What Happens in a Lean Event?

Pre-Event

1. Meet with Leadership

- ✓ Determine: Case for Change, Scope, Objectives, Boundaries and Participants for the Event
- ✓ Coordinate Event logistics – Schedule, location, supplies, meals, etc.

2. Walk the process

- ✓ Gather data, metrics, procedures, etc.
- ✓ And anything else that may explain why the Current State is the way it is

During the Event

3. Leadership kicks off the event

- ✓ Review expectations with the team
  - Case for Change
  - Scope
  - Objectives
  - Boundaries
- ✓ Lean overview
- ✓ Review Team Operating Guidelines

During the Event

Team Operating Guidelines

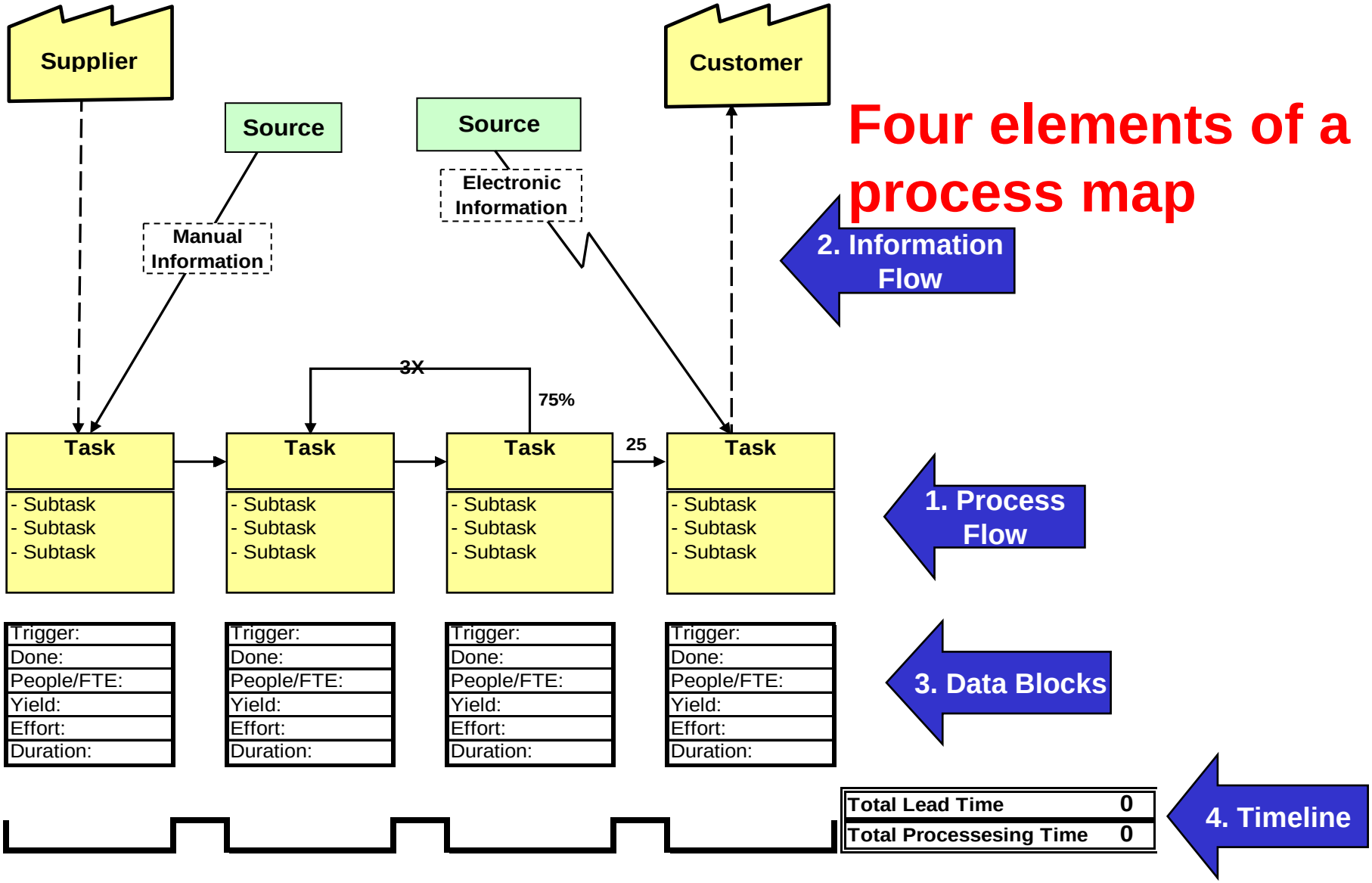
- Cell phones, Blackberries, etc. turned off
- Be on time
- Limit side conversations – Only one person speaking at a time
- Listen for understanding - Let the person finish before you speak
- Have respect for one another – Attack issues and facts…*not* people or their ideas!
- Get involved & ***Have Fun***!

During the Event

4. Document the Current State

- ✓ Capture Process & Information Flows
- ✓ Identify Value Added vs. Non-Value Added (Waste)
- ✓ Capture/Brainstorm Issues with the Current State
- ✓ Brainstorm potential solutions

Process Map


Supplier
Customer
Source
Source
Manual Information
Electronic Information
3X
75%
25
Task
Task
Task
Task
- Subtask
- Subtask
- Subtask
Trigger:
Done:
People/FTE:
Yield:
Effort:
Duration:
Total Lead Time 0
Total Processesing Time 0
Four elements of a process map
2. Information Flow
1. Process Flow
3. Data Blocks
4. Timeline

Process Step

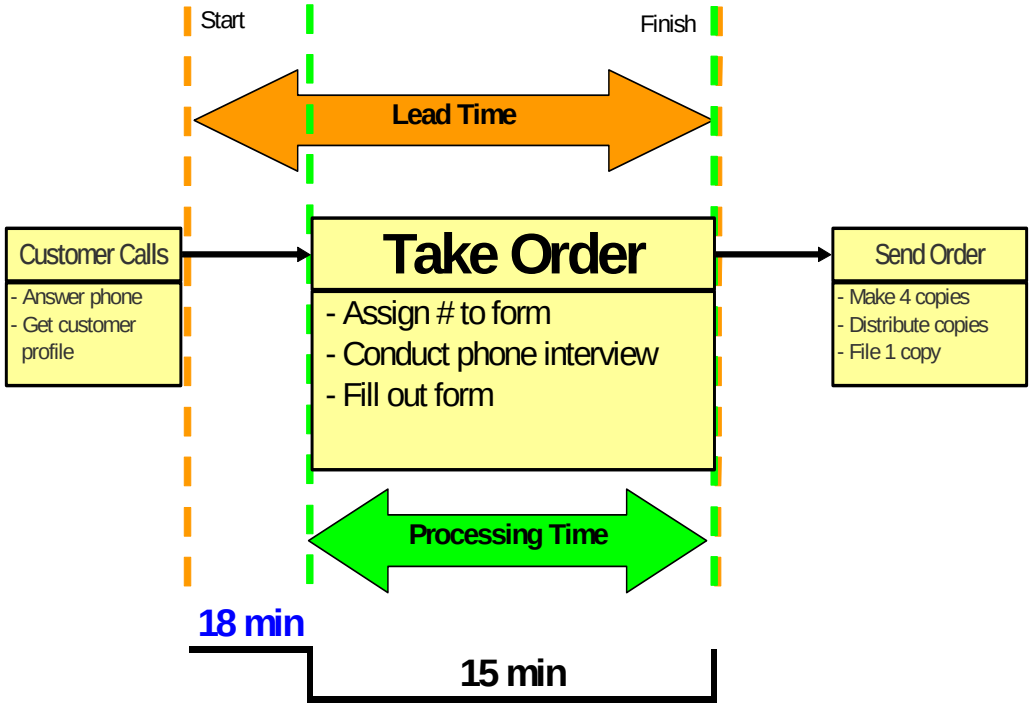
Take Order
- Assign # to form - Conduct phone interview - Fill out form

Trigger:	Receive request from customer
Done:	Form filled out
Yield:	65%
People:	1 FTE
Queue Time:	1 Min
Set up Time:	2 Min (Assign #)
Processing/Cycle Time:	15 Min (Fill out form)
Lead Time:	18 Min (1 Min queue + 2 Min setup + 15 Min fill out form)

Trigger = What indicator starts the process?
Done = What indicates the process is complete?
Yield = Rate work or information flows without rework?
People/FTE = Staffing full time equivalents
Queue = Time waiting for work or information
Set up Time = Locate materials/info to start process
Processing/Cycle Time = Manual touch time
Lead Time = Total time from beginning to end

A step ends at the hand off to the next step or when there is a queue waiting for additional information

Lead Time vs. Processing Time



Lead Time = Time required for a product to move through a process from start to finish (includes queues/waits and processing time).

Measured from the end of one process step to the end of the next.

Processing Time = Time it takes the employee to go through all of their work elements before repeating them (includes value added and non-value added time).

Measured from the beginning of a process step to the end of that process step.

During the Event

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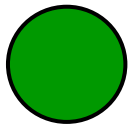
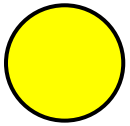
Identify Waste

Value-Added vs. Non-Value Added



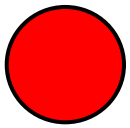
Value-Added Activities

- An activity that transforms or shapes material or information
- And the customer wants it
- And it's done right the first time



Non Value-Added – Necessary Activities

- Activities causing no value to be created but which cannot be eliminated based on current state of technology or thinking
- Required (regulatory, customer mandate, legal)
- Necessary (due to non-robustness of process, currently required; current risk tolerance)



Non Value-Added Activities

- Activities that consume resources but create no value in the eyes of the customer
- Pure waste
- If you can't get rid of the activity, it turns to yellow

Identify Waste

Identifying Value on the Map

- Visually identify areas for improvement opportunities
- Accomplished by color coding each step
  - Complete the red-yellow-green dot analysis
  - **Value (●)**
  - **Non-Value Added Necessary (●)**
  - **Waste (●)**

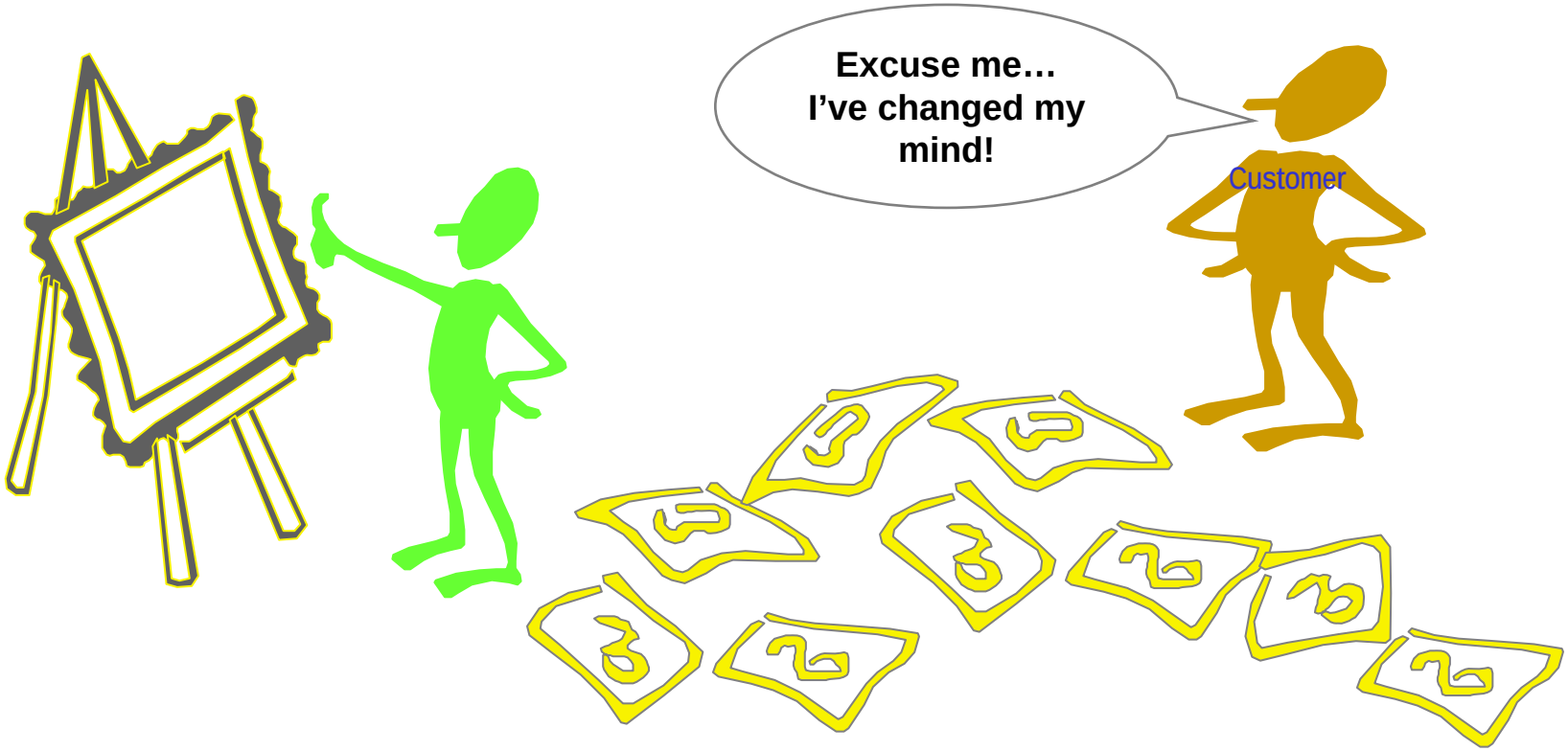
Identify Waste

8 Forms of Waste

1. Over Production
2. Waiting
3. Moving Items
4. Over Processing
5. Inventory
6. Unnecessary Motion
7. Defects
8. Behaviors

Types of Waste

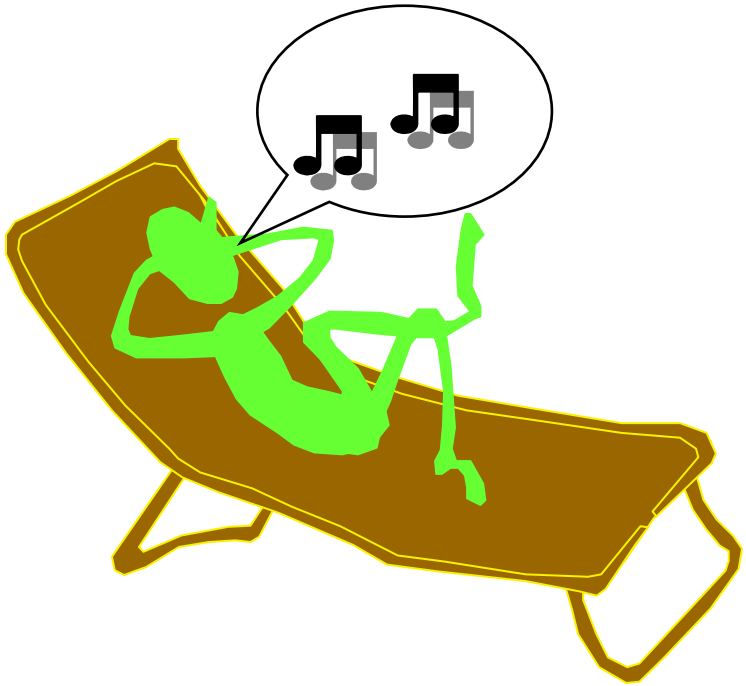
Over Production



Producing more information or product than the ultimate customer requires

Types of Waste

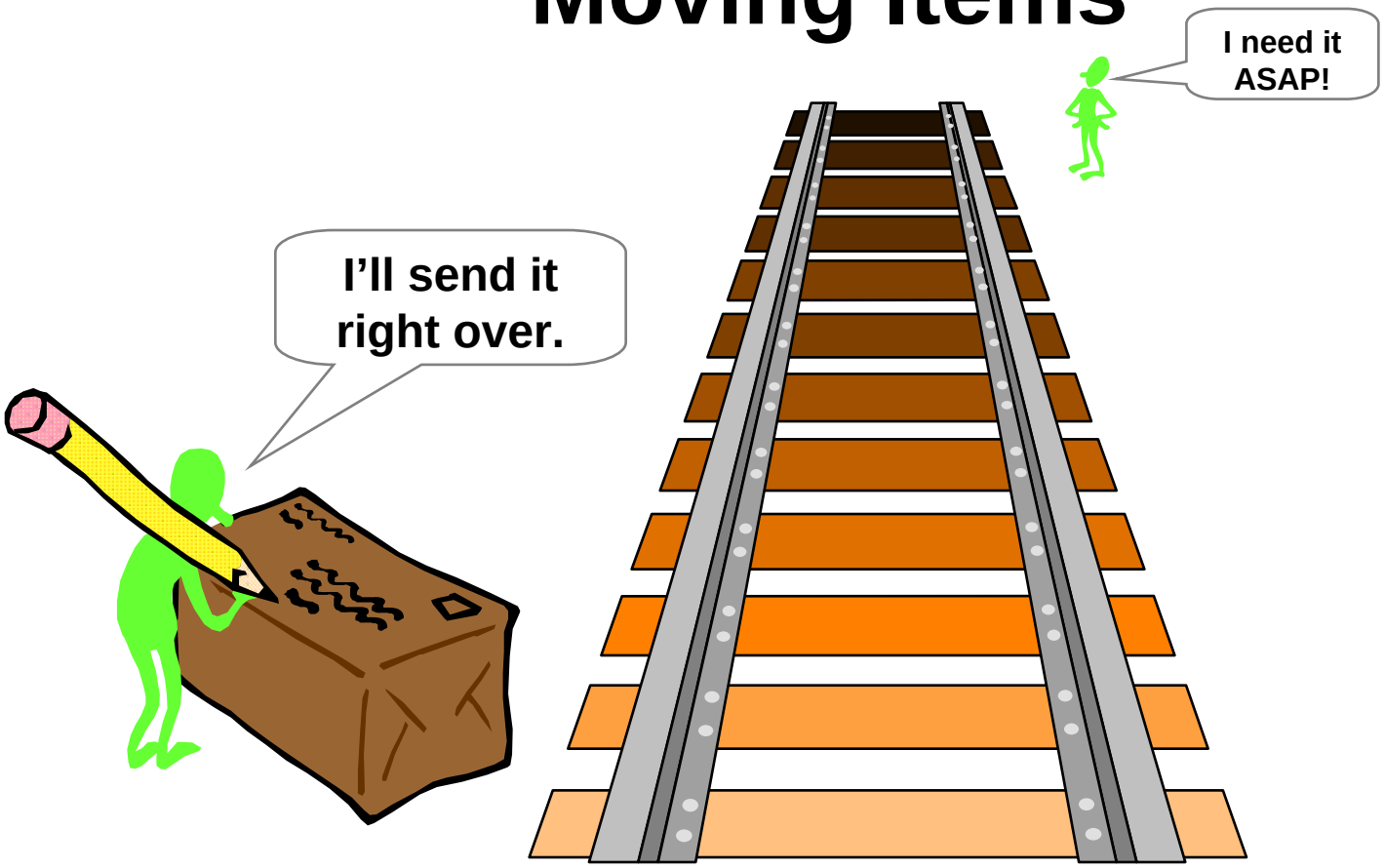
Waiting



Time spent waiting on items required to complete a task (i.e., Information, Supplies, People, etc.)

Types of Waste

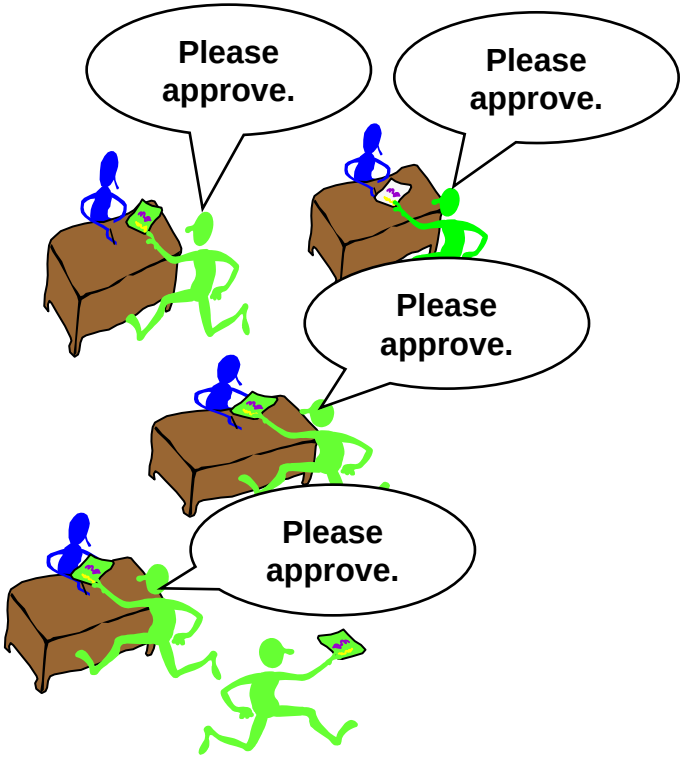
Moving Items

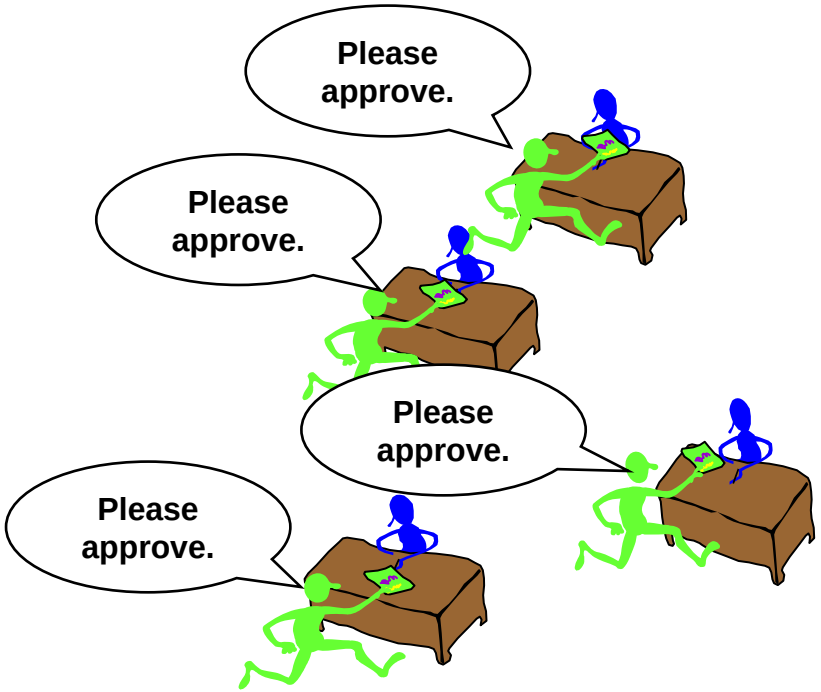


Transporting, temporarily locating, filing, stocking, stacking or moving materials, people or information

Types of Waste

Over Processing





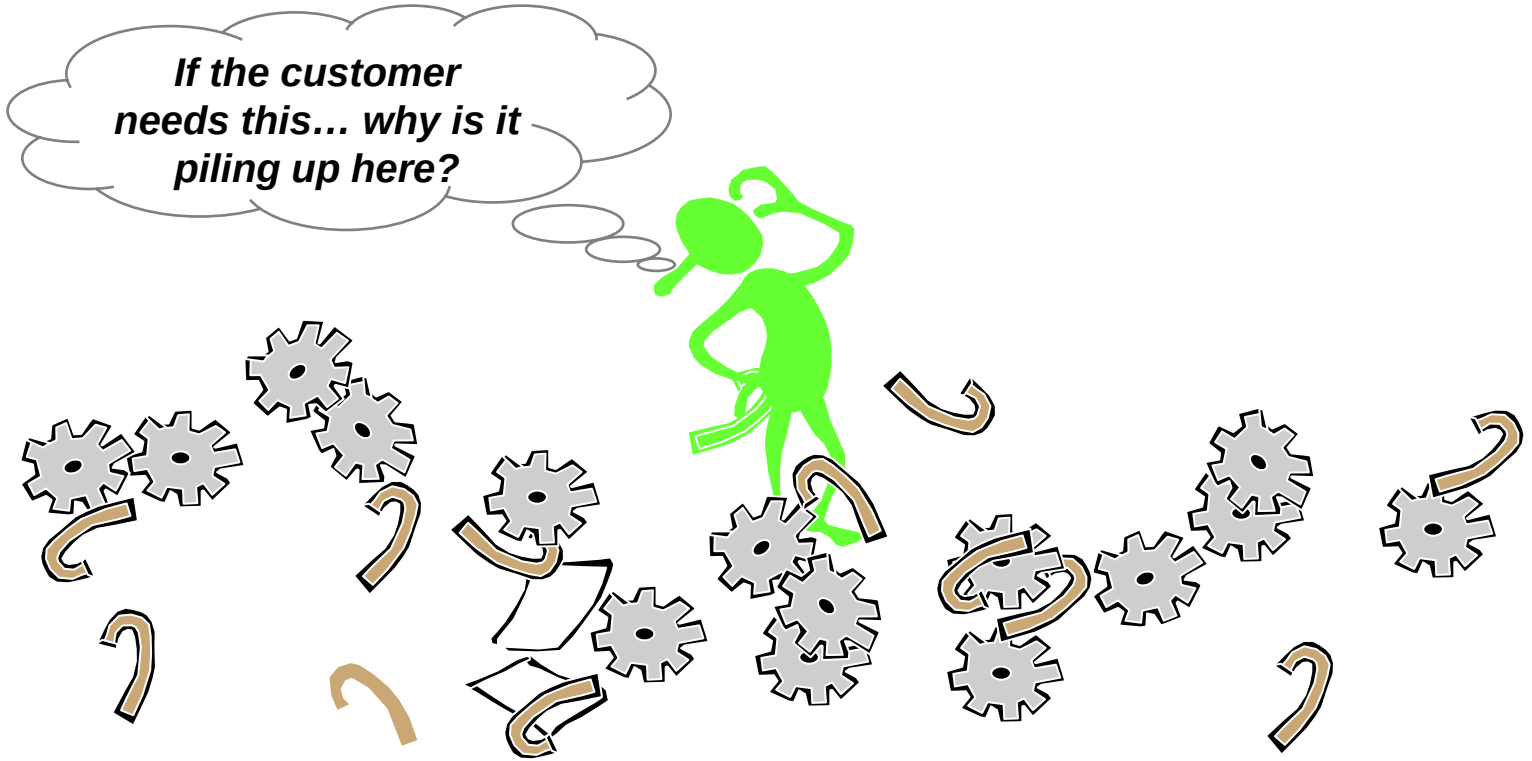
Types of Waste

Over Processing

Effort and time spent processing information or material that is not adding value

Types of Waste

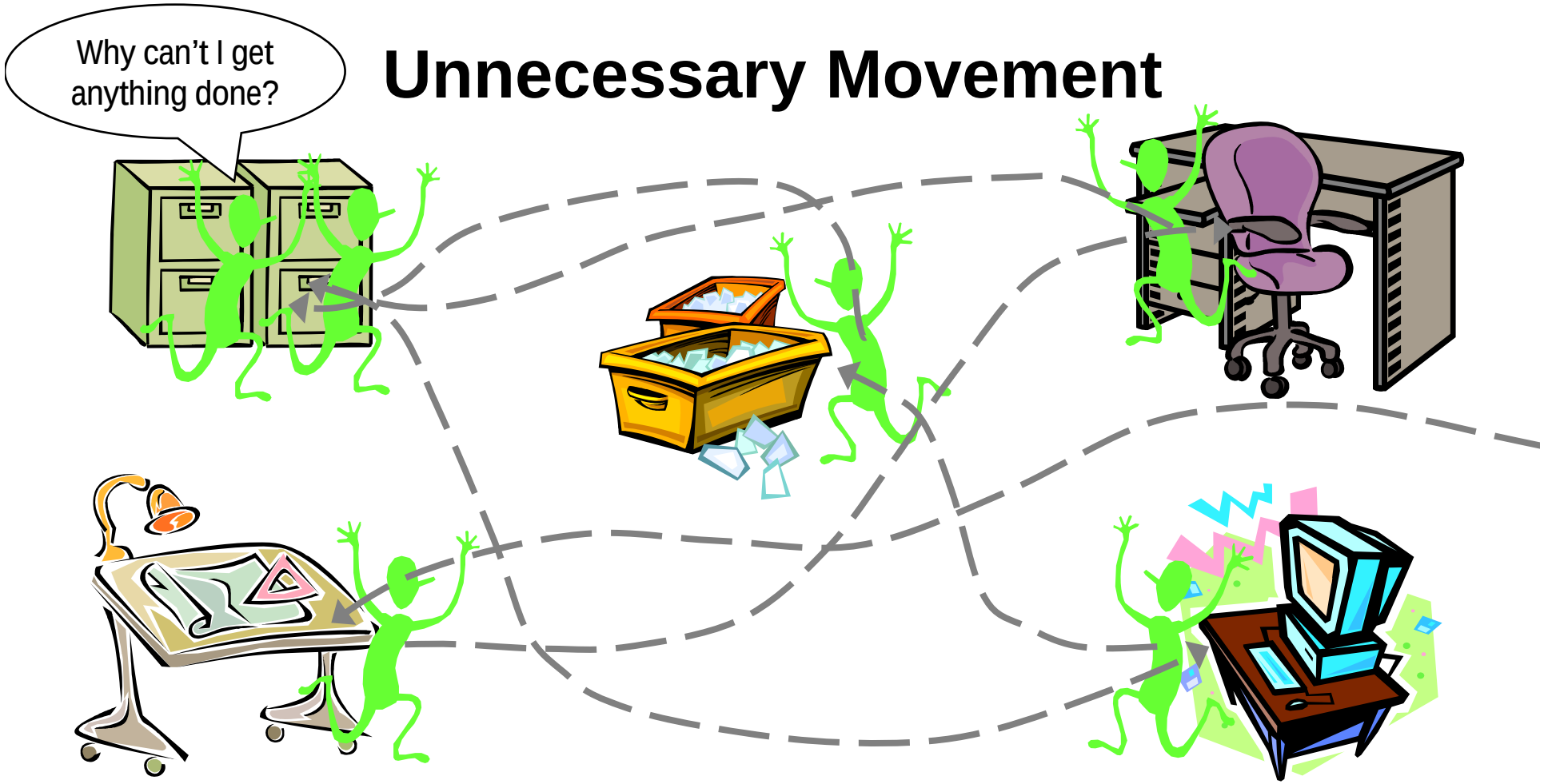
Inventory



Material or Information that is waiting for processing

Types of Waste

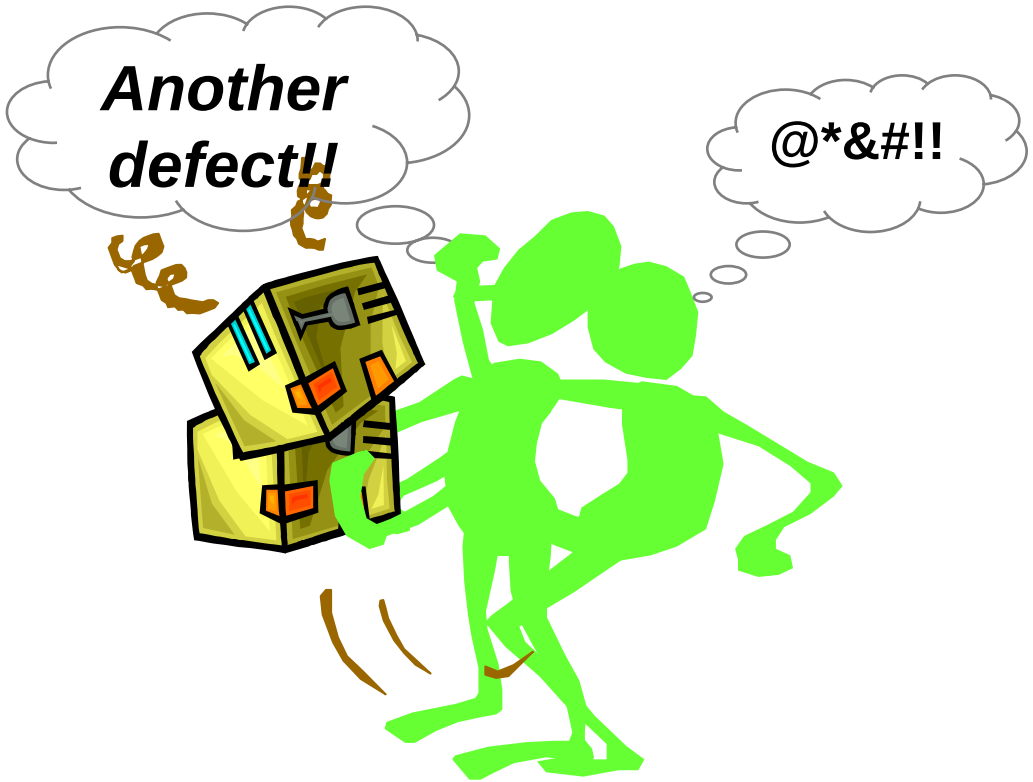
Unnecessary Movement



Any motion that does not add value to the product or service

Types of Waste

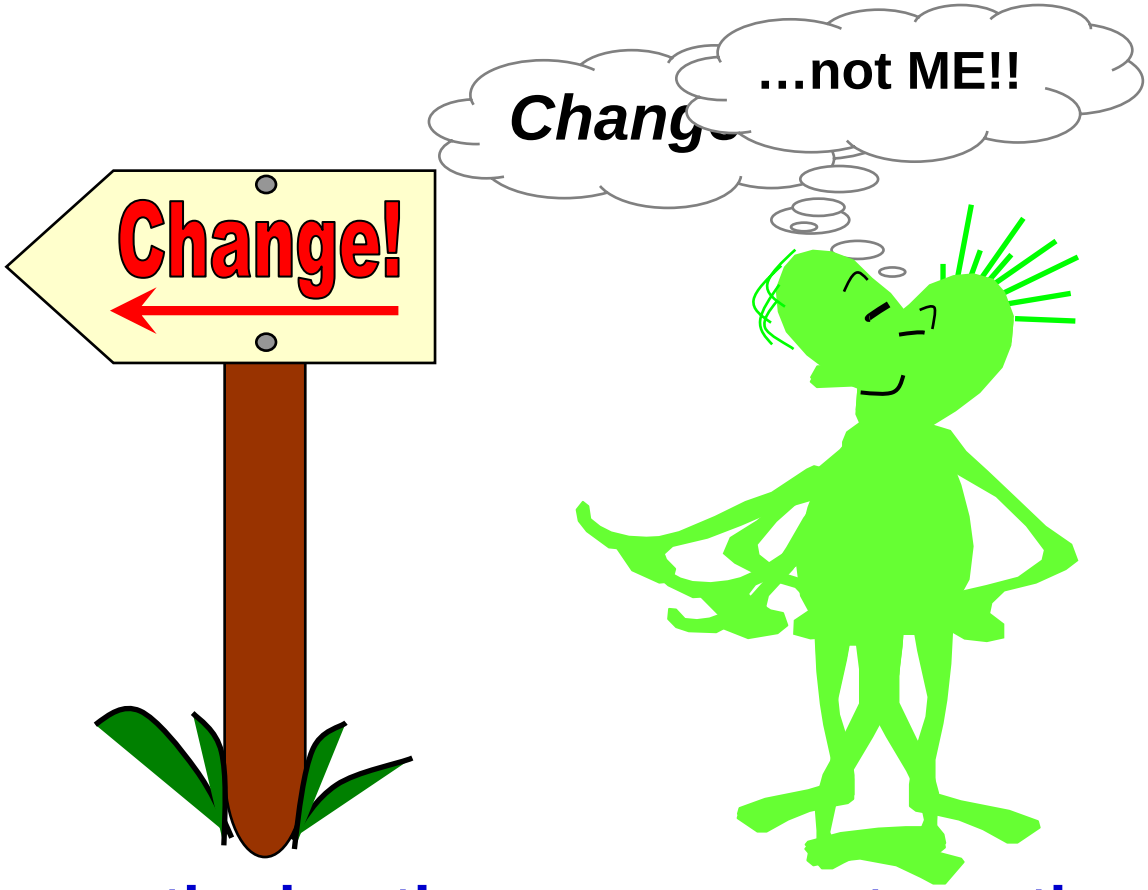
Defects



Repairing/Reworking/Scrapping material or information

Types of Waste

Behaviors



Not questioning the process, not wanting to take risk, or not wanting to rock the boat.

During the Event

4. Document the Current State

- ✓ Capture Process & Information Flows
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During the Event

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At the end of each day, we will:

- ✓ Discuss Lessons Learned
- ✓ Document accomplishments for the day
- ✓ Develop an agenda for the next day

During the Event

5. **Describe/Map an Ideal State** – One where there are no constraints inhibiting flow
   - ✓ No approvals
   - ✓ No regulatory requirements
   - ✓ No waiting
   - ✓ No quality issues
   - ✓ No ***WASTE***!

During the Event

6. Develop a Future State

- ✓ Walk the process
- ✓ Validate the issues are resolved
- ✓ Conduct a Gap Analysis
  - How do we get from here to there?
- ✓ Identify Barriers to Success
  - Cultural
  - Financial
  - Organizational
  - Regulatory
  - Technical
- ✓ Define Metrics

During the Event

7. Create an Implementation Plan

- ✓ Develop schedule for completing actions, considering the following:
  - Effort vs. impact
  - Critical path
  - Dependencies
  - Over-utilization of resources
- ✓ Assign deadlines and ownership for actions
- ✓ Schedule first cadence review
  - Meeting to monitor implementation progress

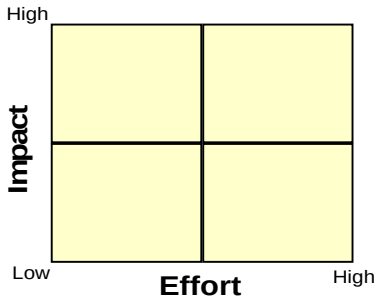
Implementation Plan

LEAN ACTIVITY ACTION LOG

Event Title: _____

Event Type:

- ☐ Do It
- ☐ Burst
- ☐ RPI
- ☐ Value Stream
- ☐ Project



Event Duration:

Start & End Date:

Critial Path: ☐ YES ☐ NO

Dependencies:

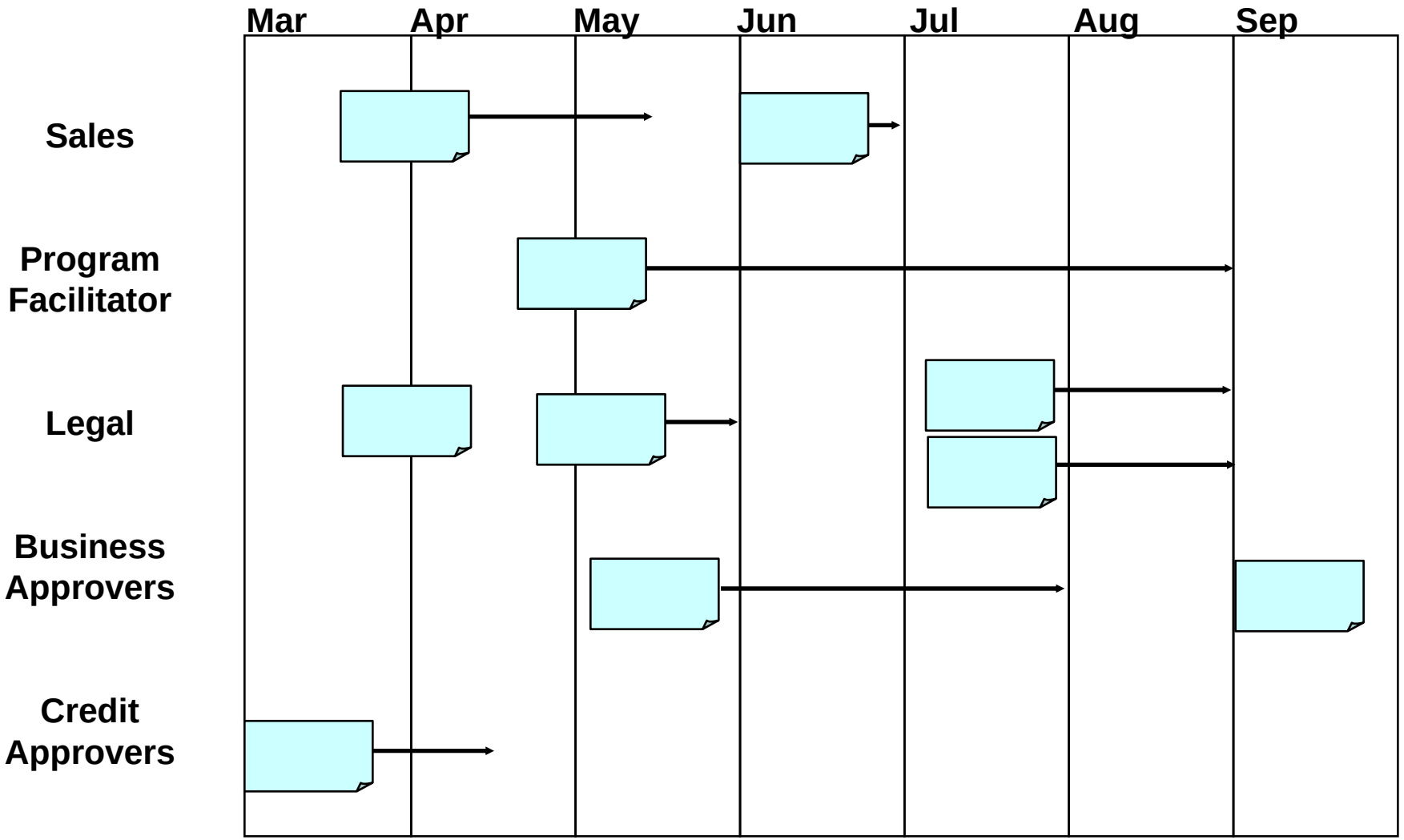
Action Description:

Anticipated Results/Deliverables:

Process Owner/Team Lead:

Potential Team Members:

Implementation Plan



Post-Event

8. Implement & Sustain

- ✓ Monitor implementation status, issues and accomplishments through regularly scheduled cadence reviews

A critical element for success is the management of the Implementation Plan

Post Event

Implementation Management Tools

Lean Event Implementation - Issue / Action resulution

C = Complete
O = On Schedule
N = Needs Action
H = Hold

Issue	Status:	Link to Plan	Title	Description	Originator	Date Assigned	Responsibility	Date Due	Date Complete
001	O	1.20	Auto population of disposition code	Request to have all action level codes automatically available for validation	Pfeifer	10/31/01	Freeman	11/30/01	11/25/01
002	C	2.30	Inconsistency between drawings/updates to drawings	How will we markup notes.	Pfeifer	10/31/01	Neagle		
003	C	2.30	Discontinued Material report application	Markup is reconciled with and incoporated into design data.	Pfeifer	10/31/01	Wilkey		
004	N	2.10	Change package recycle after approval	What is the criteria for a recycle change - a real problem today.	Pfeifer	10/31/01	Yonts		
005									
006									
007									

Develop an implementation plan that can be regularly updated by the entire team.

Post-Event

9. Continuously Improve

- ✓ Evaluate results and compare to goals
- ✓ Celebrate accomplishments
- ✓ Revisit the Future State map

Once you start implementing changes. . .

Your Future State becomes your Current State!

Backup Slides

SIPOC Diagram

We may use the SIPOC diagram as a tool to help us define the elements in our process.

The SIPOC diagram is a brainstorming tool used to identify the following key elements of a process or value stream:

Suppliers > **I**nputs > **P**rocess > **O**utputs > **C**ustomers

SIPOC Diagram

Suppliers – Those who supply resources and information to the process

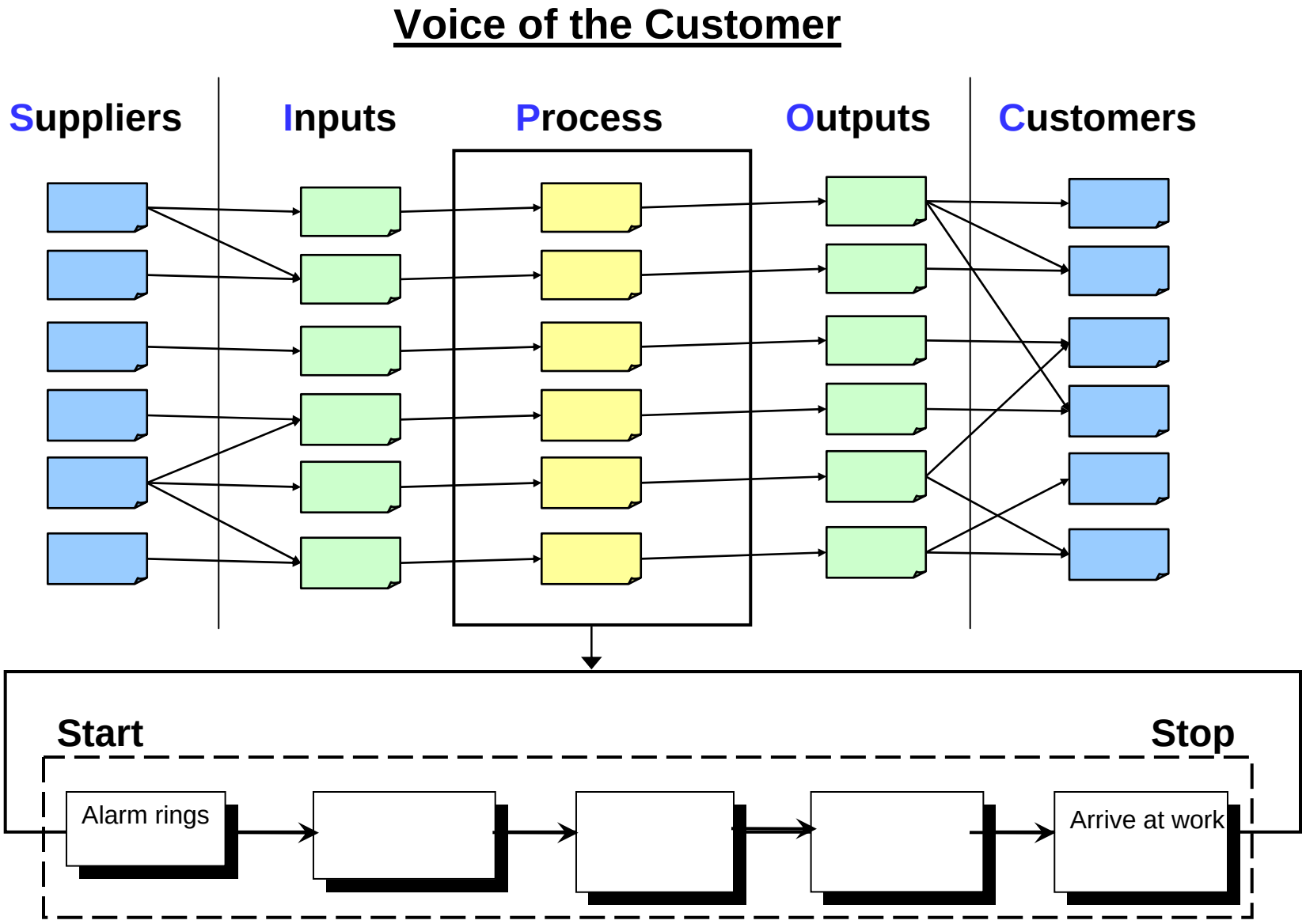
Inputs – Data, knowledge, and resources flowing into the process steps

Process – The main (high level) process steps

Outputs – The “deliverables” from the process steps

Customers – (Both internal and external) who have expectations, needs and wants to be satisfied

SIPOC Diagram



Brainstorm Issues

The Rules

- No premature decisions or evaluations
- ALL ideas are welcome (there is no such thing as a bad idea or one that is too ‘wild’)
- Don’t sit on ideas -- express them openly
- Quantity over quality
- Piggyback on the ideas of others
- Don’t waste time explaining your ideas

Brainstorm Issues

The Process

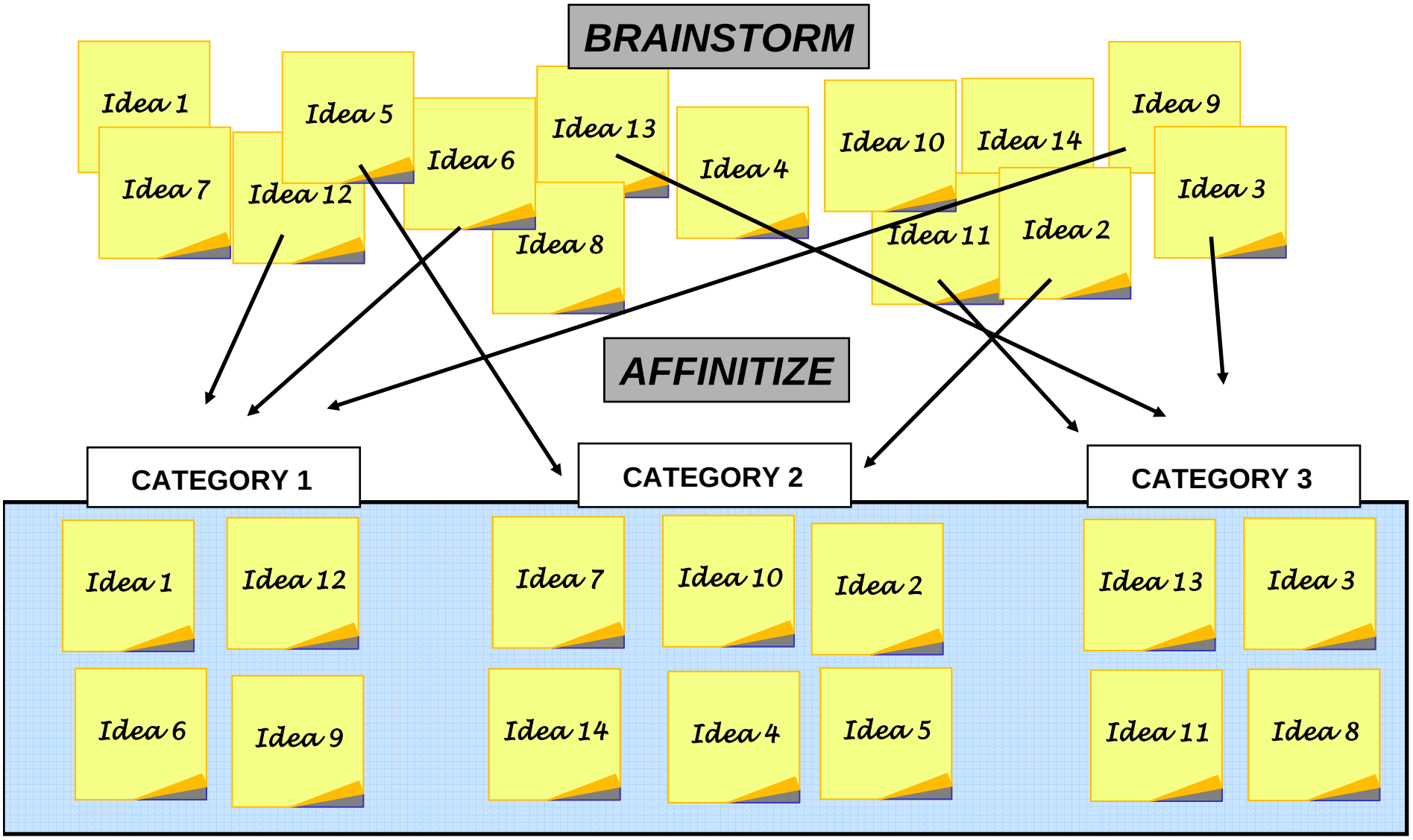
1. Team members silently record issues with the Current State on post-it notes
   – One issue per post-it
2. Use standard brainstorming rules
   – Use nouns and verbs (5 - 10 words)
3. Team members take turns reading their issues out-loud
   - Remove duplications
4. Post-its/issues are then placed on flip chart paper attached to the wall

Affinitize Issues

Sort Issues into logical categories

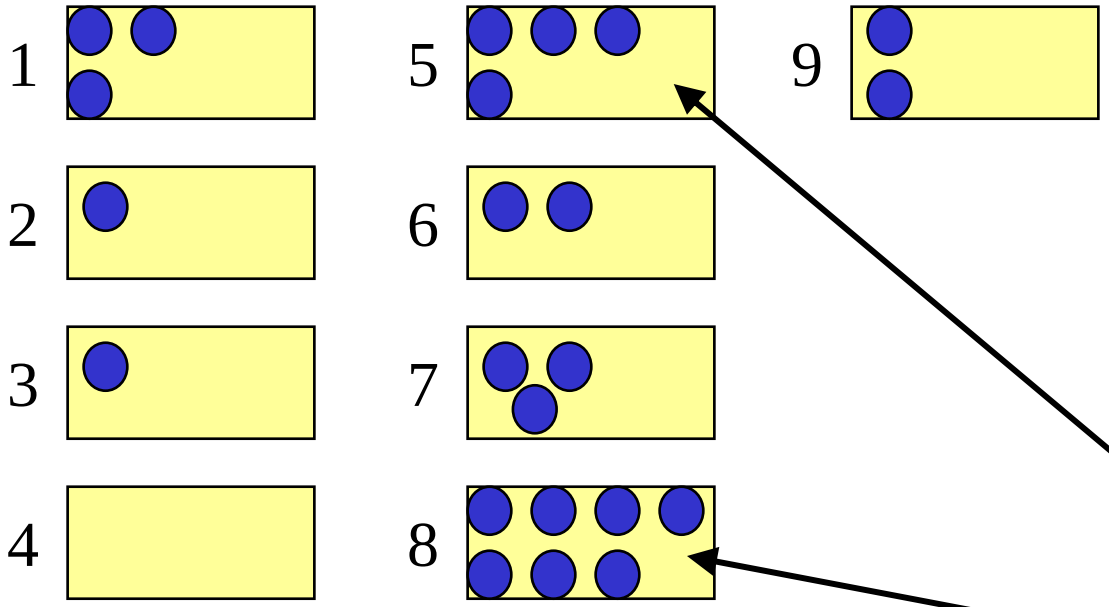
1. Team silently sorts issues by moving post-its into logical groupings
2. Team comes to consensus on category headings (i.e. issues surrounding communication, process, etc.)
3. Team prioritizes/votes on most critical issues

Example



Prioritizing

Multi-Voting: A good way to prioritize a long list of brainstorming ideas



Provide each team member with 1 dot per category

Vote on the top issue in each category

Only one dot allowed per category

* * * * * *

Idea 5 is second priority

Idea 8 is top priority