



ASQ

Six Sigma Basics and their Relevance for Project Managers

Pam Nintrup, PMP, CSSMBB

pnintrup@ppprofs.com 513-519-1392

Sponsored by:

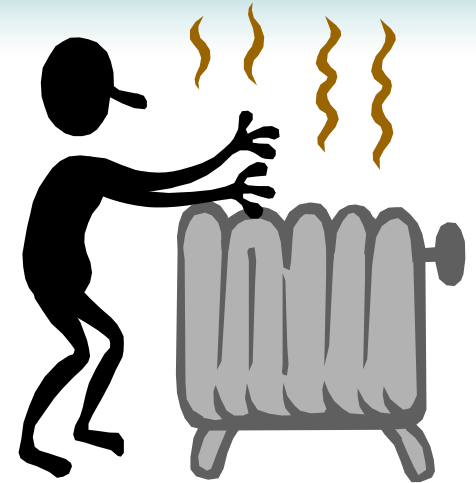


Agenda



- What do you know about Six Sigma?
- Why the interest in Six Sigma?
- Terminology and Definitions
- Process comparisons
- Similarities and differences
- What did you learn and how can you use it?

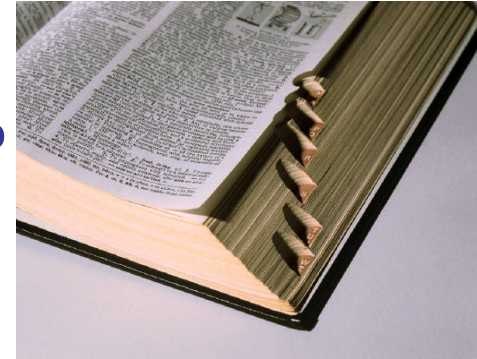
Warm Up...



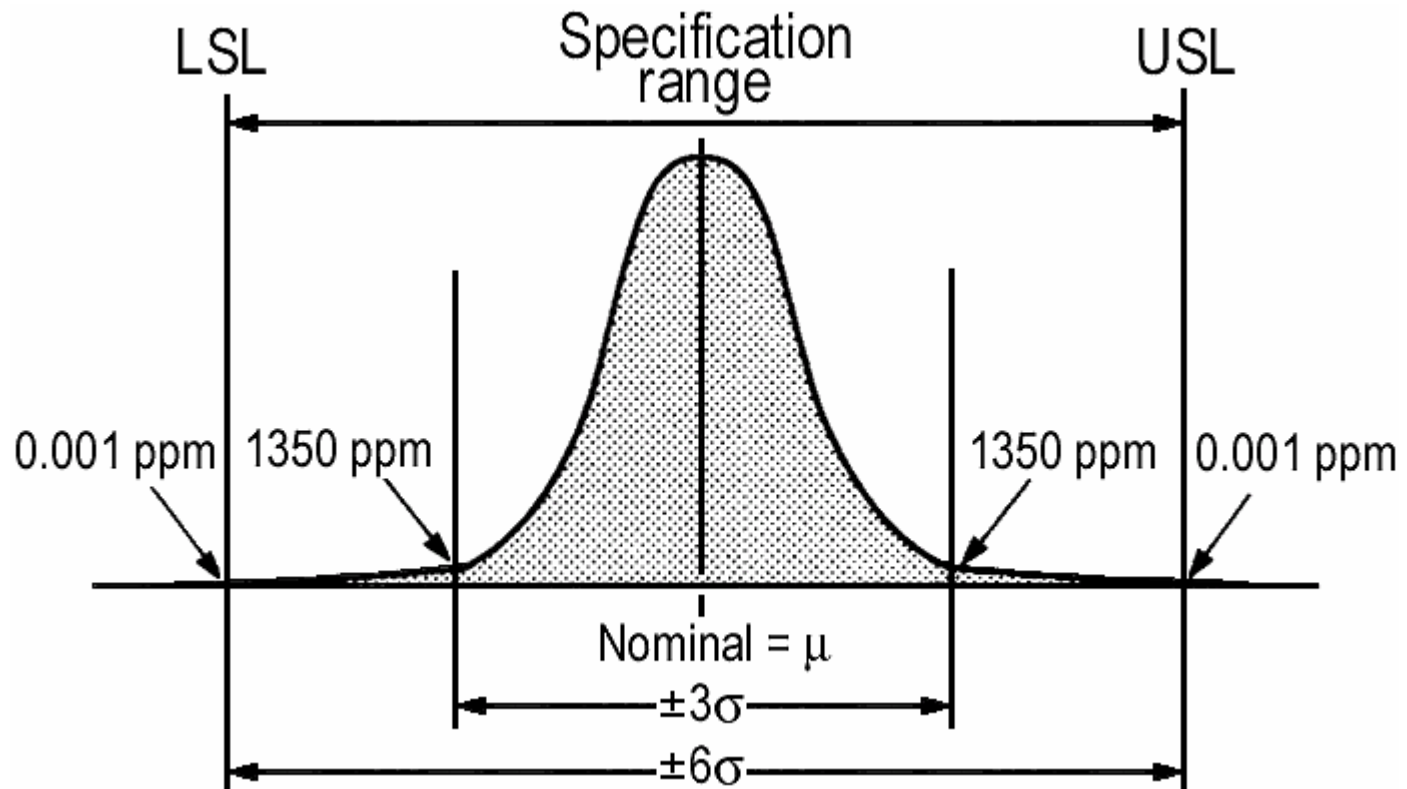
- At your table,
 - Develop three definitions of Six Sigma
 - Identify a spokesperson at your table

Six Sigma Definitions

- A measure of variation equal to 99.99966%
- 3.4 defects per million opportunities
- 6σ
- Statistically based process improvement
- A corporate strategy to improve productivity and quality
- Process improvement focused on consistent delivery
- Points on a bell curve equal to +/- six standard deviations
- Customer focused process improvement – uses voices of customer, process, business and associates



The Picture



Who is this and why is he included
in this discussion?



Six Sigma Defined

by Jack Welch

“Six Sigma is a quality program that, when all is said and done, improves your customers’ experience, lowers your costs, and builds better leaders.”

Or

“the elimination of unpleasant surprises and broken promises”

Why the interest in Six Sigma?

- Average savings realized from one Six Sigma **project** is \$230,000 (each BB can average 4-6 **projects/year**)
- Improved **customer relations, satisfaction and loyalty**
- Reduced **mistakes/defects** and **delivery time**
- Increased **market share**



Terminology and Definitions



Let's Compare

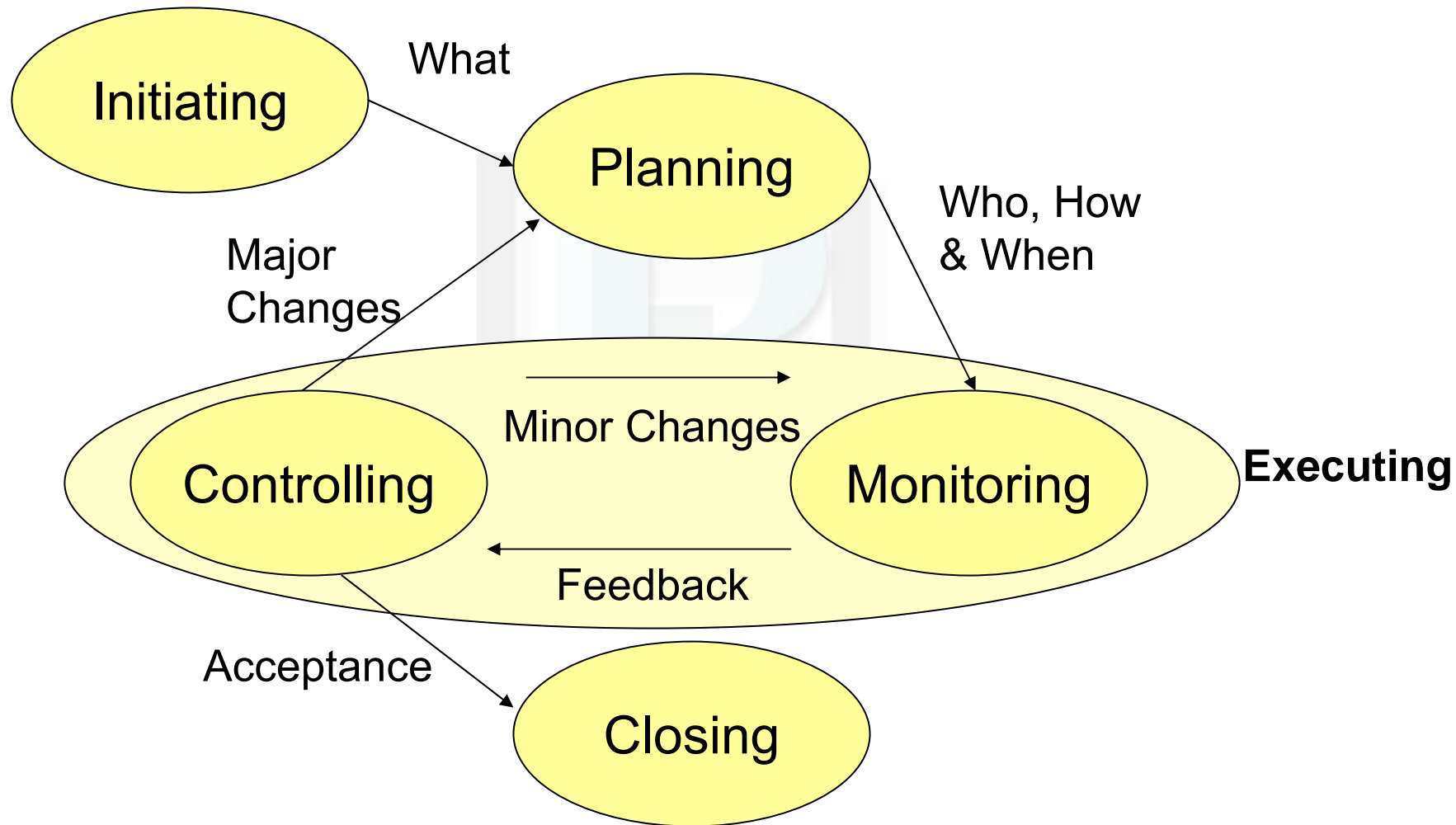
• Six Sigma

- Process – DMAIC
- Skills
- Team
- Sponsorship
- Tools
- Deliverables

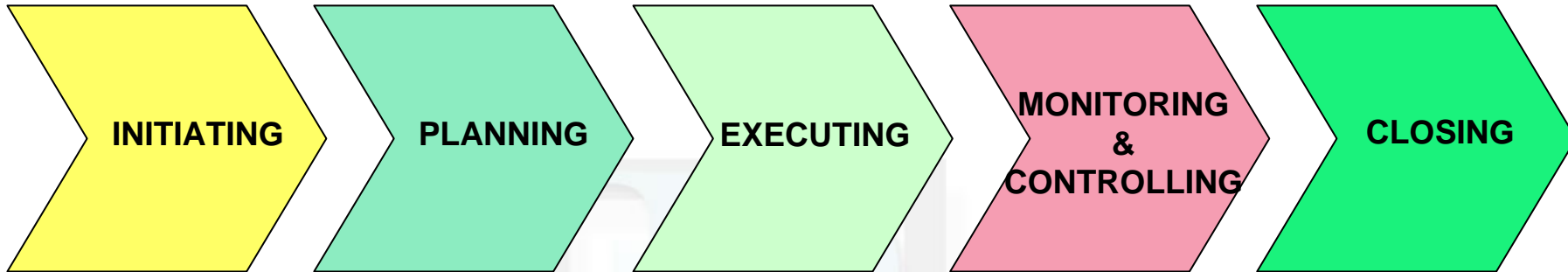
• Project Management

- Process – PMBOK®
- Skills
- Team
- Sponsorship
- Tools
- Deliverables

The Project Management Process



Project Management Project Phases



Key Activities

- Define project scope
- Develop project objective
- Identify assumptions and constraints
- Define Roles / responsibilities

- Create WBS
- Establish team
- Develop project budget
- Create auxiliary plans as needed

- Execute project tasks
- Communicate
- Create deliverables
- Manage changes

- Monitor project activities
- Deliver status reports
- Close issues
- Track changes

- Conduct closeout process
- Capture Lessons Learned
- Finalize project documentation
- Communicate success!

Deliverables

**Charter
Preliminary Scope
Statement
Estimated resources**

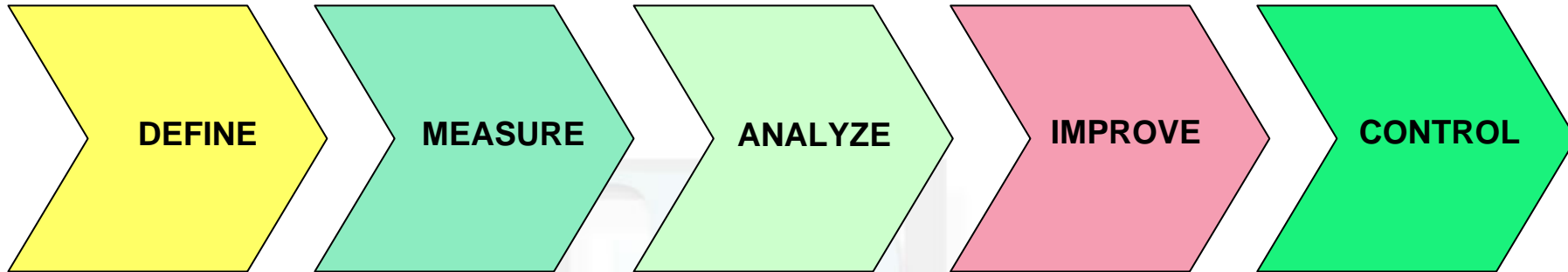
**PM Plan
Charter
WBS
Communication Plan
Risk Plan**

**Products of project
tasks
Change requests
and disposition
Issue Log**

**Approved
deliverables
Status Reports
Approved changes**

**Turnover plan
Closeout Report
Lessons Learned**

Six Sigma Project Phases



Key Activities

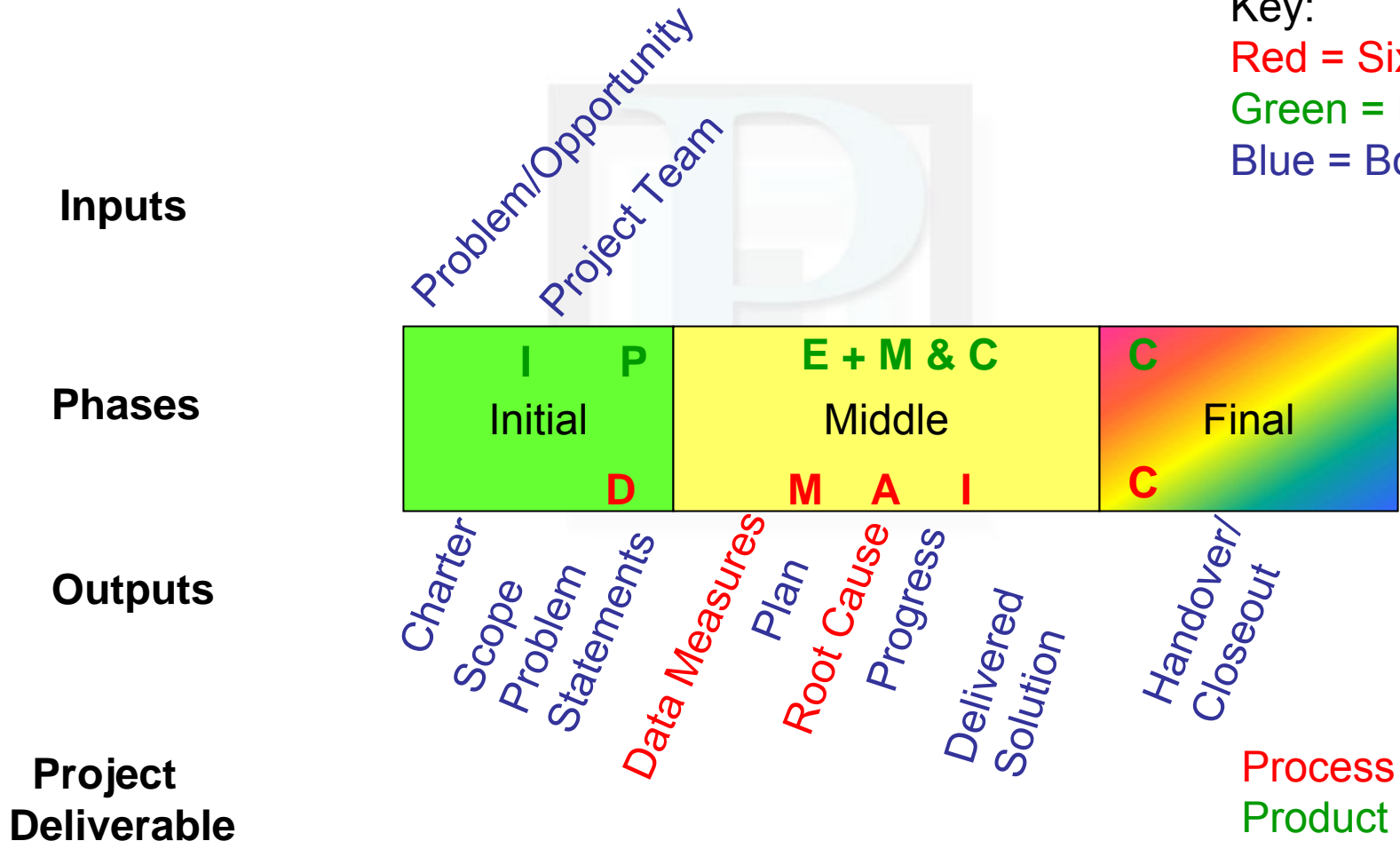
- | | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> • Determine project scope • Complete project definition • Identify the quick wins • Develop team guidelines • Roles / responsibilities | <ul style="list-style-type: none"> • Document current state • Establish performance metrics • Collect data • Watch the process | <ul style="list-style-type: none"> • Identify root causes • Identify Non-value added activities • Label process wastes • Identify process handoffs | <ul style="list-style-type: none"> • Generate solution ideas • Prioritize solutions • Determine solution impacts • Develop future state process flow • Update Action Plan • Perform solution pilots • Implement solutions | <ul style="list-style-type: none"> • Track and monitor improved process • Ensure continuous improvement • Integrate lessons learned |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Deliverables

<p>Charter SIPOC VOC Critical to Customer Requirements (CTQ's) Stakeholder Analysis</p>	<p>Baseline performance Current State Process Maps Data collection Action Plan</p>	<p>Non-value Added Fishbone Diagram Pareto Charts Risk mitigation</p>	<p>Potential Solutions Prioritization Matrix Future State process maps Solution Pilots</p>	<p>Control Plan Executive Summary Share success stories</p>
------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------

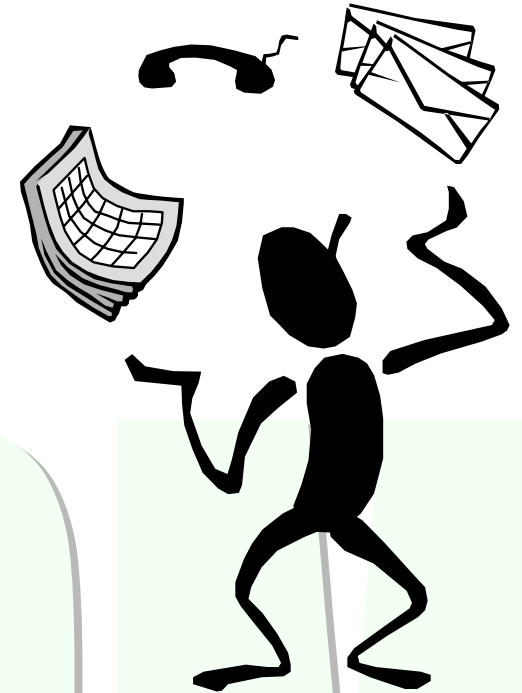
Process Comparison

Key:
 Red = Six Sigma
 Green = PM
 Blue = Both

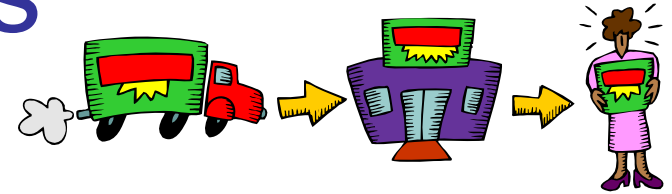


Similarities

- Skills
 - Leadership
 - Communications
 - Team Building
 - Conflict Management
 - Motivation
 - Negotiation
 - Meeting Facilitation
 - Change Management



Similarities



- Process
 - Define
 - Measure
 - Analyze
 - Improve
 - Control

- Process Components
 - Inputs
 - Actions
 - Outputs

- Process
 - Initiation
 - Planning
 - Executing
 - Monitoring and Controlling
 - Closing

- Process Components
 - Inputs
 - Tools and techniques
 - Outputs

Similarities



- Team
 - Black Belt (PM)
 - Subject Matter Experts
 - Green/White Belts
 - Process experts
 - Process owner
- Sponsorship
 - Executive
 - Champion
 - Sponsor

- Team
 - Project manager
 - Subject Matter Experts
 - Team members
 - Technical experts
 - Solution owner
- Sponsorship
 - Steering Committee
 - Executive Sponsor
 - Sponsor

Similarities



- Tools

- Activity Network Diagram (AND)
- Brainstorming
- Affinity
- Flow charts
- Tree diagrams
- Force Field
- Gantt
- Matrix
- Prioritization

- Tools

- PERT Charts
- Brainstorming
- Affinity
- Flow charts
- Tree diagrams
- Force Field
- Gantt
- Matrix
- Prioritization

Similarities



• Deliverables

- Project Charter
- Problem/Opportunity Statement
- Measurements
- Team Guidelines
- Action Plan/Task List
- Turnover plan

• Deliverables

- Project Charter
- Scope Statement
- Success Criteria
- Responsibility Matrix
- WBS / Project Plan
- Closeout Report

Differences



- Statistically based
- 3-6 month projects
- Focused on delivering process only
- Small teams
- Continuously revisited
- Difficult to do virtually
- Corporate program
- Analytical Skills

- Minimal metrics/ analysis
- Any length
- Delivers anything
- Large teams
- Usually one and done
- Easier virtually
- Can be accomplished on a smaller scale

How do I acquire Six Sigma certifications



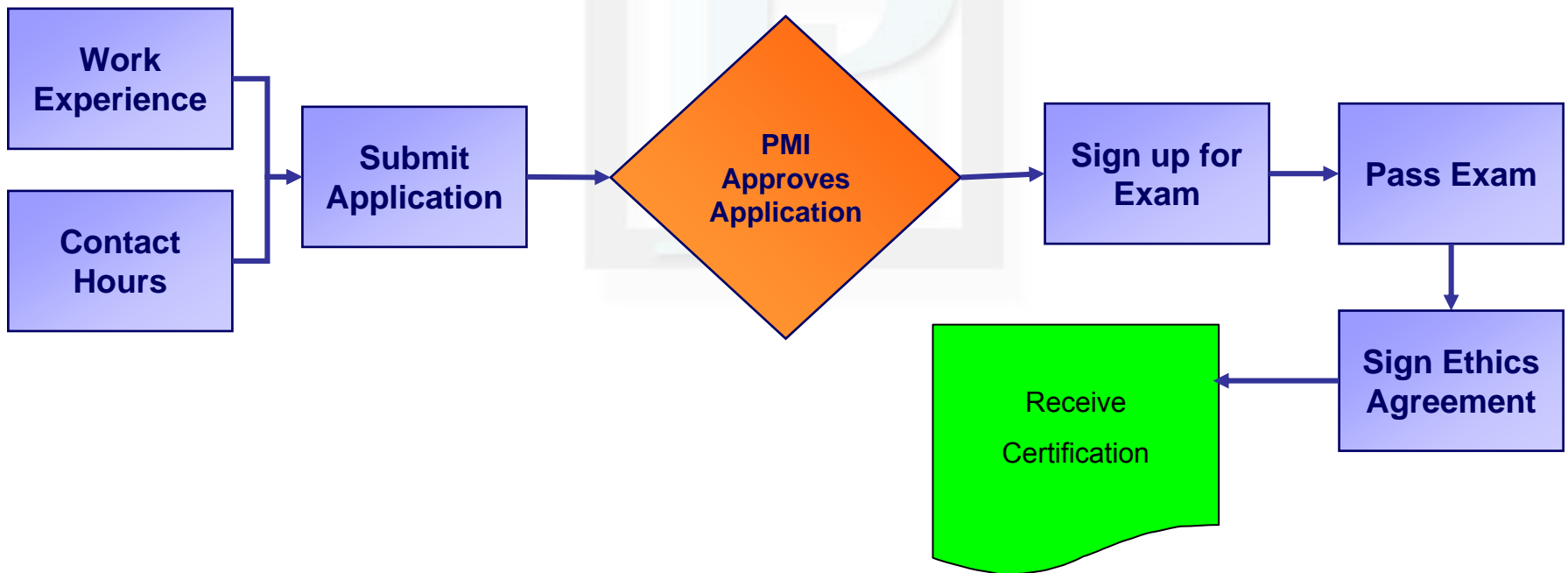
- Training
 - Attend a class that provides certification or prepares you for an exam
 - Levels include: White, Yellow, Green, Black, Master
- Exams
 - Check out organizations that allow you to take an exam to get certified
- Practice
 - Most certifications require a project

Why get PMP® Certified?

- Project Management Institute (PMI), has earned the prestigious ISO/IEC 17024 accreditation for its Project Management Professional (PMP®) credential program from the International Organization for Standardization (ISO).
- PMP® Certification sets you apart.
- PMI's salary survey found that PMP's are paid at least 10% more than non-PMP's in the US and even more in some other countries.

PMP® Certification Process

What do I need to do to become a PMP®?



PMP® Certification Requirements

To achieve the PMP® credential you must:

- satisfy educational and experiential requirements established by PMI
- verify at least 35 contact hours of specific project management oriented instruction
- demonstrate the ability to apply your understanding and knowledge of project management to situational and scenario-based questions by passing the PMP® credential examination
- sign a Code of Ethics

To download a copy of the PMP® Credential Handbook, use this link:

http://www.pmi.org/PDF/pdc_pmphandbook.pdf



PMP® Certification Requirements

What are the eligibility requirements for PMP® applicants?

Educational Background	Project Management Experience*	Project Management Education
High School diploma, Associate's degree or global equivalent	Minimum five years/60 months unique non-overlapping professional project management experience during which at least 7,500 hours are spent leading and directing project tasks**	35 contact hours of formal education
Bachelor's degree or global equivalent	Minimum three years/36 months unique non-overlapping professional project management experience during which at least 4,500 hours are spent leading and directing project tasks**	35 contact hours of formal education



Exercise



- Individually
 - Write down three points of interest from today's presentation and how you can use them
- Share at your table.

What did we learn?

- A Six Sigma project is simply a specialized type of project
- All project management skills are transferable to a Six Sigma project
- Six Sigma projects require focus on using statistical analysis tools
- Certifications in Six Sigma and Project Management are complimentary and, in demand!

Questions?

Want more information?

Pam Nintrup, PMP, CSSMBB

President, Project and Process Professionals, LLC

pnintrup@pppprofs.com

513-519-1392

References

- A Guide to the Project Management Body of Knowledge, (PMBOK®) Third Edition, Published by The Project Management Institute, 2004
- Winning, by Jack and Suzy Welch, HarperCollins Publishers, 2005
- Website: http://www.isixsigma.com/sixsigma/six_sigma.asp
- Website:
http://www.tut.fi/plastics/tyreschool/moduulit/moduuli_5/hypertext_3/2/2_2.html#2_2_1