

# Mimir

## Das Professionelle Projekthandbuch

Prof. Dr.-Ing. Peter Fromm

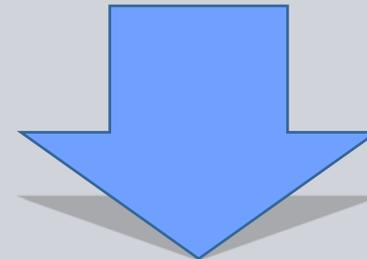


- Prozesse und Softwareentwicklung
- Mimir – Das Professionelle Projekthandbuch
- Konsortium und Roadmap

# Erfolgreiche Softwareentwicklung?



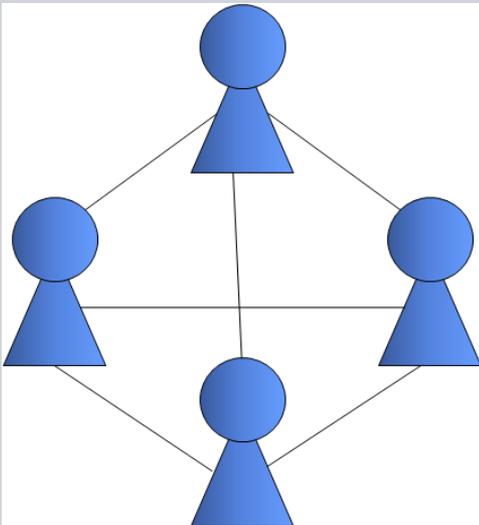
Standish Report 1994:  
85% aller Softwareprojekte scheitern!!!



Standish Report 2006:  
65% aller Softwareprojekte scheitern  
immer noch!

## Warum Projekte scheitern ...

- Mit zunehmender Projektkomplexität und Teamgröße erhöht sich das Risiko des Scheiterns eines Softwareprojektes exponentiell.
- Hauptursachen:
  - Erhöhter Kommunikationsbedarf zwischen den Projektmitarbeitern
  - Erhöhtes Risiko von Missverständnissen
  - „Zu viele Köche verderben den Brei“ – jeder Entwickler hat seine eigene Lösungsstrategie; diese passen häufig nicht zusammen!



3 Entwickler	➔	6 Kommunikationszweige
7 Entwickler	➔	5.040 Kommunikationszweige
10 Entwickler	➔	3.628.800 Kommunikationszweige

# Welcher Prozess ist der richtige für meine Firma / für mein Projekt?

CMMi

Spice

MISRA

Spiral  
Model

ISO9000

V-Model

Extreme  
Programming



Agile  
Development

RUP

## Problem der Standardisierung (I)

Ein Prozess von der Stange verbessert die Entwicklung in der Regel nicht und ist häufig kontraproduktiv

- Existierende Firmenlösungen werden nicht berücksichtigt
- Standards wie CMMi oder Automotive Spice sind nicht ausreichend konkret formuliert, um sie unmittelbar einsetzen zu können
- Zahlreiche Standards wie RUP sind speziell für kleine und mittelgroße Projekte zu schwergewichtig und können nicht einfach an neue Anforderungen angepasst werden
- In der Regel bieten Standardprozesse nur geringe methodische Unterstützung (z.B. Codierrichtlinien, Projektmanagement-Methoden, Testverfahren, ...)

## Problem der Standardisierung (II)

Die Entwicklung eines eigenen Prozesses ist für kleine und mittelständische Unternehmen aufgrund fehlender Ressourcen in der Regel nicht möglich

- Die Entwicklung eines CMMi konformen Prozesses kostet im Mittel ca. 1 Million Euro
- Um einen solchen Prozess erfolgreich einzuführen, werden erfahrene Mitarbeiter der Firma, gestandene Prozessingenieure und Werkzeugspezialisten benötigt

# Mimir – Das Professionelle Projekthandbuch (I)

Mimir - The Professional Project Guide - Mozilla Firefox

file:///ID:/user/50\_stti/20\_Projects/10\_SDS/\_work/index.htm

Meistbesuchte Seiten HDA Knowledge Tools Processes News Games Privat Radio

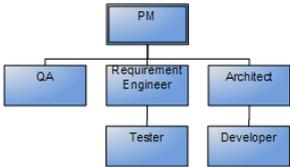
Google CMMI Suchen Rechtschreibprüfung Übersetzen AutoFill CMMI Anmelden

## Mimir - The Professional Project Guide

Home Glossary Index Tools Training Help

- [Home](#)
- [Roles](#)
- [Life Cycle](#)
- [Processes](#)
- [Methods](#)
- [Documents](#)

### Project Roles



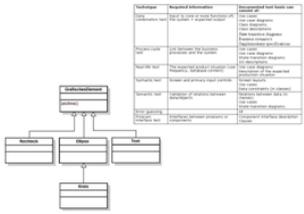
```

            graph TD
            PM[PM] --- QA[QA]
            PM --- RE[Requirement Engineer]
            PM --- Arch[Architect]
            RE --- Tester[Tester]
            RE --- Dev[Developer]
            
```

### Project Lifecycle

ID	Task	Feb 2000							März 2000						
		20	21	22	23	24	25	26	27	28	1	2	3	4	5
1	Project Planning	■													
2	Requirement Analysis				■										
3	Architecture				■										
4	Development							■	■	■	■	■	■	■	■
5	Testing														■

### Method Index



### Document Index



- Development Plan
- Code
- Test Specification
- Schedule
- Specification
- Release Note

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Fertig

## Mimir – Das Professionelle Projekthandbuch (II)

### Mimir –

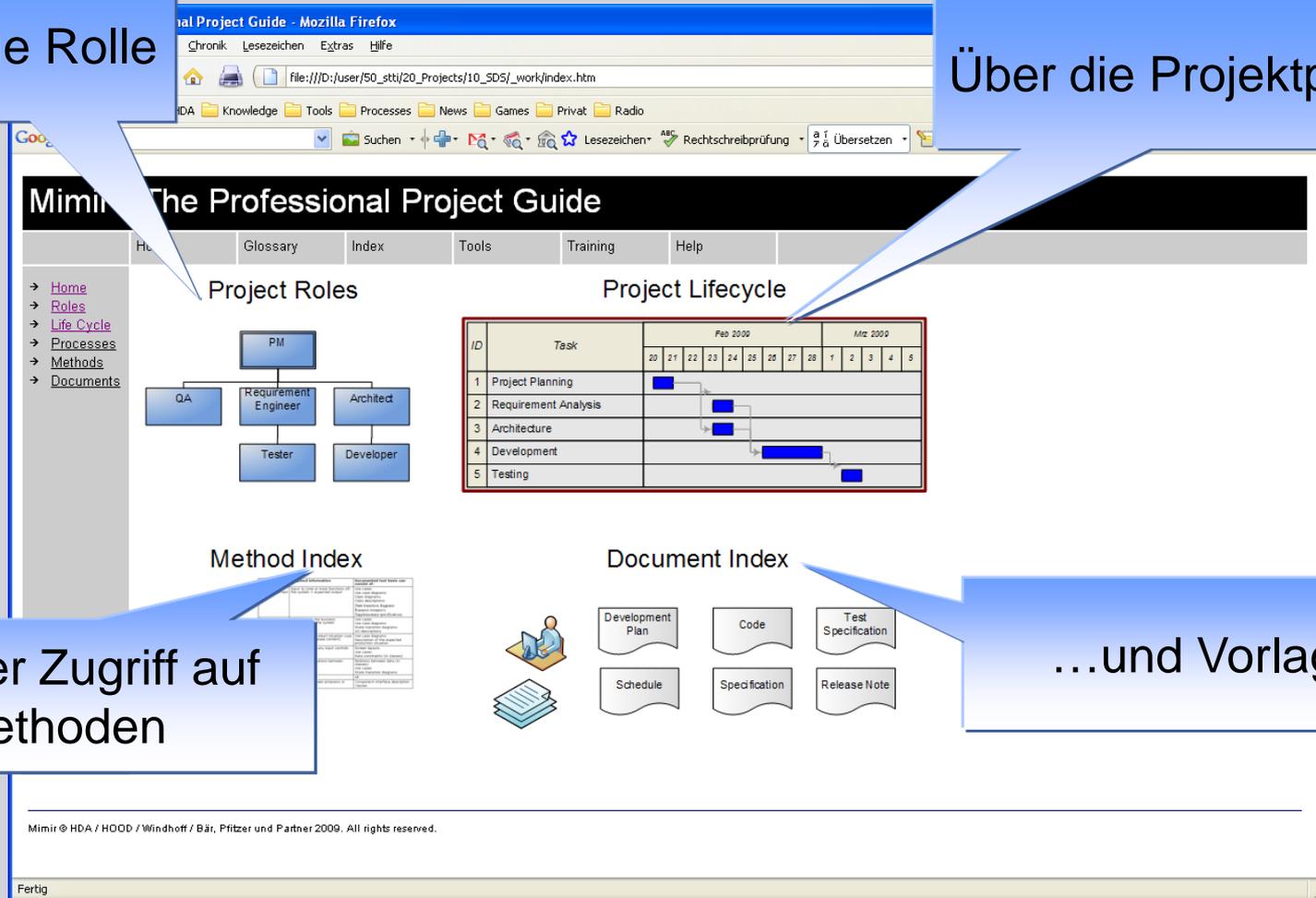
Das professionelle Projekthandbuch ist ein HTML Baukasten, der...

- die „Best Practices“ aus CMMi einfach verständlich darstellt
- von Entwicklern für Entwickler, von Projektmanagern für Projektmanager, von Testern für Tester geschrieben wurde
- existierende Lösungen wie z.B. Dokumentenvorlagen, Entwicklungsrichtlinien oder Werkzeuglösungen einfach integriert
- sich mit Bordmitteln einfach an neue Anforderungen anpassen lässt

# Mimir – Einstieg

Über die Rolle

Über die Projektphase



Mimir The Professional Project Guide  
 Home | Glossary | Index | Tools | Training | Help

- Home
- Roles
- Life Cycle
- Processes
- Methods
- Documents

### Project Roles

```

      graph TD
      PM[PM] --- OA[QA]
      PM --- RE[Requirement Engineer]
      PM --- Arch[Architect]
      RE --- Tester[Tester]
      RE --- Dev[Developer]
      
```

### Project Lifecycle

ID	Task	Feb 2000							Mär 2000					
		20	21	22	23	24	25	26	27	28	1	2	3	4
1	Project Planning	█												
2	Requirement Analysis			█										
3	Architecture			█										
4	Development					█								
5	Testing												█	

### Method Index

... (list of methods)

### Document Index



Development Plan

Code

Test Specification

Schedule

Specification

Release Note

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Direkter Zugriff auf Methoden

...und Vorlagen

# Mimir – Rollensicht (I)

Alle Rollen im Projekt  
auf einen Blick

**Mimir - The Professional Project Guide**

Home Glossary Index Tools Training Help

→ [Home](#)  
→ [Roles](#)  
→ [Life Cycle](#)  
→ [Processes](#)  
→ [Methods](#)  
→ [Documents](#)

## Project Roles

Project roles are templates describing the major activities of all project members. Every team member inside a project is assigned to a certain role. This ensures a clear assignment of tasks inside the team as well as fitting interfaces between all team members.

```
graph TD; PM[Project Manager] --- SM[Senior Manager]; PM --- QE[Quality Engineer]; PM --- CM[Configuration Manager]; PM --- RE[Requirement Engineer]; PM --- Arch[Architect]; PM --- Int[Integrator]; PM --- TM[Test Manager]; PM --- ISM[Information Security Manager]; PM --- Dev[Developer]; PM --- ST[System Tester]; QE --- QM[Quality Manager]; Arch --- Dev; Int --- ST; CM --- ES[Engineering Services];
```

Legend

- Project Core Team (Blue)
- Extended Project Team (Light Blue)
- Supporting Roles (Green)

Click on the boxes to get more information on the individual roles.

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# Mimir – Rollensicht (II)

Rollenbeschreibung

Aufgabenbeschreibung

Benötigte Vorlagen

**Mimir - The Professional Project Guide**

Home | Glossary | Index | Training | Help

→ [Home](#)  
→ [Roles](#)  
→ [Life Cycle](#)  
→ [Processes](#)  
→ [Methods](#)  
→ [Documents](#)

## Project Manager

The Project Manager has the overall responsibility for the project. His tasks include

- Agreement of the project scope and milestones with the senior management.
- Planning of the work packages, efforts and resources.
- Preparation of the schedule and development
- Installation of the project team and assignment
- Ensuring the proper communication inside the
- Performing the interface to the stakeholder.
- Monitoring and controlling the project progress
- Ensuring that the project meets the agreed fin

### Required Skills

- Excellent knowledge of project management methods and tools
- Good communicative skills

### Documents

- Development Plan
- Product Feature Plan
- Estimation Sheet
- Schedule
- Risk Sheet
- Subcontract Management Agreement
- Project Status Report
- Project Closure Report
- Meeting Minutes

### Methods

- Estimation
- Staffing
- Risk Management
- Monitoring and Control
- Reporting
- Subcontract Management
- Multiside Project
- Lessons Learned Workshop

### Workflows

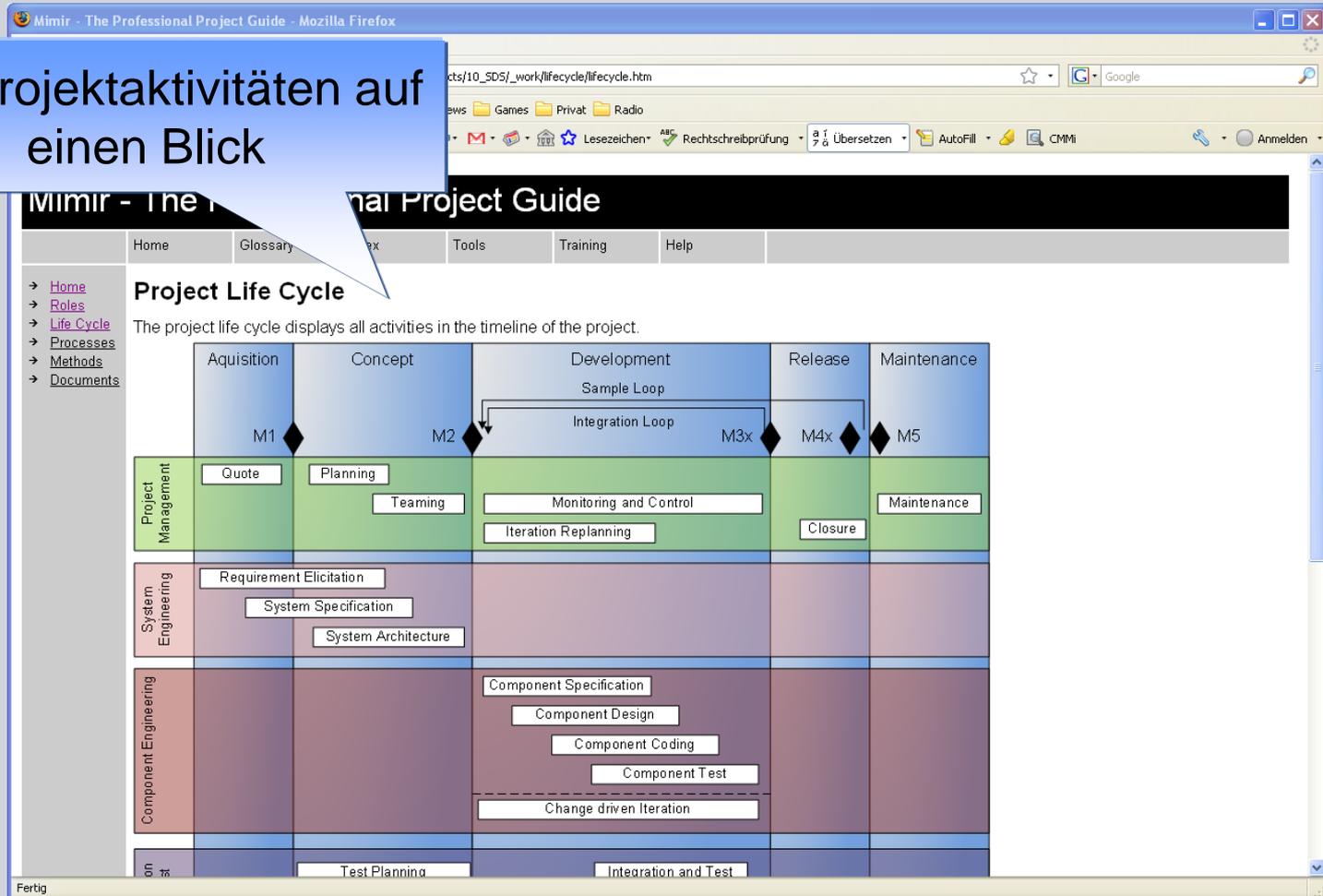
- Project Proposal and Quotation
- Project Planning
- Project Iteration Replanning
- Project Monitoring, Control and Reporting
- Project Closure
- Subcontract Management
- Project Maintenance

Unterstützende  
Methodik

Relevante  
Arbeitsabläufe

# Mimir – Projektphasensicht (I)

Alle Projektaktivitäten auf einen Blick



# Mimir – Projektphasensicht (II)

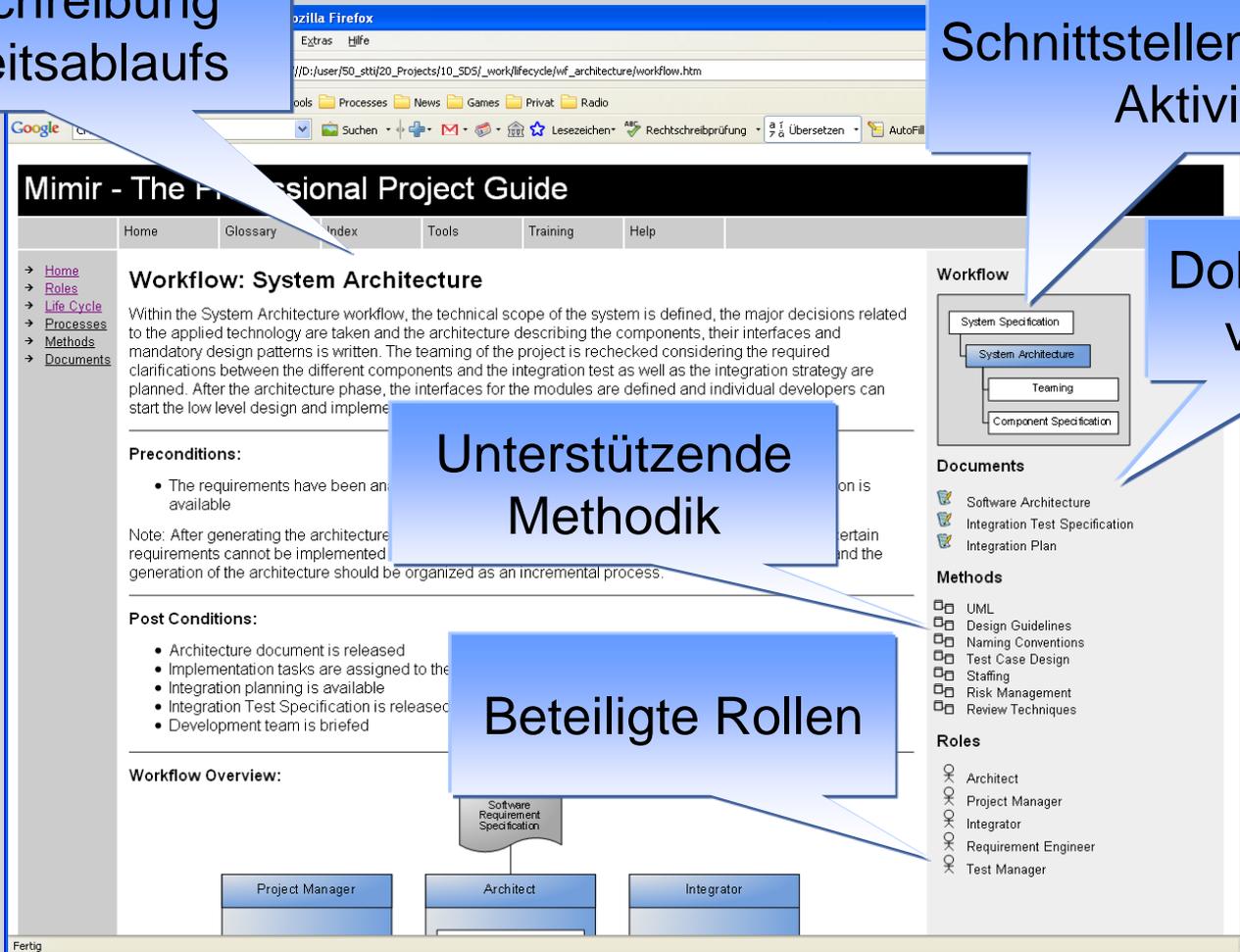
Detailbeschreibung eines Arbeitsablaufs

Schnittstellen zu anderen Aktivitäten

Dokumenten-  
vorlagen

Unterstützende  
Methodik

Beteiligte Rollen



**Mimir - The Professional Project Guide**

Home | Glossary | Index | Tools | Training | Help

→ Home  
→ Roles  
→ Life Cycle  
→ Processes  
→ Methods  
→ Documents

## Workflow: System Architecture

Within the System Architecture workflow, the technical scope of the system is defined, the major decisions related to the applied technology are taken and the architecture describing the components, their interfaces and mandatory design patterns is written. The teaming of the project is rechecked considering the required clarifications between the different components and the integration test as well as the integration strategy are planned. After the architecture phase, the interfaces for the modules are defined and individual developers can start the low level design and implementation.

**Preconditions:**

- The requirements have been analyzed and are available

Note: After generating the architecture requirements cannot be implemented. The generation of the architecture should be organized as an incremental process.

**Post Conditions:**

- Architecture document is released
- Implementation tasks are assigned to the team
- Integration planning is available
- Integration Test Specification is released
- Development team is briefed

**Workflow Overview:**

Software Requirement Specification

Project Manager | Architect | Integrator

**Workflow**

- System Specification
- System Architecture
- Teaming
- Component Specification

**Documents**

- Software Architecture
- Integration Test Specification
- Integration Plan

**Methods**

- UML
- Design Guidelines
- Naming Conventions
- Test Case Design
- Staffing
- Risk Management
- Review Techniques

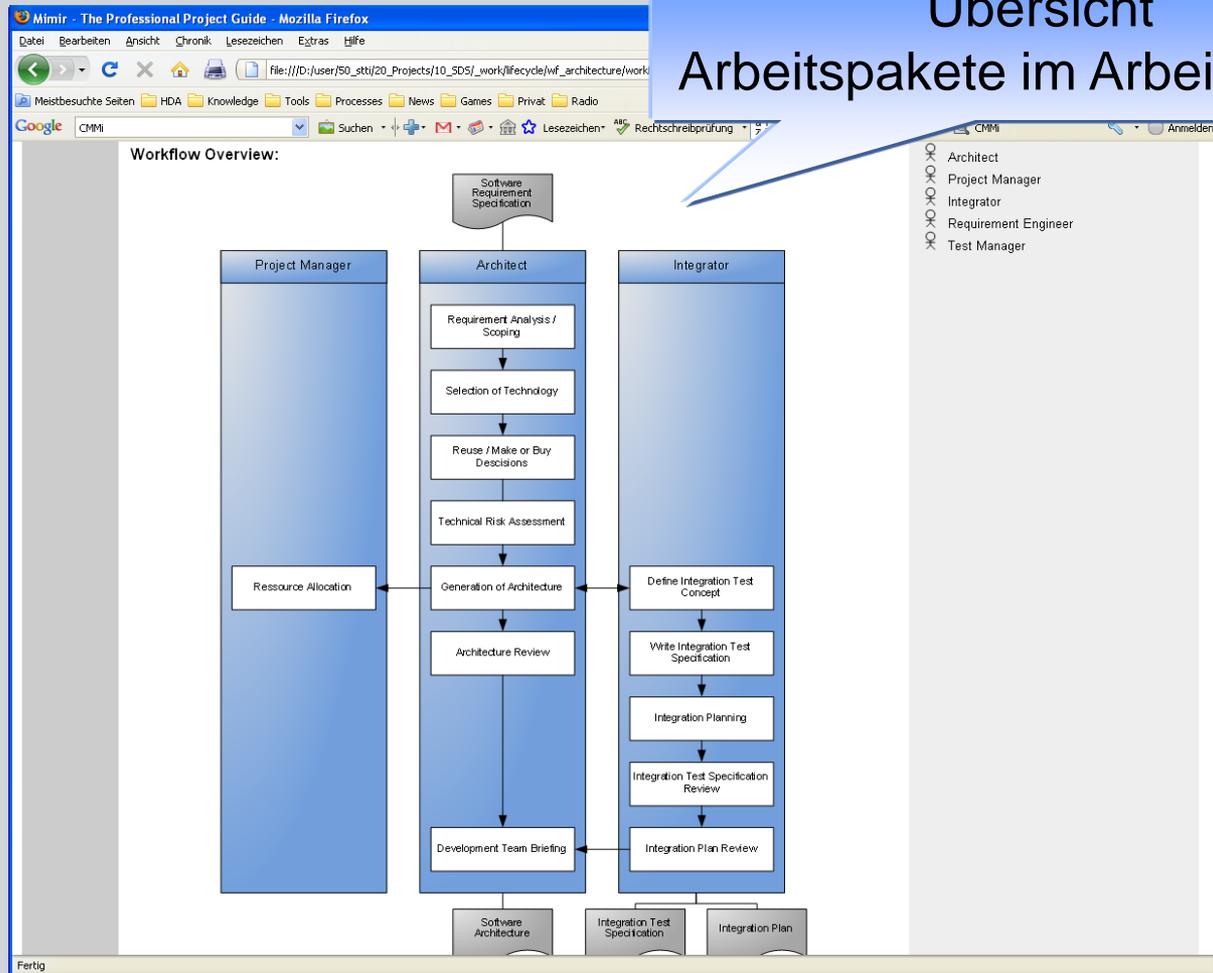
**Roles**

- Architect
- Project Manager
- Integrator
- Requirement Engineer
- Test Manager

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# Mimir – Projektphasensicht (III)

## Übersicht Arbeitspakete im Arbeitsablauf



# Mimir – Projektphasensicht (IV)

Detailbeschreibung eines Arbeitspakets

## Work Package Descriptions:

Requirement Analysis / Scoping

Architect, Software Project Manager, **Requirement Engineer**, Test Manager

The Requirement Engineer together with the Software Project Manager, Architect and the Test Manager discuss the outline of the project. The aim of the briefing is to give the Architect and the Test Manager an overview of the project and to hand over all relevant stakeholder documents.

Based on this, the Architect defines the scope of the system under design (i.e. the software system which will be developed) and agrees it with the Software Project Manager. The scope contains a detailed list of system aspects which are in-scope as well as aspects which are out of scope.

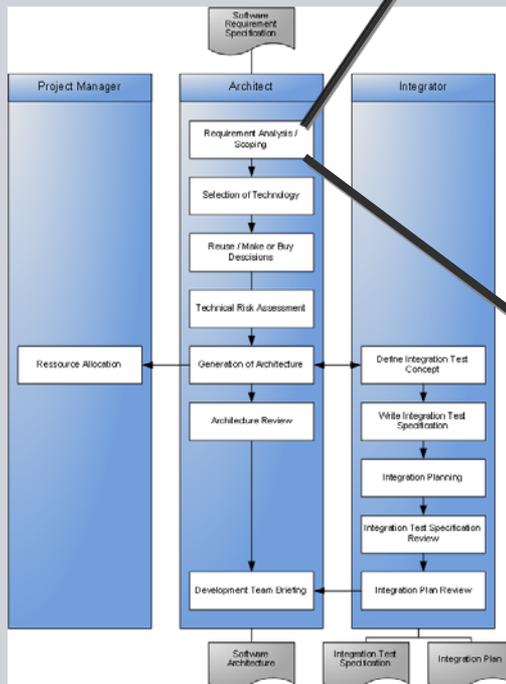
In addition, the following aspects are defined:

- Interfaces to other external systems (e.g. other systems connected via a network)
- Needed variants

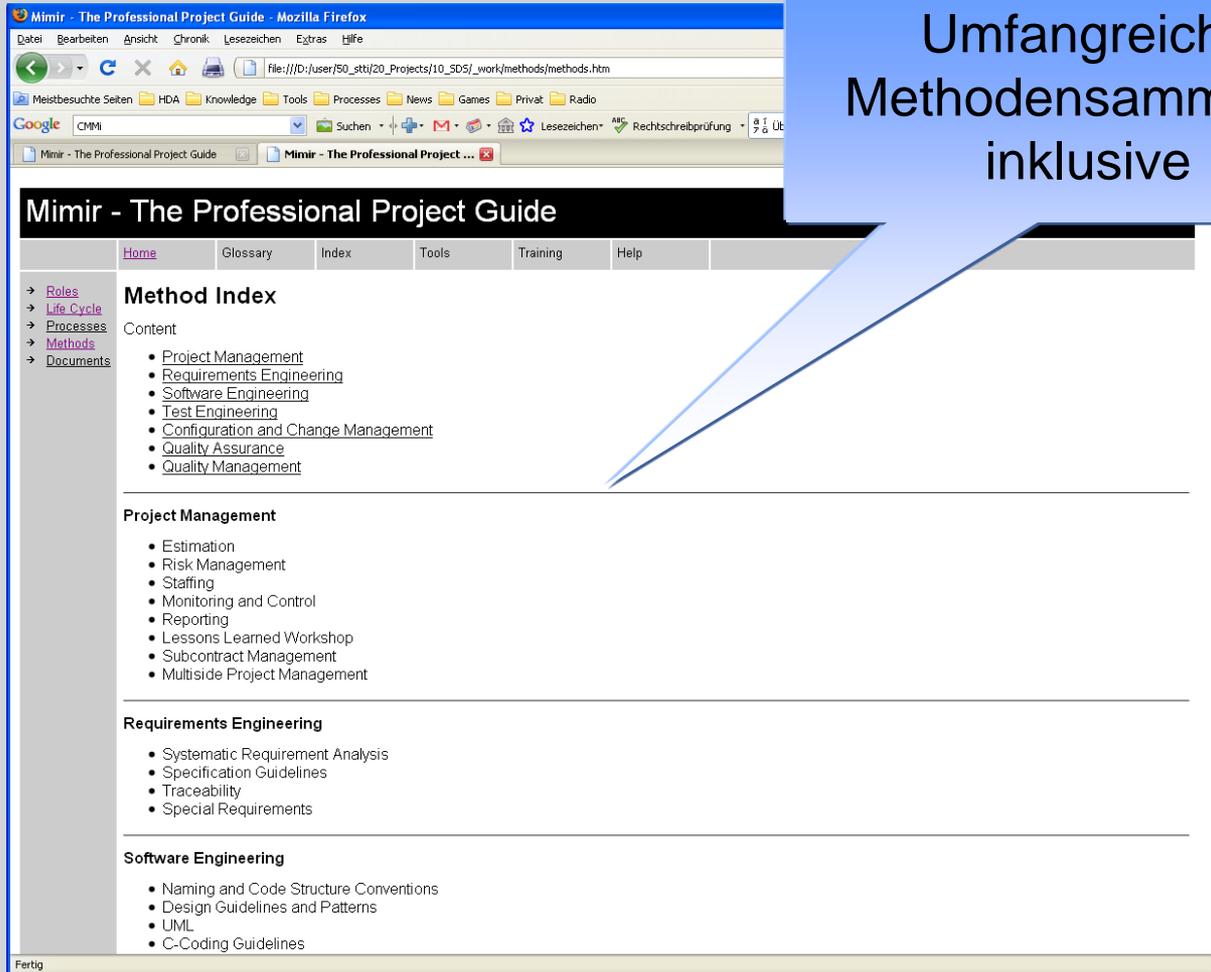
Justification: Without a defined scope and clearly defined boundaries the risk of fundamentally wrong design decisions due to misunderstandings in the team is very high.

Output: Software Architecture Document: Chapter Scope

Task-Id: SW.AR.010 / Mandatory



# Mimir – Methodensammlung



The screenshot shows a web browser window displaying the 'Mimir - The Professional Project Guide' website. The page title is 'Mimir - The Professional Project Guide' and the URL is 'file:///D:/user/50\_stt/20\_Projects/10\_SDS/\_work/methods/methods.htm'. The page features a navigation menu with links for Home, Glossary, Index, Tools, Training, and Help. A sidebar on the left contains links for Roles, Life Cycle, Processes, Methods, and Documents. The main content area is titled 'Method Index' and lists various project management, requirements engineering, and software engineering methods. A blue callout box points to the list of methods with the text 'Umfangreiche Methodensammlung inklusive'.

**Mimir - The Professional Project Guide**

Home | Glossary | Index | Tools | Training | Help

→ Roles  
→ Life Cycle  
→ Processes  
→ **Methods**  
→ Documents

### Method Index

Content

- [Project Management](#)
- [Requirements Engineering](#)
- [Software Engineering](#)
- [Test Engineering](#)
- [Configuration and Change Management](#)
- [Quality Assurance](#)
- [Quality Management](#)

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#### Project Management

- Estimation
- Risk Management
- Staffing
- Monitoring and Control
- Reporting
- Lessons Learned Workshop
- Subcontract Management
- Multiside Project Management

---

#### Requirements Engineering

- Systematic Requirement Analysis
- Specification Guidelines
- Traceability
- Special Requirements

---

#### Software Engineering

- Naming and Code Structure Conventions
- Design Guidelines and Patterns
- UML
- C-Coding Guidelines

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# Mimir – Vorlagensammlung

Mimir - The Professional Project Guide - Mozilla Firefox

Alle Vorlagen auf einen Blick

Deutsche und englische Vorlagen

Inklusive Checklisten und Beispiele

Mimir - The Professional Project

Home Glossary Index Tools

→ Roles  
 → Life Cycle  
 → Processes  
 → Methods  
 → Documents

**Document Index**

Content

- Project Management
- Requirements Engineering
- Software Engineering
- Test Engineering
- Configuration and Change Management
- Quality Assurance
- Quality Management

**Project Management**

Information		Download			
Document name & Information Naming convention	Tail.	Template		Checklist	Example
Development Plan	M	en:  de: 		PM Checklist	to be added
Schedule	M	en:  de: 		PM Checklist	to be added
Product Feature Plan	M	en:  de: 		none	to be added
Estimation Sheet	M	en:  de: 		PM Checklist	to be added
Risk Sheet	M	en:  de: 		Risk Checklist	to be added
Subcontract Agreement	O	en:  de: 		Subcontract Checklist	to be added
Project Status Report	M	en:  de: 		PM Checklist	to be added

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# Das Konsortium

## Aus der Praxis für die Praxis



Konfigurations- und  
Änderungsmanagement



Software Engineering,  
Qualitätssicherung

Requirements-  
Engineering

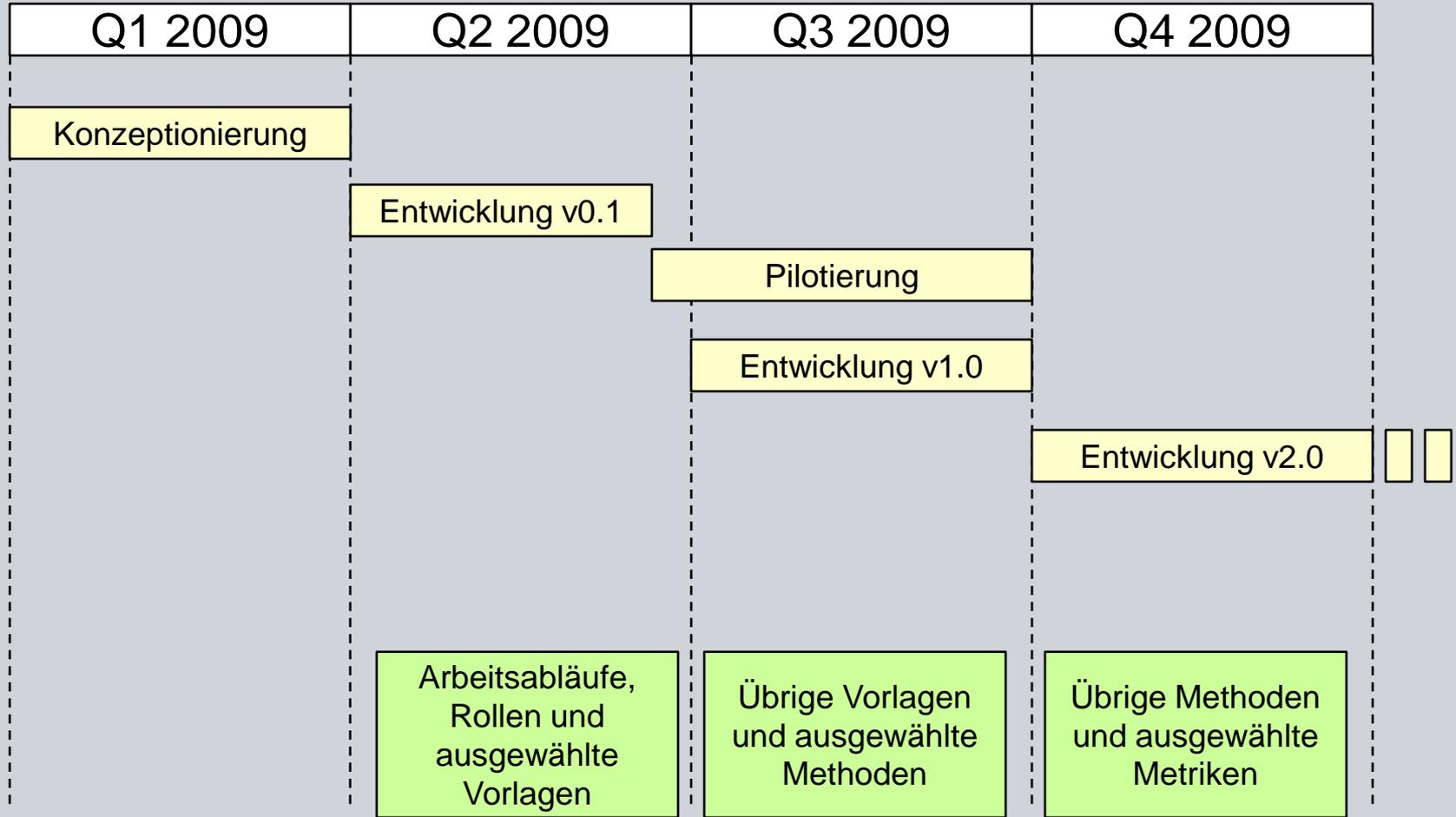


Projekt-, Test- und  
Qualitätsmanagement

# BÄR PFITZER & PARTNER

Ingenieure und Betriebswirte

# Roadmap



## Und wer ist Mimir?

**Mimir** ist ein rätselhafter Riese der nordischen Mythologie. Er ist Hüter eines Quells (Mimirs Brunnen) und steht für Wissen, Weisheit und Weissagung. Er ist so weise, dass selbst der Göttervater Odin eine enge Bindung zu ihm pflegt und von ihm Wissen und Rat begehrt.

(Wikipedia)



# Kontakt

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