



Capability Maturity Model Integration

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Agenda

1. CMMI Model
 - 1.1 Structure of processes
 - 1.2 requested, expected and informative Model parts
 - 1.3 Die 5 level of maturity
 - 1.4 goals in stepped presentation
 - 1.5 Die 4 Categories
 - 1.6 Generic goals and ability levels
 - 1.7 pros and cons of CMMI



History

- 1987: development a questionnaire for rating the **productivity of Software developer**
- Create a Reference model - Capability Maturity Model (CMM)
 - 1991: Version 1.0, 1993: Version 1.1
- CMMs are basic for **CMMI**

CMMI

- Scope of application: **Software development, systems development und purchase of Software**
 - CMMI for Development (CMMI-DEV) support of development of Software, Systems or Hardware
 - CMMI for Acquisition (CMMI-ACQ) support of buying Software, Systems or Hardware
 - CMMI for Services (CMMI-SVC) support for providing services

Thema: Capability Maturity Model Integration (CMMI)

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CMMI

- 2000 Pilot version 1.0, 2002 Version 1.1, 2006 Version 1.2
- 2010 Version 1.3 for all CMMI-Models are published
- **Best Practices**

Goals

- **Improve of own processes**
- „controlled project work“ concrete and operational

Process scopes

- Realize the requirement to catch the goal,
- Summarize requirements to process scopes

2 presentation forms: stepped and continued form

Thema: Capability Maturity Model Integration (CMMI)

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Structure der Process scope

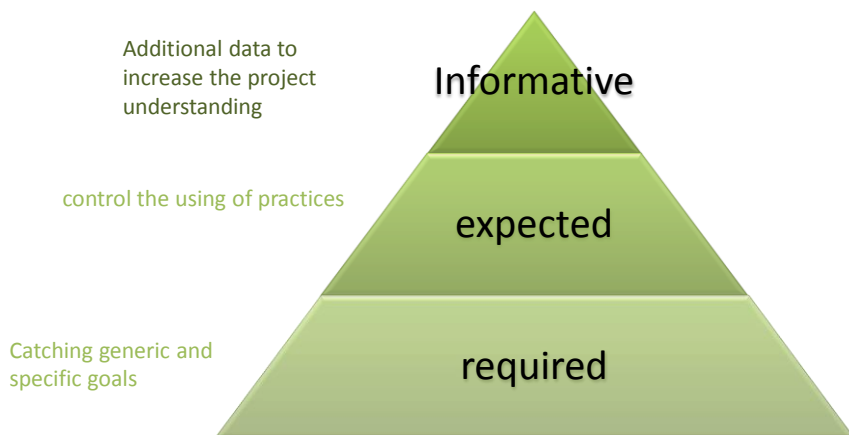
- Disposition of content of CMMI in **process scopes**
- Each process scope has goals to catch,
- 2 types of goals, specific and generic
- For each goal exists **Practices**, to catch the goal
 - Specific practices (matching to the specific process scope and describe the way to catch the goal)
 - Generic practices (describe the way to catch the generic goal)
- Summary of process scopes:
 - In stepped description in **maturity**
 - In der continued description in **categories**

Thema: Capability Maturity Model Integration (CMMI)

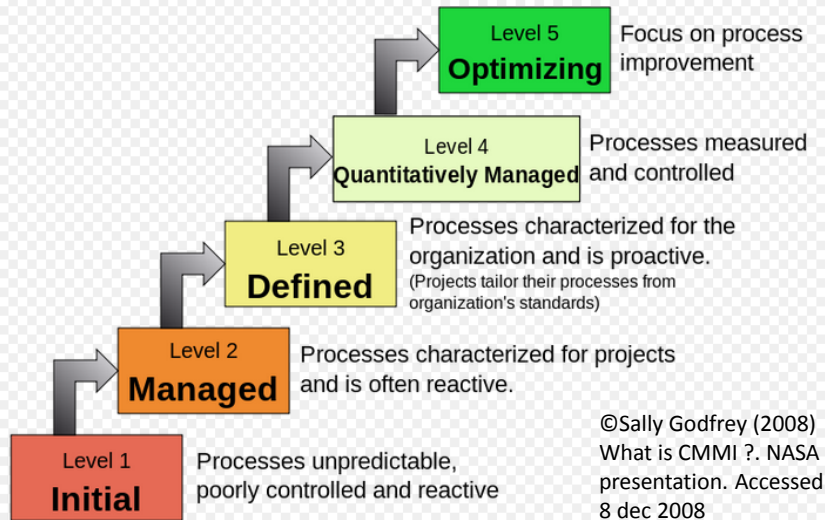
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Model parts



Characteristics of the Maturity levels



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4 categories for continued description

- Categorizing of process scopes (requirements) from stepped description
 - Tree categories are model independent:
 - Process management
 - Project management
 - Support
 - Fourth category is CMMI-Modell specific:
 - Development
 - Acquisition
 - Service oriented

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| Grad | Generic goal | maturities |
|------|---|------------------------|
| 0 | | Incomplete |
| 1 | Specific goal reached. | performed |
| 2 | Institution of managed process | managed |
| 3 | Institution of defined process | defined |
| 4 | Institution of quantitative managed process | quantitatively managed |
| 5 | Institution of optimized process | optimizing |

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- Step 1 to 2 to big
- Duration 1→2: Ø 26 month
- High maturity ≠ good Software
- Not usable for organization smaller than 25 employees and huge enterprises
- Increasing of productivity and quality possible, but big effort

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- Helmut Balzert - Lehrbuch der Softwaretechnik Softwaremanagement 2.Auflage (S. 565-581)

ready! 😊

Thank you for attention

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