

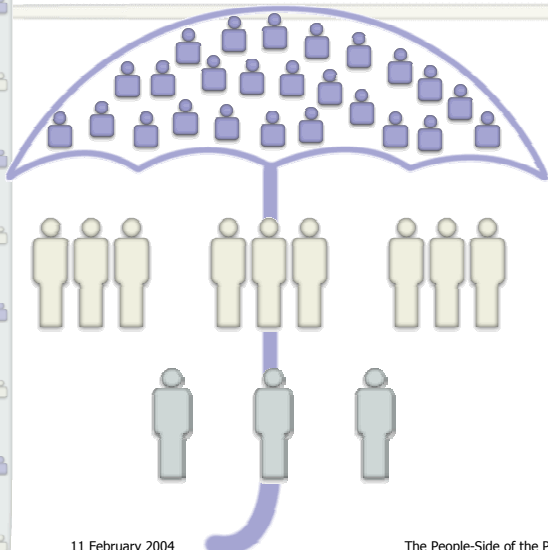
The People-Side of the PSP

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A Comprehensive Approach to Process Improvement



Capability Maturity Model (CMM): Focuses on the organization's capability; management actions.

Team Software Process (TSP): Focuses on team performance; product development.

Personal Software Process (PSP): Focuses on individual skills and discipline; entirely personal.

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The People-Side of the PSP

- I. Background
- II. Theory & Stories
- III. Personal Benefits @ Y&L

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I. Background

- 8 engineers in the class
 - Architect/J2EE
 - 3 Java
 - C & UI developer
 - C#
 - ColdFusion
 - DB Architect

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I. Background (cont.)

- First Project
 - Enterprise J2EE application
 - 5 team members
 - Estimate: ~ 9 KLOC, 7 weeks
 - Actual: ~15 KLOC, 11 weeks
 - ~250 System Test Defects (or 16 def/KLOC)
 - First reality grounded commitment the team made was in week 8. It was met in week 11.

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I. Background (cont.)

- Current Project
 - Enterprise J2EE application
 - 3 team members
 - Estimate: ~9,235 LOC, 3 weeks
 - Actual: ~8,500 LOC, 3 weeks
 - ~2 def/KLOC in System Test
 - Hit the commitment!

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II. Theory & Stories

1. Self-awareness
2. Fact-based Decision Making
3. Ownership & Accountability

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Personal Software Process

- **Personal**
 - *Your process. You own it. You have the responsibility to change it!*
- **Software**
 - A personal process applied to software development.
- **Process**
 - *“A series of actions, changes, or functions bringing about a result.”*

Excerpted from *The American Heritage® Dictionary of the English Language*

Humphrey, Watts S. *A Discipline for Software Engineering*. Addison-Wesley. Reading, MA. 1994.

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Work To Your Talents

- What are your talents?
“A talent is a recurring pattern of thought, feeling, or behavior that can be productively applied.”
- Every role performed at excellence requires talent.
“Michelangelos of housekeeping.”

Buckingham, Marcus, Curt Coffman. *First, Break All The Rules*. Simon & Schuster. NY, NY. 1999.
 Peters, Thomas J. *The Circle of Innovation*. Random House. New York, NY. 1997.

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Make Non-Talents Irrelevant

- “People don’t change that much. Don’t waste time trying to put in what was left out. Try to draw out what was left in. That is hard enough.”* – wisdom from great managers
- Team up people with complimentary talents.

Buckingham, Marcus, Curt Coffman. *First, Break All The Rules*. Simon & Schuster. NY, NY. 1999.

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II. Theory & Stories

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A Disaster off the Scilly Isles

- What do we know to be *important* but are *unable* to measure?
 - October of 1707, Admiral Clowdisley Shovell
 - 4 warships and 2,000 lives were lost
 - Longitude: How far east or west you are?
 - Guessing average speed, or dropping a log over the side of the boat and measuring time of travel from bow to stern.

Buckingham, Marcus, Curt Coffman. *First, Break All The Rules*. Simon & Schuster. NY, NY. 1999.

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What Is Your Software Development Performance?

- Have you been thinking about it before?
 - Do you know your “*batting average?*”
- The complexity of all activities that an individual does in order to create software.
- The **understanding** your performance is the basis of making good estimates.

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The Stockdale Paradox

Retain faith that you will prevail in the end, regardless of the difficulties. **AND at the same time** Confront the most brutal facts of your current reality, whatever they might be.

Collins, Jim. *Good to Great*. Harper Business. NY, NY. 2001.

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II. Theory & Stories

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“People seek joy in work.”

“I don’t know where does it say that we have to regard work as some form of punishment.”

Attributed to W. Edwards Deming by Peter Senge, et. al.
Peters, Thomas J. *The Circle of Innovation*. Random House. New York, NY. 1997.

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“People don’t resist change, people resist being changed.”

- Focus on the “Why?”
- You don’t have to change people.
- Show people how their contribution fits into the overall picture.

Senge, Peter. *The Fifth Discipline*. Pg. 23. Currency Doubleday. New York, NY. 1990.

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PSP is not about Process

- At it’s essence, what the PSP class delivers is **not about process**.
- The PSP class delivers an **understanding** of your skills and capabilities.
 - Measurement
 - Estimate vs. Actual
 - Hidden assumptions

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III. Personal Benefits @ Y&L

1. Self-awareness
2. Fact-based Decision Making
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Self-awareness

- Some team members made personal plans to achieve goals outside of work.
“I’m using PSP to get ‘small projects’ done around the house.”—Bob Warren
- Some team members reported a better understanding of what it takes to write good software.

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Self-awareness

*“I am logging data about my personal life...
Since I know a few things about myself I am
trying to make time to do things accordingly.”*

–Tanay Sengar

- Examples:
 - counting pages while reading
 - counting calories

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Self-awareness

*“I used to just do things. PSP helped me do
things right.”* –Vijay Parthasarathy

- The nature of the conversation has changed. Now team members discuss design ideas and debate the merits of various solutions before coding starts.

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III. Personal Benefits @ Y&L

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Fact-based Decision Making

- Schedules based on data.
 - One team created a schedule for defect fixes based on the data collected on prior defect fixes in the same product. The schedule turned out to be “surprisingly” accurate.
 - Based on the data the team decided to rewrite a component instead of fixing it and add new features.

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Ownership & Accountability

“I used to wait for somebody to tell me what to do, now I feel empowered to do what I need to get the job done.” –Y&L Developer

- The team members now feel that they are responsible for the success of the company.
- A team member spent a weekend rewriting unmaintainable code.

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What's Next?

“If the other guy’s getting better, then you’d be getting better faster than that other guy’s getting better ... or you’re getting worse.”

Peters, Thomas J. *The Circle of Innovation*. Random House. New York, NY. 1997.

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What's Next?

- Professional Career Tracks: a guide to help our technical people with their professional growth.

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Summary

- The PSP class has benefits reaching beyond the workplace.
- The PSP develops the raw normative behaviors in engineers that enables them to build strong TSP teams.

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