Software Process Improvement

SWEN-261
“To address this mistake we must use root-cause analysis. I’ll begin by saying it’s not my fault.”
Overview

- Why is improvement important.
- What are some positive and negative tendencies.
- How to measure where you are.
- How to improve.
Process Improvement

- Consistently apply practices that work
- Change the practices that cause problems
- Determine how helpers vs. hindrances may be distinguished from one another.
Why Improve?

- Decreased cost of quality
- Increase your productivity
- IE… Better, cheaper, better. Work smarter not harder.

- If you aren’t improving, you are declining…
What You Need

- Openness and willingness to learn and change.
- Communication.
- Support by team & management
- It may cost time and money to improve
- Ability to admit existing issues.
A Poor Process Is....

• Ad hoc. Very little control.
• Unpredictable results.
• Risks
  • New technology
  • Team issues
• Not measured/evaluated
• No ownership
A Good Process Is...

• Controlled
• Many measurements
• Less variation
• Always focused on improvement.
Creating Zero Defect Software

- Testing or inspecting cannot usually improve the quality of software (Usually too late)
Ways to Remove Defects

• Fix the problems in each product
  • Patches
• Fix the process that leads to defects (most cost effective)
  • Requirements gathering
  • Design
  • Implementation
  • Etc…. 
Stages of Quality

1. Initial
2. Repeatable
3. Defined
4. Managed
5. Optimizing.
How to Improve?

• Set aside time and resources.
• Always strive to get better.
• Get to root cause of problems.
• Open & Honest discussion.
How Can Your Team Improve?