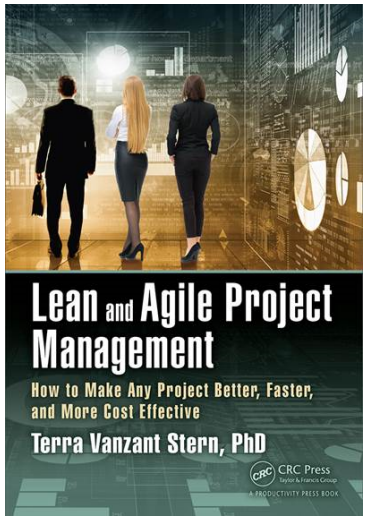
Welcome!

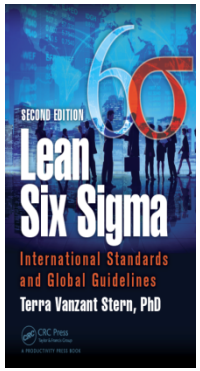
Introduction to

Lean & Agile Project Management

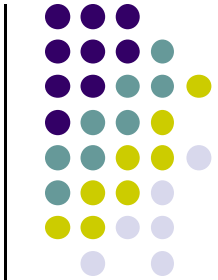


Terra Vanzant Stern, PhD

- Principal, SSD Global Solutions, Inc.
- Chair ASQ Lean Enterprise Division (2015/2016)
- Chair Elect North America for Lean 6 Society (2017)
- Executive Director of RMQC (2017)
  - On-line Virtual Conference for ASQ Denver
  - Program Director/Membership Director/Chair ASQ Denver
- Author
  - HR Concepts for Project Managers
  - Lean Six Sigma: Practical Bodies of Knowledge
  - Lean Six Sigma International Standards and Global Guidelines
    - New Revised Edition November
  - Lean and Agile Project Management (Available for Pre-Order)
- Personal Life – last 4 weeks



Class Objectives

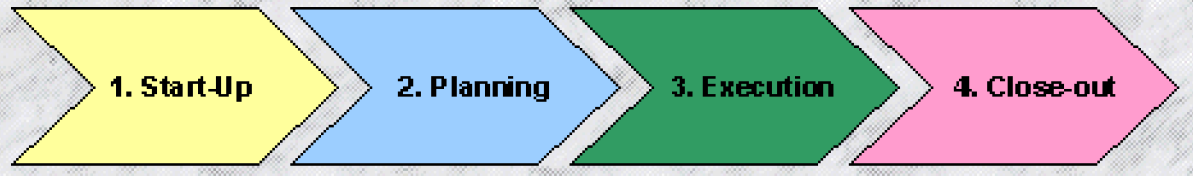


- Quick Introduction to the Project Management Life Cycle
- Introduce How You Can Maximize Project Management by Using Lean Thinking & Agile Techniques
- Tool Example
- Short Discussion or Questions

Project Management Theory

- PM-BOK
- Prince 2
- ISO 21500

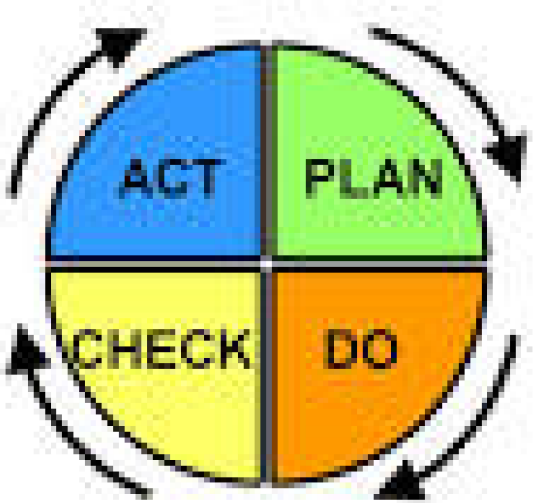
Project Life Cycle



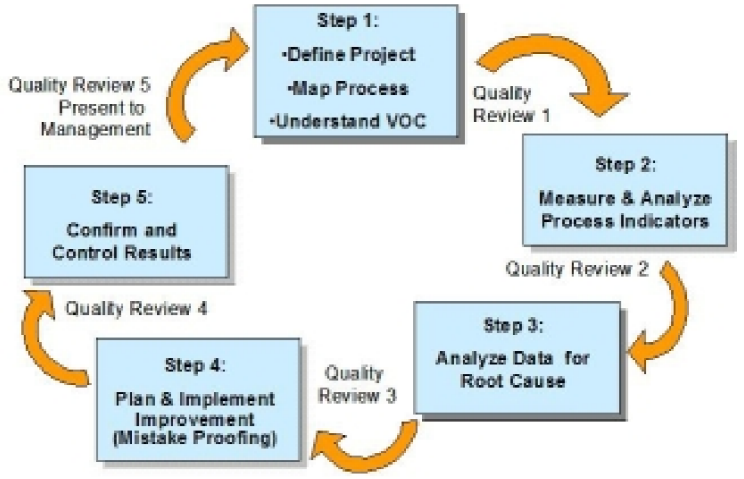
1. Start-Up	2. Planning	3. Execution	4. Close-out
Purpose	Scope - Final	Production of Key Deliverables	Celebrate!
Strategic Fit	Select Team Members	Monitor/Control	Contract Closeout
Objectives	Plan Deliverables	Quality Management	Team Feedback
Scope (draft)	Quality Plan	Time Management	Recommendations for further action
Terms of Reference	Baseline Schedule	Cost Management	Post Implementation Review
Draft Schedule	Baseline Budget	Risk Management	
Budget Estimate	Risk Register	Issue Resolution	
	Issues Register	Change Control	
	Business Case	Reporting	
	Approvals	Communications	
	Communication Plan		

In Conjunction with the PLC

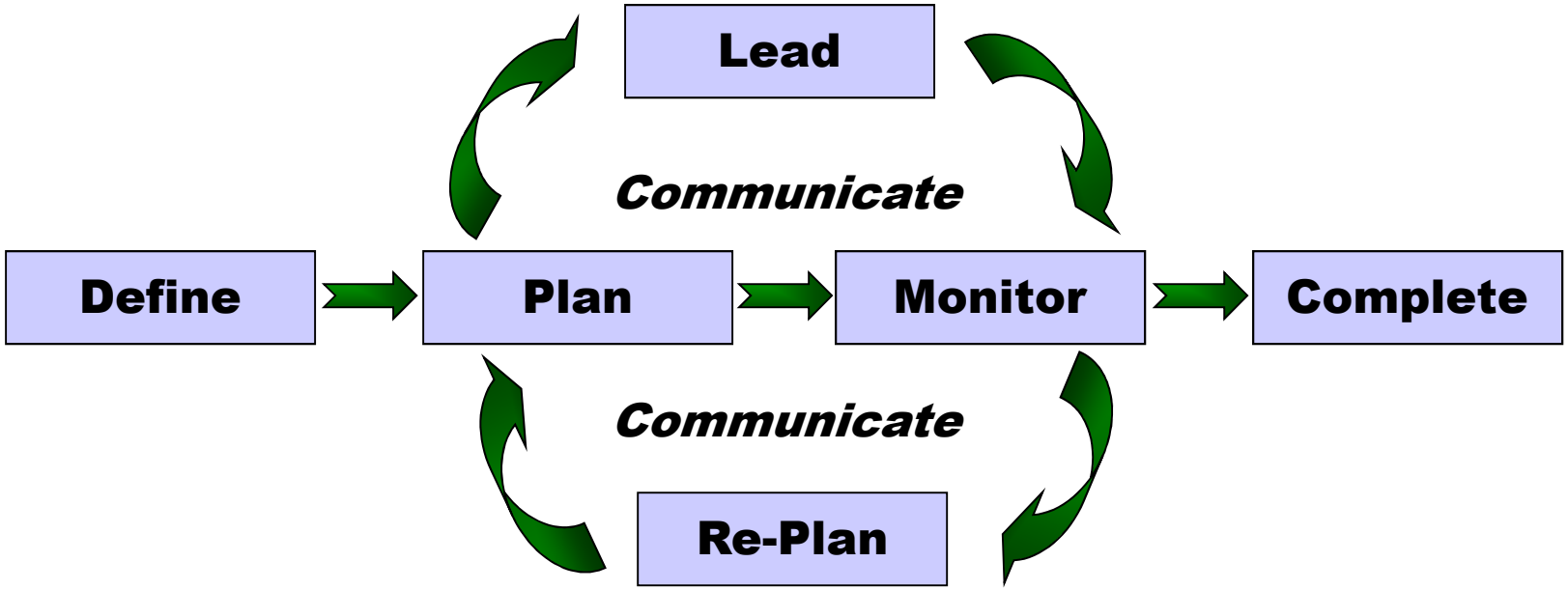
- PDCA



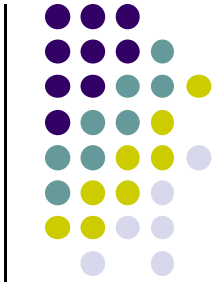
- DMAIC



Project Manager's Role



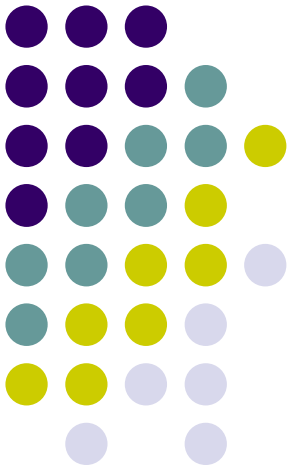
Seven Analytical Problem Solving Tools



- Control Chart
- Check Sheet
- Flowchart
- Fishbone Diagram
- Histogram
- Pareto Chart
- Scatter Chart

All Promote

WBS



Project Life Cycle

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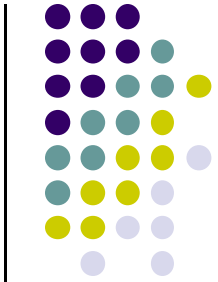
Start-Up – Lean Thinking

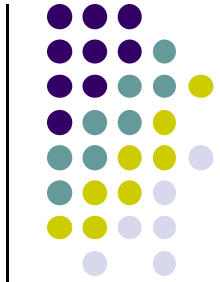
- 5S
- Rapid Improvement Events
- Standard Work
- RCA tools (5 Whys, Fishbone)
- SMART Goals (Adopted)

Project Planning – Lean Thinking



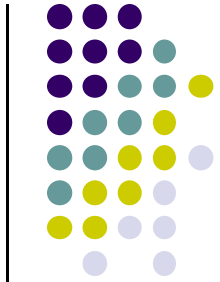
- Bottleneck Analysis
- Continuous Flow
- Gemba
- JIT
- Jidoka

Execution – Lean Thnking



- Level Scheduling (Heijunka)
- Takt Time
- Kanban

Close-Out – Lean Thinking

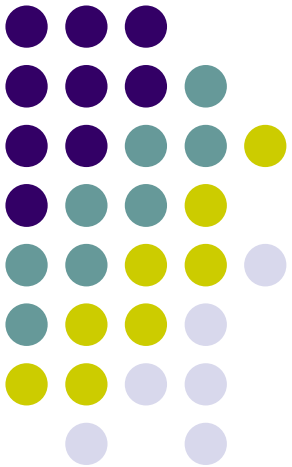


- 5S
- Introduce Continuous Improvement
- Standard Work

Muda/Waste Concepts
Lean Thinking (Philosophy)

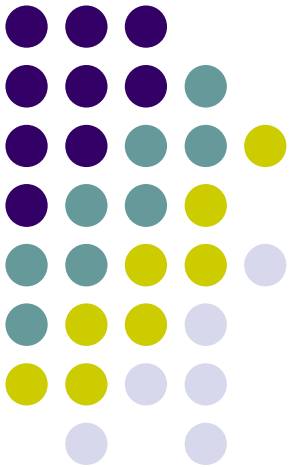
Stop Watering

The Plastic Plants

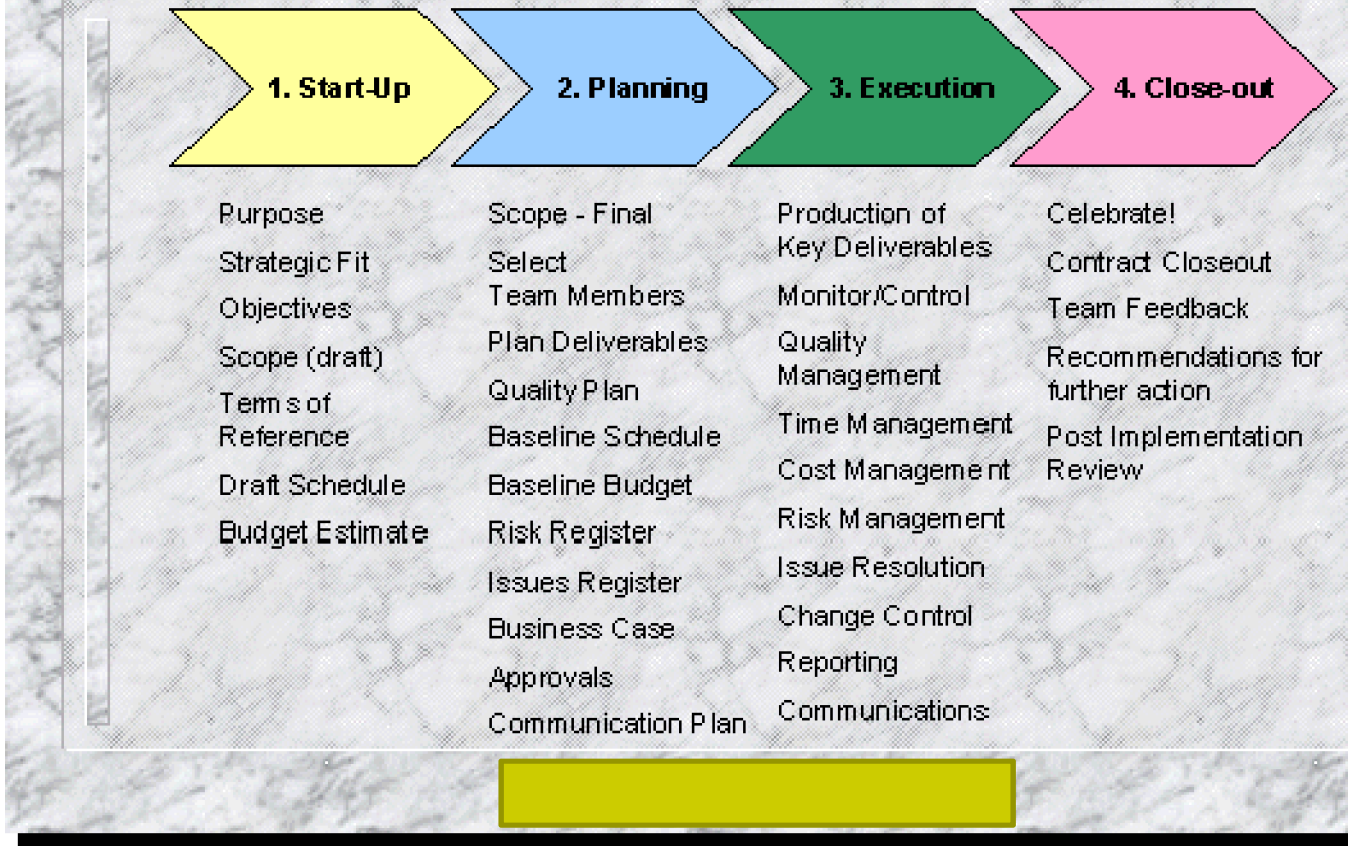


Agile Techniques

Applied to Traditional Project Management

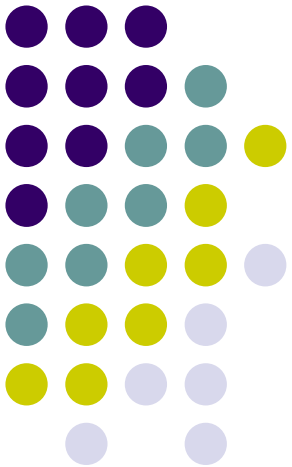


Project Life Cycle

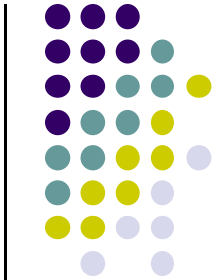


Projects

Without Heavy Compliance Components Benefit

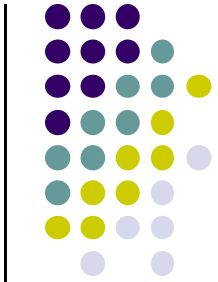


Agile Start Up/Planning



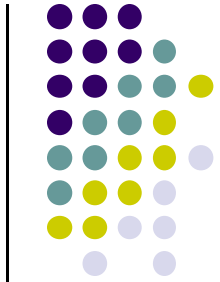
- More Face to Face Communication
- More Discussion
- Less Initial Doumentation
- More Risk
- In Theory Pays More Attention to TOC
- VOC/VOE

Agile



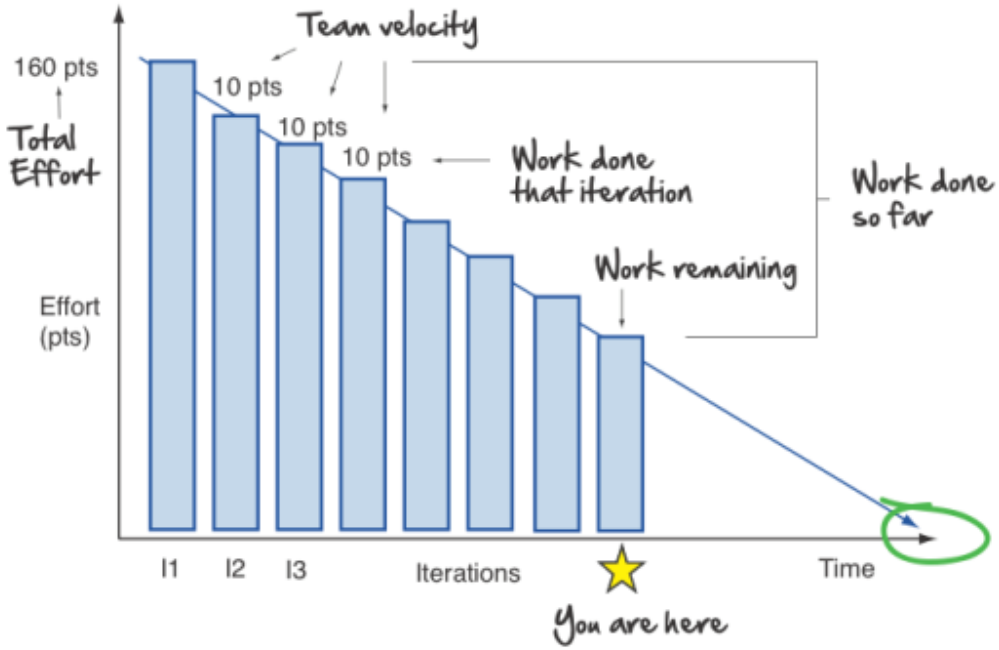
- You Can Leave Start Up/Planning Without an Official Y Statement (Problem Statement)
  - In LSS/SS the Y Statement
  - In PM/IT Problem Statement

Execution - Agile

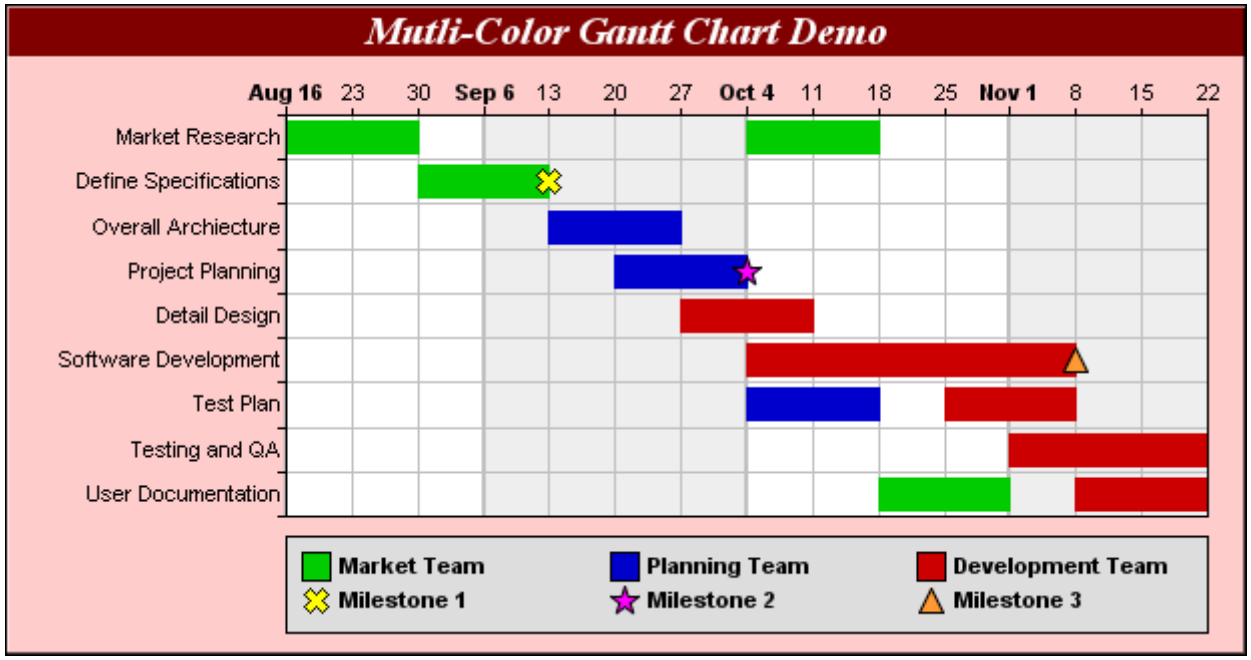


- 2 Week Chunks (Sprints)
- Daily Scrum Meetings
- Burndown Chart vs. WBS
- Role of the Project Manager

Burndown Chart

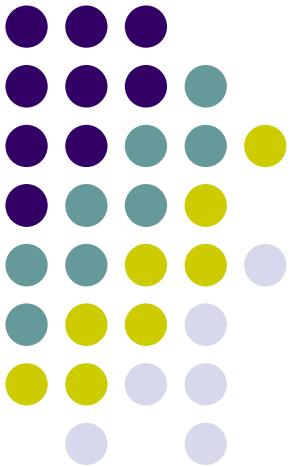


Traditonal/Lean (Gantts)



Control

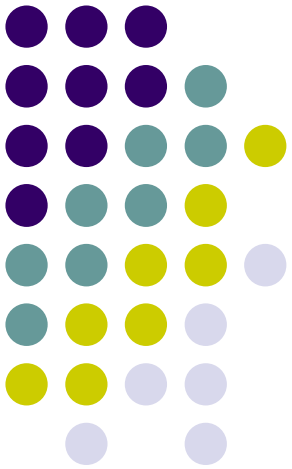
Same



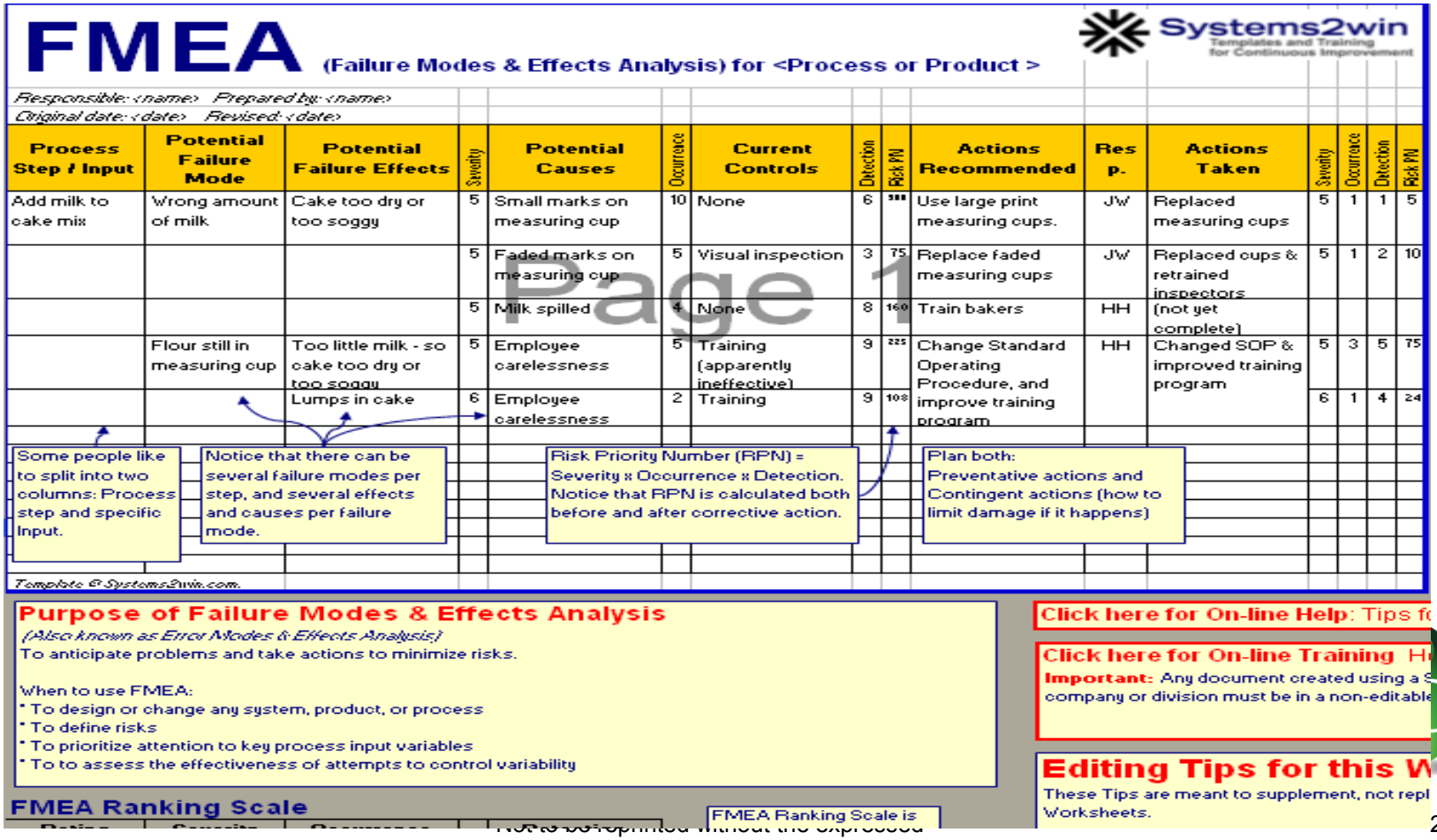
Lean & Agile PM Tool

FMEA Thinking

Use in Start Up



FMEA Example



FMEA (Failure Modes & Effects Analysis) for <Process or Product >

Systems2win Templates and Training for Continuous Improvement

Responsible: <name> Prepared by: <name>
Original date: <date> Revised: <date>

Process Step / Input	Potential Failure Mode	Potential Failure Effects	Severity	Potential Causes	Occurrence	Current Controls	Detection	Risk PN	Actions Recommended	Resp.	Actions Taken	Severity	Occurrence	Detection	Risk PN
Add milk to cake mix	Wrong amount of milk	Cake too dry or too soggy	5	Small marks on measuring cup	10	None	6	300	Use large print measuring cups.	JW	Replaced measuring cups	5	1	1	5
			5	Faded marks on measuring cup	5	Visual inspection	3	75	Replace faded measuring cups	JW	Replaced cups & retrained inspectors	5	1	2	10
			5	Milk spilled	4	None	8	160	Train bakers	HH	(not yet complete)				
	Flour still in measuring cup	Too little milk - so cake too dry or too soggy	5	Employee carelessness	5	Training (apparently ineffective)	9	225	Change Standard Operating Procedure, and improve training program	HH	Changed SOP & improved training program	5	3	5	75
		Lumps in cake	6	Employee carelessness	2	Training	9	108				6	1	4	24

Some people like to split into two columns: Process step and specific Input.

Notice that there can be several failure modes per step, and several effects and causes per failure mode.

Risk Priority Number (RPN) = Severity x Occurrence x Detection. Notice that RPN is calculated both before and after corrective action.

Plan both: Preventative actions and Contingent actions (how to limit damage if it happens)

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Page 1

Purpose of Failure Modes & Effects Analysis

(Also known as Error Modes & Effects Analysis)

To anticipate problems and take actions to minimize risks.

When to use FMEA:
- To design or change any system, product, or process
- To define risks
- To prioritize attention to key process input variables
- To to assess the effectiveness of attempts to control variability

FMEA Ranking Scale

FMEA Ranking Scale is

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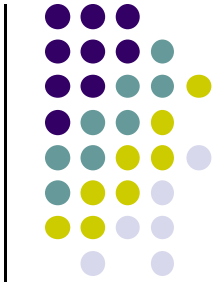
Important: Any document created using a S company or division must be in a non-editable

Editing Tips for this W

These Tips are meant to supplement, not repl Worksheets.

Simple FMEA Example
Soft Drink Machine



Function	Potential Failure	Potential Effect of Failure	Potential Cause of Failure	Current Process Control
Dispense correct soft drink	Does not Dispense the correct soft drink	Customer not happy!	Not enough Soft drinks available or not enough of the right kind of soft drinks	Deliveries made each Saturday

Student Exercise

Function (Activity)	Potential Failure (Activity does not happen)	Potential Effect of Failure	Potential Cause of Failure	Current Process Control (What is in place NOW to keep the failure from happening)