

# The People-Side of the PSP

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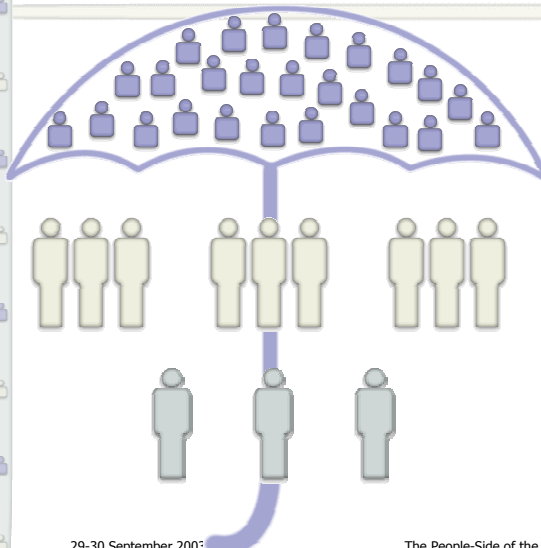
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## A Comprehensive Approach to Process Improvement



**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.

# The People-Side of the PSP

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

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## I. Background

- 8 engineers in the class (through R4)
  - Architect/J2EE
  - 3 Java
  - C & UI developer
  - C#
  - ColdFusion
  - DB Architect

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## The *Art & Science* of Software Process



When asked why he gave the title, *The Art of Computer Programming*, to his famous series of books, Donald Knuth said:

*"Science is what we understand well enough to explain to a computer and art is everything else."*

Knuth, Donald. *Computer Programming is an Art*. Communications of the ACM. December 1974.

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## Three Key Personal Benefits



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

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## II. Theory & Stories

1. Self-awareness
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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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# I. Theory & Stories

1. Self-awareness
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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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# I. Theory & Stories

1. Self-awareness
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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.

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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 personal goals outside of work.  
*“I’m using PSP to get ‘small projects’ done around the house.”—Bob Warren*
- Folks 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, counting calories

## 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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## 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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## II. Personal Benefits @ Y&L

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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.”*

- 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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