

# SPI in Profinit

(A self-appraisal of the current software process practice in a small to mid-size software organization)

(<http://www.profinit.cz/kariera/SoftwarovyProcesProfinitu.htm>)

Tomáš Smolík

Profinit, s.r.o.

[tomas.smolik@profinit.cz](mailto:tomas.smolik@profinit.cz)

<http://www.profinit.cz>

# 1. Introduction

## Basic organization characteristics:

(<http://profinit.cz/oprofinitu/profilfirmy.htm>)

- software development organization
- # of Software Engineers ~ 50
- relatively fast growth in recent years (e.g. up to twofold in terms of # employees per year; up to four times in terms of # concurrent projects per year)
- now: steady growth
- much more informal insights during the lesson

## Lecturer standpoints:

- practicing SPI for more than 10 years, among others
- experience ranges from one man project to 400 dev. org.
- from individual projects level to organization level
- focus only on changeable critical stuffs in given context
- introduce only proven things in given context
- introduce new things gently, systematically, in proper time

## Why to define, enact, monitor, understand, and improve ... an organization software process?

- software development economy (time, size, #defects, effort, maintainability, predictability)
- this all eventually necessitate to a disciplined professional approach for all primary (e.g. Requirements) and support activities (e.g. CM)

## 2. Brief Contents

- Part I: Software Process Definition & Enactment - Current Organizational Practice
- Part II: Inspiration - SPI Approaches & Related Works Overview
- Part III: Prerequisites & Timeline for Introduction to the Organization
- Part IV: Selected Preconditions for The Repeated Practicing and Continuous Improvement

(Note: The first, "fast track"; The second, illustration, explanation etc.)

# Part I

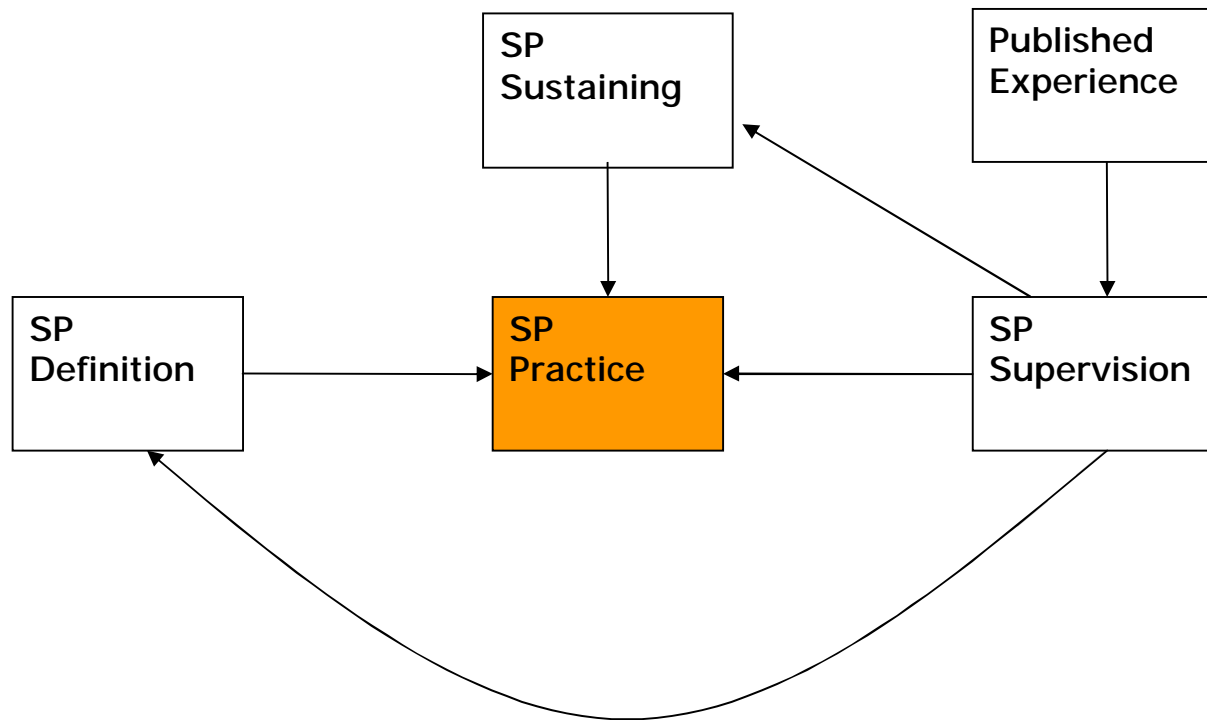
## Software Process Definition & Enactment - Current Organizational Practice

From the abstract:

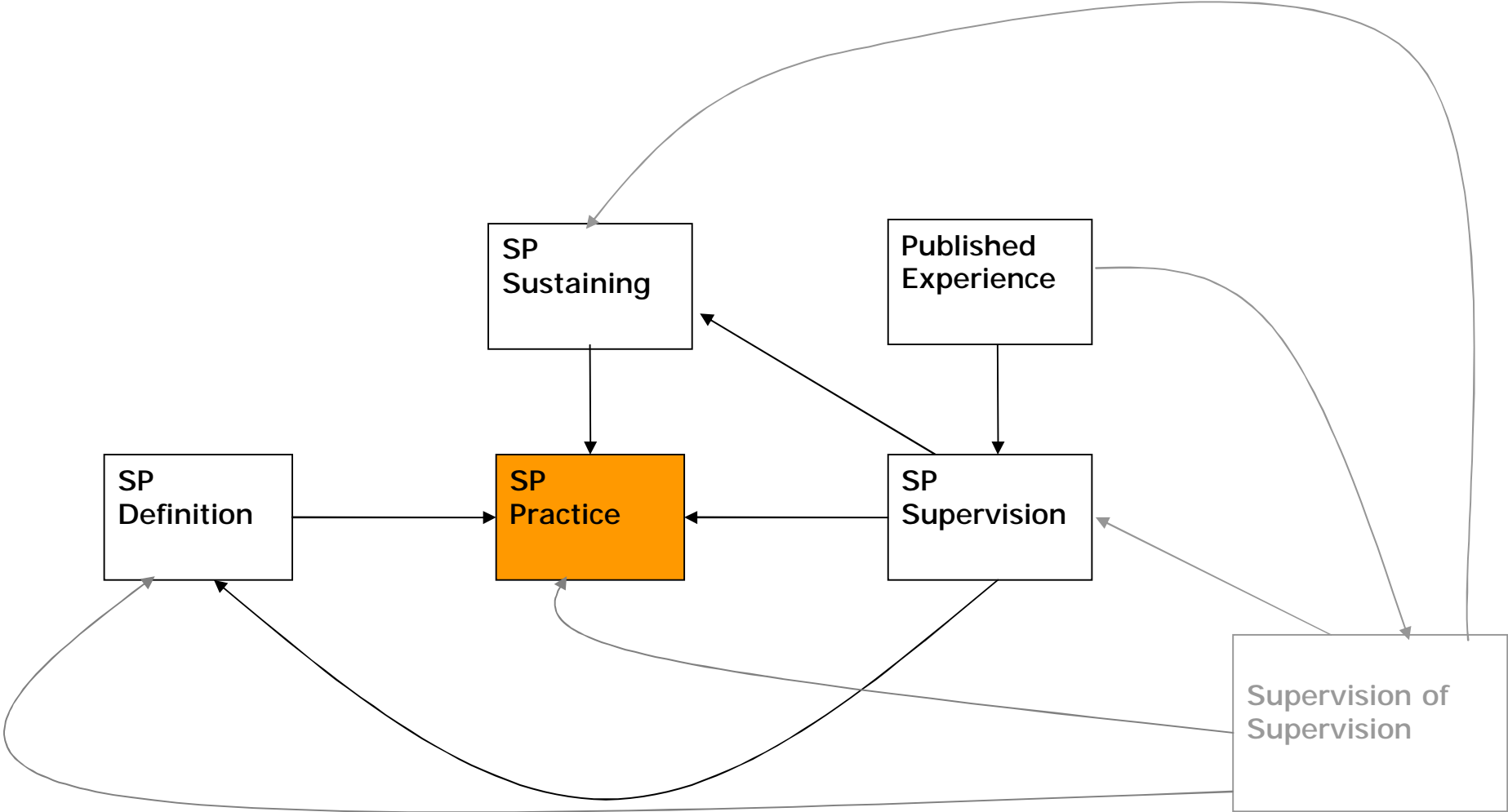
... Description of the current software process definition and actual practice in a small to mid size software development organization. ...

# 3. Software Process Schematic View

## Software Process Definition & Enactment



Note: Standard sw process terminology and taxonomy are deliberately left out.



## Schematic Overall Description

All parts are available form internal web pages

- General index
- Project review index
- Professional goodies index
- Reusable stuffs index (this is not restricted to source code, libs etc.)

Motivation

- Training slides

Definition

- Minimal practices
- Policies
- Standards (not typical, not intentional, but in some cases it may happen)

Practicing & Sustaining & Supervision

- "Tuesdays" (The last Tuesday morning in every month is the SP happening for All professional staff)
- Regular project revisions

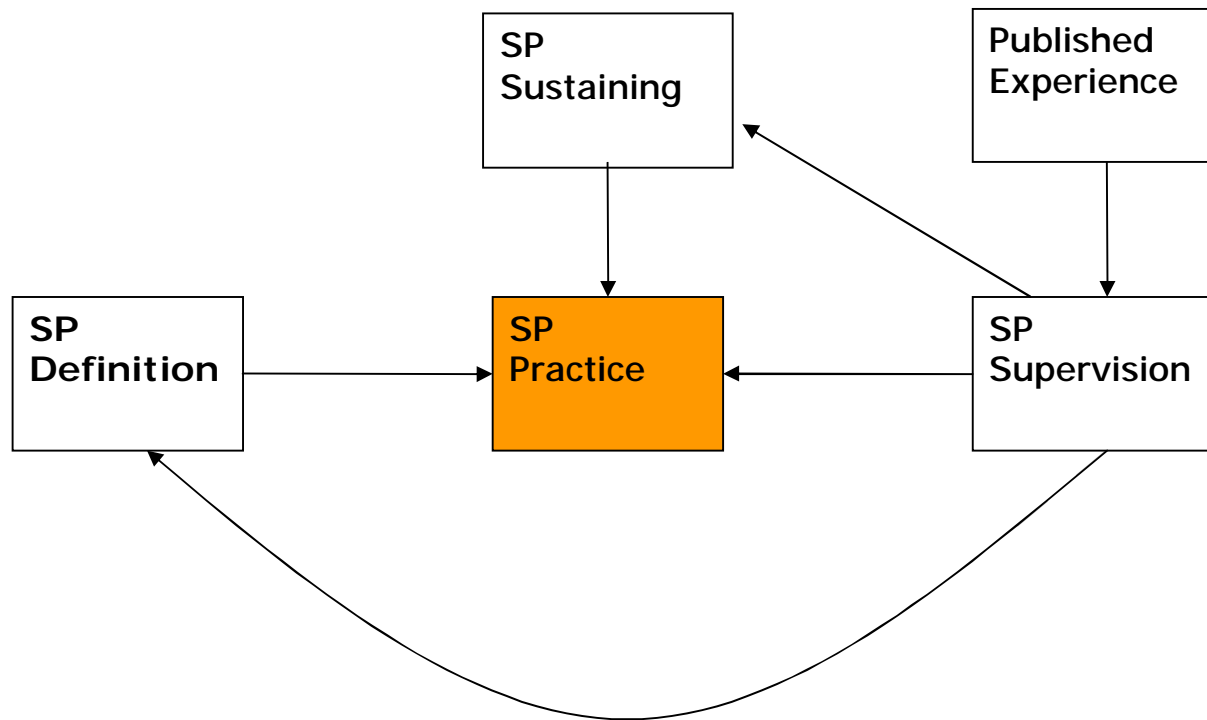
- Professional ladder
- Resource planning
- Staffing policy
- Fiscal table
- Project's history (postmortems)
- Proposal approval process
- Long term engagements with individual persons
- Peer reviews (esp. source code)
- Training

Understanding

- 
- Goodies, etc.

Professional Resources (esp. Books, Articles, Tech. Papers etc.)

## 4. Software Process Definition



## 4.1. Overall approach

Introduce and define new process element if and only if:

- there is a problem encountered
- this problem is somewhat serious
- introduced process element has been successfully proven on the project level

(This is the very NASA SEL & Experience Factory - like approach)

## 4.2. Minimal Practices

List:

- Project Management and Organization
- Configuration Management
- Development Environment
- Requirements
- Design
- Programming
- Testing
- Documentation
- V&V

(Planned: Proposal, Project Management, Introduction)

## Origin:

- Common understanding of the least common denominator of serious problems encountered in our organization)

## Form:

- maximum two A4/ Letter
- checklist (max up to one A4)
- comments, notes, explanations (max up to one A4)
  - mandatory templates
  - mandatory articles
  - reusable stuffs
  - goodies
  - generally things for to inspiration and efficient employment of the minimal practice

## Raison d'etre:

- minimal and compact set of general truths that we believe/ recognized are relevant to us

## Example:

...

1. The requirements specification (given the functional definition) has to be able to serve, at least, for the following:

1.1 set the contract for development (both from the scratch and during maintenance)

1.2 qualification testing

1.3 acceptance testing

1.4 to discern whether something is within the scope of the project or given change request

1.5 to discern whether problem reported is i) defect ii) change request iii) shadow zone (if it is deliberately work with)

...

## 4.3. Goodies

### SOFTENG/PAL/OSSP/naroky/goodies/Reqs



Current directory: [\[Development\]](#) / [SOFTENG](#) / [PAL](#) / [OSSP](#) / [naroky](#) / [goodies](#) / [Reqs](#)

Files shown: 8

File	Rev.	Age	Author	Last log entry
<a href="#">BeCarefulWithUseCases.mht</a>	<a href="#">1.1</a>	12 months	tsmolik	vlozeni do cvs
<a href="#">PS-v2.doc</a>	<a href="#">1.1</a>	12 months	tsmolik	vlozeni do cvs
<a href="#">nAPOST_Req_Spec_Sybase-ReqOnly.V0010.doc</a>	<a href="#">1.1</a>	12 months	tsmolik	vlozeni do cvs
<a href="#">qualreqs.pdf</a>	<a href="#">1.1</a>	12 months	tsmolik	vlozeni do cvs
<a href="#">strukturovanyTextPrikady.doc</a>	<a href="#">1.1</a>	12 months	tsmolik	vlozeni do cvs
<a href="#">use_case.pdf</a>	<a href="#">1.1</a>	12 months	tsmolik	vlozeni do cvs
<a href="#">wilson.pdf</a>	<a href="#">1.1</a>	12 months	tsmolik	vlozeni do cvs
<a href="#">writert.pdf</a>	<a href="#">1.1</a>	12 months	tsmolik	vlozeni do cvs

## 4.4. Policies

### List:

- CV/policy.txt
- measurementPolicy.txt
- historyPolicy.txt
- SSPO\_ProjectReview\_Policy.doc
- JavaReviewPolicy.txt
- SystemDesignReviewPolicy.txt
- proposalPolicy.txt
- freshmanPolicy.txt
- staffPolicy.txt
- projectManagerPolicy.txt
- financniTabulkaPolicy.txt
- contractPolicy.txt
- civilisationPolicy.doc
- samPolicy.txt
- SQLReviewPolicy.txt
- readingPolicy.txt
- documentationPolicy.txt

(Planned: projectMainPagePolicy.txt, projectPlanPolicy.txt, projectProcedures.txt)

## Origin:

- Acute need; ... desperation :-)

## Form:

- Simple txt file structured 1, 2, and 3 ... n

## Raison d'etre:

- **DO NOT REPEAT PROBLEMATIC THINGS THAT CAN BE SIMPLY AVOIDED, AGAIN AND AGAIN.**

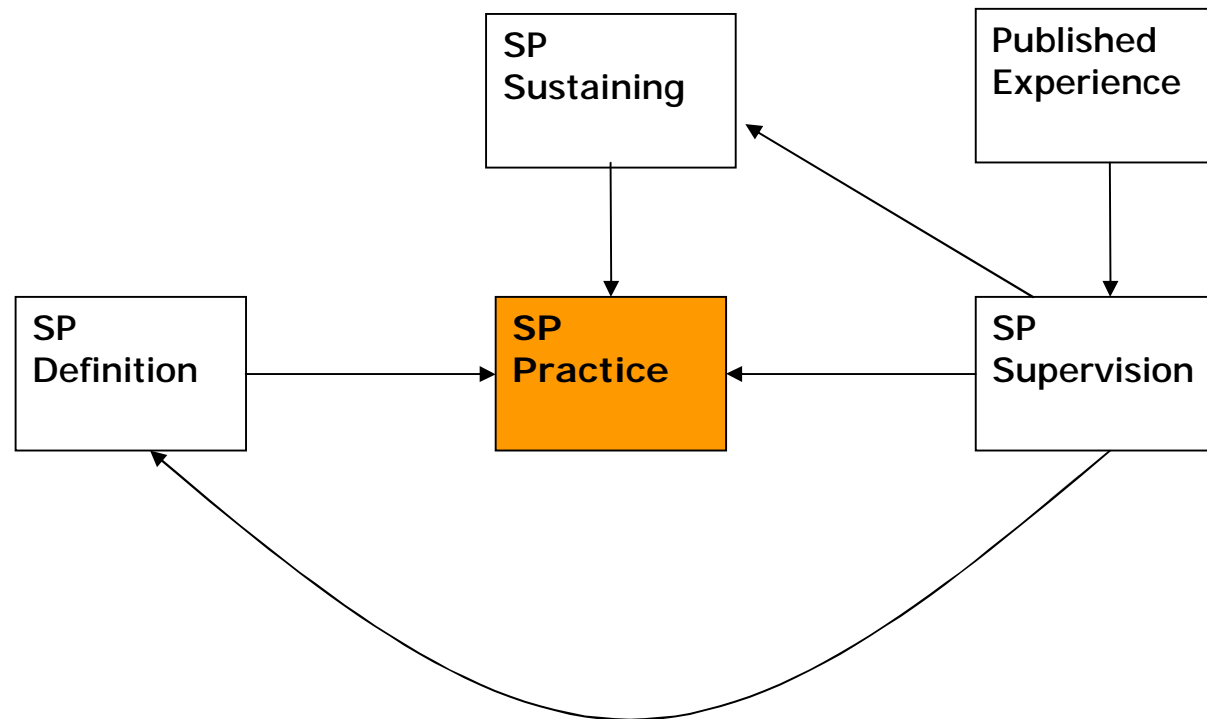
## Example:

```
...
- (7) Project is organized in such a way that knowledge of requirements
specification, knowledge of architecture, design and technologies used are
captured by a small number of persons including the respective project
manager; this does not mean that someone can not know something, but this does
mean that somebody must know everything ...
...
```

## 4.5. Standards



- Origin (unique situations)
- Not typical

## 5. Software Process Practice - At glance



- Project centered
- Software process tailoring (gently but systematically)
- Individual project procedures
- CVS/ SVN
- Bugzilla
- Project History
- Resource utilization ... tracked
- Basic measurement
- Project home page
- Risks, Problems ... tracked
- "Fiscal table"
- Individual persons involvement ~ Professional Ladder
- Regular structured project revisions

> [PASY-site](#)



Projekt Dokumentace How-to Testování Analýza

Last Published: 10/24/2006 02:17:08


▼ Projekt

- Index
- Source Policy

built with Apache Forrest

## Projekt

- [Aplikace](#)
- [Project Plan](#)
- [Source Code Management](#)
- [Issue tracking](#)

 [PDF](#)

### Aplikace

Aplikace v našem vývojovém prostředí: [http://lx2.sybase\\_czech.sybase.cz/casviewer](http://lx2.sybase_czech.sybase.cz/casviewer)

### Project Plan

[Projektovy plan](#) je v subversion repository.

### Source Code Management

Zdrojový kód je uložen v externí [Subversion Repository](#)

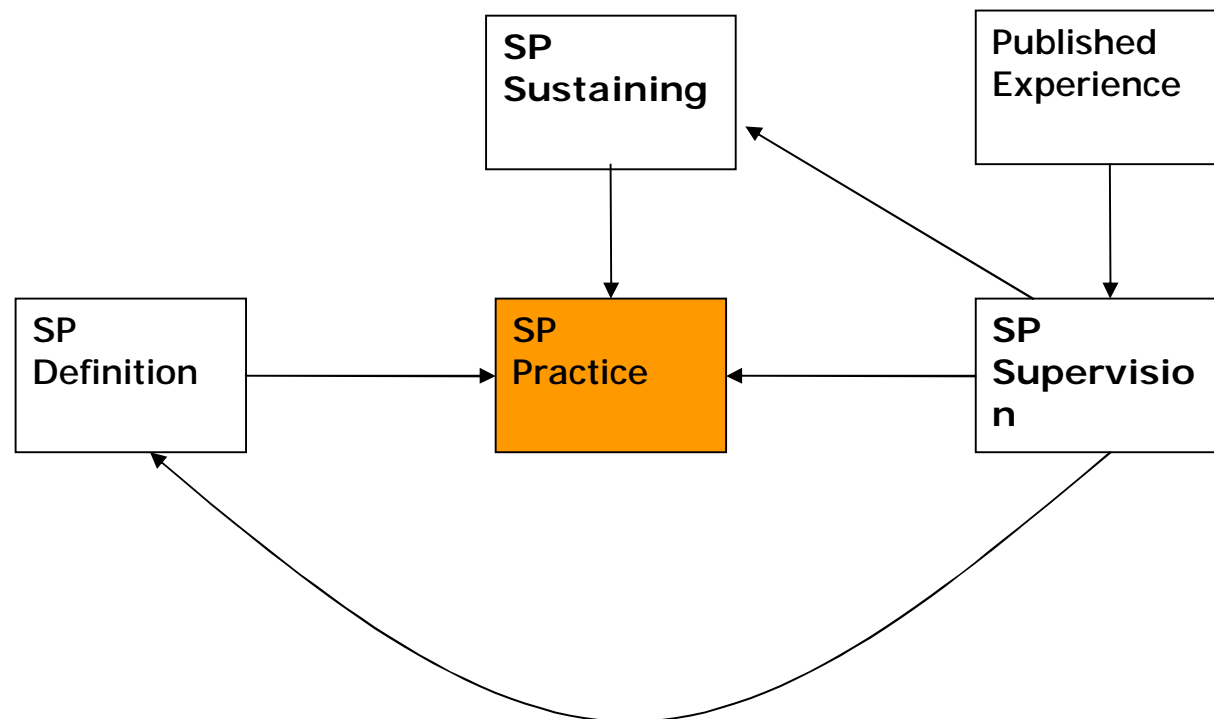
Aktuální zdrojáková politika je popsána [zde](#)

### Issue tracking

Pro Issue tracking se používá [externí bugzilla](#)

# Lecture: Software Process Improvement in Profinit

## 6. Supervision & Sustaining the Prescribed Software Process Practice



## 6.1. Supervision

(Note on organization: Customer team/ Service Account Manager (Soft. Eng.)/ (PMs)/ professional staff)

- Regular customer team revision
  - o review of SAM knowledge
  - o review of resources utilization and planning
  - o individual projects review
  - o Nice-to-have: reusable stuffs, etc.
- Regular revision of individual project, if necessary
- Fiscal table
- CVS/ SVN
- Bugzilla (defects, issues, change request, individual planning etc., basic effort metrics)
- Internal IS with basic effort metrics

## 1 "Checklist" - seřazeno co projít

Osoba SAM/PM		
Téma	Probralo, neprobralo, stav	PM
Minimální nároky (ví o existenci, četl, zná, rozumí, chápe, aplikuje, aplikuje rutinně)		ano
Přezkoumání (prop, reqs, arch, dbs des., dm, ?); odhad, organizace, plány Kdo vede? navrhuje? navrhuje dm? navrhuje arch.; kdo jedná? x role - kdo nemá PMM nesmí s prostředky nad 50 €d bez dozoru etc.		ano
Policy (výběr/ ví o existenci, četl, zná, rozumí, chápe, aplikuje, aplikuje rutinně)		
staffPolicy.txt		ano
projectManagerPolicy.txt		ano
measurementPolicy.txt		ano
historyPolicy.txt		ano
proposalPolicy.txt		
financniTabulkaPolicy.txt		
samPolicy.txt		
Odpovědnosti PMs, SAMs		ano

Mechanika lidí a peněz (sheets/sekce z PPS_kapacityProjektySystemyNabidky.xls)		
Téma	Probralo, neprobralo, stav	PM
Kapacity		ano
Projekty		ano
Poptávka		
Disponibilita		
Core zakaznika		
Core projektů		ano
Finanční tabulka		
Role lidí		
initial assessment		
aktuální stav, řízený růst		

Projekty/ systémy (kap. č. 5)		
Téma	Rutina organizace a vedení	
	stav	praxe činnosti
Termíny		
Plán (dlouhodobý, krátkodobý)		
Rozsah, závazky (co máme dělat; plán/ odhad, skutečnost/ prognóza; rozdíl - důvody)		
Rozsah řízení		
Zdroje (jsou k dispozici, spotřebováno, prognóza spotřeby)		
Rizika		
Věci k řešení (problémy)		
Balance zaplacených zdrojů vs prognózy rozsahu/ spotřeby zdrojů		
Téma	Probralo, neprobralo, stav	
Měření - praxe		
Historie		
Minimální nároky - praxe		
Údržba, rozvoj, podpora provozu, konzervace systémů		
Hlavní stránka projektů		

Kontext zakaznika (kp. č. 6)	
Téma	Probralo, neprobralo, stav
Uerky	
Podřízení lidí	
Znovupoužitelnost	
Outsourcing	

## 6.2. Sustaining

- Professional Ladder (Three Soft.Eng. Criteria: theory, practice, process) - heavily consumed
- Staffing (Who did/ does/ will do What; Roles)
- Resource planning
- Review (esp. source code)
- Proposal approval process
- Intranet pages
- Tuesday

## The Business of Software ... in profinit.

vyvíjíte, planujete nenaplanovatelně ... a samozřejmě nemáte čas pak čtete [Armoura](#), kromě toho, že čtete [CrossTalk](#), [The Pragmatic Programmers](#) a [ODKAZ DNE](#)

[Kontexty](#) [Koutky](#) [Reuse](#) [Projekty & systémy et al. \(sheet Projekty\)](#) [Nabídky - vse](#) [Nabídky - dnesni deni](#) [Smlouvy - vse](#) [Smlouvy - dnesni deni](#) [Prilezitosti - vse](#) [Revize - vse](#) [Historie - vse](#) [Angazma - vse](#) [CrossTalk](#)

**Populární** [Bgzil-I](#) [Bgzil-E](#) [CVS-I](#) [SVN-I](#) [CVS-E](#) [SVN-E](#) ["Excel"](#) [Knihy](#) [E-Knihy](#) [Min. Nar.](#) [Policies](#) [T. pod. - new](#) [T. pod. - old](#) | [Google](#) [Apache](#) [TheServerSide](#)

**Zakaznici, projekty, systémy, nabídky - Raison d'être** [Why Projects Fail - jak to vidí americká armáda v červnu 2006](#)

- [Kontexty \(zakaznicke\)/ Projekty / Systémy](#)
- Nabídky (Proposals): [Policy \(PPS\)](#) [Policy \(nadrazena firemni\)](#) [Nabídky - vse](#) [Nabídky - dnesni deni](#) [Prilezitosti - vse](#)

**Profinit professional staff - kdo ten software dela ... jedina podminka dostacujici** [PPS KULTURA](#) [Software Engineering Code of Ethics and Professional Practice](#)

- [Freshman Policy](#) [CV Policy](#) [Zivotopisy](#) [Znalosti a ochota pomoci](#) [Kapacity \(sheet Kapacity\)](#) [Staff Policy](#) [Karierni Postupy](#) [EvidenceAll](#) [Angazma](#) [Academy](#)
- [Professional Ladder](#): Sw. eng. nároky na karierní postup: [Policy \(SW ENG\)](#) [Policy \(PPS\)](#) [Samples](#) [Best Practices Column in IEEE Software Magazine](#) [Literatura](#)

**Softwarovy proces organizace v3 - jak to usilujeme delat** [Motivace](#) [Summary - readme](#) [Verejny koncepčni popis](#) Historie/ koreny: [v2 \(2002\)](#) [v1 \(1996\)](#)

- Minimální nároky na proces vývoje: [Predpis - 9 x checklists](#) [Pomucky - goodies](#) ["Mikronaroky na A4"](#) ["Uterky"](#)
- [Policy](#): [Tento seznam](#) predstavuje nasi detailnejši stanovenou praxi v nekterych oblastech.
- [Standardy](#): [Tento seznam](#) predstavuje nasi standardizovanou praxi. (ulozene [dedictvi](#) z roku 2002)
- [Revize](#): [Policy](#) [Checklist revize](#) [Plan revizi \(sheet Revize\)](#) [History policy](#) [Measurement policy](#) [Project Manager's Policy](#) [Fiscal Policy](#) [Popisu kontextu](#)
- [Interní dokumenty \(Stellent\)](#)

**Infrastruktura - pomoci ceho taky pracujeme** [Elementarni schematicky popis](#)

- [Interní Bugzilla](#) [Externí Bugzilla](#) [CVS - int](#) [SVN - int \(profinit/profinit, zatim ne ViewVC\)](#) [CVS - ext \(profinit/profinit492\)](#) [SVN - ext \(profinit/profinit\)](#)
- [Znovupouzitelne veci - jakkoli](#) [Sw k dispozici & licence](#)
- [PPS Počítace](#) [Přístupova prava](#)
- [Stranky technicke podpory](#) [Odkazy byvale technicke podpory](#)

**Literatura, vzdelavani, odborne debaty - a pritom vsem se vsemozne vzdelavame** [Koutek knihomola poskytuje vsechno bohatstvi](#)

- Počítačová knihovna v suterénu & Odborná literatura v Bugzilla: [Katalog knihovny](#) [Katalog E-knihovny](#) [Katalog odborne liteartury](#) [Vypujcni rad](#) [Seznam knih](#) [Fronta](#)
- [PPS koutky - vybranne odborne materialy](#) [Repository](#)
- Interní školení, povídání, experní seminare: [PPS povídání](#) [Expertní semináře](#) [Naše materialy k internim školením](#)
- [Interní školení pro rok 2006 - přihlasky](#) Chcete-li se přihlásit na školení, upravte dokument zde: [\Prague-nt\Process\AssetLibrary\Resources\Skoleni\InterniSkoleni\Agenda\InterniSkoleni2006.doc](#).
- [PPS News - odborne debaty](#) Návod, jak se připojit k našim news, kde diskutujeme o programování atd. A zde je k dispozici [Web News Client \(profinit/pnews\)](#).

*Otázky a odpovědi kladte a hledejte v newsgroups: [spo](#), [spo.cm](#), [spo.design](#), [spo.devem](#), [spo.doc](#), [spo.organizace](#), [spo.prgm](#), [spo.regs](#), [spo.testing](#), [spo.v.v](#). Nebo jakkoli jinak je Vám příjemne. Celkovy ne vubec spatny popis naseho SSPO od MM (diky za nej) je [na nasem webu](#). Svuj vlastni popis dodam az na to prijde rada, zatim pouze [provizorni popis](#) (ts).*

## PPS koutky

(soutez *Spring hrou - jak hrave ziskat az 1/2 sw eng razitka pro karierni postup, viz dale*)

[ODKAZ DNE](#)

[PPS home](#) [Kontexty](#) [Reuse](#) [Projekty & systemy et al. \(excel\)](#) [Nabidky - vse](#) [Nabidky - dnesni deni](#) [Smlouvy - vse](#) [Smlouvy - dnesni deni](#) [Prilezitosti - vse](#) [Revize - vse](#)  
[Historie - vse](#) [Angazma - vse](#) [CrossTalk](#)

[-1. ACM PAPERS SELECTION](#)

[-0.5 NASA, DoD, SEI](#)

[0. PROFESIONALA](#)

[1. PROGRAMATORA](#)

[2. SOFTWAROVEHO INZENYRA](#)

[3. VEDOUCIHO PROJEKTU](#)

[4. PROPOSAL](#)

[5. VLADCU ZDROJU](#)

[6.1 CODE REVIEW](#)

[6.2 SYSTEM DESIGN REVIEW](#)

[7. OO DESIGNERA](#)

[8. SOFTWARE PROCES IMPROVEMENT](#)

[9. SW PROCES v -1](#)

[10. PRVNI POMOC](#)

[11. SOFWAROVEHO ARCHITEKTA](#)

[12. UTERKY](#)

[13. STANDARDY](#)

[14. REAUSE](#)

[15. KNIHOMOLA](#)

[16. ANALYTIKA](#)

[17. WEB VYVOJARE](#)

[18. PREDNASKY - sw eng v praxi](#)

[19. DATA WAREHOUSE](#)

[20. DATABASE SYSTEMS](#)

[21. SYSTEM ENGINEERING x SOFTWARE ENGINEERING](#)

[22. IDE](#)

[23. PKI, SECURITY etc.](#)

## Kontexty (zakaznicke)/ Projekty/ Systemy

(revize, popis, nabidky, smlouvy, finance, historie, tailored process/ postupy)

[PPS home](#) [Koutky](#) [Reuse](#) [Projekty & systemy et al. \(excel\)](#) [Nabidky - vse](#) [Nabidky - dnesni deni](#) [Smlouvy - vse](#) [Smlouvy - dnesni deni](#) [Prilezitosti - vse](#) [Revize - vse](#)  
[Historie - vse](#) [Angazma - vse](#) [CrossTalk](#)

[POSTA](#)  
[SPORITELNA](#)  
[LETISTE](#)  
[KOMERCKA](#)  
[CSOBP](#)  
[SK](#)  
[CSOB](#)  
[TO2](#)  
[BD/OSTATNI](#)  
[MADARSKO](#)

Proces vyvoje/ postupy: [Profinit policies](#) rozhodnout kde bude

Pro ilustraci - docasne (typicky patri na stranky projektu/ systemu): [CBS Status Report \(s riziky etc.\)](#) [evidence vydavanych zdroju](#) [ukazka vyuziti evidence zdroju napr. pro 2033](#) [ukoły po lidech](#)

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### CSOBP ---- (JP) / zdroje: prague-nt, int cvs

Revize: [Popis kontextu](#) [Posledni revize SAM](#) [Archiv](#)

Obchod a marketing: [Nabidky s prefixem Prop](#) [Nabidky - vse](#) [Smlouvy - vse](#) [Vse](#)

Finance: [Fiscal table 2006](#) [Plan kapacit 2006](#)

Projekty/ systemy - hl. stranky: [PPR2](#) [IPBPBalicky](#) [B2BZivot](#) [CSOBPCKP](#)

Historie: [Archiv](#) [Legacy](#) [Archiv](#)

Proces vyvoje/ postupy: [Postupy \(bal\) - master](#) [Postupy \(bal\) - repository](#) [CSOBP - zalohovani](#) [Generalni postupy - draft](#)

---

### SK ---- (Pill) / zdroje: prague-nt, int svn

Revize: Popis kontextu [Posledni revize SAM](#) [Archiv](#) *toto budu muset jeste koncepce promyslet*

Obchod a marketing: [Nabidky s prefixem Prop](#) [Nabidky - vse](#) [Smlouvy - vse](#) [Vse](#)

Finance: [Fiscal table](#)



## PART II

# Inspiration - SPI Approaches & Related Works Overview

From the abstract:

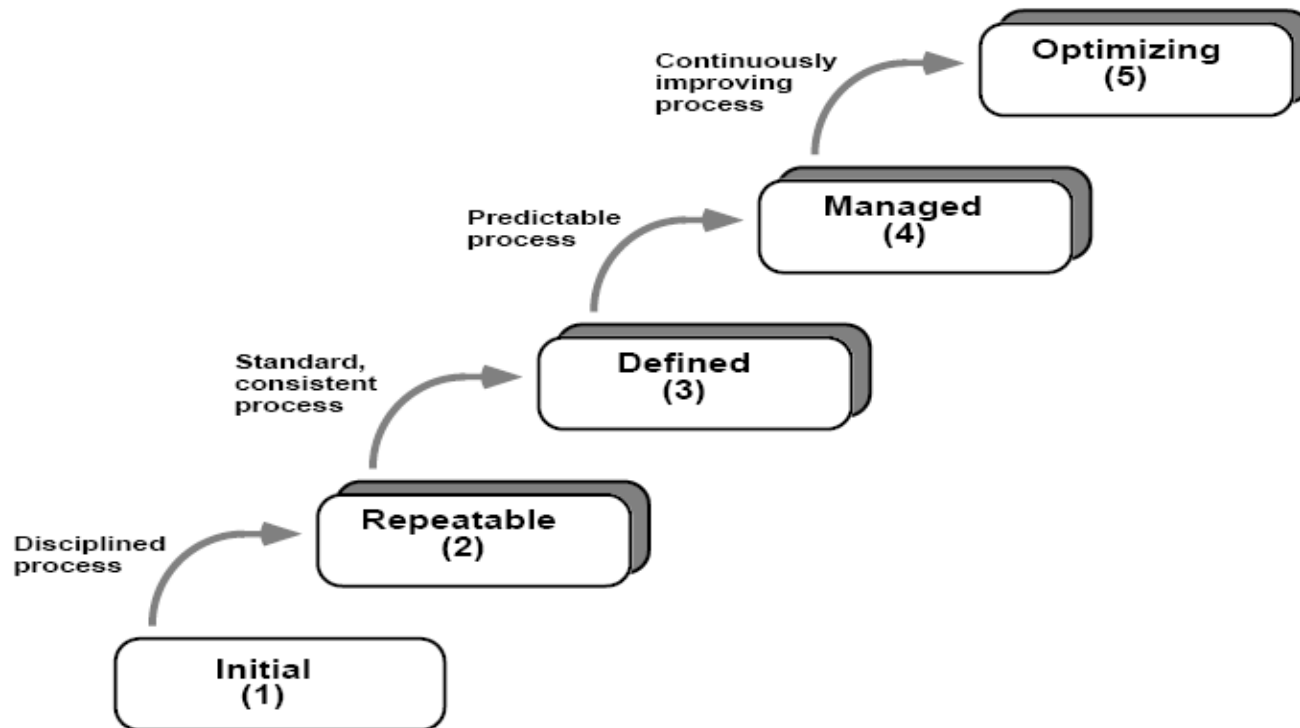
... Short discussion of two typical approaches to software process definition and improvement; one is based on a perceived set of best practices and the second one is based on changing the most critical stuffs. Illustration of pragmatic synthesis of both approaches; one for initial software process definition and the second one for regular periodical sustaining and improvement. ...

# 7. Two Basic Approaches to SPI

## SEI Capability Maturity Model - CMM

(<http://www.sei.cmu.edu>)

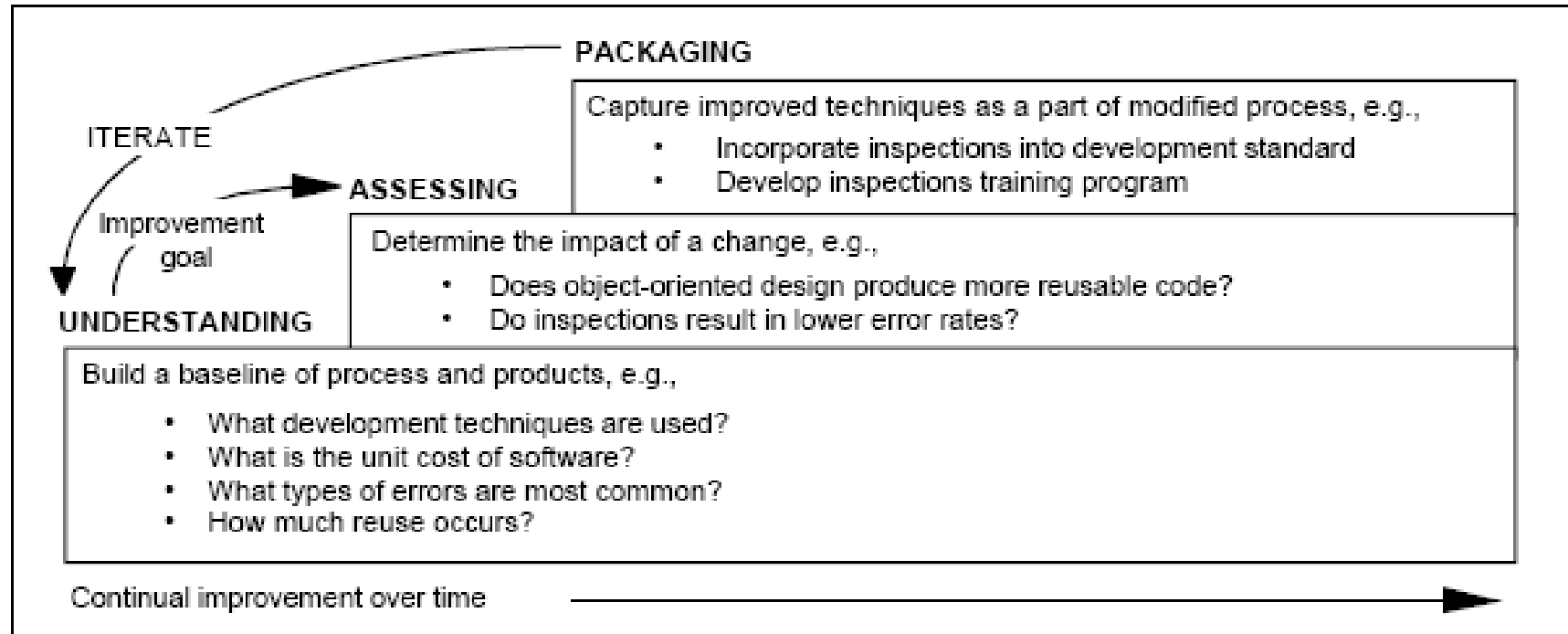
### The Five Maturity Levels



(Note: CMM Tutorial, slides: MLs: 17, CMM Structure: 23, KPAs: 27 - 30)

## SEL NASA Approach

(<http://sel.gsfc.nasa.gov/website/welcome.htm>)

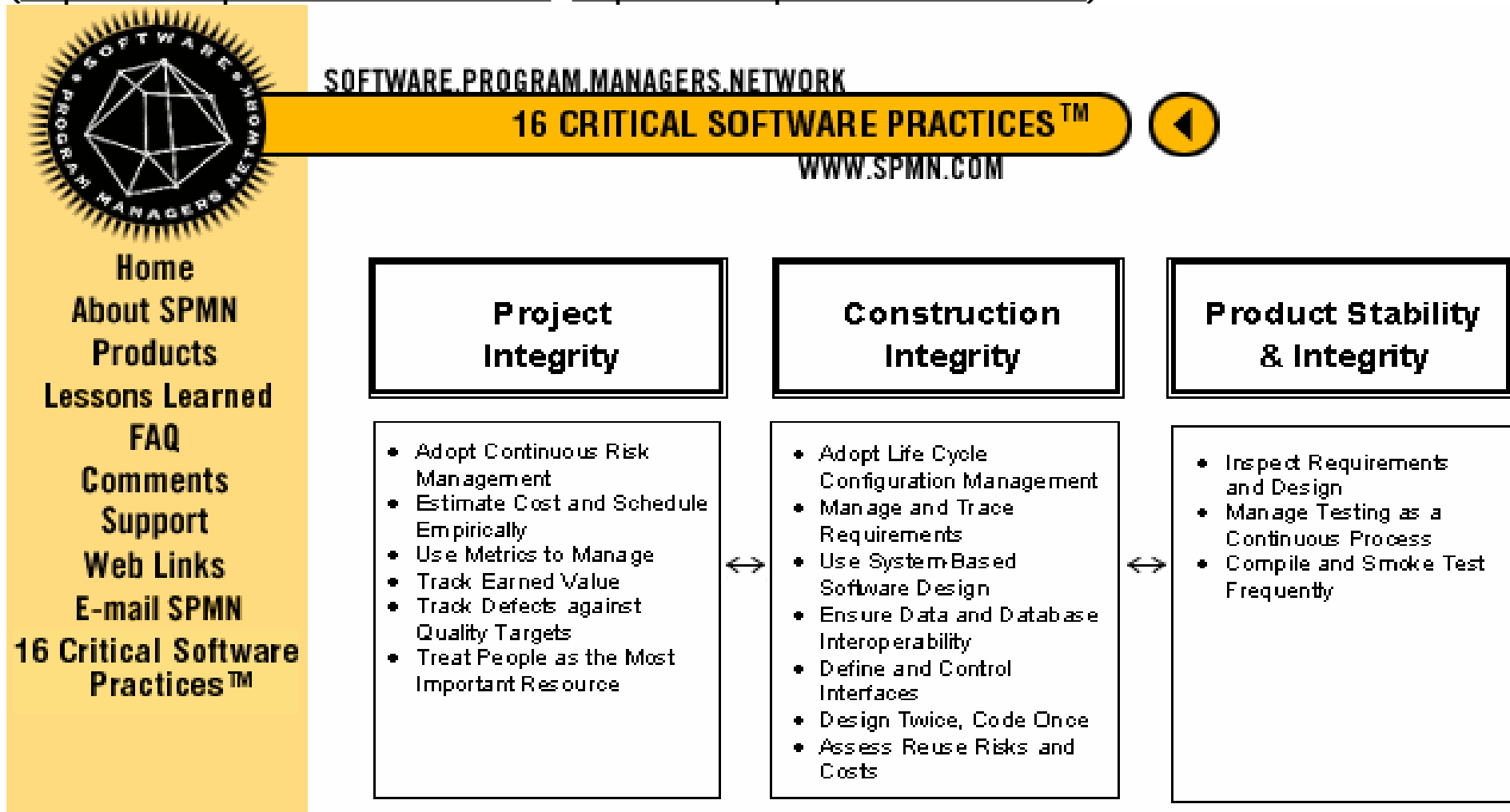


**Figure 2-2. Three-Phase Approach to Software Process Improvement**

## 8. How to survive I - DoD Context

(Pragmatic and efficient setting in DoD/ large organization's context)

(<http://www.spmn.com/16CSP.html> <http://www.spmn.com/index.html>)



## 9. How to survive II - Moderate size Context

(Pragmatic and efficient setting in moderate size organization's context)

Construx, Process impact, Joel on software, the pragmatic programmers...

Process, Checklists, Goodies, Ladder, IEEE Software articles, Books ...



(<http://www.construx.com/professionaldev/organization/pdl/>)

## 10. Comments on ISO, MIL, ESA, etc.

ISO 9000-3:1991

ISO 12207

MIL-STD-498

TickIT

DoD-STD-2167, 2167A

ESA-PSS-05-0

SPICE

...

## PART III

# Prerequisites & Timeline for Introduction to the Organization

From the abstract:

... Description the relatively intricate way to introduce, to practice, to sustain and further to improve this software process. Analysis pre- and co requisites of such undertaking. Analysis the critical interdependencies between software project management of individual software projects and organization software process. ...

# 11. Prerequisites

- Years of project consolidation on project level
- Years of working with skilled and determined personnel
- Years of recurring problems
- Understanding the problems
- Recognitions that not all problems are inevitable
- Evident success stories on individual project level

## 12. Timeline ~ SPI Endeavour History

2000 talking about on organization level

2002 thinking about on organization level

2005 doing that on organization level

- Strong management understanding and commitment
- Sufficient # of enthusiastic/ determined/ skilled guys

(Note: 2000 - 2006 doing that on person and project level)

(Note: Lecturer has a painful experience with SPI from 1996 - 1999 from another company and this ultimately shaped his standpoints before this undertaking)

## PART IV

# Selected Preconditions for the Repeated Practicing and Continuous Improvement

From the abstract:

... Brief introduction to closely related topics; namely SDLC economics, professional ladder enforcing synthesis of professional education and pragmatic practice, peer reviews, supervision of individual software projects and project managers, resource planning and strict proposal approval process. ...

## 13. Selected preconditions

- Budgeting (~ 2.2% of soft eng. resources)
- Committed personnel
  - o generally
  - o strong individual support from "funs"
- Economy (The initiative must pay off)
- Initial economy targets:
  - o effort, scope , resources/ budget balance
  - o delivery dates
  - o ins/ outs balance after one year warranty after acceptance ~ # of defects
- Regular, systematic and multi-person engagement
- Cultural change

## 14. Summary

- Consumed marriage between definition and practice
- Nothing is granted forever
- Even serious regresses are being encountered
- But the culture has been definitely changed
- The question of initial software process definition
- Metrics and Measurement
- Economy
- Acknowledgements to PPS staff

From the abstract:

... (Short public simplified overview of the software process described above as seen by one of a supervisee project manager can be read here <http://profinit.cz/kariera/SoftwarovyProcesProfinitu.htm>)...



# 15. Q&A

## 16. Abstract

*The presentation gives my 10+ years experience relating to the software process definition, improvement and practicing. The topics covered are as follows: Description of the current software process definition and actual practice in a small to mid size software development organization. Description the relatively intricate way to introduce, to practice, to sustain and further to improve this software process. Analysis pre- and co requisites of such undertaking. Short discussion of two typical approaches to software process definition and improvement; one is based on a perceived set of best practices and the second one is based on changing the most critical stuffs. Illustration of pragmatic synthesis of both approaches; one for initial software process definition and the second one for regular periodical sustaining and improvement. Analysis the critical interdependencies between software project management of individual software projects and organization software process. Brief introduction to closely related topics; namely SDLC economics, professional ladder enforcing synthesis of professional education and pragmatic practice, peer reviews, supervision of individual software projects and project managers, resource planning and strict proposal approval process. (Short public simplified overview of the software process described above as seen by one of a supervisee project manager can be read here <http://profinit.cz/kariera/SoftwarovyProcesProfinitu.htm>)*

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