Using the PSP
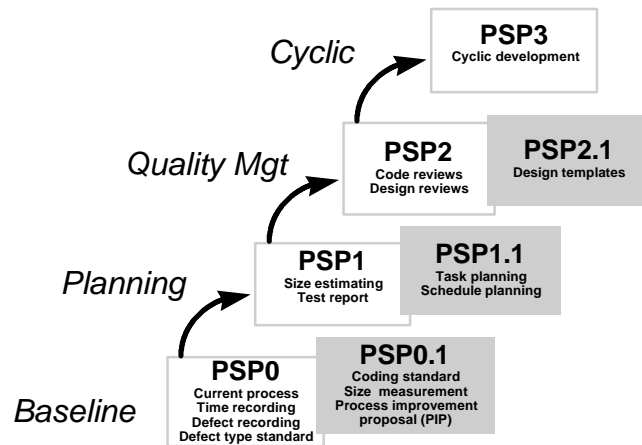
Outline

- *Review of PSP Levels*
- *Overview*
- *Making Personal Commitments*
- *Using the PSP*
- *Costs*
- *Benefits*
- *Coaching*
- *The Responsible SW Professional*
- *Your Future in SE*

Review of PSP Levels *(Humphrey, 1995, p. 11)*

Cyclic → **PSP3**
Cyclic development

Quality Mgt → **PSP2**
Code reviews
Design reviews
PSP2.1
Design templates

Planning → **PSP1**
Size estimating
Test report
PSP1.1
Task planning
Schedule planning

Baseline → **PSP0**
Current process
Time recording
Defect recording
Defect type standard
PSP0.1
Coding standard
Size measurement
Process improvement
proposal (PIP)

Overview *(cf. Humphrey, 1995, p. 471)*

- *How do you decide how to use a PSP in your daily work?*
- *You must weigh the costs and benefits, and make a commitment.*

Making Personal Commitments

- Managers want your commitment.
- They want you to complete a job within a specified time/budget.
- You will be asked to prepare schedules - because they believe you are a capable professional.
- They will test your commitment by pushing you to "crash" your schedule.
- You can address this pressure by doing your homework:
  - Have good data to base your estimates on.
  - Make realistic plans.
  - Show that you have a minimum cost plan, but that if they want a minimum time one then they need to decide how much they are willing to spend to accomplish it. Tradeoffs have a cost.

Using the PSP in an Organization

- You can use the PSP alone.
- However, it is easier and nicer when others or the whole organization follows a similar discipline.
- You can interest others by asking for their help.
- They may then decide to try some of the PSP for themselves.
- Remember not to compare yourself with others - better or worse.
- If the organization is interested furthering the use of the PSP, it should provide training time and indicate its value by asking about it regularly. Engineers know what management thinks is important by what it asks about...

The Personal Costs of a PSP
(cf. Humphrey, 1995, p. 475-478)

- *Three potential costs of using a PSP:*
  - *Time to learn and use it.*
  - *Emotional cost of maintaining the discipline.*
  - *Potential risk to your ego.*
    - *We are not all world-class developers.*
    - *But we still can be good, capable professionals.*
- *Four Stages of Learning:*
  (cf. Fig 14.1, p. 478, and Bohn's stages of knowledge)
  - *Unconscious incompetence*
  - *Conscious incompetence*
  - *Conscious competence*
  - *Unconscious competence*

The Personal Benefits of a PSP
(cf. Humphrey, 1995, p. 478-480)

- *Insight into your talents and abilities*
- *Stimulation from unlimited continuous improvement ideas*
- *Framework for personal improvement*
- *Increased control over your work*
- *Pride and personal accomplishment*
- *Basis for effective teamwork*
- *Conviction on how to do the job*

Coaching

- *There is not a "coaching ethic" in SW development, as there is in other disciplines.*
  - *Sports*
  - *Medicine*
  - *Academics*
- *Software coaches would have 3 objectives:*
  - *Motivate superior performance*
  - *Insist on dedication to excellence*
  - *Support and guide individual development*

The Responsible SW Professional

- *Professionals:*
  - *Use effective methods in their work*
  - *Recognize their strengths and weaknesses*
  - *Practice, practice, practice*
  - *Learn from history*
  - *Find and learn new methods*

Your Future in SE

(cf. Humphrey, 1995, p. 485)

■ *<u>Prepare</u> yourself for opportunities by building your skills and a discipline for software engineering.*

■ *You will be able to <u>take advantage</u> of unforeseen opportunities because you are then more ready for them than if you had not developed such a discipline.*