

The background is split diagonally from the top-left to the bottom-right. The upper-left portion is white, and the lower-right portion is yellow with a repeating pattern of light yellow circles. A thin yellow vertical line is positioned to the left of the main title.

Team Software Process

A quick overview

Watts Humphrey

'The father of software quality'



PSP (Personal Software Process)

It **focuses on the individual**, while TSP works on a team level.

It improves estimating and **planning skills** and helps **reduce the number of defects** on their work.

TSP **only works on PSP** trained engineers.



TSP (Team Software Process)

It **focuses on the team.**

Improves the **quality and productivity** of engineering teams, helping them meet **cost** and **schedule commitments**.

Works on teams of **2 to 20 members**.

A **trained coach** monitors the process.



CMM (Capability Maturity Model)

Aims to **improve existing software development processes.**

It's not considered a software process, as it doesn't tell you how to do something, but **how it should be done.**



The Principles

- Team resources
- Quality ownership
- Aggressive plans
- Commitment
- Project goals
- Plan detail
- Team roles
- Plan ownership

Agressive Plans

People generally **work harder** when they face an important and **meaningful challenge**.

Team Roles

Roles provide a sense of **ownership** and **belonging**.
They prevent **conflicts**, **duplicate work** and **wasted effort**.

Interdependency

Each team member **depends** to some degree on others.

Improves individual performance as members will generally make a **special effort** to meet obligations to the rest of the team.

A photograph of a basketball game in progress. In the foreground, LeBron James, wearing a dark blue Cleveland Cavaliers jersey with "CAVS" and the number "23" in maroon, is dribbling the ball with his left hand. He has a yellow wristband on his right wrist. He is being closely guarded by a Boston Celtics player wearing a green jersey with the number "36" and "BOSTON" visible. Another Celtics player is partially visible behind him. To the right, the back of a Cavaliers player's jersey is visible, showing the name "JEFF" and the number "2". The background is filled with a large crowd of spectators in a stadium setting.

Development teams

A full-page photograph of Hulk Hogan, a professional wrestler, in a celebratory pose. He is pulling off a yellow t-shirt with red patterns, revealing his muscular torso. He wears a red and yellow bandana and white wristbands. The background is a dark, out-of-focus crowd in a arena.

Enhancement teams

Team Launch

- 4 day **planning** process
- 9 **meetings**, each follows **scripts**
- 3 to 4 month expectancy
- Teams are **relaunched** periodically

Team Launch

Day #1

- Establish **product and business goals**
- **Assign roles** and define team goals
- Produce **development strategy**

Team Launch

Day #2

- Develop **size estimates** and overall plan
- Develop the **quality plan**
- **Allocation of work** to team members

Team Launch

Day #3

- Identification and **evaluation of project risks**
- Mitigation actions for immediate **high-impact risks**
- **Risk assessment checkpoints** are defined

Team Launch

Day #4

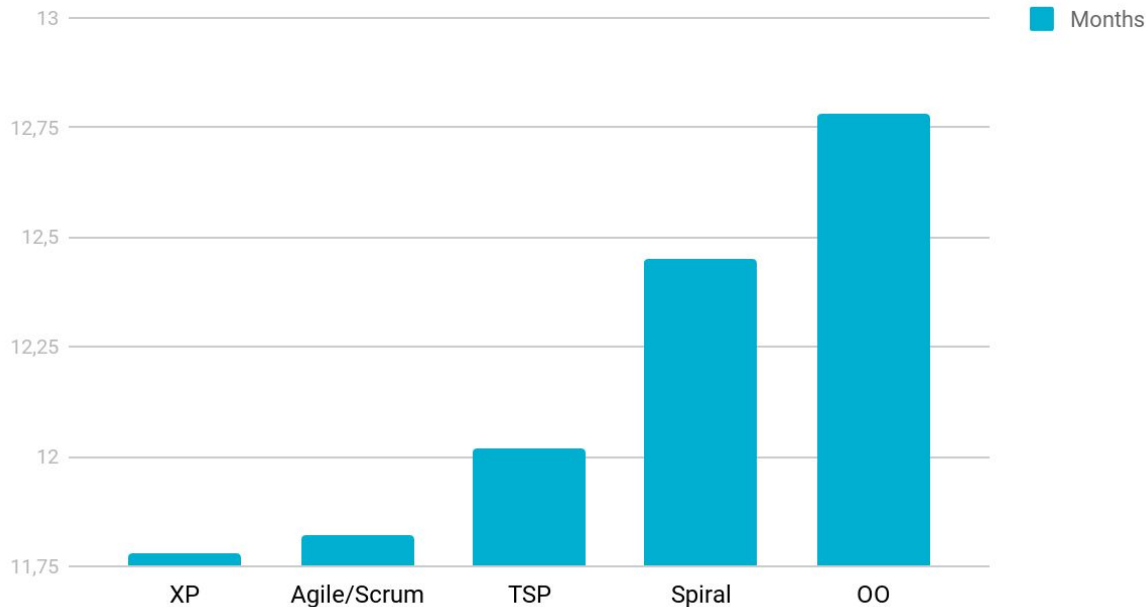
- Project plans are discussed and **reviewed by the management.**
- **Postmortem step:** review launch process and **PIP** (project improvement proposal) **submissions.**

Running the numbers

These are the **shortest schedules** for applications of **1000 function points**.

TSP ranks fairly well considering its **focus on quality** instead of speed, with just **over a year** of development.

Software schedules

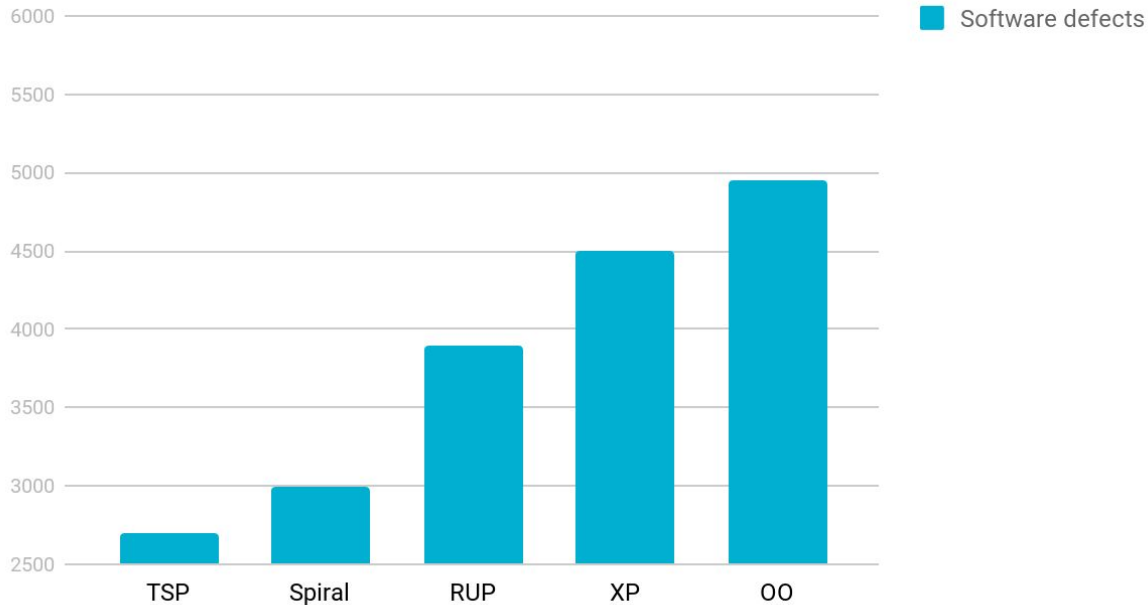


Running the numbers

Defect potential is the **sum of defects** found in requirements, design, source code and 'bad fixes'.

TSP's quality measures really shine here, breaking in **under 2700 defect potentials**.

Software quality



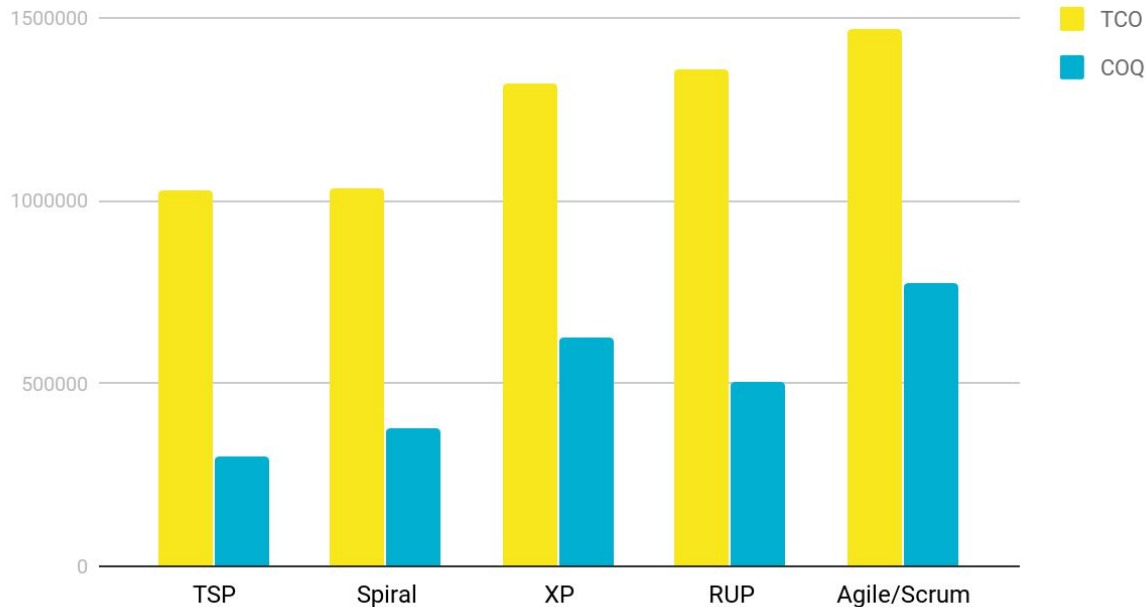
Running the numbers

Total Cost of Ownership includes development, 5 years of **enhancements, maintenance** and customer support.

Cost of Quality includes direct costs for **finding and fixing bugs** through 5 years.

Naturally, TSP's low defect count at deploy makes code less costly to maintain.

Total Cost of Ownership & Cost of Quality



Obrigado

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