

Business Informatics 2 (PWIN) WS 2023/24

Introduction & Course Organisation

Prof. Dr. Kai Rannenber

Chair of Mobile Business & Multilateral Security
Johann Wolfgang Goethe University Frankfurt a. M.

- Introduction to the Chair
- Course Organisation
- Scope and Outline of the Course
- Introduction to Information & Communication Systems

<p>E-Finance</p> <p>Prof. Dr. Peter Gomber</p>	<p>Business Informatics (Informatics)</p> <p>Prof. Dr. Mirjam Minor</p>	<p>Business Informatics & Information Management</p> <p>Prof. Dr. Oliver Hinz</p>
<p>Business Ethics & Business Education (associated)</p> <p>Prof. Dr. Gerhard Minnameier</p>	<p>Business Informatics</p> <p>Hon. Prof. Dr. Matthias Zieschang</p>	<p>Economic and Business Education (associated)</p> <p>Prof. Dr. Eveline Wuttke</p>
<p>Business Education</p> <p>Prof. Dr. Helmut Niegemann</p>	<p>Information Systems & Information Management</p> <p>Prof. Dr. Wolfgang König</p>	<p>...</p>
<p>Information Systems Engineering</p> <p>Prof. Dr. Roland Holten</p>	<p>Business Informatics & Microeconomics</p> <p>Prof. Dr. Lukas Wiewiorra</p>	<p>Mobile Business & Multilateral Security</p> <p>Prof. Dr. Kai Rannenber</p>

Chair of Business Administration, especially Business Informatics, Mobile Business and Multilateral Security

Chair of Mobile Business & Multilateral Security

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Team & External PhD Students



Kai
Rannenber



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Diana
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Sascha
Löbner



Atiyeh
Sadeghi



Ann-Kristin
Lieberknecht



Frédéric
Tronnier



Ahad
Niknia



Peter
Hamm



Tim
Schiller



Michael
Schmid



Christopher
Schmitz



Prof. Dr. Jan Muntermann
Göttingen University



Dr. Stefan Figge
BuyIn (Deutsche Telekom / Orange)



Dr. Mike Radmacher
Deutsche Telekom



Dr. Andreas Albers
Deutsche Telekom



Dr. Stefan Weiss
Swiss Re



Prof. Dr. Denis Royer
Ostfalia – Hochschule für angewandte Wissenschaften



Dr. Markus Tschersich
Continental



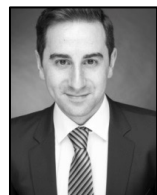
Dr. Ahmad Sabouri
Continental



Dr. Falk Wagner
EE



Dr. Christian Kahl
CyberSolutions GmbH



Dr. Gökhan Bal
Deutsche Bahn



Dr. André Deuker
KfW



Dr. Shuzhe Yang
GLS



Dr. Ahmed Yesuf
FARO



Dr. Welderufael Tesfay
Deutsche Telekom



Dr. Fatbardh Veseli
Capgemini Germany



Dr. Majid Hatamian
Google



Dr. habil. Sebastian Pape
Continental



Dr. David Harborth
Capgemini Invent

Office:

Diana Weiß

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Office Hours: On appointment



Vita of Prof. Dr. Kai Rannenberg

Einbeck, Göttingen, Eystrup, Wolfsburg, ...
TU Berlin (Dipl.-Inform.)
Uni Freiburg (Dr. rer. pol.)

Dissertation on “**Kriterien und Zertifizierung mehrseitiger IT-Sicherheit**“
Standardization at ISO/IEC JTC 1/SC 27 and DIN NI-27

Kolleg “Sicherheit in der Kommunikationstechnik”
Gottlieb Daimler- and Karl Benz-Foundation

Multilateral Security:
“Empowering Users, Enabling Applications“, 1993 - 1999

Recent History

1999-09 till 2002-08

Microsoft Research Cambridge UK

www.research.microsoft.com

Responsible for “Personal Security Devices and Privacy Technologies“

2001-10 Call for this chair

2001-12 till 2002-07 Stand-in for the chair

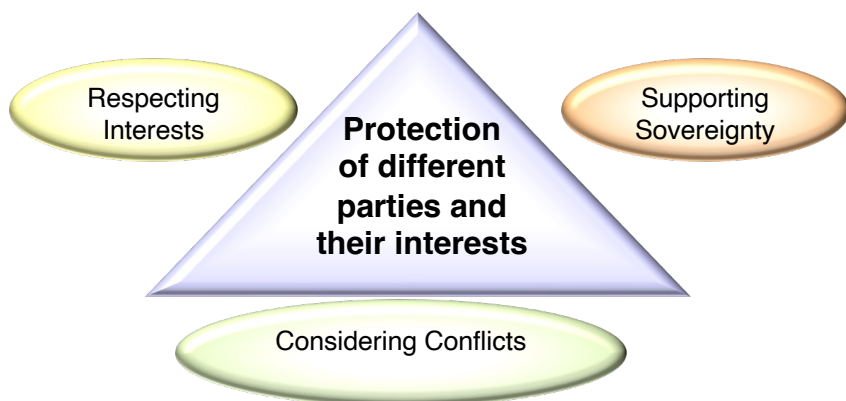
Since 2002-07 Professor at Goethe University Frankfurt

Since 2012-04 Visiting Professor at the National Institute for Informatics (Tokyo, Japan)



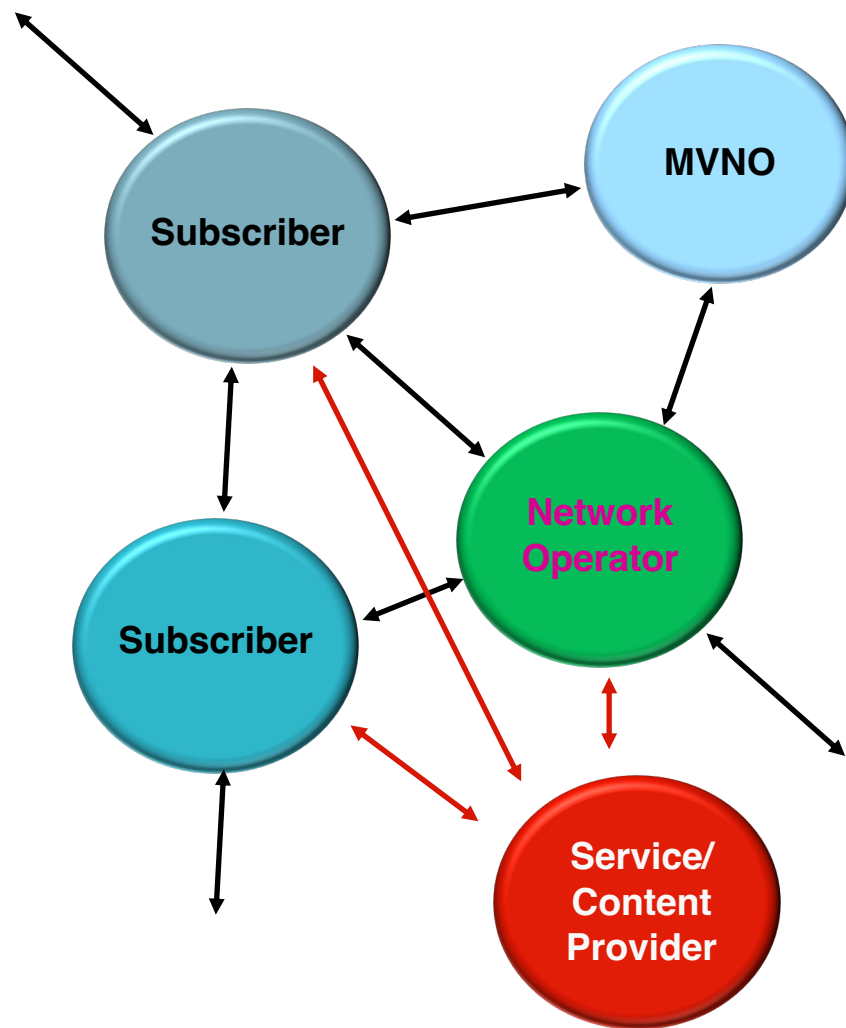
Different Parties with different Interests

- Customers/Merchants
- Communication partners
- Citizens/Administration

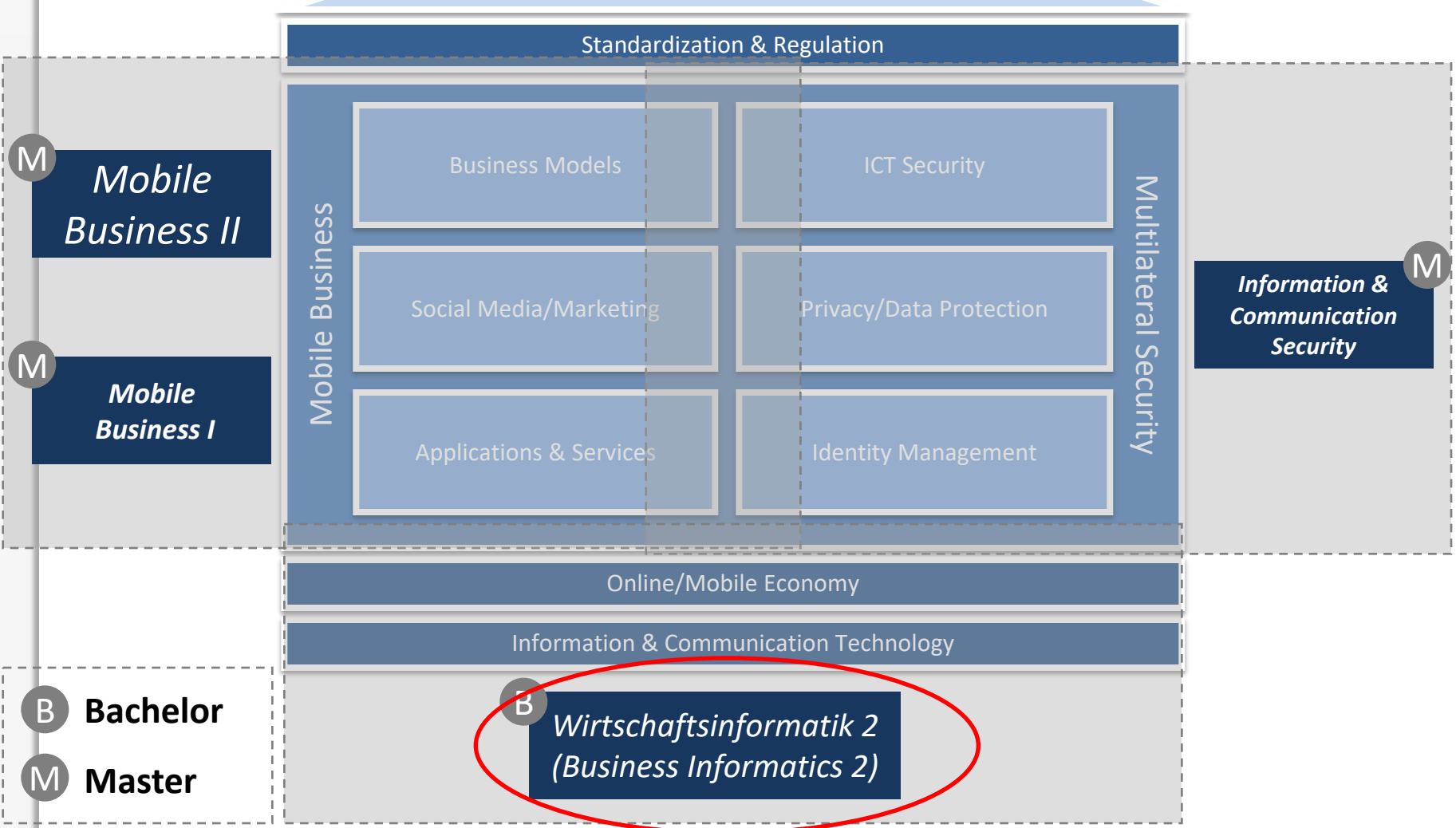


... in a world of consortia

- more partners
- more complex relations



Chair of
Mobile Business & Multilateral Security



	WS 2023/2024	SS 2024
Bachelor	<p><i>Course</i> Business Informatics 2 (PWIN)</p>	<p><i>Course</i> /</p>
Master	<p><i>Course</i> Mobile Business I: Application Design, Applications, Infrastructures and Security</p> <p><i>Seminar</i> Data Privacy Analysis in Cloud Services</p>	<p><i>Course</i> Mobile Business II: Application Design, Applications, Infrastructures and Security</p> <p>INKO: Information & Communication Security</p> <p><i>Seminar</i> A Seminar with and about ChatGPT and LLMs</p>

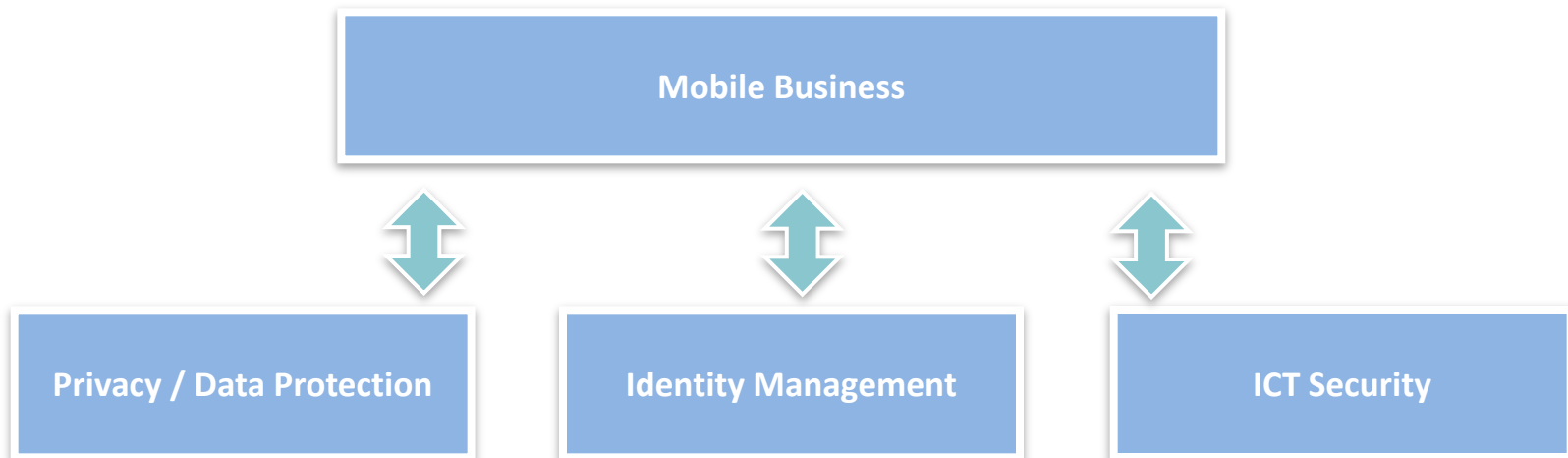
- **Master of Science in Betriebswirtschaftslehre**

<http://www.wiwi.uni-frankfurt.de/?id=96>

- **Master in Wirtschaftsinformatik**

<http://www.informatik.uni-frankfurt.de/index.php/de/studierende-studiengaenge/studierende-studiengaenge-master-wirtschaftsinformatik.html>

Advancing *Mobile Business* while enabling individuals to be in control of their personal data by providing *Identity Management*, *Privacy Protection*, and *ICT Security* within the Digital Economy



Chair of
Mobile Business & Multilateral
Security

FIIPS-at-Home
PANELFIT Privacy & Us

Standardization & Regulation



Premium*



Mobile Business

Business Models

ICT Security

Multilateral Security

Social Media/Marketing

Privacy / Data Protection

Applications & Services

Identity Management

Online/Mobile Economy

Information & Communication Technology

European & national-funded Projects

Industry Co-operations

PhD Projects



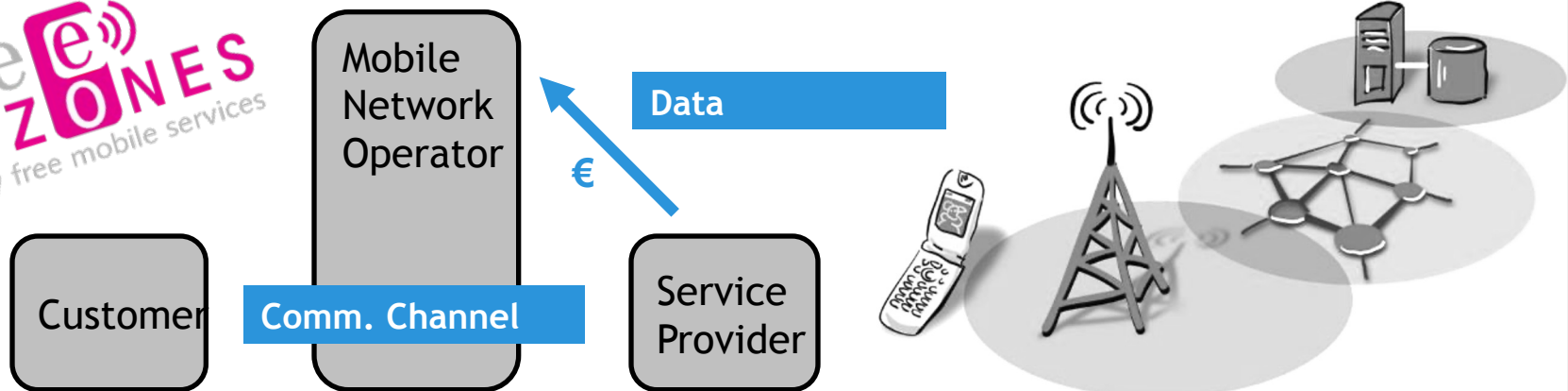
predict
prioritise
prevent



PREMIUM Project (Completed in 2007)

- **Potential:** Mobile network operators have a customer relation with most of the German population!
- **Offering:** Mobile network operators are providing service providers with a communication channel to potential customers.
- **Motivation:** Service providers gain higher, mobile initiated revenues in their business.
- **Objective:** Eliminating data costs for customers while making them marketing costs for service providers.

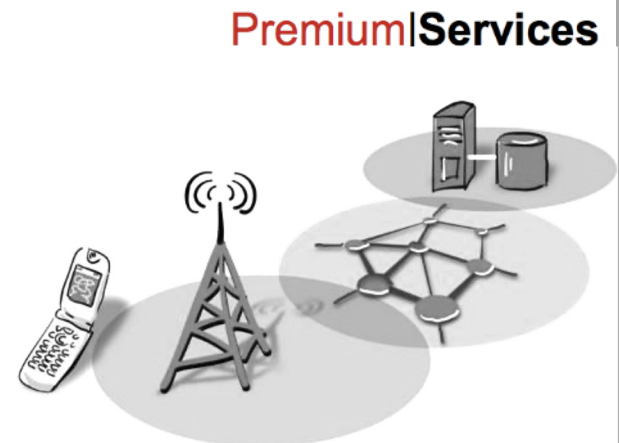
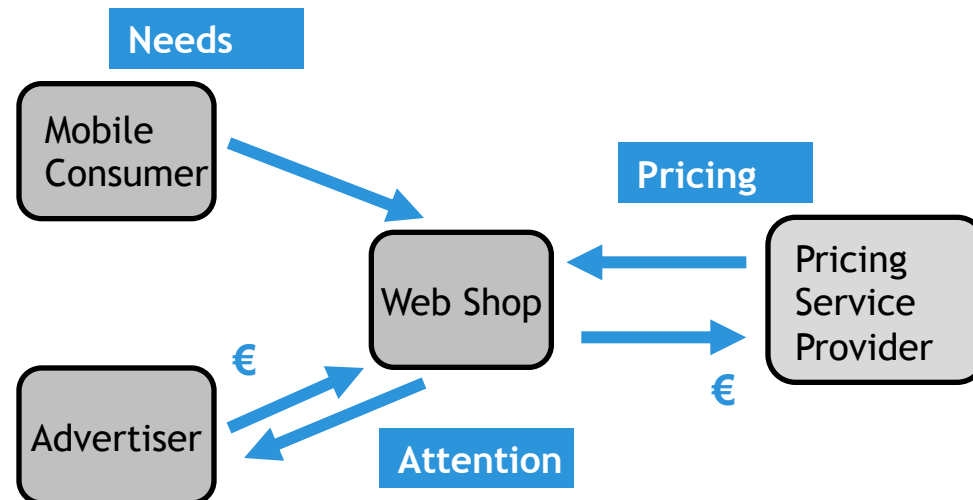
free
ZONES
Enjoy free mobile services



PREMIUM Services Project (Completed in 2011)

Research on Pricing Mechanisms for Context-sensitive Mobile Consumer Contacts offered to Mobile Advertisers

- Design of dynamic, interactive pricing mechanism to address the unique characteristics of Context-sensitive Mobile Consumer Contacts
- Development of an Evaluation Tool for Advertisers in order to determine the value of mobile consumers in their current usage situation
- Implementation of Pricing Service Platform for the webservice-based provision of Pricing Mechanisms to SMEs (e.g. Online Webshops)



- EU FP7 Challenge “Secure, dependable and trusted Infrastructures”



- Integrated Project
- Planned for 3 years from 2008-03 (extended till 2011-06): Summit event at IFIP Sec 2011 Lucerne
- EC contribution : ~€ 10 Mio
- Partners
 - IBM, Microsoft, SAP, Giesecke & Devrient, W3C, and more...



Giesecke & Devrient
security at work.



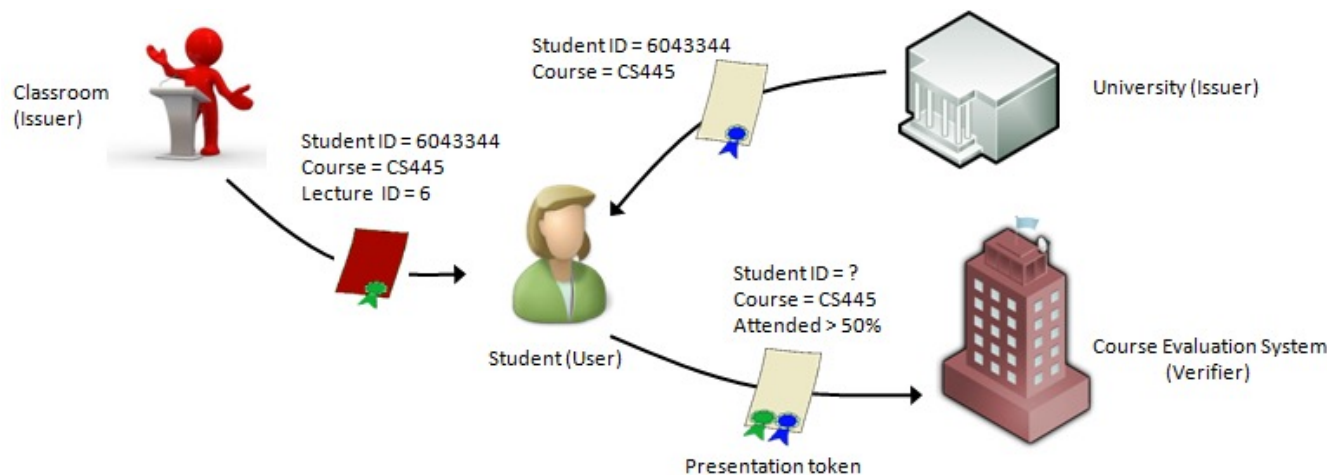
- Providing Privacy *throughout Life*: Prime*Life*!
 - ... digital footprints left over lifetime
 - ... in emerging Internet applications
 - ... user-centric and configurable
 - Making Privacy Real: Prime*Life*!
 - Making results of PRIME (FP6) and PrimeLife widely usable and deployed
 - Cooperating with other projects for transferring PRIME and PrimeLife technologies and concepts
 - Advancing State-of-the-Art in Technology supporting Privacy and Identity Management
 - Mechanisms, HCI, Policies, Infrastructure
- ... Building on results and expertise of PRIME



- Attribute-based Credentials for Trust (ABC4Trust)
- Nov. 2010 - Feb. 2015
- Objectives:
 - Abstraction of concepts of privacy-ABCs & unification of features
 - A common unified architecture
 - Independent from the specific technologies
 - Enabling the federation of privacy-ABC Systems based on different technologies
 - Enabling interoperability between different privacy-ABC technologies
- Avoid lock-in into one specific system
- Raise trust in privacy-ABC technologies



- 1st Pilot - Privacy in Online Evaluation and Feedback Systems
 - Deployment: Patras University, Greece
 - Scenario: Students evaluate anonymously the courses they attended
- 2nd Pilot - Privacy in social communication fora
 - Deployment: Söderhamn Secondary School, Sweden
 - Scenario: Pupils communicate using pseudonyms on the school communication system
- Benefits of Privacy-ABCs
 - Privacy-ABCs are by default untraceable (no user-tracking)
 - Enable minimal disclosure (user reveals only the necessary information)
 - User can chose to stay anonymous or generate (unlimited number of) pseudonyms
 - Advanced security (no sharing of credentials, device-binding for extra protection)



Reference implementation with ABC functionality

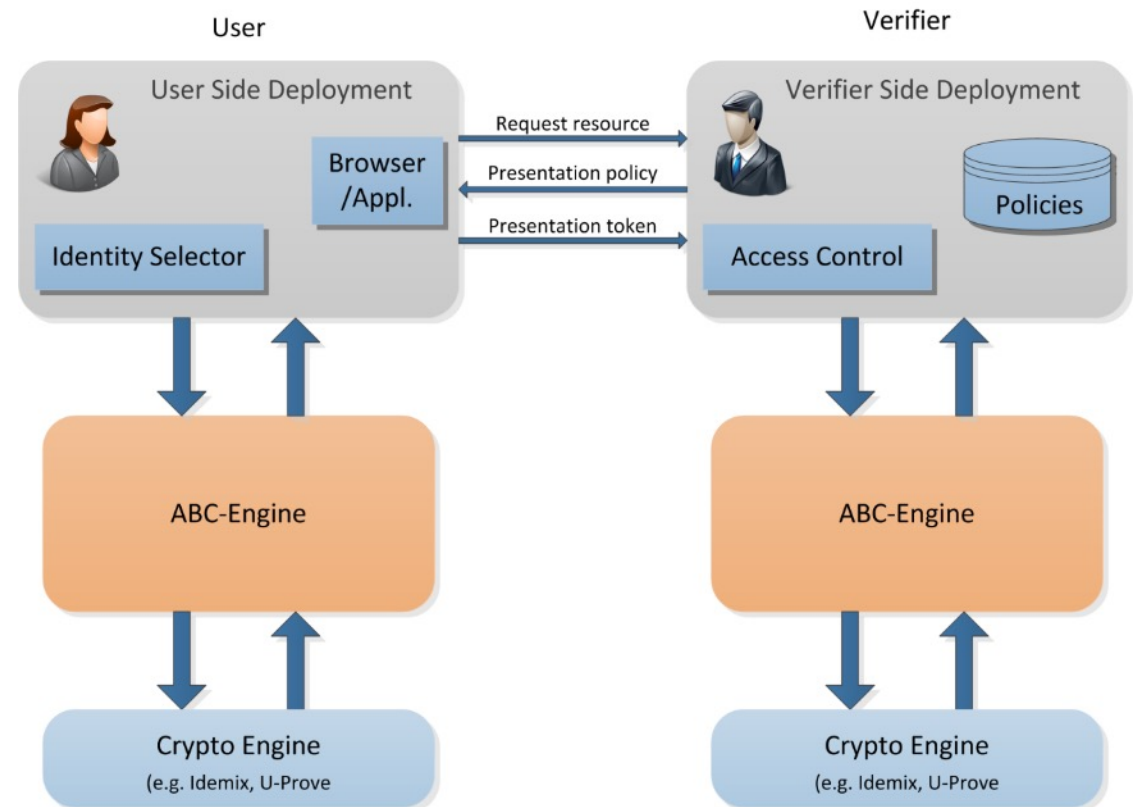
- coded in the ABC-Engine,
- exposed to the application layer as web-services,
- as open source

For developers

- Easier application development
- Cryptographic operations are abstracted away from

For users

- Only need to install a browser plug-in



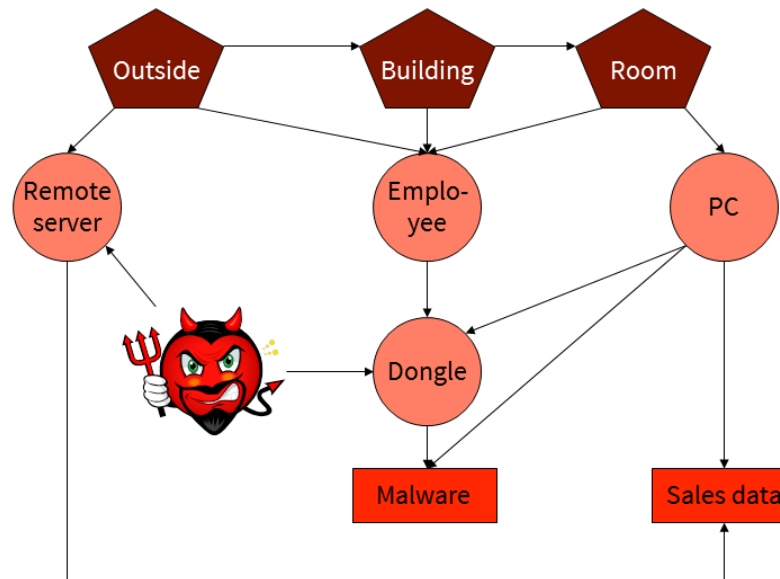
(Completed in 2016)

- There is a constant increase of costs due to cyber attacks (hacking, industrial espionage, exploitation of loopholes).
- How to combine technical sciences, social sciences and state-of-the-art industry processes and tools to
 - predict complex attack scenarios spanning digital, physical, and social engineering aspects,
 - enable informed decisions on security investments,
 - reduce security incidents, and
 - increase resilience?



■ Project aims

- tool support for investments into cyber security controls
- models and processes to analyse and visualize possible attacks
- an attack navigator to systematically predict, prioritise, and prevent complex attacks



- Privacy and Usability (Privacy & Us)
- Dec. 2015 until Sep. 2020
- Objectives:
 - Develop ways to minimize the negative impact of personal information disclosure
 - Create awareness of the possible negative consequences of uncontrolled personal data disclosure
 - Develop and evaluate methods to assess risks and make informed decisions

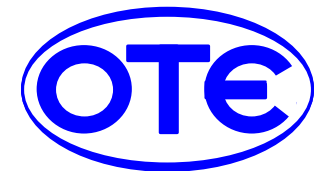




CREDENTIAL

Overview and Vision

- Oct 2015 - Sep 2018
- **Vision:** develop, test, and showcase innovative cloud-based services for storing, managing, and sharing **digital identity information** and other highly critical **personal data** with a demonstrably **higher level of security** than other current solutions.
 - Secure, user-friendly, cloud-based identity management solution
 - Open, portable and broadly interoperable architecture
- Piloting in different domains
 - e-government,
 - e-health, and
 - e-business



- **Duration:** 08/2015 - 12/2018
- **Aim:** Protection of communication networks of small and medium sized energy providers.
- **Focus:** Balance between security and usability. Enable non-experts to detect and overview security risks.
- **Research I:** Development of security metrics and corresponding measuring methods.
- **Research II:** Creation of a cross-organisational knowledge-database for small and medium sized energy providers to improve availability and integrity of critical infrastructures against attackers.



- **Duration:** 01/2016 - 06/2019
- **Aim:** Create and integrate privacy-enhancing technologies into the internet infrastructure
- **Focus:** Establish PET in the mass market
 - Develop new or adapt existing business models
 - Standardize technologies
 - User study: How do users understand tariff and pricing models?
 - User study: What is the perceived relationship of service feature and accepted prices?
 - How can existing value creation architectures and operational models be adapted?





Privacy



Usability

Business Model



Revenues



Costs



Value

Network



Risk

Assessment



Value

Proposition



Distribution

Channels



Tariff

Model



Customers



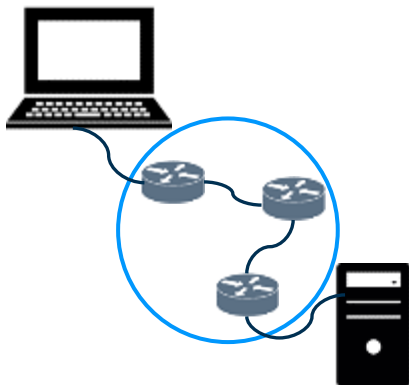
Provider



Requirements

Privacy Enhancing Technologies

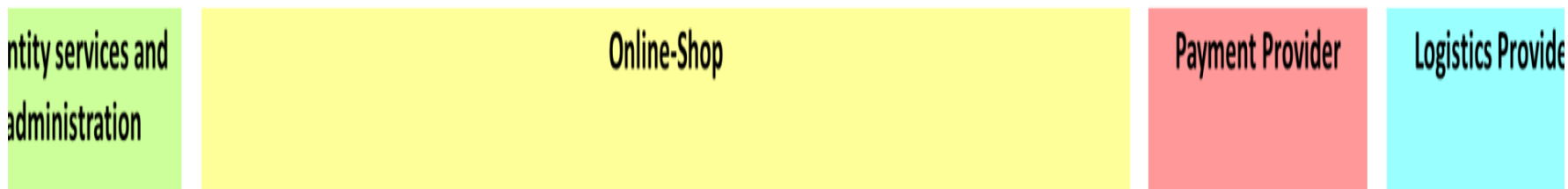
Conditions



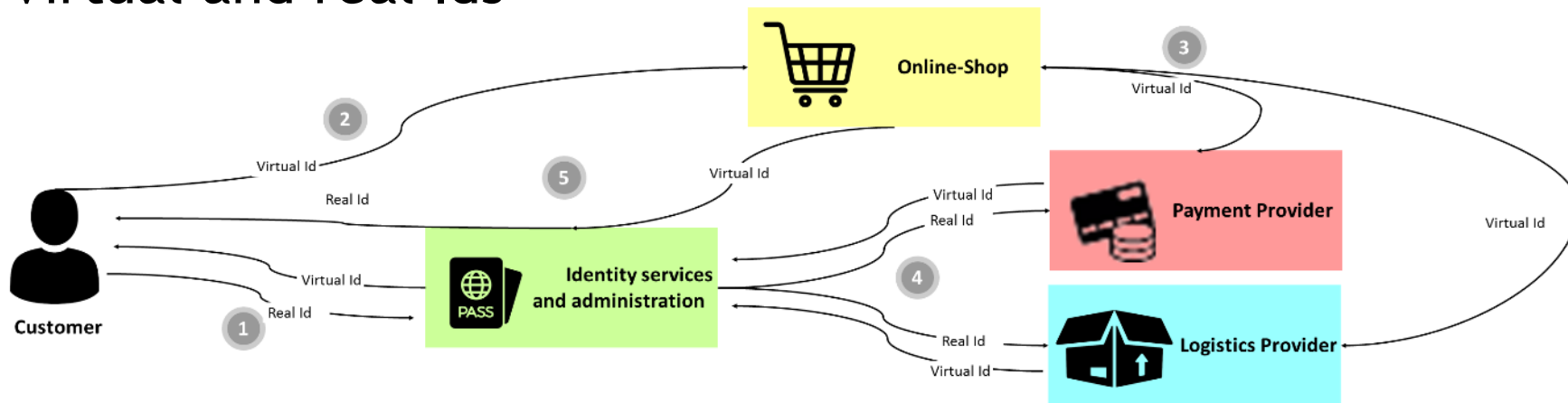
- **Selbstdatenschutz im Online Commerce**
- **Duration:** 04/2016 - 06/2019
- **Aim:** Enhance Privacy for Online Shopping
- **Focus:** Develop an online commerce solution with an architecture that enables pseudonymous online shopping, while respecting the interests of all stakeholders.
 - Modelling business processes
 - Considering especially the requirements of the web shop providers since they are crucial for mass-market penetration
 - User studies concerning usability and business model development

Hochschule
Zittau/Görlitz
UNIVERSITY OF APPLIED SCIENCES

Commodity chain



Virtual and real Ids



- 1 Registration
- 2 Login at Online-Shop
- 3 Payment and Logistics Provider get orders
- 4 Mapping of virtual Id to real Id for payment and logistics provider
- 5 Confirmation E-Mail

- Participatory Approaches to a New Ethical and Legal Framework for ICT
- Website: www.panelfit.eu
- Duration: 2018/11 - 2022/04
- Aim: Help researchers and innovators in conducting ethical and legally compliant research
- Focus: Conduct issues and gap analysis and develop guidelines for researchers and innovators on:
 - Informed Consent
 - Data Commercialization
 - Cybersecurity



- Frühwarn-, Informations- und Angriffserkennungssystem für Smart Home
- Website: www.fiips.org
- Duration: 2022/12 - 2025/12
- Aim: to improve users' self-determination and confidence in their use of digital technologies in their home network. To this end, a mobile app and hardware solutions are to be developed to protect home networks and smart home systems.
- Focus: Ensure user adoption and privacy through usability tests, (expert) interviews and large-scale qualitative studies throughout the development of the solutions.



SPONSORED BY THE





Goethe University co-ordinates mega-project on cybersecurity and data protection

📅 28. Februar 2019



An extensive research project on cybersecurity and data protection in Europe will be launched this week. Goethe University Frankfurt has assumed the leadership and co-ordination of the 43 total consortium partners from science, business, industry and society.

i This is the news channel for the latest information from science and research at Goethe University.

<https://aktuelles.uni-frankfurt.de/englisch/goethe-university-co-ordinates-mega-project-on-cybersecurity-and-data-protection/>

Proposal for a European Cybersecurity Competence Network and Centre | Digital Single Market - Mozilla Firefox

Proposal for a European Cybers X +

https://ec.europa.eu/digital-single-market/en/proposal-european-cybersecurity-competence-nei

Suchen

Commission and its priorities Policies, information and services Log in



Search

European Commission > Strategy > Digital Single Market > Policies >

Digital Single Market

POLICY

Proposal for a European Cybersecurity Competence Network and Centre

Building on the ambitious cybersecurity initiatives announced in 2017, the European Commission proposes as a next step the creation of a Network of Cybersecurity Competence Centres and a new European Cybersecurity Industrial, Technology and Research Competence Centre to invest in stronger and pioneering cybersecurity capacity in the EU.

Aims of this proposal

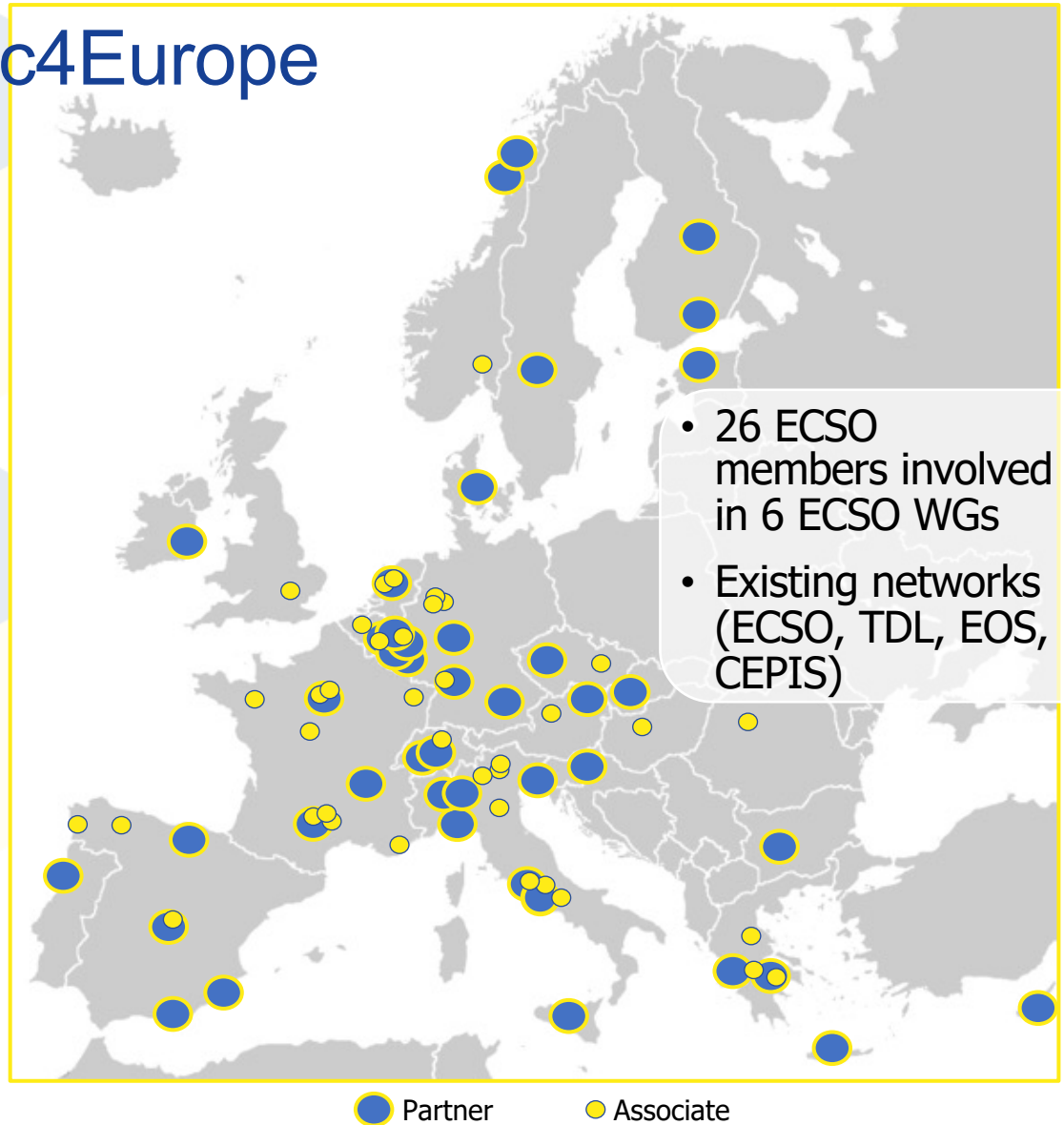
The mission of the proposal to establish a European Cybersecurity

About Cybersecurity

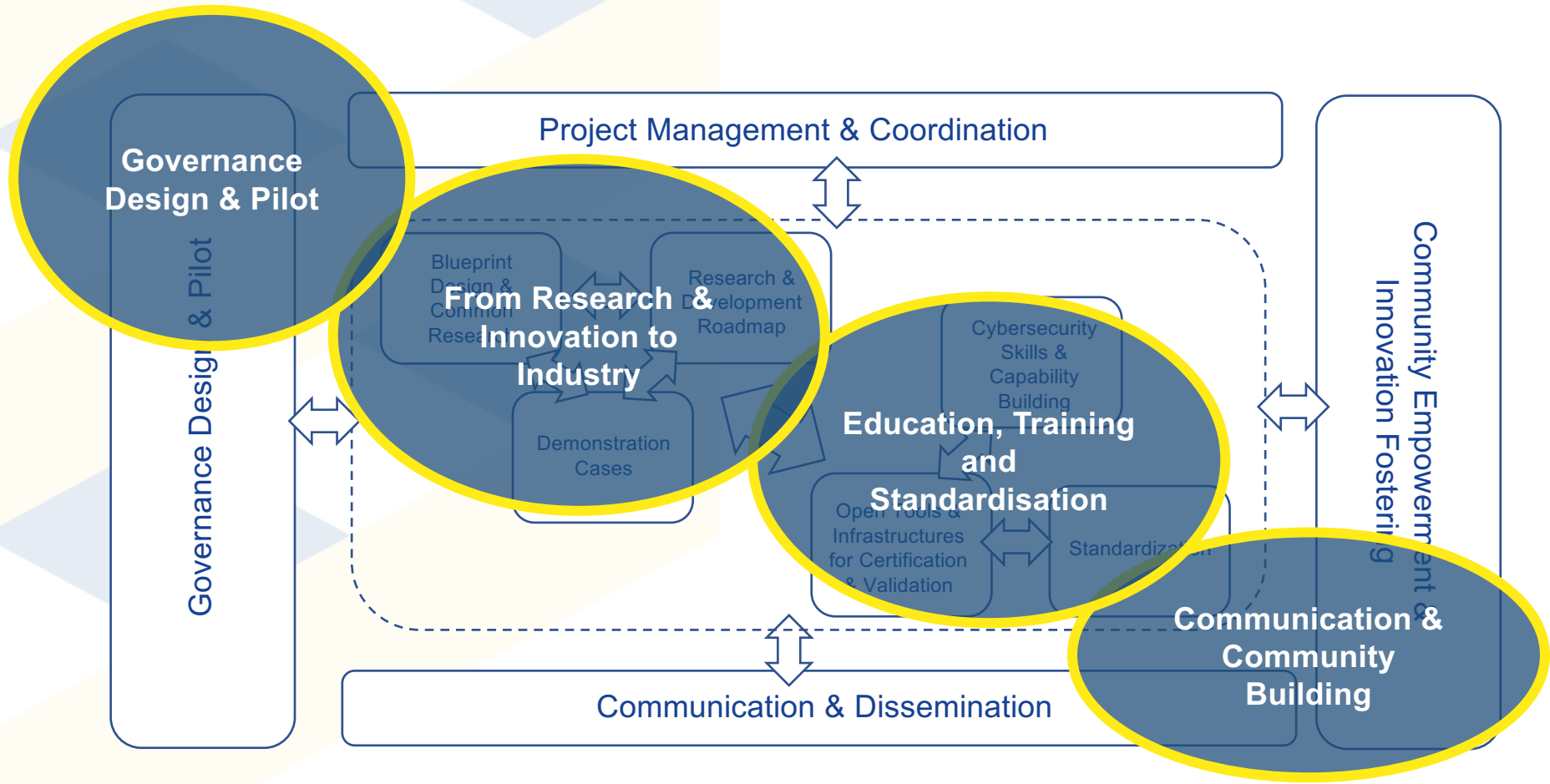
- Policies +
- Blog posts
- News
- Events

Who Are CyberSec4Europe

- Centres of Excellence / Universities / Research Centres / Enterprises (small and larger)
- 43 members in 22 countries
- 40 associates in 16 countries
- 11 technology/application elements and coverage of nine vertical sectors
- Experience from over 100 cybersecurity projects in 14 key cyber domains
- Funding period: 02/2019 – 12/2022



Piloting a Competence Network



Online Panel Discussion

19:00-20:30, 9 July 2020

Realising Europe's Cybersecurity Strengths and Capacity for the 2020s

Moderator

David Goodman

Trust in Digital Life Association

Tamara Tafra

Previous chair of the Horizontal Working Party on Cyber Issues, Permanent Representation of Croatia to the EU

Rasmus Andresen

MEP, Rapporteur Cybersecurity Competence Network Centre Regulation

Andreas Könen

Head of Cyber and Information Security, German Federal Ministry of the Interior, Building and Community

Miguel González-Sancho,

Head of Cybersecurity Technology and Capacity Building, DG CNECT, EC

Juhan Lepassaar

Executive Director, ENISA

Europe is funded by the European Union under the H2020 Programme Grant Agreement No. 830929

Welcome Address

Lucia Puttrich

Hessian Minister of European and Federal Affairs and Representative of the State of Hesse at the Federal Government

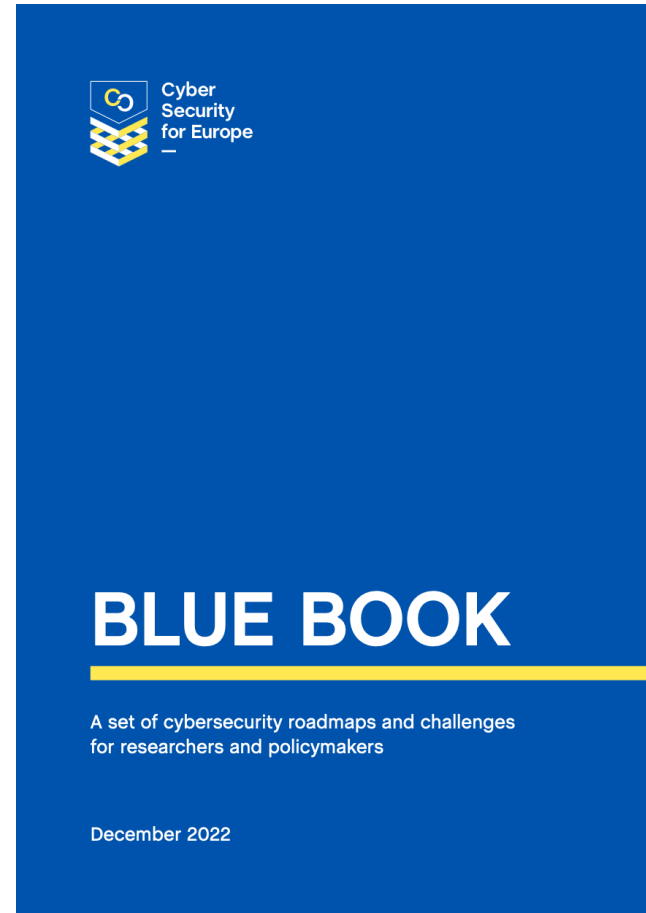
Welcome Address

Kai Rannenber

Co-ordinator CyberSec4Europe
Goethe University Frankfurt

CyberSec4Europe Summit Event
<https://cybersec4europe.eu/events/momentum/momentum-report/>

Overview Books



<https://cybersec4europe.eu/our-results/books/>

Objective:

- aims to bridge the gap between degrees, working life, and marketable cybersecurity skill sets necessary in today's digitalization efforts and provide examples of best practices for cybersecurity training programs.

Facts:

- 27 organizations from 16 countries
- Funded by the European Union, Project Agreement no. 101083594
- Project lead: Goethe University
- Website: <https://www.cybersecpro-project.eu>

- Multilateral Security, Privacy, and Identity Management in
 - IT Security Evaluation
 - Criteria (IS 15408, Common Criteria)
 - Certification
 - Standardisation (in ISO/IEC JTC 1/SC 27)
 - WG 3: IT Security Evaluation Criteria
 - WG 5: Identity Management and Privacy Technologies

- EU ENISA, European Cybersecurity Competence Centre and Network, EP, ...

Partners of the Chair



VOLKSWAGEN PAYMENTS S.A.



Unabhängiges Landeszentrum für
Datenschutz Schleswig-Holstein



and many more ...

- Introduction to the Chair
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- Scope and Outline of the Course
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Sascha Löbner
M.Sc.

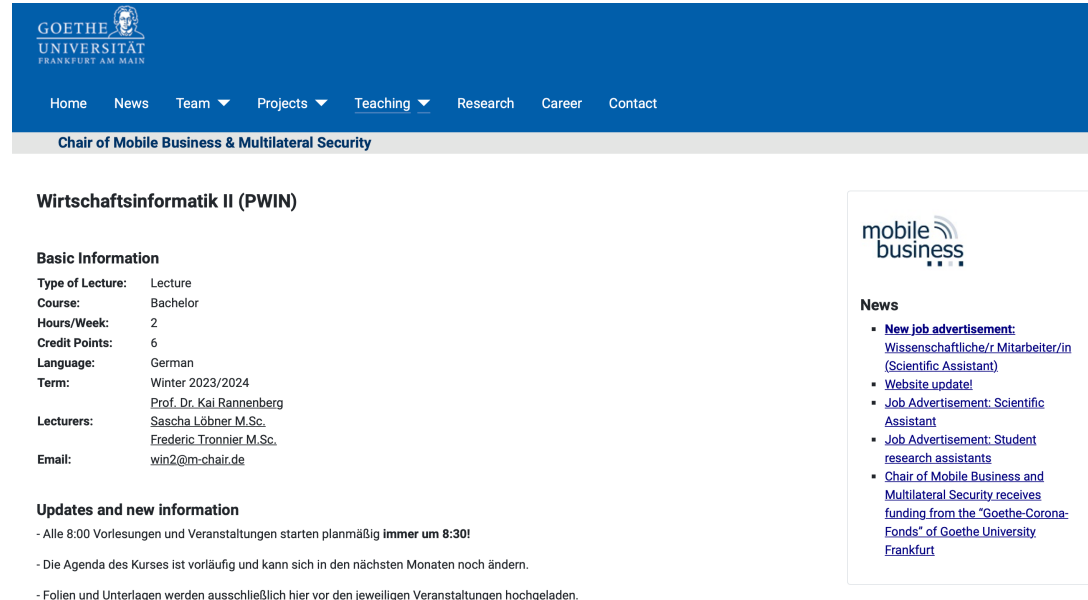
**Please write to:
win2@m-chair.de**



Frederic Tronnier
M.Sc.

- **Course Slides**
 - Slides of the course can be downloaded from the website of the Chair at www.m-chair.de

- **Online News**
 - News about the course (e.g. room changes, announcements, etc.)
 - Available via website of Chair



The screenshot shows the website for the Chair of Mobile Business & Multilateral Security at Goethe University Frankfurt am Main. The page title is "Wirtschaftsinformatik II (PWIN)".

Basic Information

Type of Lecture:	Lecture
Course:	Bachelor
Hours/Week:	2
Credit Points:	6
Language:	German
Term:	Winter 2023/2024
Lecturers:	Prof. Dr. Kai Rannenberg Sascha Löbner M.Sc. Frederic Tronnier M.Sc.
Email:	win2@m-chair.de

Updates and new information

- Alle 8:00 Vorlesungen und Veranstaltungen starten planmäßig **immer um 8:30!**
- Die Agenda des Kurses ist vorläufig und kann sich in den nächsten Monaten noch ändern.
- Folien und Unterlagen werden ausschließlich hier vor den jeweiligen Veranstaltungen hochgeladen.

News

- **New job advertisement:** [Wissenschaftliche/r Mitarbeiter/in \(Scientific Assistant\)](#)
- [Website update!](#)
- [Job Advertisement: Scientific Assistant](#)
- [Job Advertisement: Student research assistants](#)
- [Chair of Mobile Business and Multilateral Security receives funding from the "Goethe-Corona-Fonds" of Goethe University Frankfurt](#)

- Exercises
 - Presentation and discussion of exercise results
 - Addressing of open questions from the lectures
 - Preparation for final written exam
- „Mentorium“
 - Preparation, presentation and discussion of exercises in smaller groups of students
- All materials are going to be made available on the website of the Chair in advance and should be prepared by the students.

- Duration: 90 minutes
- 6 Credit Points
- Date of written exam is going to be posted on the examination office's website
- Exam language: German
- All lecture and exercise content is relevant unless it is explicitly excluded
- Previous written exams can be found at www.m-chair.de

Equivalence of prior Academic Achievements to this course

- Acceptance of verified achievements of universities or universities of applied sciences and arts (located in Germany or foreign countries) is possible.
- Achievements from schools generally rejected:
 - Apprenticeships of grammar schools, secondary schools, technical colleges, etc.
 - Apprenticeships of vocational schools

Equivalence of Academic Achievements prior to this Course

- Acceptance will be granted if it is verified that at least 75% of the contents of this course (incl. exercises) was covered and studied at a former university.
- In addition, the weekly number of hours of the course at the former university must be higher or equal to the hours of this course (2L+1E) in order to be accepted .
- The application documents have to consist of an outline of the passed course from the former university, a corresponding certificate and a table of the contents, which shows the overlap with this course (*structured by the outline of this course!*).

<https://moodle.studiumdigitale.uni-frankfurt.de/moodle2/enrol/index.php?id=325>



Suche



Definition des Tages

Supply Chain Performance Measurement

Hier weiterverbreiten Bernd Hellingrath Das Supply Chain Performance Measurement bewertet die Effektivität und Effizienz der Performanz einer gesamten Supply Chain. Der Vergleich der gemessenen Performanz mit Plan- oder Vergangenheitsdaten ermöglicht die...



Suche

Search

Erweiterte Suche

Enzyklopädie der Wirtschaftsinformatik

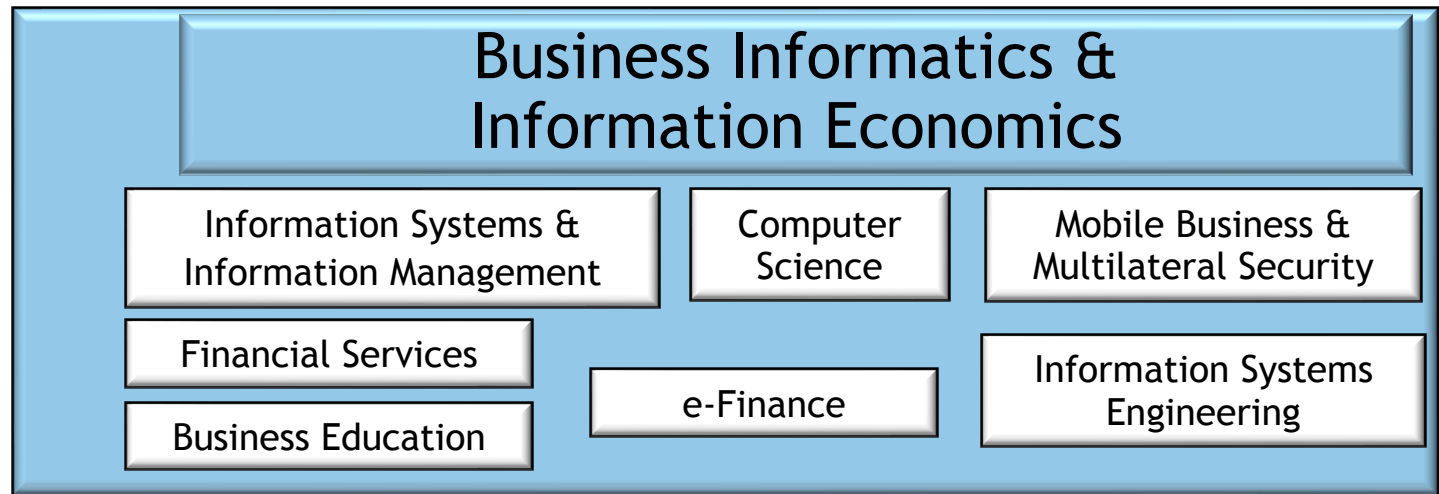
Herzlich Willkommen in der Enzyklopädie der Wirtschaftsinformatik, dem Nachschlagewerk für Wissenschaftler, Praktiker und Studierende!

www.enzyklopaedie-der-wirtschaftsinformatik.de

- Introduction to the Chair
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Integration of the Course into the Teaching of Business Informatics

Focus Phase



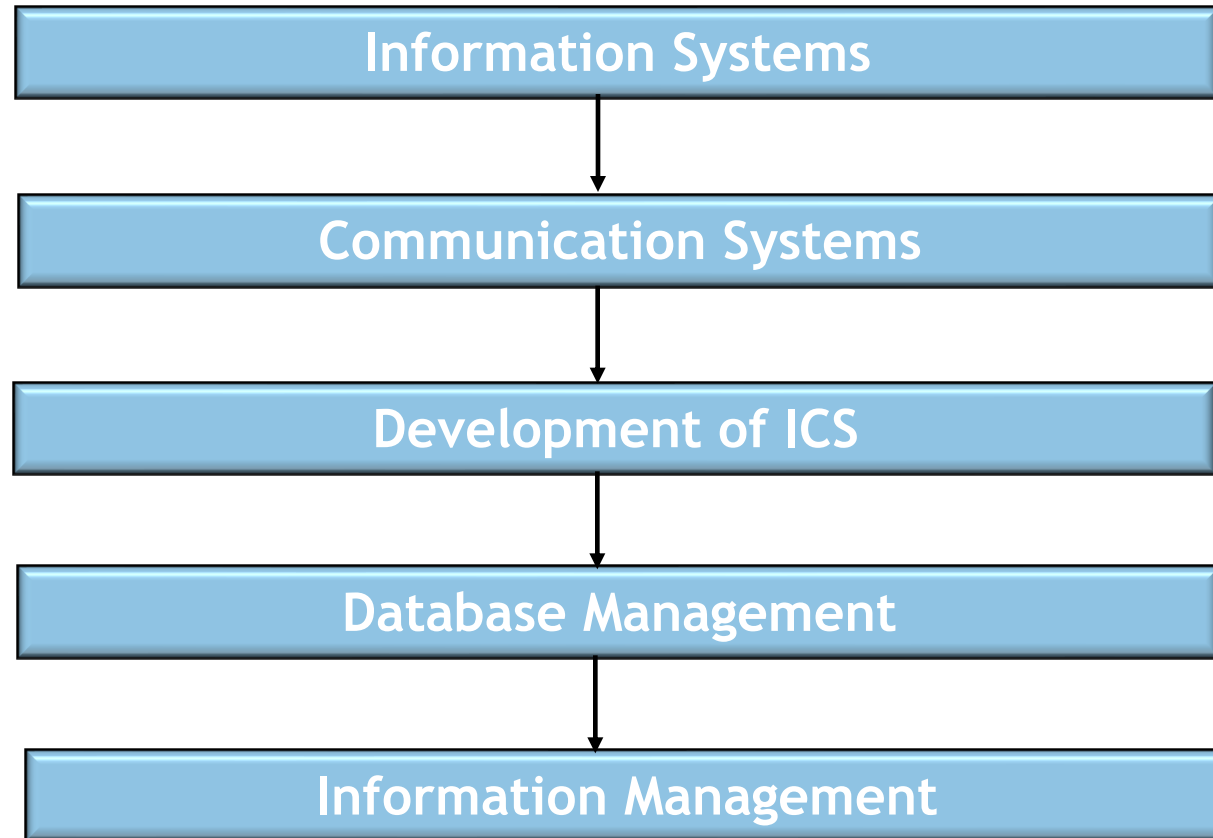
Advanced Phase

PWIN / Business Informatics II

Orientation Phase

OWIN / Business Informatics I

Components of the Course Business Informatics II (PWIN)



Components of the Course Business Informatics II (PWIN)

Information Systems

Purpose of and Research on Information Systems

Enterprise Modelling

Architectures of Information Systems

Mobile Information Systems

Components of the Course Business Informatics II (PWIN)

Communication Systems

Introduction to layer-based Communications

Fixed Networks

Wireless Networks

After NSA-gate the Internet will not be what it used to be

The screenshot shows a Firefox browser window displaying a Guardian article. The browser's address bar shows the article title: "The US government has betrayed the int...". The Guardian website header includes the logo, a search bar, and navigation links for "News", "Sport", "Comment", "Culture", "Business", "Money", "Life & style", "Travel", and "Environment". A blue banner reads "Comment is free". The article title is "The US government has betrayed the internet. We need to take it back", with a sub-headline: "The NSA has undermined a fundamental social contract. We engineers built the internet – and now we have to fix it". A list item below the article reads "Explaining the latest NSA revelations – Q&A". The author's name is "Bruce Schneier", dated "The Guardian, Thursday 5 September 2013 20.04 BST", with a "Jump to comments (720)" link. On the right side, social sharing buttons are visible: Facebook Share (14174), Tweet (5,690), Google+ (3k), Pin it (28), LinkedIn Share (454), and Email. Below these are icons for "Article history" and "World news". At the bottom of the article, there is a photograph of a server room.

[Schneier 2013]

Development of ICS

Management of IT-Projects

Software Engineering

Object Orientation & UML

Markup Languages

Components of the Course Business Informatics II (PWIN)

Database Management

Databases

SQL

Information Management

Business Process Reengineering

Business Process Modeling

KW	Day	Time	Room	Type	Nr.	Title	Slides
KW42	17.10.23	08:00 - 10:00	HZ4	Lecture	VL1	Introduction & Course Organisation	
KW42	17.10.23	10:00 - 12:00	HZ4	Lecture	VL2	Information Systems I - IS Basics	
KW43	24.10.23	10:00 - 12:00	HZ4	Exercise	E1		
KW44	31.10.23	8:00 - 10:00	HZ4	Lecture	VL3	Informationssysteme II - Modelle und Architekturen	
KW44	31.10.23	10:00 - 12:00	HZ4	Lecture	VL4	Informationssysteme III - Mobile Information Systems	
KW45	07.11.23	10:00 - 12:00	HZ4	Guest Lecture	GL1	Daniel Otto-Schleicher (Deutsche Bank)	
KW45	07.11.23	14:00 - 16:00	Cas 1.802	Mentorium	M1		
KW45	09.11.23	10:00 - 12:00	SH 3.105	Mentorium	M1		
			IG 1.314				
KW45	09.11.23	14:00 - 16:00	(Eisenhower-Raum)	Mentorium	M1		
KW46	14.11.23	8:00 - 10:00	HZ4	Exercise	E2		
KW46	14.11.23	10:00 - 12:00	HZ4	Guest Lecture	GL2	Michael Schmid – Lufthansa	
KW46	14.11.23	14:00 - 16:00	Cas 1.802	Mentorium	M2		
KW46	16.11.23	10:00 - 12:00	SH 3.102	Mentorium	M2		
KW46	16.11.23	14:00 - 16:00	SH 3.102	Mentorium	M2		
KW47	21.11.23	10:00 - 12:00	HZ4	Exercise	E3		
KW48	28.11.23	8:00 - 10:00	HZ4	Lecture	VL5	Communication Systems I - Layer-based Communication	
KW48	28.11.23	10:00 - 12:00	HZ4	Lecture	VL6	Communication Systems II - Wired and Wireless Communication	

KW49	05.12.23	10:00 - 12:00	HZ4	Guest Lecture	GL3	Dr. Sebastian Pape – Continental
KW49	05.12.23	14:00 - 16:00	Cas 1.802	Mentorium	M3	
KW49	07.12.23	10:00 - 12:00	SH 3.105	Mentorium	M3	
			IG 1.314			
KW49	07.12.23	14:00 - 16:00	(Eisenhower-Raum)	Mentorium	M3	
KW50	12.12.23	8:00 - 10:00	HZ4	Lecture	VL7	Management of ICT Projects
KW50	12.12.23	10:00 - 12:00	HZ4	Lecture	VL8	ICS Development I - Software Engineering
KW51	19.12.23	10:00 - 12:00	HZ4	Exercise	E4	
KW51	19.12.23	14:00 - 16:00	Cas 1.802	Mentorium	M4	
KW51	21.12.23	10:00 - 12:00	Cas 1.802	Mentorium	M4	
KW51	21.12.23	14:00 - 16:00	Cas 1.802	Mentorium	M4	
KW2	09.01.24	8:00 - 10:00	HZ4	Lecture	VL9	ICS Development II - Object Orientation & UML
KW2	09.01.24	10:00 - 12:00	HZ4	Lecture	VL10	ICS Development III - Markup Languages
KW3	16.01.24	10:00 - 12:00	HZ4	Exercise	E5	
			IG 1.314			
KW3	16.01.24	14:00 - 16:00	(Eisenhower-Raum)	Mentorium	M5	
KW3	18.01.24	10:00 - 12:00	Cas 1.802	Mentorium	M5	
KW3	18.01.24	14:00 - 16:00	Cas 1.802	Mentorium	M5	
KW4	23.01.24	8:00 - 10:00	HZ4	Lecture	VL11	Management I - Databases & Data-oriented Modelling
KW4	23.01.24	10:00 - 12:00	HZ4	Lecture	VL12	Database Management II - Structured Query Language
KW5	30.01.24	10:00 - 12:00	HZ4	Exercise	E6	
KW5	30.01.24	14:00 - 16:00	Cas 1.802	Mentorium	M6	
KW5	01.02.24	10:00 - 12:00	Cas 1.802	Mentorium	M6	
KW5	01.02.24	14:00 - 16:00	Cas 1.802	Mentorium	M6	
KW6	06.02.24	8:00 - 10:00	HZ4	Lecture	VL13	Business Process Reengineering (BPR)
KW6	06.02.24	10:00 - 12:00	HZ4	Lecture	Q&A	Q&A

- Introduction to the Chair
- Course Organisation
- Scope and Outline of the Course
- Introduction to Information & Communication Systems

What is an Information System?

“[...] a set of interrelated components that collect (or retrieve), process, store, and distribute information to support decision making, coordinating and control in an organization.”

Source: Laudon, Laudon (2013), p. 35

Information System and Application System

- **Information System (IS):**

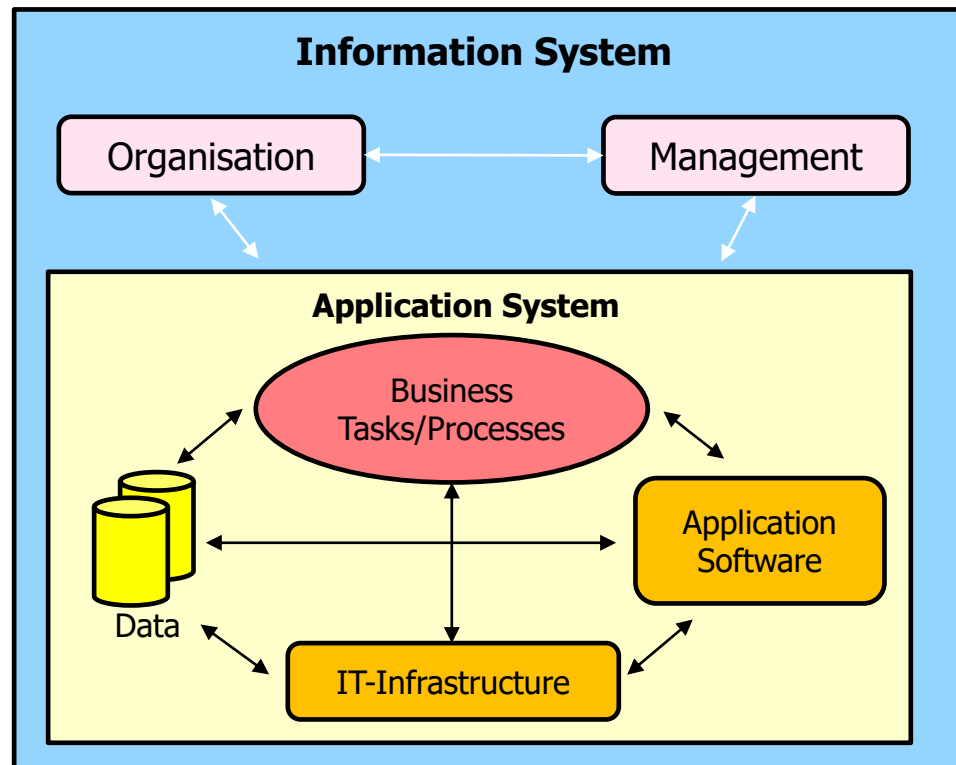
A system which was built to be used as part of an enterprise. It contains all relevant application systems and is embedded into the organisation and management of an enterprise.

- **Application System (AS):**

A system which consists of business tasks and processes it supports, the underlying IT-infrastructure, the application software and the data it required in order to accomplish its objectives.

Information System Structure and Components

Source: Laudon, K.C., Laudon, J.P., Schoder, D. (2010), p. 18.

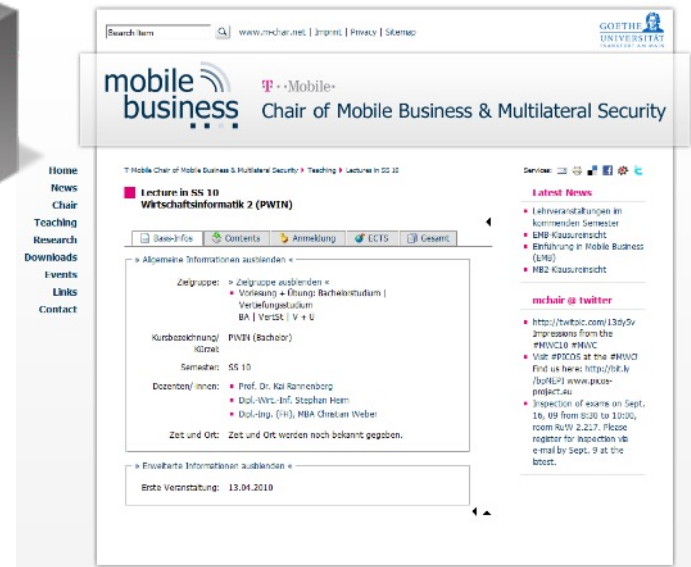


- A communication system is a collection of to each other compatible
 - Hardware (terminals, physical network components),
 - Software (operation systems, network protocols, application systems), and
 - Transmission protocols,

which allow an exchange of information – for example between different sites of an enterprise.



Information



Interplay of Information and Communication Systems

- Information Systems (organisational orientation)
 - Designed for a specific operational area of responsibility
 - Considers organisational and basic personal requirements
 - Supports decision making, coordination, controlling and monitoring in enterprises, but even more aids managers and employees to analyse problems, understand complex business cases and develop new products.
- Communication Systems (technical orientation)
 - Physical networking
 - Transmission media
 - Hardware and software

- Laudon, K.C., Laudon, J.P., Schoder, D. (2010) „Wirtschaftsinformatik - Eine Einführung“, Pearson Studium, München.
- Laudon, K. C.; Laudon, J. P. (2013): *Essentials of Management Information Systems*. 10th Edition, Pearson Education Limited, Kendallville.
- Scahill, Jeremy and Begley, Josh (2015): The great SIM Heist - How spies stole the keys to the encryption castle; firstlook.org/theintercept/2015/02/19/great-sim-heist/
- Schneier, Bruce (2013): *The US government has betrayed the internet. We need to take it back.* www.theguardian.com/commentisfree/2013/sep/05/government-betrayed-internet-nsa-spying

