

Project

Grundlagen des Software Engineering Fundamentals of Software Engineering

Prof. Dr. Dr. h.c. Dieter Rombach

SS 2016



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software engineering dependability

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- Goal
- Project
- Applied Techniques
- Infrastructure

- Apply engineering methods and techniques for the **systematic development** of software-intensive systems



Requirements
Engineering



Architectural design



Component
Engineering



Testing

- Apply engineering methods and techniques for the **systematic development** of software-intensive systems



**Requirements
Engineering &
Interaction Design**



Architectural design



**Component
Engineering**



Testing

- This year's project will deal with the development of a mobile people's bus system. The system consists of a mobile app that serves as the people's bus host system and another mobile app for citizens to use the different people's busses. It is intended, that the system will be used within the project Digitale Dörfer (for further information see www.digitale-doerfer.de). Real life evaluations with concrete existing people's bus systems are also optionally possible.

**Fraunhofer**

IESE

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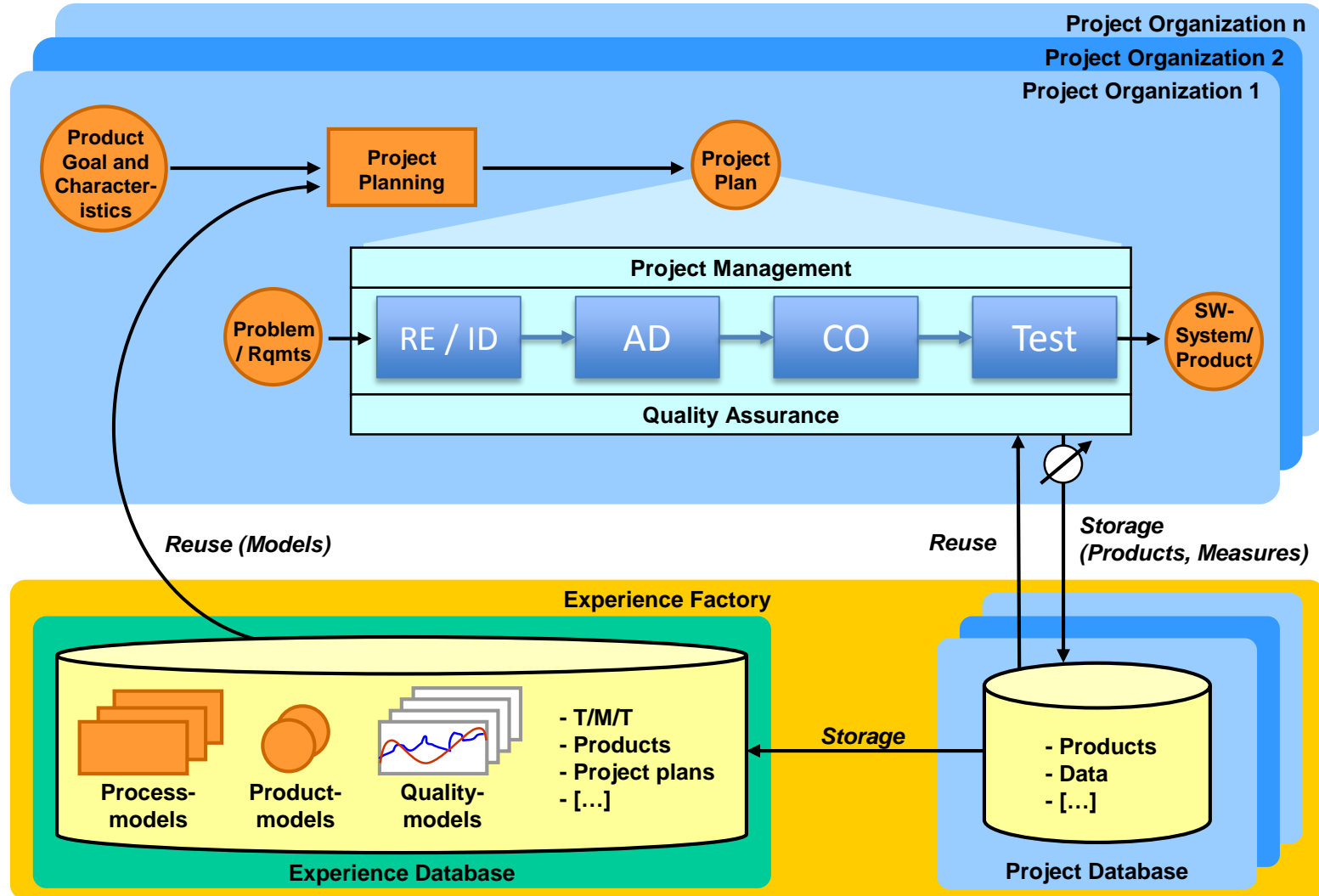


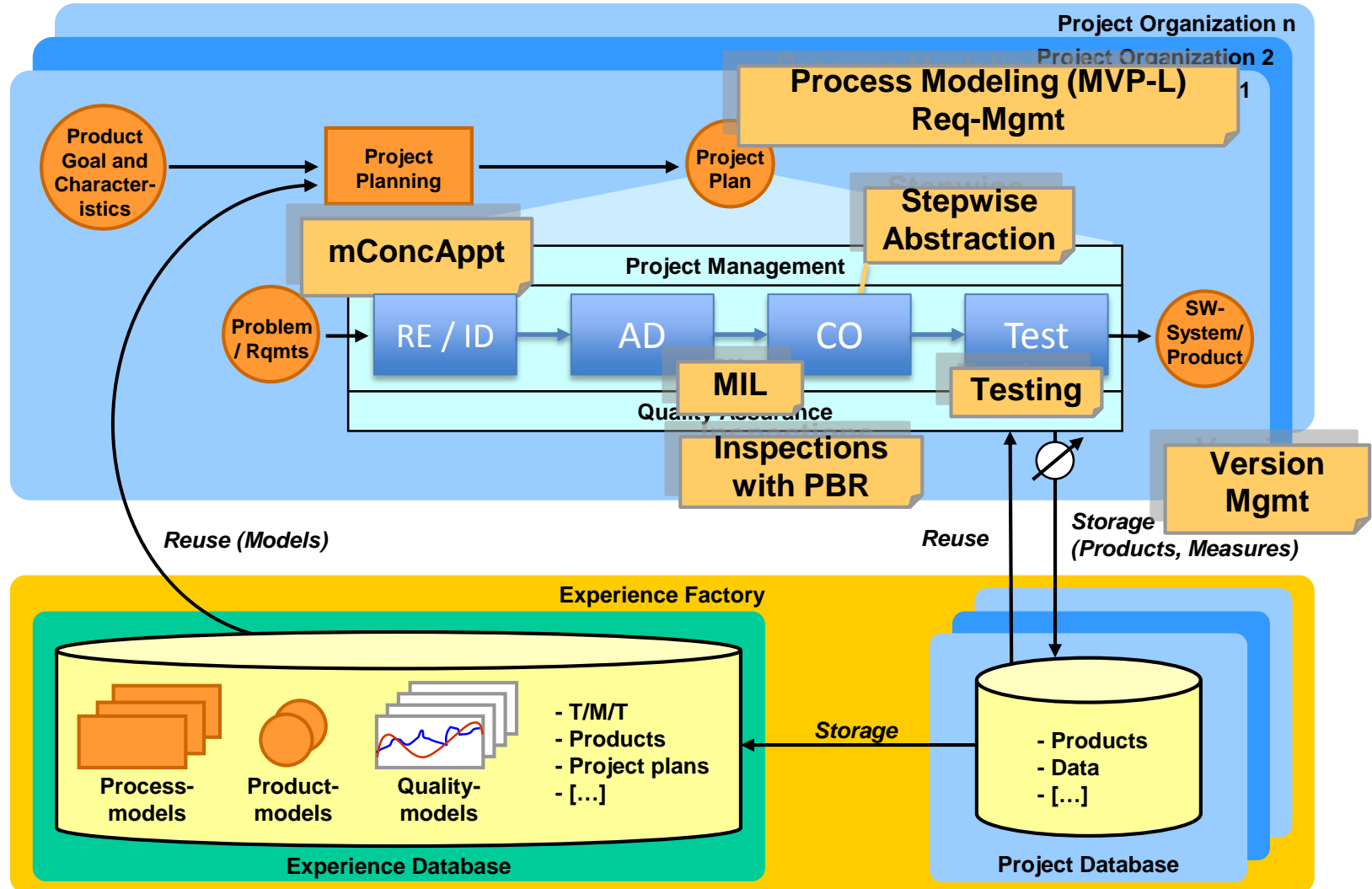


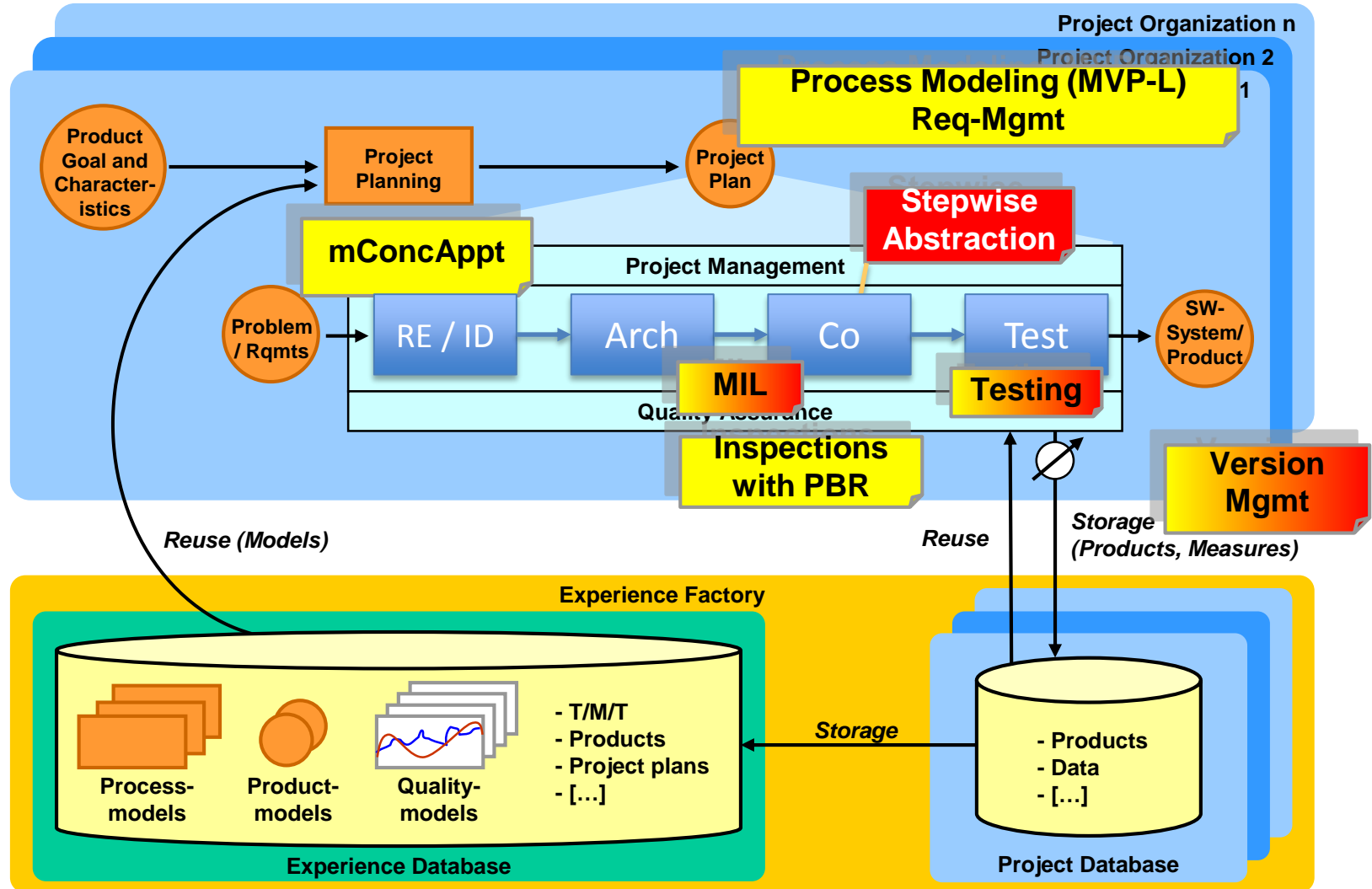
gerbus fährt stündlich um 9:00, 10:00, 11:00, 14.00 und 16:00 Uhr



	he Ankunftszeit				
	die Isigny-Allee	09:00		Danziger Str./ Penny/	
	ke Sonnenstr.	09:01		Paulus Fachmarkt/Edeka/ Netto	09:25
WERBE- BIET OS	tr./ Schellenberger Str.	09:03	H	Danziger Str./ Dietz/ Aldi	09:26
	erger Str./ Sandhübel	09:04	H	Danziger Str./ Zemo	09:27
	Verbindung Heinrich Koch Str.	09:05	H	In der Nasserde/Kreuzung Deutschhermstr.	09:29
	Verbindung Heinrich Koch Str.	09:06	H	Friedenstr./Ärztelhaus/ Friedhof	09:30
	acherstr./ Blumen-Janke	09:08	H	In der Nasserde/ Regionale Schule	09:31
H	Mackenbacherstr./ Getränke Schick	09:09	H	in der Mitte der Ostpreußenstr. (Nr. 8)	09:32
H	Mörickestr./ von Brentano Str.	09:10		In den Sandäckern	
H	Eichendorferstr./ Übergang Falltor	09:11	H	Am Mühlhebel 8	09:34
H	Mackenbacherstr./ Kreuzung Obergasse	09:12	H	In den Sandäckern/ Kreuzung im Schelmental	09:35
H	Rummelstr./ Parkplatz Borngasse	09:13	H	Rummelstr./ Utec	09:35
H	Hüttengärten/ Seniorenheim	09:14	H	Rabenhübel/ Parkplatz Rabennest	09:36
H	Beethoven-/ Mozartstr./In der Lehmenkaut	09:14	H	Kirchenstr./ Friedhof Nord	09:36
H	Hüttengärten/ Weilerbacher Reisebüro	09:15	H	Friedhofstr./ Kreuzung Turnerstr.	09:37
H	Busenhübel/ Metzgerei Schröder/		H	Rummelstr./VG	09:38
	Florale Werkstatt Janke	09:16	H	Rummelstr./ Parkplatz Borngasse	09:39
H	Busenhübel/ Kreuzung Lindenstr.	09:16	H	Hüttengärten/ Seniorenheim	09:40
H	Am Hochrain/ Zum Geißreiß drehen	00:18	H	Beethoven-/ Mozartstr./In der Lehmenkaut	09:40
H	Ringstr./ Kreuzung Talstr. (oben)	09:19	H	Hüttengärten/ Weilerbacher Reisebüro	09:41
H	Ringstr./ Kreuzung Talstr. (unten)	09:19	H	Hauptstr./ Parkplatz Kreisparkasse/ Barz/ Spar	09:42
H	Spitzäckerstr./Am Elpel	09:20	H	Hauptstr./ Apotheke/ Tee- und Bastelstube Rutz	09:42
H	Lindenstr. Hausnummer 13	09:21	H	Hans-Reiner-Str./ Onkel Toms Hütte	09:43
H	Hauptstr./ Parkplatz Barbarossa Bäckerei	09:22		(Fuchs Lubritech, Aral)	
	Reisebüro Lowak, Fahrschule Schneider		H	Danziger Str./ Penny/ Paulus/ Edeka/ Netto	09:44
H	Hauptstr./ Apotheke/ Tee- und Bastelstube Rutz	09:23	H	Danziger Str./ Dietz/ Aldi	09:46
H	Hans-Reiner-Str./ Onkel Toms Hütte	09:24			
	(Fuchs Lubritech, Aral)				
				zurück zum Kreisel....	







Steffen Hess	Christian Wolschke	Anne Hess	Sebastian Müller	Malte Brunnlieb
New feature requests	Project Management Issue Tracker	Requirements Engineering / Interaction Design with mConcAppt in Wiki	Entries in Wiki for test reports Test cases	Architecture Git commits Jenkin builds Code


- **Project environment is provided**
 - Technical support: Christian Wolschke, Thomas Schneider

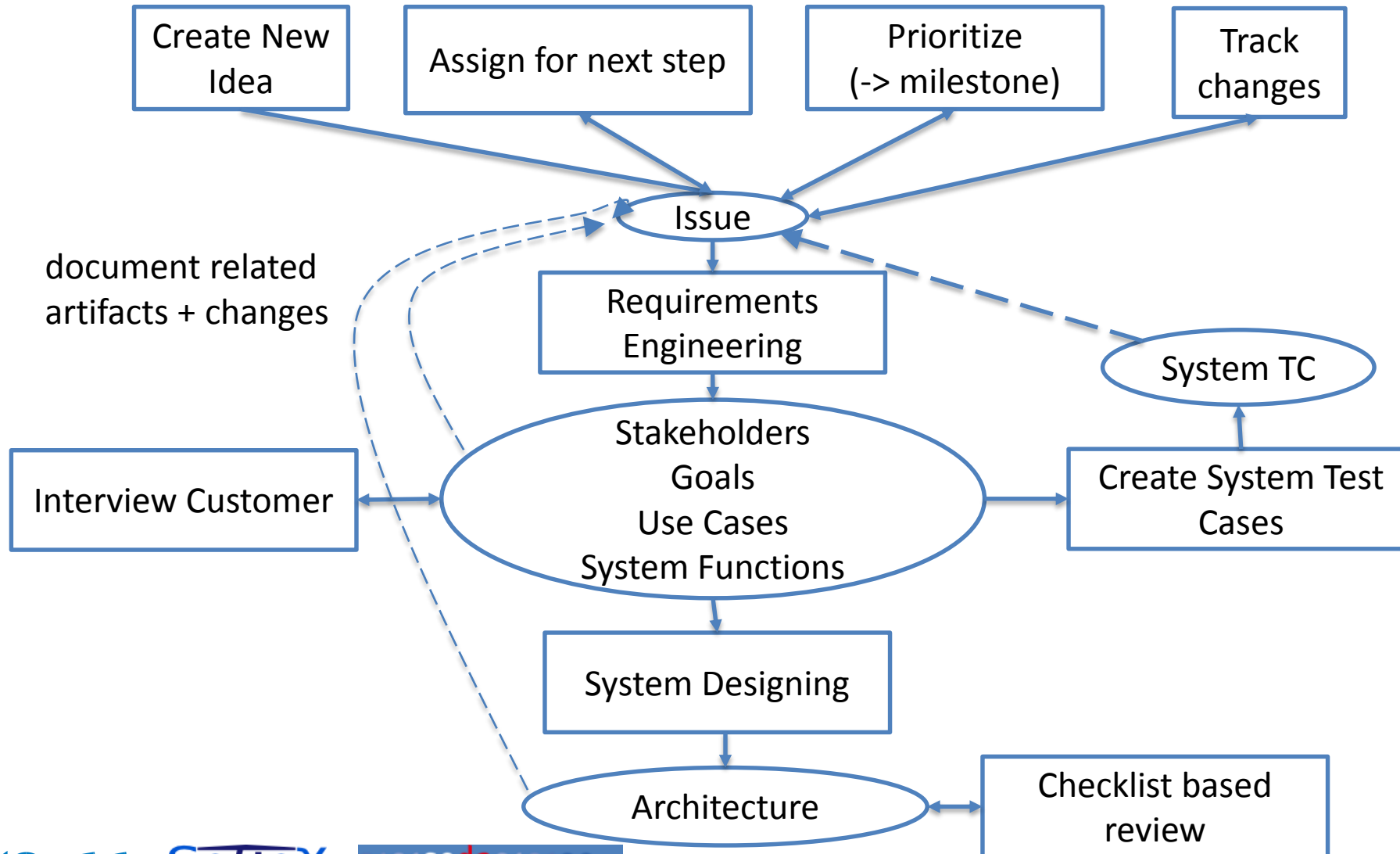


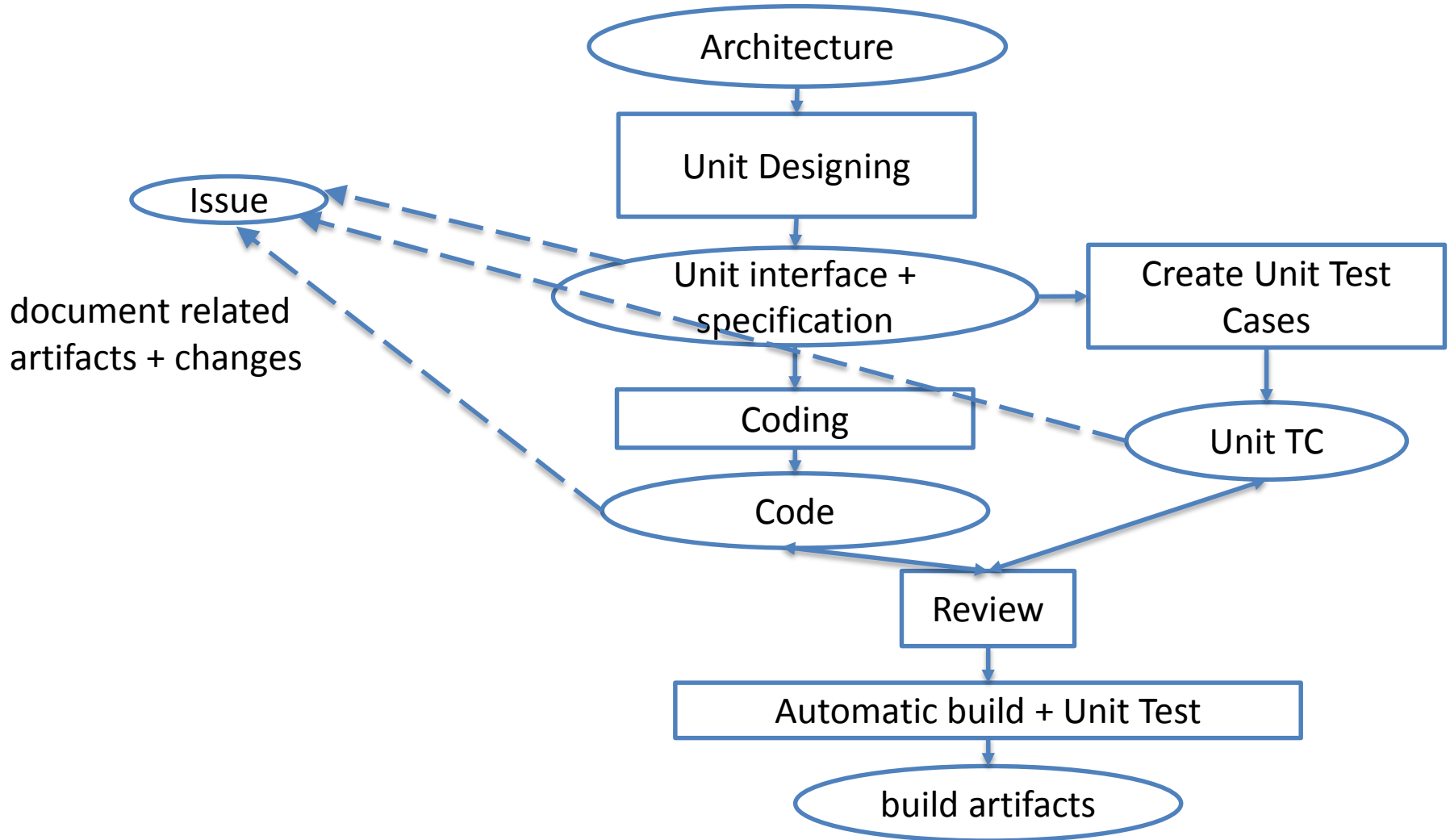
Thomas Schneider
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- **Kick-off Meeting**
- **4 Iterations**
 - Each iteration consists of
 - Requirements & Interaction Design
 - PBR: Test cases and customer interview
 - Architecture
 - Checklist-based review
 - Coding
 - Code reviews
 - Testing
 - Each iteration ends with testate
- **Final Presentation**
 - with Prof. Rombach
 - Date: t.b.d.

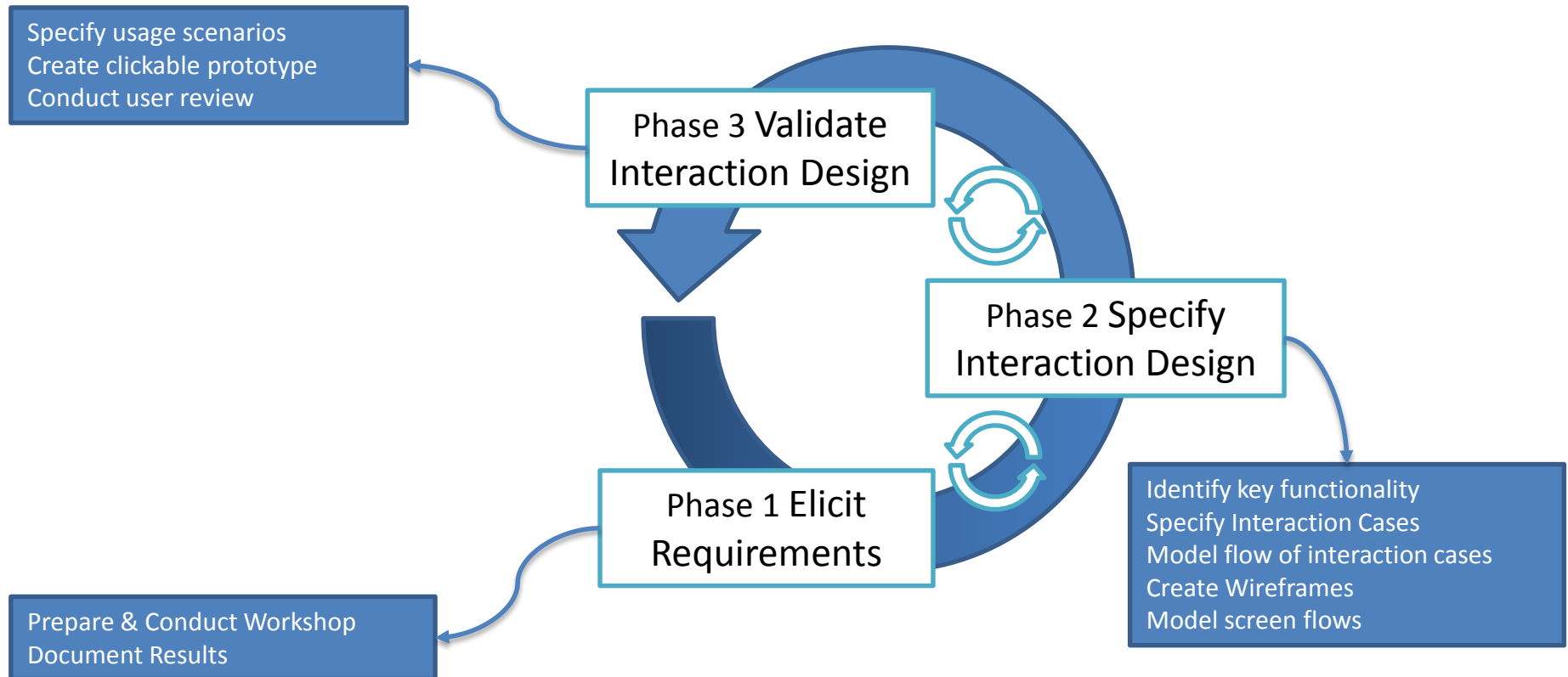
		April				May				June						July				
INFO	CW	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	THE UNIVERSITÄT RS LAUTERN	
	Iter 1			1	1	1	1													
	Req +Des			1	1															
	Co					1														
	QA						1													
	Iter 2							2	2	2										
	Req +Des							2												
	Co								2											
	QA									2										
	Iter 3											3	3	3						
	Req +Des											3								
	Co												3							
	QA													3						
	Iter 4														4	4	4			
	Req +Des														4					
	Co															4				
QA																4				
	Buffer																X			
	Finalize																	X		




Slide 14

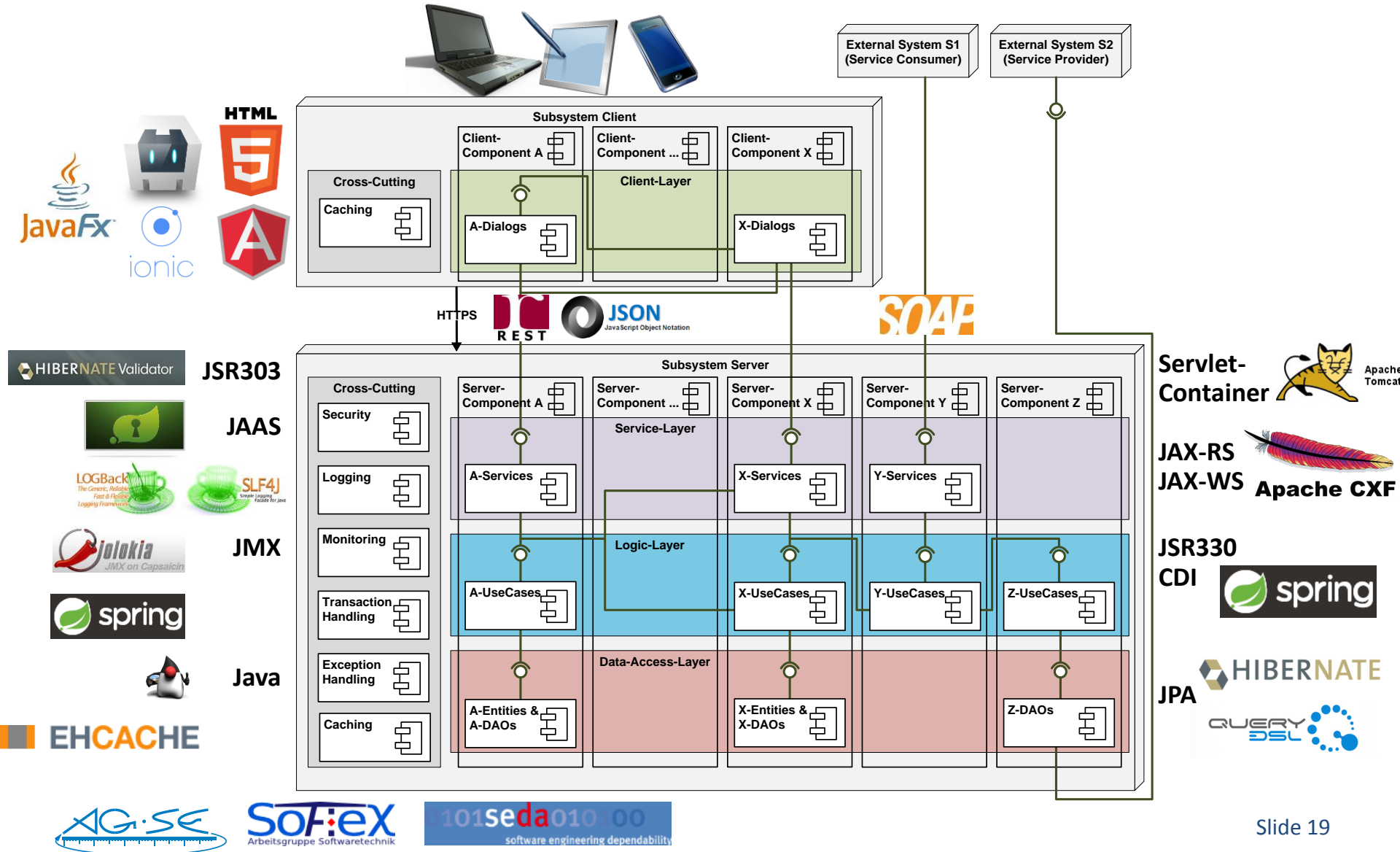


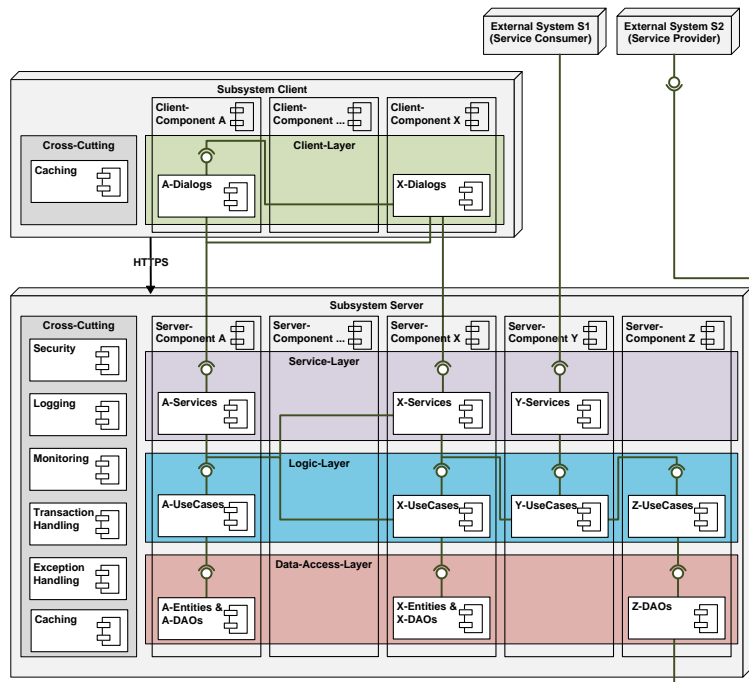


See „mConcAppt@GSE2016.docx“ for detailed guidance



	OASP4J 	OASP4JS 	OASP4NET 
Client	<ul style="list-style-type: none"> Currently not addressed JavaFx planned 	<ul style="list-style-type: none"> AngularJS Best-Practices Modules Sample Application Application Template 	<ul style="list-style-type: none"> Not planned
Server	<ul style="list-style-type: none"> JEE-Standards Best-Practices Modules Sample Application Application Template 	<ul style="list-style-type: none"> Not planned (node.js) 	<ul style="list-style-type: none"> In Progress





```

> oasp4j-example-application [oasp4j-sample develop]
├── src/main/java
│   ├── io.oasp.gastronomy.restaurant
│   │   ├── general
│   │   ├── offermanagement
│   │   │   ├── common
│   │   │   │   ├── api
│   │   │   │   └── base
│   │   ├── dataaccess
│   │   │   ├── api
│   │   │   ├── impl.dao
│   │   ├── logic
│   │   │   ├── api
│   │   │   ├── base.usecase
│   │   │   ├── impl
│   │   ├── service
│   │   │   ├── base
│   │   │   └── impl.rest
│   └── calermanagement

```


- **Infrastructure**
 - Git for source code management (SCM)
 - Jenkins
 - At least one Mac & Win10 for mobile builds
- **Follow the guidelines of the OASP!**
- **Think in use cases. Trace use cases to components.**
- **Testing**
 - Try to perform your tasks test-driven (TDD) by unit tests
 - Implement consumer-based tests

- **You will work as ONE Team**
 - gseprojekt@cs.uni-kl.de
- **Three groups exist**
 - Group 1: Backend
 - gseprojekt1@cs.uni-kl.de
 - Group 2: Citizen App
 - gseprojekt2@cs.uni-kl.de
 - Group 3: Bus App
 - gseprojekt3@cs.uni-kl.de
 - "Group 4": Supervisors
 - gseprojekt4@cs.uni-kl.de
- **You will only be able to finish your tasks if you continuously work on them**
 - 8 ECTS Points -> 240 hours, 13 weeks -> ~ 18,5 hours/week

Gruppe	Name
	1 Jay Bonkile
	1 Sriram Kumar Srinivasan
	1 Ricarda Rosemann
	1 Muhammad Zeeshan
	1 Mohammad Baniasad
	1 Hafiz Ahsan Raza
	2 Marcel Müller
	2 Johann Heinz
	2 Dominik Skalnik
	2 Steffen Benjamin Holzer
	2 Oliver Säger
	2 Maissa Kerkeni
	3 Mher Ter-Tovmasyan
	3 Charel Irrthum
	3 Patrick Pschorn
	3 Sascha Müller
	3 Sviatlana Shukailava
	3 Erik Grüner

- **Sign participation declaration**
 - you agree your result to be public and reusable
- **Get access to our lab**
 - Physical keys
- **Get access to**
 - PCs in lab
 - Github project
 - Jenkins-Server
- **Read guidelines for working**
- **Start to work**

- For requirements elicitation
- On Friday, April 22, in 32-439 at 13:15 h
- Preparation is necessary