
Improving Business Productivity

Using Process Mapping to Remove Waste from Business Processes

Presented by: Richard Ranftl, CPIM

Who am I?

Richard Ranftl (CPIM)

- Have been teaching since 2001 (Operations Management)
- Own a Manufacturing Consulting business
- Past-President of APICS Fraser Valley Chapter
- Have my APICS CPIM designation
- Two diplomas from BCIT (Building Tech / Ops Mgt)
- 20+ years work experience
 - Roles from Quality through Finance to Operations
 - Industries from Food to Hi-Tech to Forestry

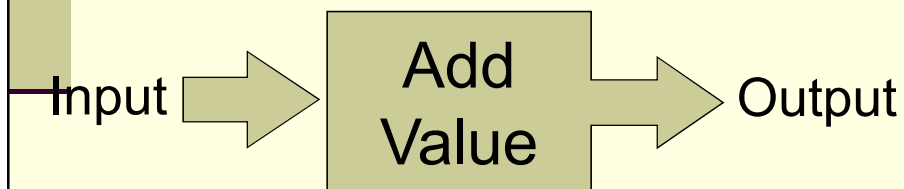
Presentation Overview

- What is “Productivity”
- Why Process Mapping?
- Team based Process Mapping
- Cycle Time Analysis

To get you familiar and ready to use the tools

How do we “make money”?

Charge the “customer” more than we paid to provide the good or service – this is called “Adding Value”



Productivity

- “An overall measure of the ability to produce a good or a service” (APICS Dictionary)
- Equation:
 - OUTPUT divided by INPUT
 - Example:
 - 100 units produced using 20 labour hours
 - Productivity is 5 units per labour hour
- How can we improve this measure?

We need to CHANGE !

What is change?

- Become / or make something different
- Substitute or replace something
- Pass from one state to another
- Remove and replace something

GOAL: Improvement

Why should we improve?

- The gap between performance and expectations is more threatening than the uncertainties associated with change

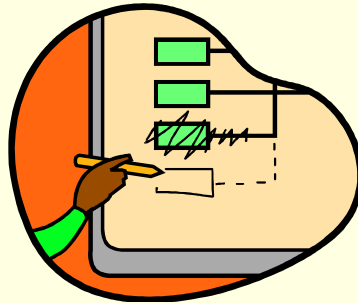


Process Problem Examples

- Insurance Company:
 - 28 days to process application
 - Only 26 minutes of which represented real productive work
- Soft Drink Distributor:
 - 44% of invoices contained errors
 - Result was high cost to reconcile and many unhappy customers

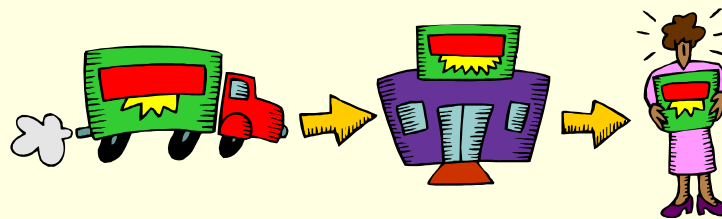
What is a Process Map?

- A picture of how people do their work.
- What processes are you using to get from Point A to Point B?



Why should we map our processes?

- Agree on what processes to use
- Find a more efficient route
- Foundation for Continuous Improvement initiatives



Preparation

- Materials
 - Post-It notes
 - Paper
- Time Requirements
 - 4 – 16 hours to create map
 - 2 hr minimum for working sessions
 - Allow time for data collection
- Your Objective
 - Map “as is” with all flaws / problems

Group Dynamics

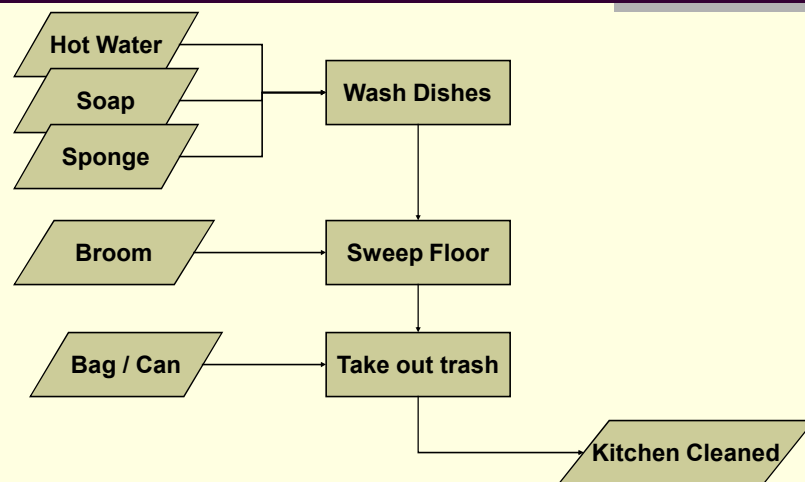
- Team Based processing method
- Brainstorming
- Consensus



Team Selection

- Who should be on the team?
 - People knowledgeable about the process
- How large should it be?
 - 3 – 8 people
- What qualifications do they need?
- Will they cooperate?
- Do we need an “expert”?

Sample Process Map



Process Selection?

- Steps for Selecting a Process:
 - Determine key business objectives
 - Brainstorm processes that support objective
 - Brainstorm process that are not operating at desired level
 - Agree on process to map

Process Mapping: Key Point

- Remember – why are we mapping?
 - Increase customer satisfaction
 - Increase market share
 - Save money / reduce costs
 - Employee morale
 - Reduce errors / variations

Mapping Progression

- Primary Processes:
 - Basic steps that produce the output
 - Those that occur every time

Brainstorm Process Activities



Sort Primary Activities



Mapping Progression

- Alternative Pathways:
 - Optional tasks off of the mandatory path
 - Always poses a question
 - Often a yes / no alternative

- Inspection Points:
 - A pass / fail decision
 - To find errors before reaching the customer.
 - Causes process direction to reverse itself (rework loop)

Add Alternative Paths / Inspections

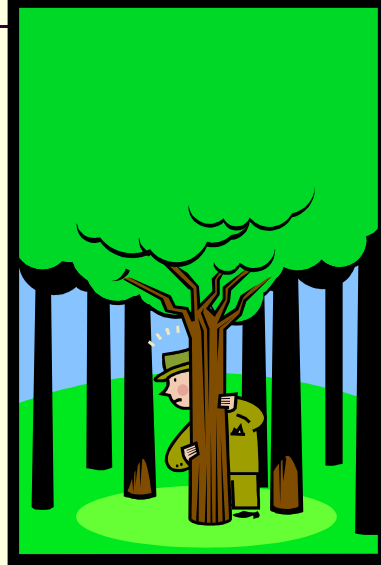


The team will struggle with:

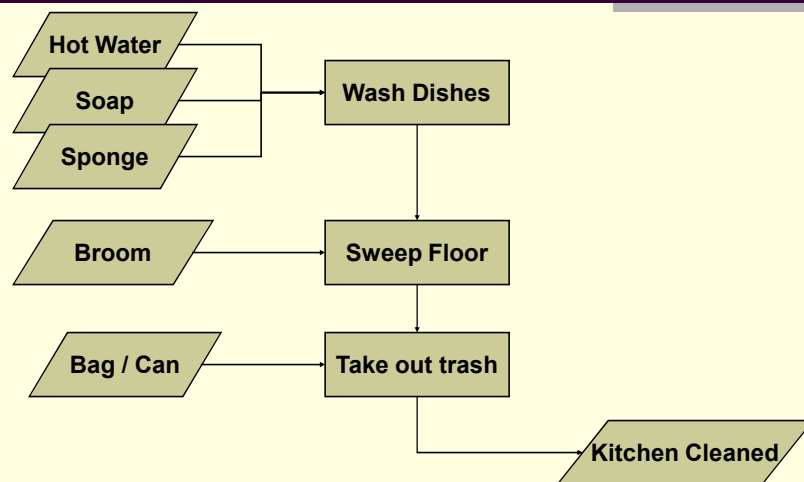
- Inputs
 - required for process (materials, people, info)
- Process Boundaries
 - First / Last steps in the process
- Point of view

Understanding Our Process

- Point of View:
 - Macro Processes
 - Micro Processes



Map: Cleaning the Kitchen

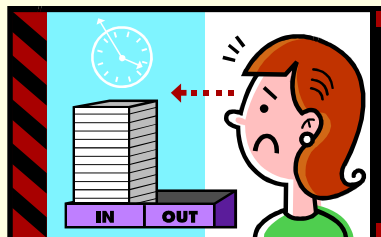


Process Improvement Techniques

- Move steps into another process
- Design a parallel process
- Automate or mechanize steps
- Map sub-processes
- Use a map for training
- Get feedback
- Use map as a benchmarking tool

Cycle Time Analysis

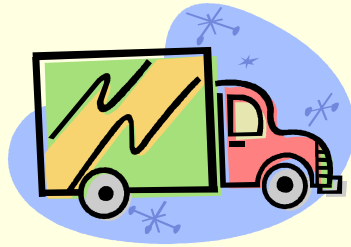
- The total time taken from a customer request to the delivery of the product or service to the customer



Cycle Time Elements

- Value Added:

- A step that contributes to higher customer satisfaction or improved process efficiency
- e.g.: delivery of ordered lumber



Cycle Time Elements

- Non Value Added:

- A step that does not contribute to higher customer satisfaction or efficiency
- e.g.: walking to pick up paperwork



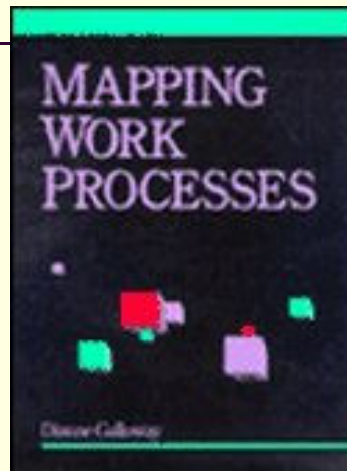
Cycle Time Reduction Worksheet

Process Step	Min.	Max.	Norm.	VA / NVA
Check Account	.5	1.0	.5	NVA
Check Cabinet	1.0	5.0	1.0	NVA
Search for File	0.0	10.0	3.0	NVA
Total Time	9.5	4064.0	36.5	1 : 15

4,064 min = 2.8 days

Additional Resources

- Mapping Work Processes
 - Dianne Galloway
- BCIT June Workshops
- Richard Ranftl
 - 604-451-6750
 - Richard_Ranftl@bcit.ca



Process Mapping Summary

- Team based Continuous Improvement
- Valuable tool to document or **change** activities
- Cycle Time (VA / NVA) to improve results

