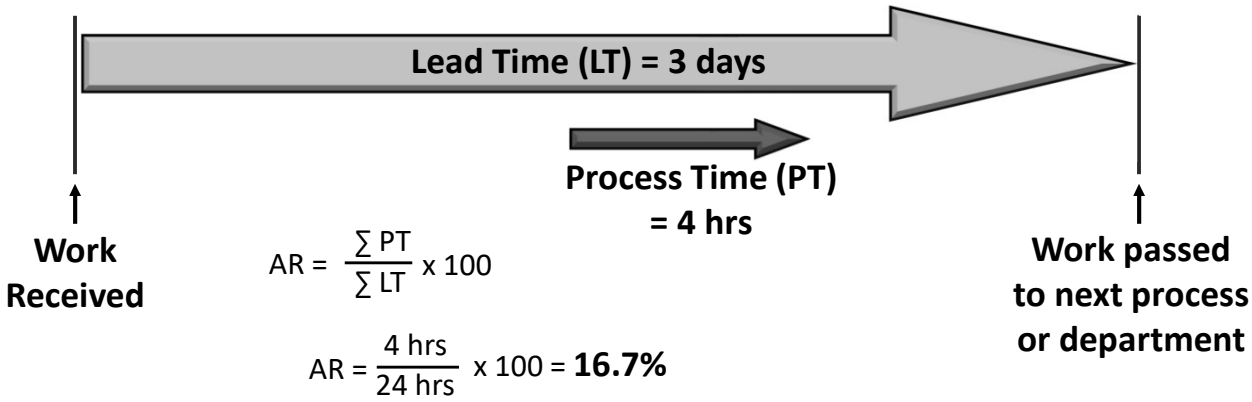



45



# Summary Metric: Activity Ratio

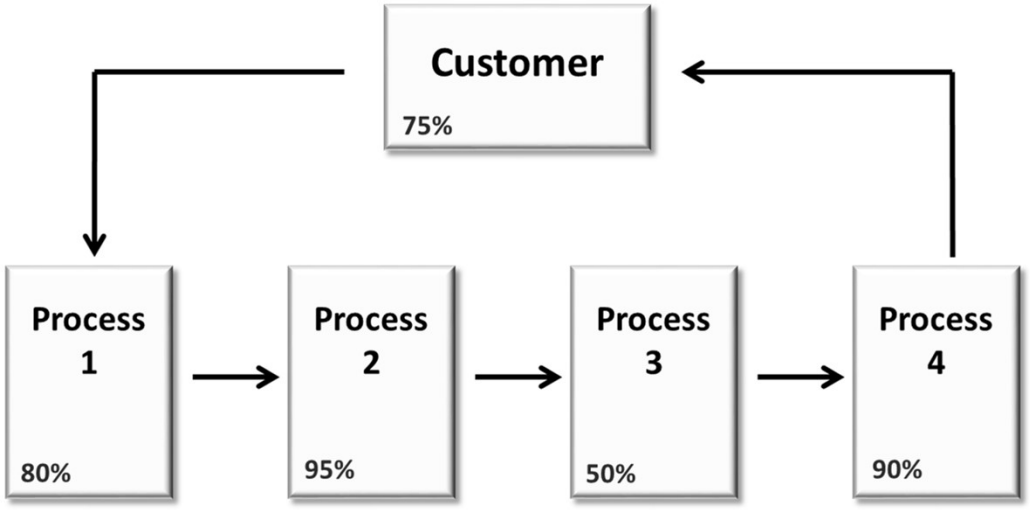



$$AR = \frac{\sum PT}{\sum LT} \times 100$$

$$AR = \frac{4 \text{ hrs}}{24 \text{ hrs}} \times 100 = \mathbf{16.7\%}$$

**AR (Activity Ratio)** = Percentage of time the request is being worked on as it passes through the value stream

# Summary Metric: Rolled %C&A




- **Rolled %C&A -** The percent of value stream output that passes through the process "clean," with no "hiccups" or rework required (correct, add, clarify)
- **Rolled %C&A** = (0.75 x 0.80 x 0.95 x 0.50 x 0.90) x 100 = **25.7%**

50

# Summary Metrics: Labor Requirements

- Total PT
  - Sum of ***all*** activities, not just critical path
- Labor Requirements

$$\textbf{\# FTEs} = \frac{\text{Total PT (in hrs) X \# occurrences/year}}{\text{Available work hrs/year}}$$

$$\textbf{Freed Capacity} = \text{Current State FTEs} - \text{Future State FTEs}$$

* FTE = Full-time Equivalent (example: 2 half time employees = 1 FTE)

51

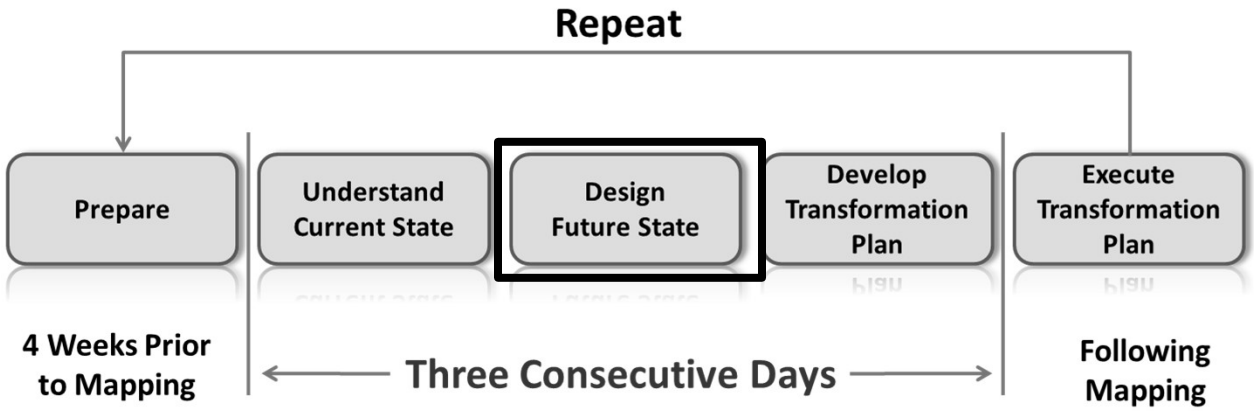
## ABC Millworks
## Value Stream: Commercial Windows

| Metric | Current State | Projected Future State | Projected % Improvement |
|---|---|---|---|
| **Process Time** | | | |
| **Lead Time (LT)** | | | |
| **LT – RFQ** (CS blocks 2-4) | | | |
| **LT – PO-Dev** (CS blocks 6-10) | | | |
| **Activity Ratio** (full value stream) | | | |
| **Rolled %C&A** | | | |
| **Labor requirements** | | | |

* Based on 2500 orders per year and 1,950 available work hours per employee per year.

53

## Value Stream Mapping Activity Phases and Timing



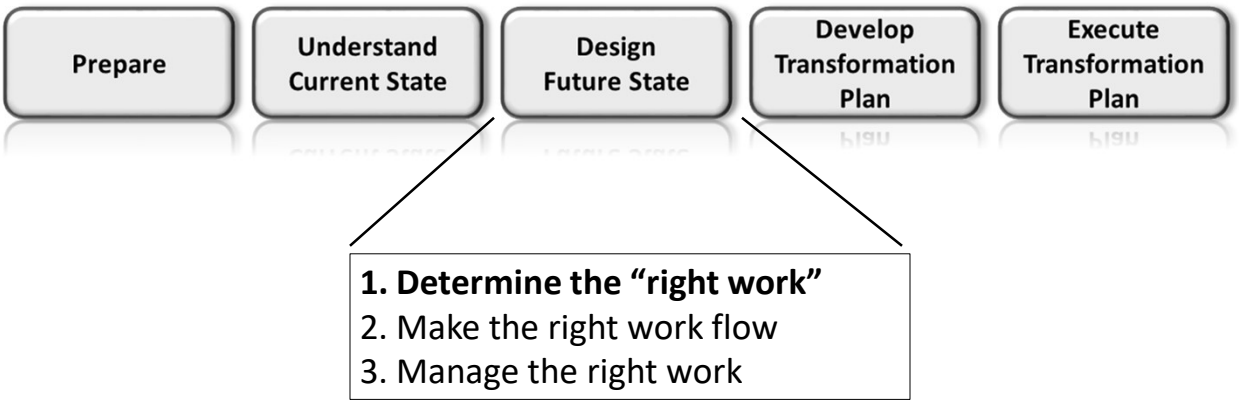

55

## Common Current-state Findings

- Poor x-departmental alignment
- Functions missing or getting involved too early or too late in the process
- Unnecessary handoffs
- High variation in how work is done
- Low % Complete & Accurate (and resulting rework, loopbacks, delays…)
- Excessive inspection (review, approvals, audits)
- Compliance overkill
- Existing technology not fully leveraged
- Overspecialization of staff
- Underutilization of skills
- Delays due to juggling multiple responsibilities
- No standard work
- Redundant activities
- Excessive motion & transportation
- Batching
- Push and overburden
- ***No one is responsible for the overall value stream***

56

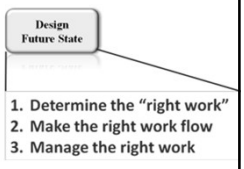
# Design the Future State Map: 3 Steps




57

## Questions for Designing the Future State – Office & Service

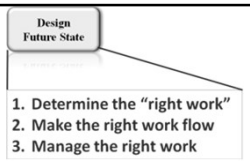
What is the business issue? What are the goals / objectives?
Service, quality, capacity, morale…




1. Are there redundant / unnecessary touches?
2. Are there redundant / unnecessary transactions?
3. Are there redundant systems?
4. How can we deal with delays?
   –Process more frequently; smaller batches; cross train & coverage
5. Designated resources per value streams?
6. Is available technology fully utilized?
   – Can information flow be streamlined (manual and system flows)?
7. What is the best workflow?
   –Address %C&A; best sequence; combine work; synchronization?
8. How will we measure, monitor and manage the process?

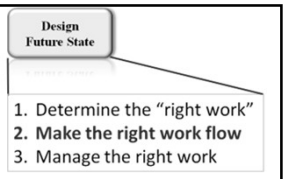
58

## Determining the "Right Work" Touches, Transactions, Systems…




- Maximum results with minimum effort
  - How can we improve downstream performance and customer satisfaction?
  - Typical objectives: reduce total PT, reduce total LT, improve %C&A
- Value-adding (VA) & non-value-adding (NVA) work
  - Eliminate *un*necessary NVA
  - Reduce necessary NVA
  - Optimize VA
- Eliminate work, *or add work*
  - To eliminate work, need to address reason work was there (e.g. eliminate an inspection)
  - Add work as required if it will improve overall performance

## Making the Right Work Flow




- Ideal flow: LT = PT
  - LT reductions force the issues to the surface
- Address the barriers to flow
  - Application of classic Lean countermeasures (e.g. standard work, visual controls, poka yoke, batch size reduction, service level agreements…)
- Define the best sequence
  - Earlier, later, parallel

## Approach to Future State Design
## Strategic Choice

Start FS design from scratch (blank sheet)?

…or…

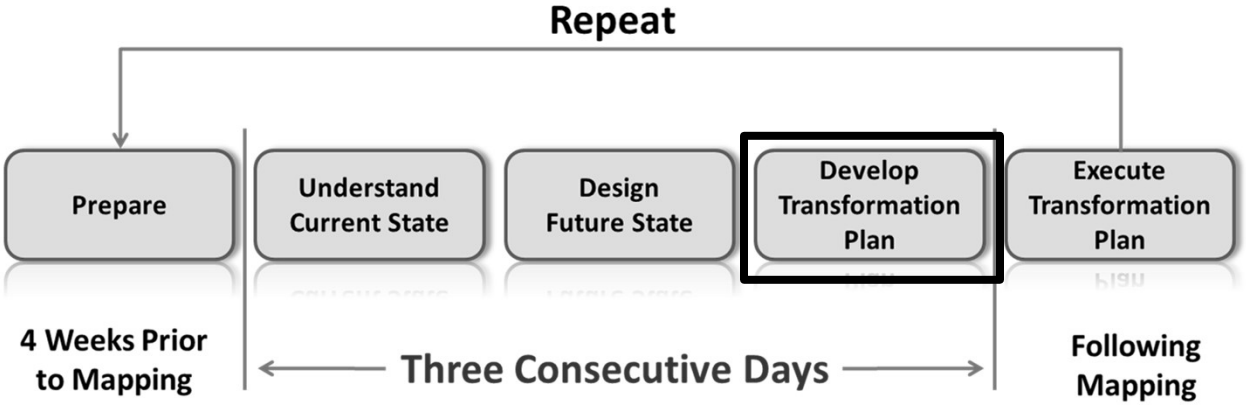
Focus on ideas related to the pain points?

## ABC Millworks – Commercial Windows

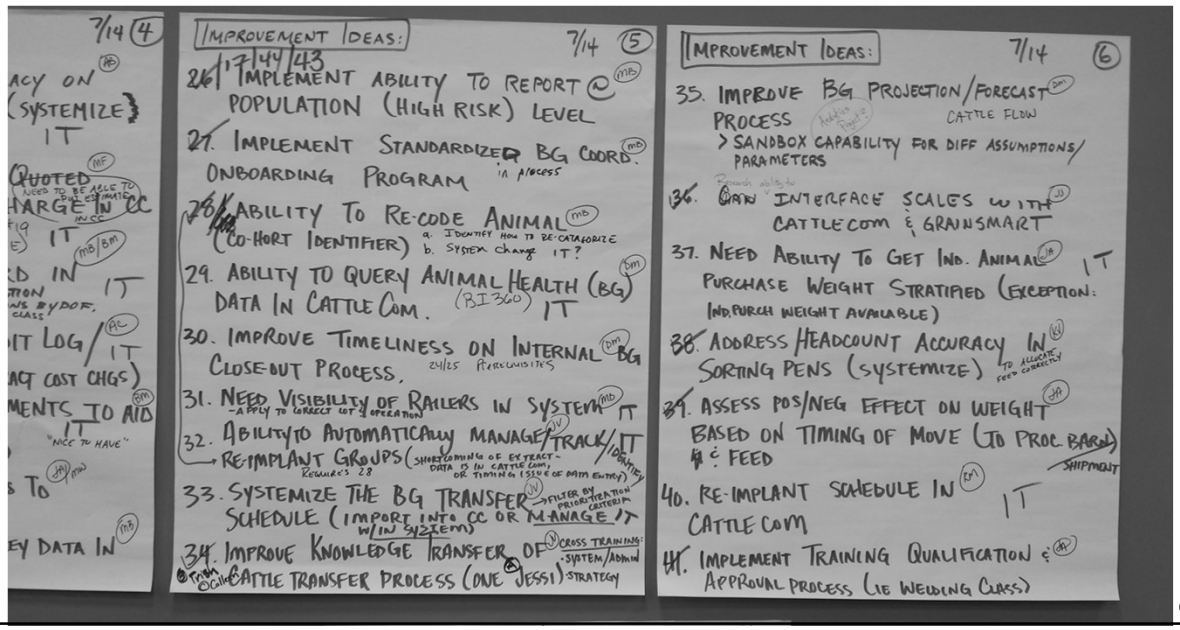
| Metric | Current State | Projected Future State | Projected % Improvement |
|---|---|---|---|
| **Process Time** | **38.0 hours** | | |
| **Lead Time (LT)** | **49.0 days** | | |
| **LT – RFQ** (CS blocks 2-4) | **11 days** | | |
| **LT – PO-Dev** (CS blocks 6-9) | **17 days** | | |
| **Activity Ratio** (full value stream) | **9.7%** | | |
| **Rolled %C&A** | **6.3%** | | |
| **Labor requirements** | **48.7 FTEs*** | | |

* Based on 2500 orders per year and 1,950 available work hours per employee per year.

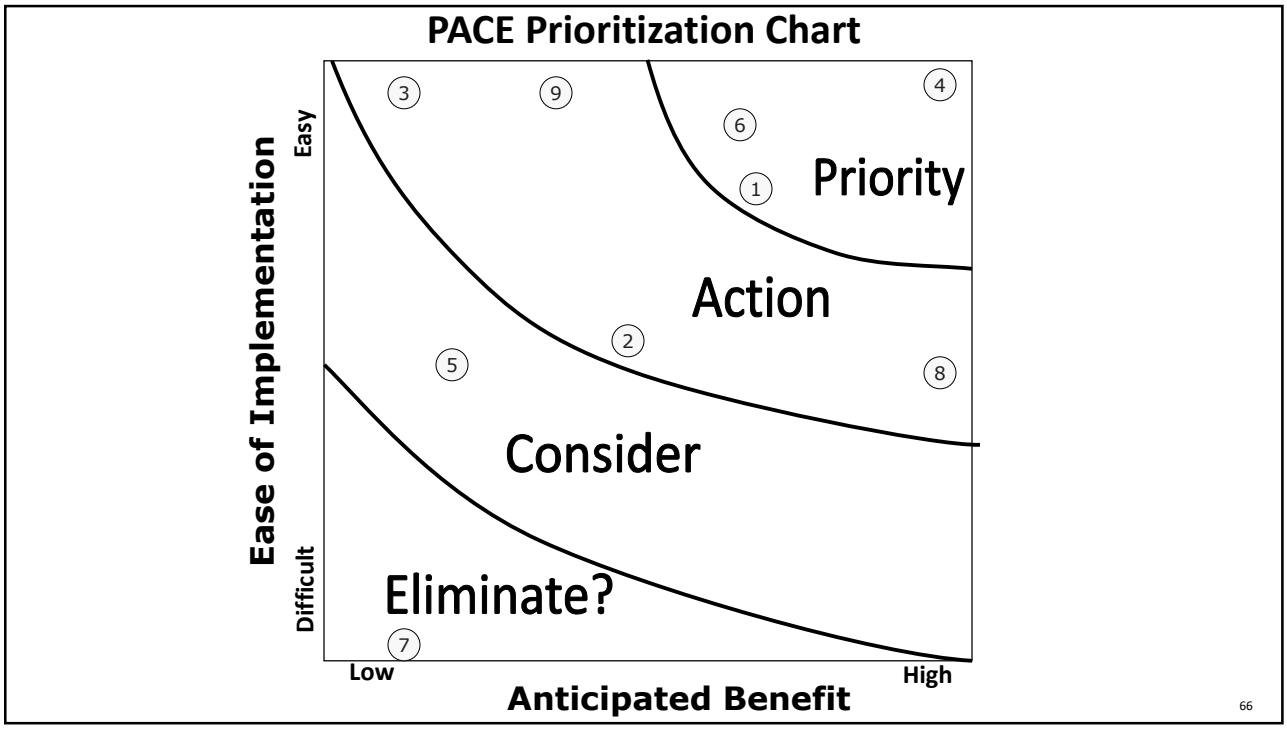
# Value Stream Mapping Activity Phases and Timing




# Lots of Great Ideas…




65




## Value Stream Transformation Plan

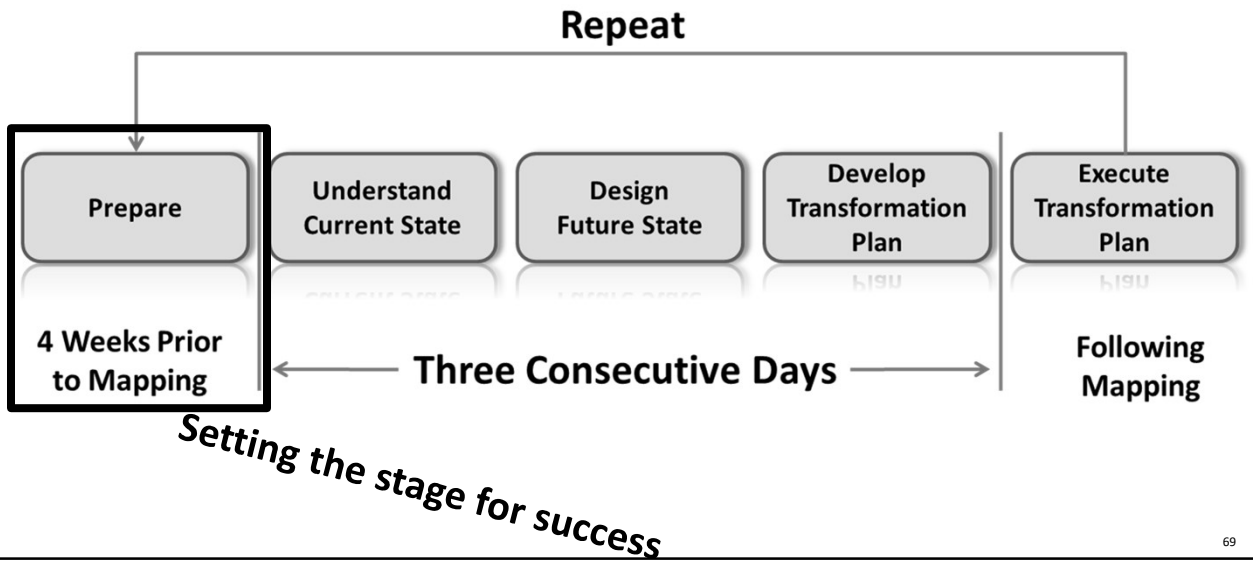
| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Value Stream** | ABC Millworks | | | | **Scheduled Review Dates** | | | | | | | | | | | | | | |
| **Executive Sponsor** | Allen Ward | | | | 9-Aug-19 | | | | | | | | 18-Oct-19 | | | | | | |
| **Value Stream Champion** | Nancy Little | | | | 23-Aug-19 | | | | | | | | 8-Nov-19 | | | | | | |
| **Value Stream Mapping Facilitator** | Dave Parks | | | | 9-Sep-19 | | | | | | | | 26-Nov-19 | | | | | | |
| **Date Created** | 7/26/2019 | | | | 30-Sep-19 | | | | | | | | 19-Dec-19 | | | | | | |
| **FS VSM Block #** | **Goal or Measurable Target** | **Proposed Countermeasure** | **Exec. Method*** | **Owner** | **Planned Timeline for Execution** | | | | | | | | | | | | | | **Status** |
| | | | | | J | F | M | A | M | J | J | A | S | O | N | D | | | |
| 1 | All existing customers with RFQ have access to form; %C&A of quotes = 90% | Standard RFQ form/checklist developed and made available to customers | KE1 | Sean Michaels | | | | | | | | | | X | X | | | | 50% |
| 2 | Reduce PT @ review step and ensure RFQ omissions are detected at this step | Standard review criteria developed for sales to check incoming RFQs | KE1 | Sean Michaels | | | | | | | | | | X | X | | | | 30% |
| 3 | All estimates created using template; reduce estimate PT to 1.5 hours | Update existing estimating template | KE2 | Dave Gerald | | | | | | | | | X | X | | | | | 10% |
| 3,4 | Central repository for estimate history | Link Excel and Salesforce | Proj | Diana Marie | | | | | | | | | X | | | | | | 100% |
| 6 | Eliminate manual emails between sales and estimating | Activate auto-notification in SalesForce (work flow) | Proj | Diana Marie | | | | | | | | | | X | X | | | | 40% |
| 8 | Fewer detailing errors passed on to production | Improved library of standard details | KE3 | Ryan Austin | | | | | | | | X | | | | | | | 100% |
| 8 | Designated resources for custom windows (residential & comm) - shorter LT & improved leveraging of experience | Designated team | Proj | Michael O'Shea | | | | | | | | | | | X | X | | | 0% |
| 8,9 | Less guessing re: customer requirement; fewer assumptions and bad design passed to production | Give Detailing open access to sales and specification documents from quoting process | JDI | Diana Marie | | | | | | | X | X | | | | | | | 100% |
| 8,9 | Eliminate need for CS to compile specification packages for detailing & | Link data files in SalesForce to SO and | Proj | Dianne | | | | | | | | | | X | X | X | | | 40% |

# It's not about the map...

It's about the conversations,
the insights, the *decisions*,
*alignment*, and *organizational healing*
that mapping enables.

68

## Value Stream Mapping Activity Phases and Timing



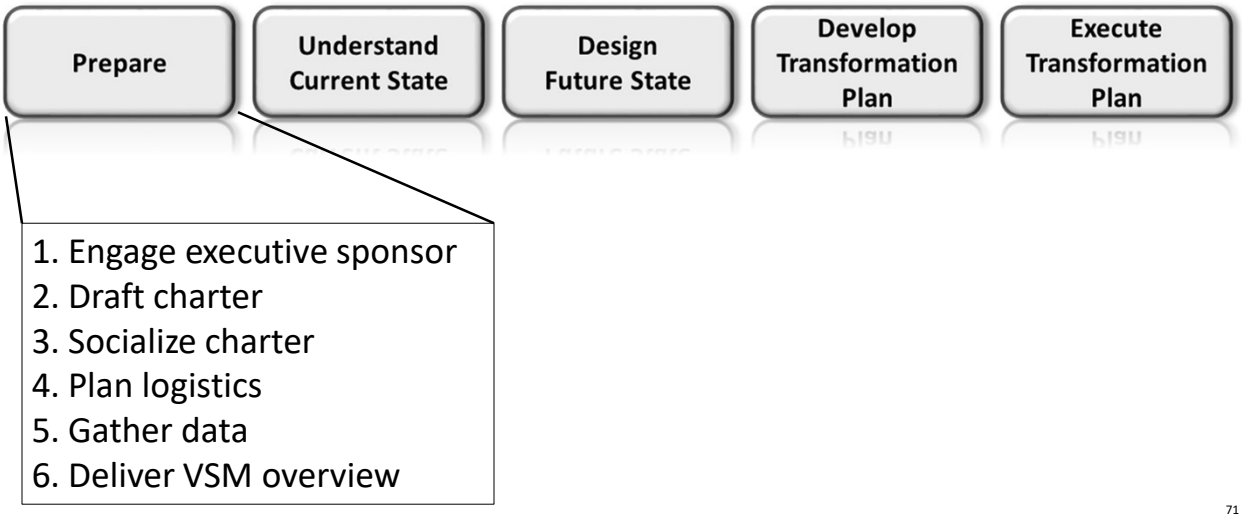

69

# Key People

- **Executive Sponsor**
  - VP or higher
  - Authority over significant portion of value stream (or strong influencer)
  - Ultimately accountable for results
  - Must attend briefings
- **Value Stream Champion**
  - Oversees significant portion of the value stream
  - Heavily engaged in entire value stream transformation (own the transformation plan)
  - Member of mapping team
- **Facilitator**
  - Objective; no skin in the game
  - Skilled in both mapping/improvement mechanics, and high-level team dynamics.

70

# VSM Preparation




71

# Engage Executive Sponsor & Champion

- Hold initial conversation with executive sponsor, value stream champion & facilitator.
- Assure alignment between value stream activity and strategic goals / priorities
- Explain planning , execution and follow-up phases.
- Explain his/her role in each phase of the transformation process.

72

# VSM Prep


1. Engage executive sponsor
2. **Draft charter**
3. Socialize charter
4. Plan logistics
5. Gather data
6. Deliver VSM overview

73

## Charter: Critical planning, communication, and consensus-building tool

| Scope | |
|---|---|
| Value Stream | Windows |
| Specific Conditions | Commercial windows, custom design |
| Demand Rate | 2500 |
| Trigger | Customer submits RFQ |
| First Step | Sales reviews the RFQ |
| Last Step | Production ships product |
| Boundaries & Limitations | No new software; only minor changes to existing IT systems; no additional staff; no budget changes |
| Improvement Time Frame | Future state design is fully realized by December 31, 2019. |

| Accountable Parties | |
|---|---|
| Executive Sponsor | Allen Ward |
| Value Stream Champion | Nancy Little |
| Facilitator | Dave Parks |
| Logistics Coordinator | Dave Parks |
| Briefing Attendees<br>** required<br>*optional | ** Allen W (COO), Joe M (CIO), Sal T (VP Sales)<br>* Bruce R (VP Ops), Carlos P (HR), Su T (CFO), Bill M (VP CS) |

| Logistics | |
|---|---|
| Event Dates & Times | July 24-26, 2019<br>8:00 am - 5:00 pm |
| Base-camp Location | Surf's Up - Room A |
| Meals Provided | Continential breakfast & lunch |
| Briefing Dates & Times | July 24, 25, & 26<br>4:00-5:00 pm |

When?

| | Current State Problems & Business Needs |
|---|---|
| 1 | Desire to stay ahead of the competition & deepen customer loyalty. |
| 2 | Forecasted growth of 10% for next fiscal year. |
| 3 | Customers at risk - quality & information issues @ installation |
| 4 | RFQ lead time = 2 weeks; PO to design lead time = 3 weeks |
| 5 | Competition's RFQ LT is 1 wk; PO to delivery is 1 wks |

| | Goals & Measurable Target Conditions |
|---|---|
| 1 | Reduce RFQ LT from 2 weeks to 3 days (70% improvement). |
| 2 | Reduce PO to design LT from 3 wks to 5 days (67% improvement) |
| 3 | Reduce install issues by 50% |
| 4 | |
| 5 | |

What & Why?

| | Benefits to Customers & Business |
|---|---|
| 1 | Easy delivery; less hassle; less cost. |
| 2 | Better working relationships between sales, estimating & engineering. |
| 3 | Freed capacity to absorb additional business w/o increasing staff. |
| 4 | |
| 5 | |

| | Relevant Data |
|---|---|
| 1 | Sales effectiveness: RFQ conversion rate. |
| 2 | Financial: Estimate-to-actual cost comparison |

| | Mapping Team | | | |
|---|---|---|---|---|
| | Function / Title | Name | | Contact Information |
| 1 | Sales, Director | Sean Michaels | | |
| 2 | IT, Director | Diana Marie | | |
| 3 | Finance, Controller | Dave Gerald | | |
| 4 | Engineering, Vice President | Nancy Little | | |
| 5 | Manufacturing, Director | Ambreen Motiwala | | |
| 6 | Customer Service, Manager | Danny Tran | | |
| 7 | Customer (Const Mgmt) | Ryan Austin | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |

Who?

| | On-Call Support | | |
|---|---|---|---|
| | Function | Name | Contact Information |
| 1 | Planning / Purchasing, Planner | Lourdes Dwyer | |
| 2 | Production Supervisor | Tom St. James | |
| 3 | | | |
| 4 | | | |

| Agreement | | |
|---|---|---|
| Executive Sponsor | Value Stream Champion | Facilitator |
| | | |

74

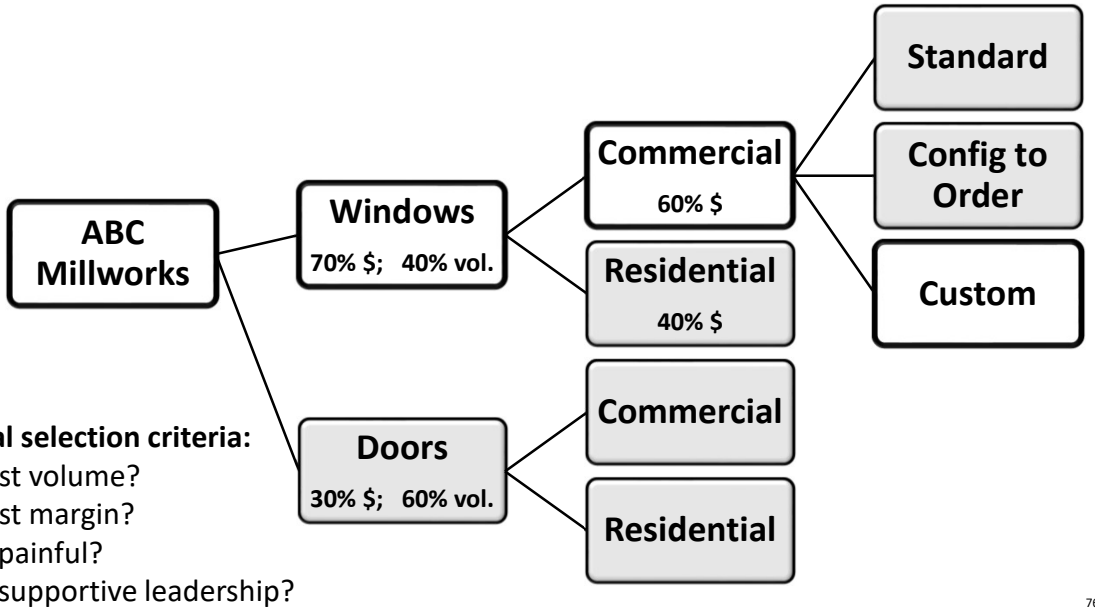
## Specific Conditions

| Scope | |
|---|---|
| Value Stream | Windows |
| Specific Conditions | Commercial windows, custom design |
| Demand Rate | 2500 |
| Trigger | Customer submits RFQ |
| First Step | Sales reviews the RFQ |
| Last Step | Production ships product |
| Boundaries & Limitations | No new software; only minor changes to existing IT systems; no additional staff; no budget changes |
| Improvement Time Frame | Future state design is fully realized by December 31, 2019. |

| | Current State Problems & Business Needs |
|---|---|
| 1 | Desire to stay ahead of the competition & deepen customer loyalty. |
| 2 | Forecasted growth of 10% for next fiscal year. |

75

## Value Stream Scoping Diagram: Defining Specific Conditions

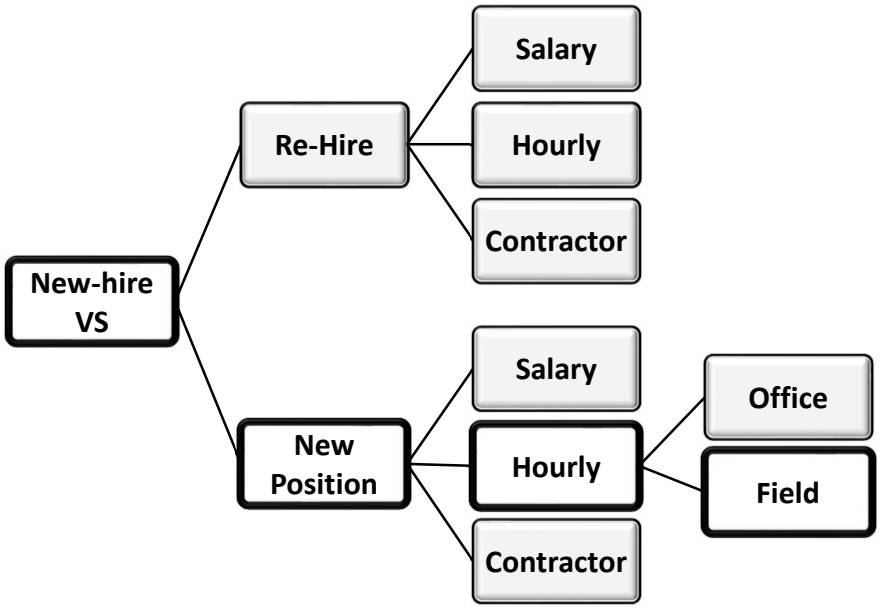



**Potential selection criteria:**

- Highest volume?
- Highest margin?
- Most painful?
- Most supportive leadership?

76

## VS Scoping Diagram: Defining Specific Conditions




77

# Boundaries and Limitations; Timeframe

| Scope | |
|---|---|
| Value Stream | Windows |
| Specific Conditions | Commercial windows, custom design |
| Demand Rate | 2500 |
| Trigger | Customer submits RFQ |
| First Step | Sales reviews the RFQ |
| Last Step | Production ships product |
| Boundaries & Limitations | No new software; only minor changes to existing IT systems; no additional staff; no budget changes |
| Improvement Time Frame | Future state design is fully realized by December 31, 2019. |

| Current State Problems & Business Needs | |
|---|---|
| 1 | Desire to stay ahead of the competition & deepen customer loyalty. |
| 2 | Forecasted growth of 10% for next fiscal year |

78

## Value Stream Mapping Charter

| Scope | | Accountable Parties | | Logistics | |
|---|---|---|---|---|---|
| Value Stream | | Executive Sponsor | | Event Dates & Times | |
| Specific Conditions | | Value Stream Champion | | | |
| Demand Rate | | Facilitator | | Base-camp Location | |
| Trigger | | | | | |
| First Step | | Logistics Coordinator | | Meals Provided | |
| Last Step | | | | | |
| Boundaries & Limitations | | Briefing Attendees ** required *optional | | Briefing Dates & Times | |
| Improvement Timeframe | | | | | |

| Current State Problems & Business Needs | |
|---|---|
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |

| Measurable Target Condition | |
|---|---|
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |

| Benefits to Customers & Business | |
|---|---|
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |

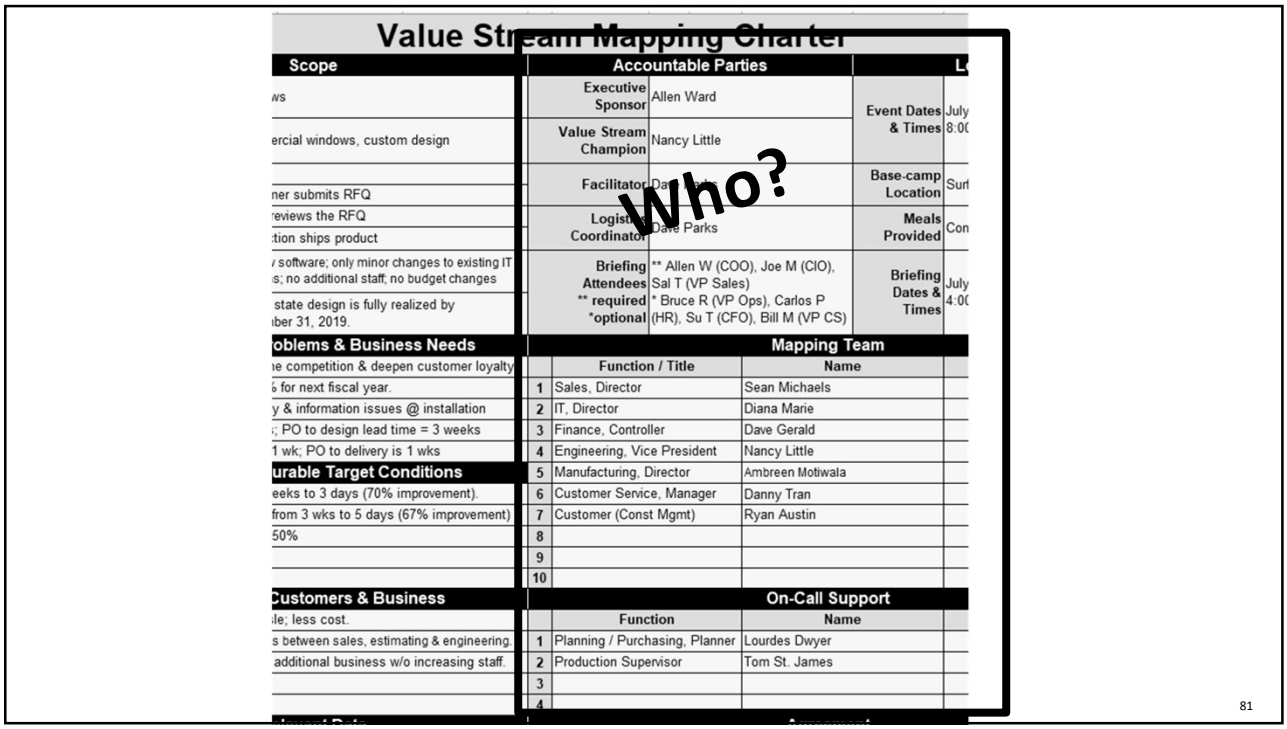
| Relevant Data | |
|---|---|
| 1 | |
| 2 | |
| 3 | |
| 4 | |

| Mapping Team | | | |
|---|---|---|---|
| | Function | Name | Contact Information |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

| On-Call Support | | | |
|---|---|---|---|
| | Function | Name | Contact Information |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |

| Agreement | | | |
|---|---|---|---|
| | Executive Sponsor | Value Stream Champion | Facilitator |
| 1 | | | |
| 2 | | | |
| 3 | Signature: | Signature: | Signature: |
| 4 | Date: | Date: | Date: |

80




## Team Composition

- Authority - Leadership over primary functions engaged in the value stream
- Influencers
- Vision

**Shoot for as high as you can; settle for as low as you must**

- "On-call" members
  - Leadership from ancillary functions
  - Subject matter experts

# Team Members - Common Rules of Engagement

1. Team starts and ends the day (and breaks) together.
2. No interruptions or distractions – 100% focus; other apps closed, ignore the phone…
3. One conversation at a time; no side bars.
4. The current process isn't broken – it can be improved.
5. When walking the process, approach with curiosity, humility, and respect for the people doing the work.
6. Finger-pointing and blame has no place: "It is what it is."
7. Respectful disagreement is encouraged.
8. Rank has no privilege.
9. No veto power from outside the team.
10. Seek the wisdom of ten versus the knowledge of one.
11. No silent objectors; don't leave in silent disagreement.
12. Creativity before capital.
13. Ban "Can't" and "No, because…" from your vocabulary.
14. Be bold! Ask Why? Why not? What if?

83

# Daily Leadership Briefings


#1 – Share insights; reduce resistance

#2 – Build consensus re: future state

#3 – Reality check & gain commitment for action plan

# Small Group Activity

## For the Value Stream You Selected Earlier –

- Based on the specific conditions, as well as first and last steps, start identifying "who"
  - Team
  - On call
  - Executive sponsor
  - Champion
  - Briefing attendees
- 15 minutes – work
- 10 minutes – debrief

| Accountable Parties | | | |
|---|---|---|---|
| Executive Sponsor | | Event Dates & Times | |
| Value Stream Champion | | | |
| Facilitator | | Base-camp Location | |
| Logistics Coordinator | | Meals Provided | |
| Briefing Attendees<br>** required<br>*optional | | Briefing Dates &Times | |

| Mapping Team | | | |
|---|---|---|---|
| | Function | Name | Co |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

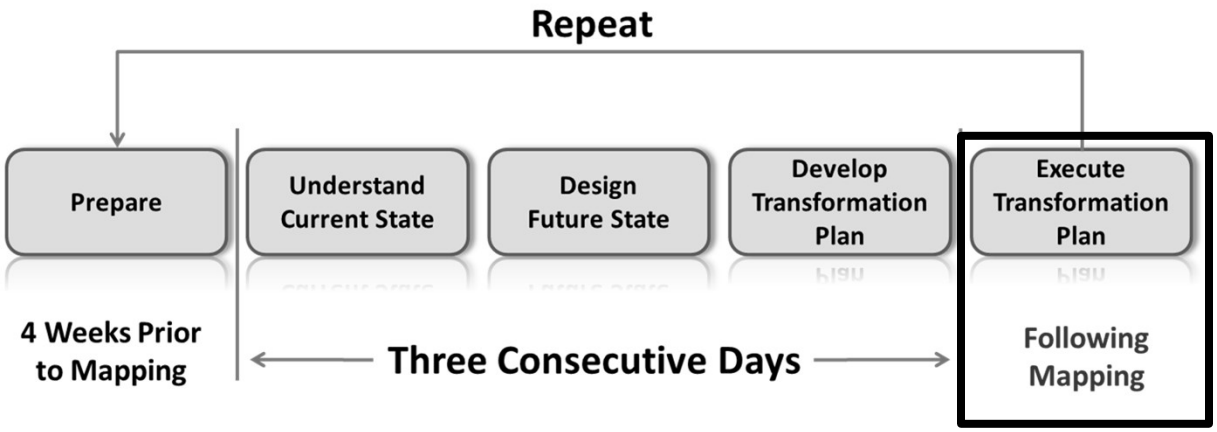
| On-Call Support | | | |
|---|---|---|---|
| | Function | Name | Co |
| 1 | | | |

# Socializing the Charter

- ***Conversation*** with functional leadership
- Alignment of focus, problem, objectives, team
- Notify folks what will be happening
- Modify charter as required
- Post the charter

86

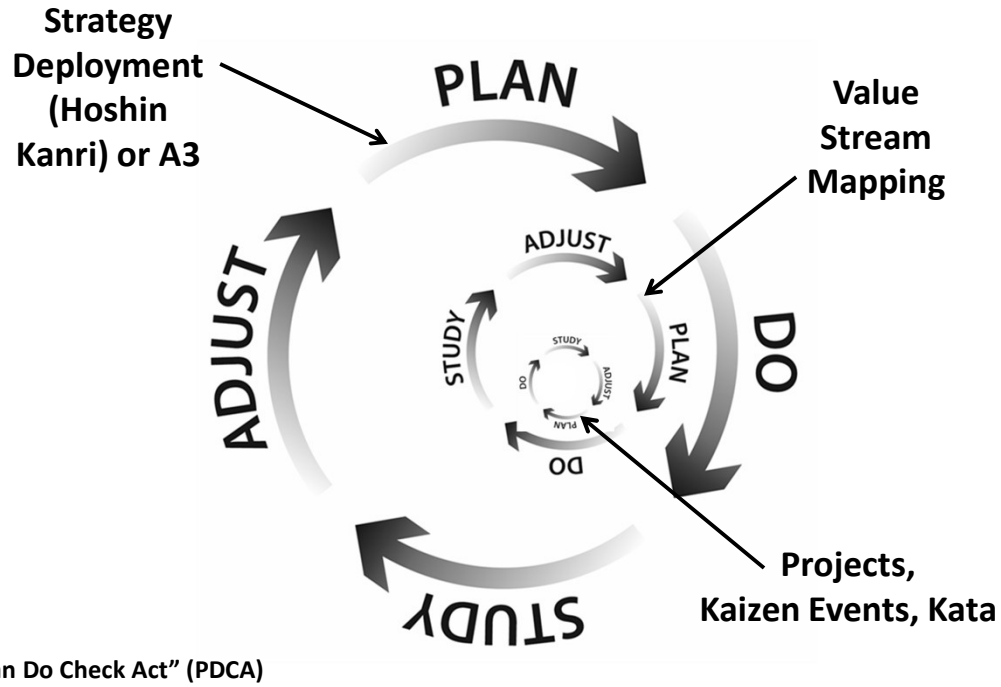
## Value Stream Mapping Activity Phases and Timing




## Managing the Transformation

- **Ownership**
  - Designated person – Value Steam Manager
  - Monitors metrics and communicates performance to plan
  - Facilitates problem solving
  - Leads ongoing improvements; ensures aligned with strategy
  - Influences changes if going off course
- **Key Performance Metrics**
  - Two to five relevant KPIs
  - Value Stream level as well as process level
  - Specific to process in question; operational
  - Set goals, visualize & track

88




a. k. a. "Plan Do Check Act" (PDCA)

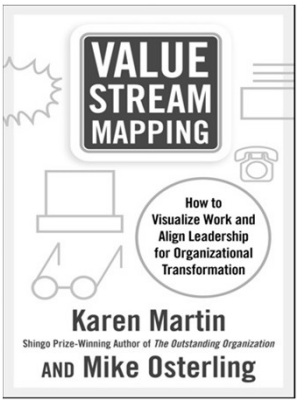
89

## Value Stream Mapping: As Much Art as Science

91

# Resources

- *Learning to See*, Rother & Shook
- *Value Stream Mapping: How to Visualize Process and Align People for Organizational Transformation,* Karen Martin & Mike Osterling
- *Value Stream Mapping for Lean Development: A How-to Guide to Streamline Time to Market*, Locher




92

## ABC Millworks – Commercial Windows

| Metric | Current State | Projected Future State | Projected % Improvement |
|---|---|---|---|
| **Process Time** | **38.0 hours** | **35.5 hours** | **6.5%** |
| **Lead Time (LT)** | **49 days** | **32 days** | **34.7%** |
| **LT – RFQ** (CS blocks 2-4) | **11 days** | **5 days** | **54.5%** |
| **LT – PO-Design** (CS blocks 6-9) | **17 days** | **6 days** | **64.7%** |
| **Activity Ratio** (full value stream) | **9.7%** | **13.5%** | **39.2%** |
| **Rolled %C&A** | **6.3%** | **45.4%** | **621%** |
| **Labor requirements** | **48.7 FTEs*** | **48.6 FTEs**** | **----** |

* Based on 2500 orders per year and 1,950 available work hours per employee per year.
** Based on ***2750*** orders per year and 1,950 available work hours per employee per year.

95

## Contact Us:

**Mike Osterling**

President, Osterling Consulting, Inc.

+1-619-572-3632

mike@mosterling.com

linkedin.com/in/mikeosterling


97