About the Seminar

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About the Seminar
Cornerstones

ACES – **A**rchitecture-**C**entric **E**ngineering **S**olutions

The Fraunhofer Approach for
Modeling Software and System Architectures

Compiled Best Practices from literature,
scaled and tailored for effective architecting in practice

More than 20 years of architecting experiences across domains:
Information Systems, Smart Ecosystems, Data Spaces and Embedded Systems

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In this seminar, we show you…

… the "big picture" of architecture

… and how to:

- Elicit architecturally-significant requirements
- Design architectures
- Document architectures
- Evaluate architectures
- Communicate architectural decisions
- Benefit from architectures
- Successfully work as a software architect!

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The Seminar

What it is

+ Real world questions and examples
+ For practitioners
+ Interactive seminar design
+ Paradigm-spanning
+ Using technologies
+ Integrated methodology in the big picture

What it is not

– Out-of-touch architecture
– Academic and formal
– One-way lecture
– OOD/OOP course
– Technology course
– Detailed discussions and fragmented focus

Architecture Competence Areas

People

- Architect's Role

System Expertise (Challenges, Solutions, Technologies)

Quality Attributes	Styles / Tactics / Patterns	Architectural Paradigms	Frameworks & Technologies	Reference Architectures

Methods & Tools

Architecture Driver Elicitation	Documentation & Modelling	Architecture Design	Architecture Evaluation	Implementing Architecture
AEPs & Planning	Architecture Management	Architecture in SE	Reconstruction / Modernization	Architecture Capability Assessment

Foundations

Architecture Motivation	Architecture Definitions	Architecture Terminology	Architecture Big Picture	
Architecture Scope(s)	Architecture Views	Architecture Drivers	Architecture Decisions	

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Agenda

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Agenda

	Day 1	Day 2	Day 3	Day 4 (optional)
09:00-10:30	Welcome & Intro	Architecture Drivers (2/2)	Architecture Documentation	Deepening and Practices
Coffee				
10:45-12:15	Architecture Foundations	Architecture Engagement Purposes	Architecture Evaluation (1/2)	Deepening and Practices
Network Lunch				
13:00-14:30	Architecture Views	Architecture Design (1/2)	Architecture Evaluation (2/2)	Deepening and Practices
Coffee				
14:45-16:00	Architecture Drivers (1/2)	Architecture Design (2/2)	Architecture Work	Deepening and Practices (end 15:30)

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Agenda
Day 1 – Fundamentals of Software Architecture

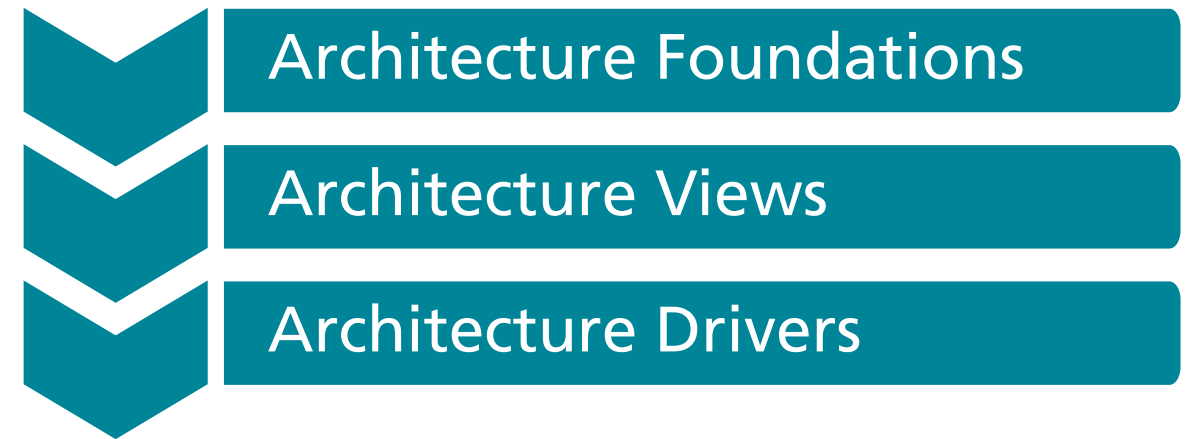|	Day 1	Day 2	Day 3	Day 4 (optional)
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Agenda
Day 1 – Fundamentals of Software Architecture

- Motivation of software architecture
  - What is software architecture?
  - Why do we need it?
  - How can we make use of it?
  - The big picture of software architecture
- Project examples – success factor architecture
- Architecture decomposition framework (ADF)
  - Which aspects about architecture are there?
  - How to document them in architectural views?
  - Which views do I need for my purpose?
- Stakeholders of architecture
  - Which stakeholders are there and what do they want?
  - The role of the architect

Architecture Foundations

Architecture Views

Architecture Drivers

- Stakeholder analysis and architecture drivers
  - What are architecture drivers?
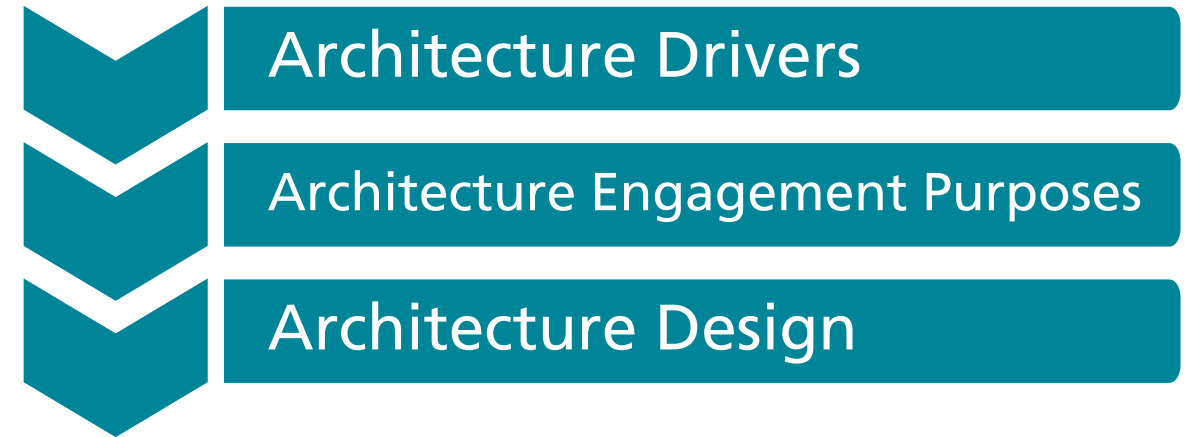 - How to capture and document architecture drivers?

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Agenda
Day 2 – Architecture Design

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09:00-10:30	Welcome & Intro	Architecture Drivers (2/2)	Architecture Documentation	Deepening and Practices
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Agenda
Day 2 – Architecture Design

- Design process overview
- Scenario-driven design
  - Functionality-driven decomposition
  - Data-driven decomposition
  - Deployment-driven decomposition
  - Designing for quality attributes
  - Design with patterns
- Connecting architecture and implementation
  - Governance of implementation
- Context factors affecting architecture in real projects

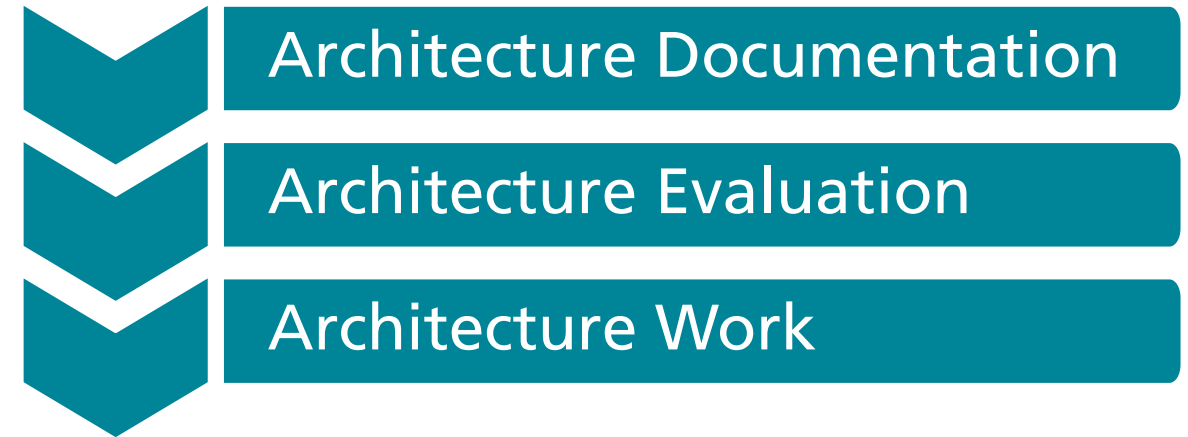**Architecture Drivers**

Architecture Engagement Purposes

Architecture Design

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Agenda
Day 3 – Documentation and Evaluation

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Agenda
Day 3 – Documentation and Evaluation

- Architecture documentation
  - Goals of architecture documentation
  - Best practices
  - Structuring architecture documentation with solution concepts
- Motivation of architecture evaluation
  - Practical example
  - Which decisions can we support with architecture evaluation?
- Overview on architecture evaluation
  - Concern elicitation check
  - Architecture adequacy assessment
  - Sound documentation assessment
  - Distance investigation (Compliance checking)
  - Code quality assessment
  - Sustainability check

Architecture Documentation

Architecture Evaluation

Architecture Work

- Techniques for architecture evaluation
- Audit experiences

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Day 4 (optional) – Deepening and Practices

- Further practice of learned content, where possible, to address participants' requests.
- Possible Topics:
    - Modularity
    - Modernization & Renovation
    - Domain-Driven Design & Microservices
    - Cloud Computing
    - Data-Driven Design
    - DevOps
    - Event-Driven Design
    - Comprehensive Examples

Feedback of Participants

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How would you summarize the seminar in one sentence?

"At the seminar, a comprehensive proposal was made regarding how to design the role of the architect."

"Well organized, very helpful. Thank you!"

"Provided a sensible summary of the complex issue of software architecture to create a good basis on which to build further."

"A comprehensive overview of this topic and with practical in-depth information/applications; good exchange with colleagues from other companies."

"Enriching"

Contact

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