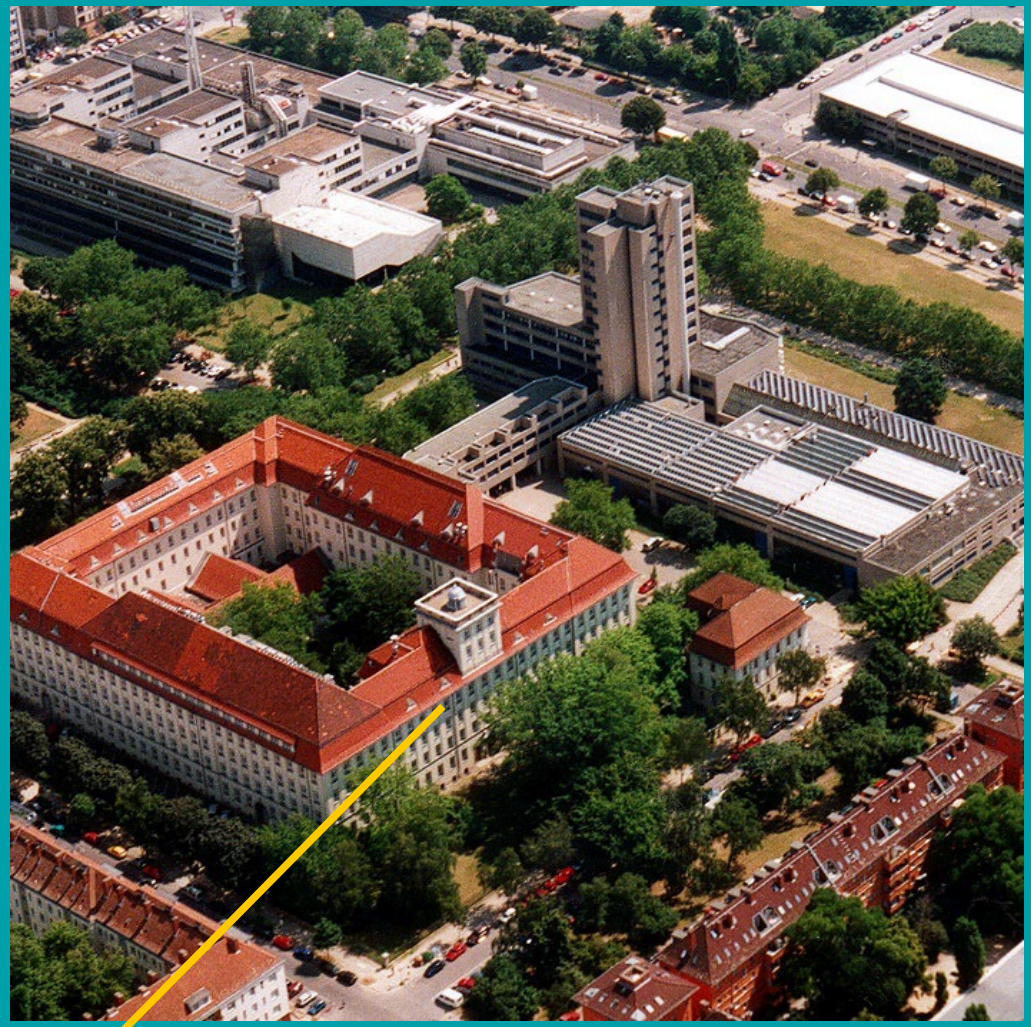
Berlin/Beuth University of Applied Sciences and Technology

16/06/2022

Prof. Dr. Florian Schindler

Our University

From above



BHT
Berliner Hochschule
für Technik

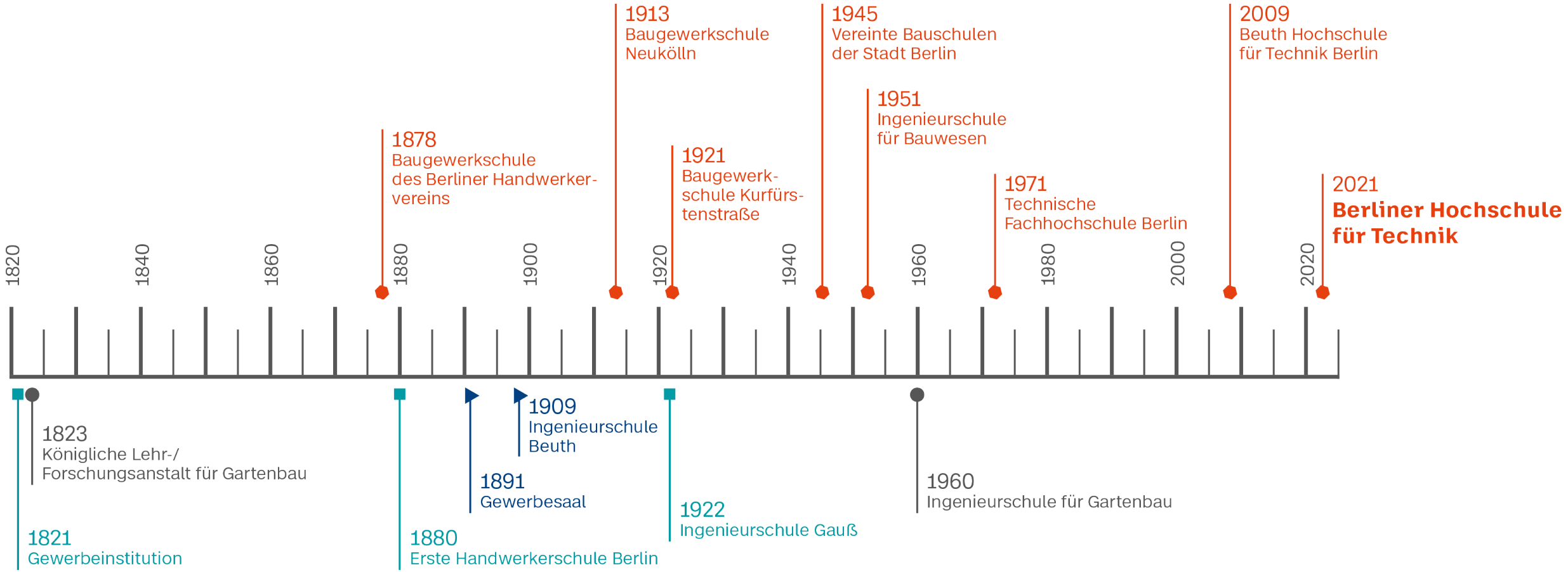
Studiere Zukunft

Berlin University of Applied Sciences and Technology

- Founded in 1971 as Technische Fachhochschule Berlin, renamed Berlin University of Applied Sciences and Technology in 2021

- Over 13,000 students in 72 degree programmes
- Largest range of engineering degree programmes in Berlin-Brandenburg

University of Applied Science and Technology - Development -



Central Berlin Campus

Building:

A – Beuth

B – Gauß

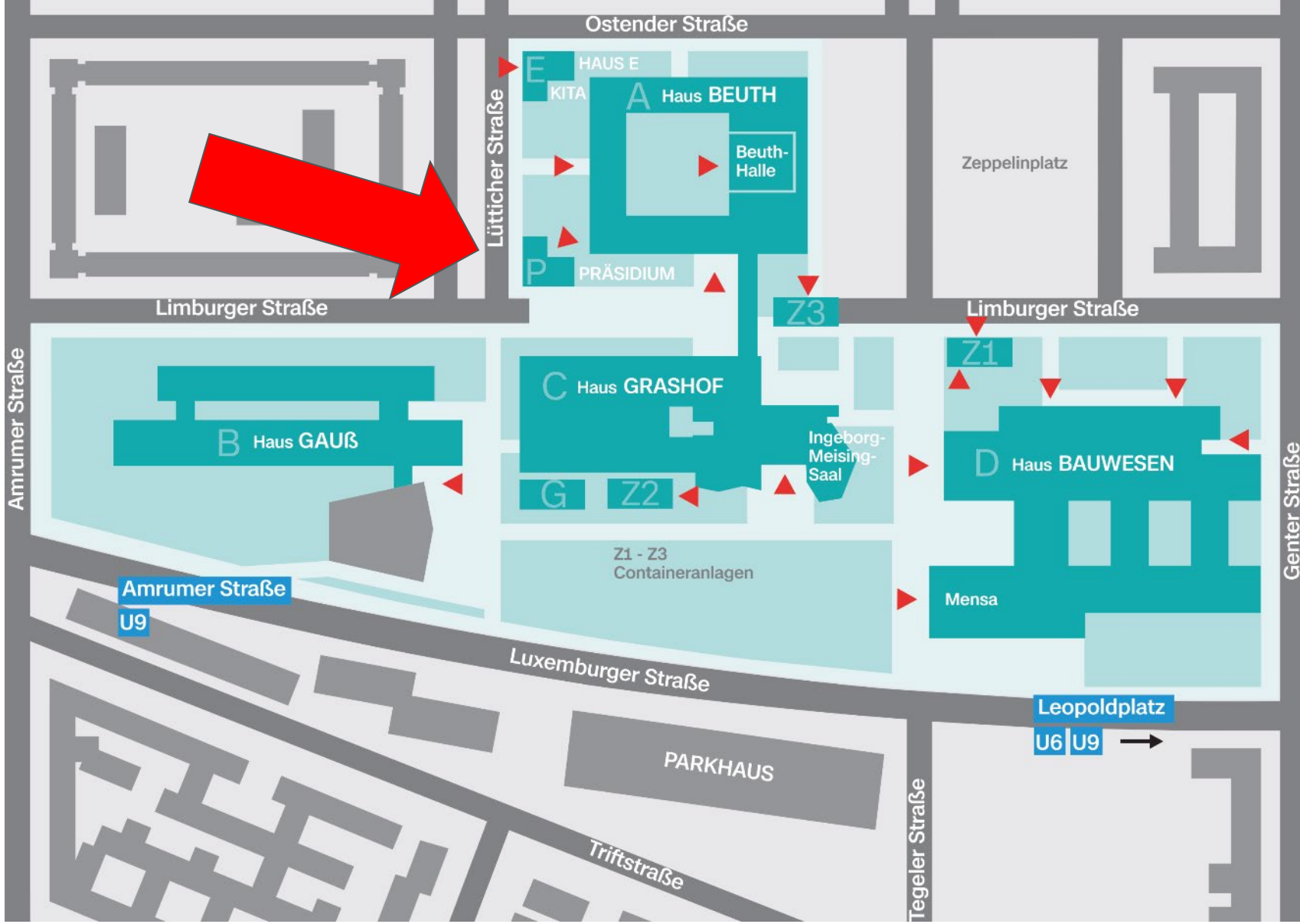
C – Grashof

D – Bauwesen

E – Kindergarten

G – Greenhouse

P – Präsidial „Palace“



House „Beuth“

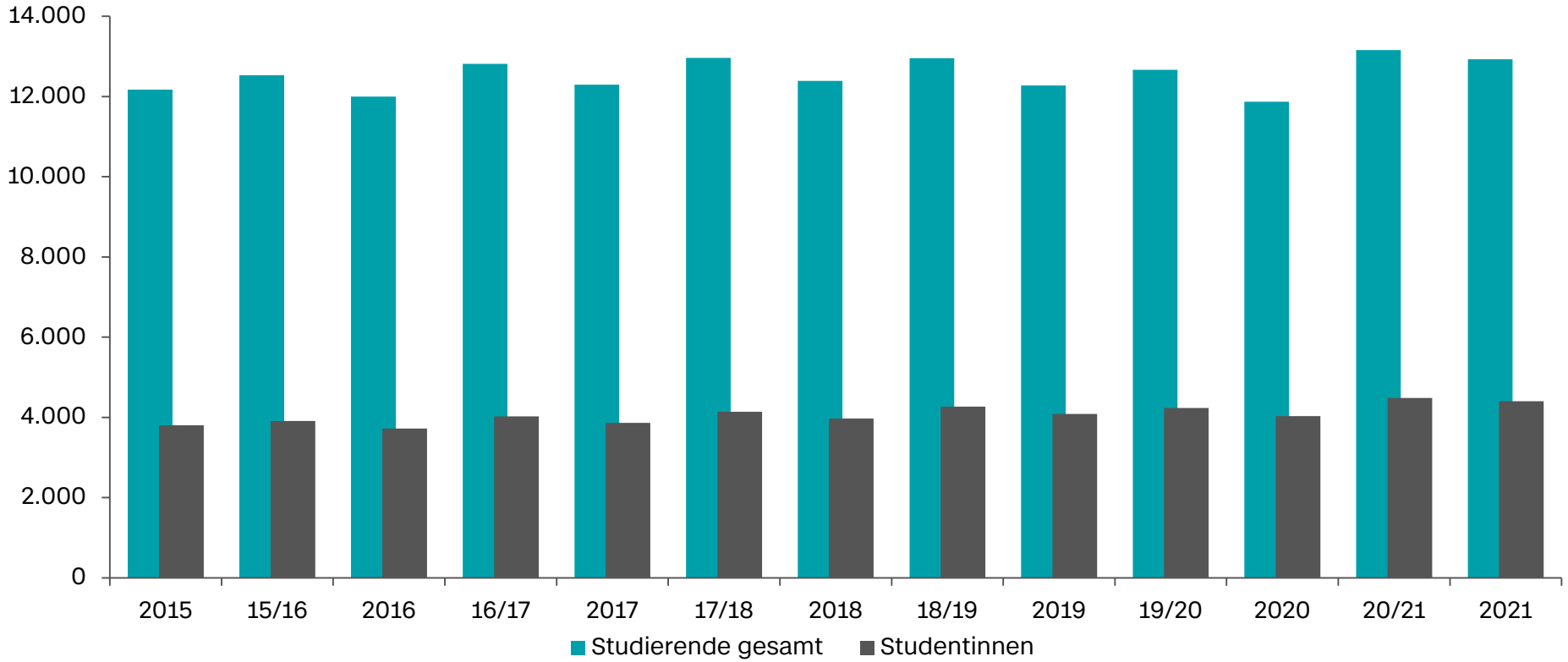
Our University

BHT
Berliner Hochschule für Technik

Studiere Zukunft

Number of Students enrolled

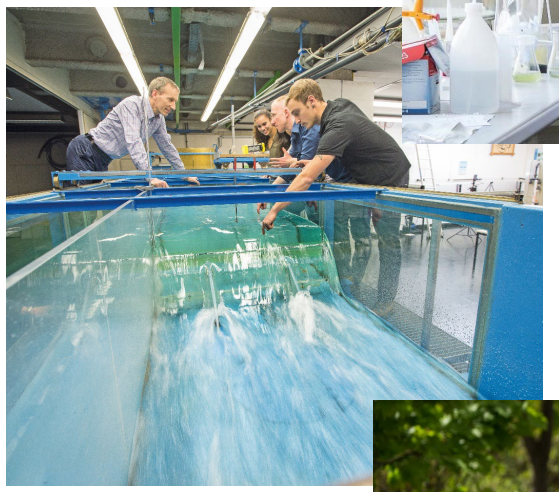
About 13.000 (12.929) Students as of 2021

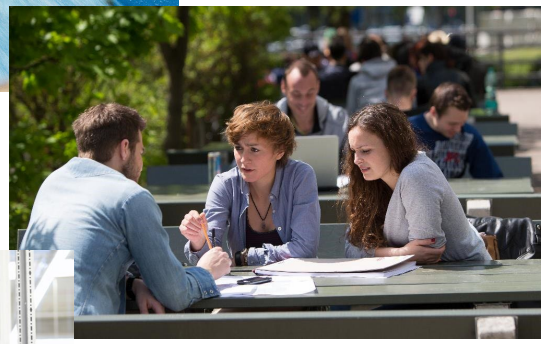


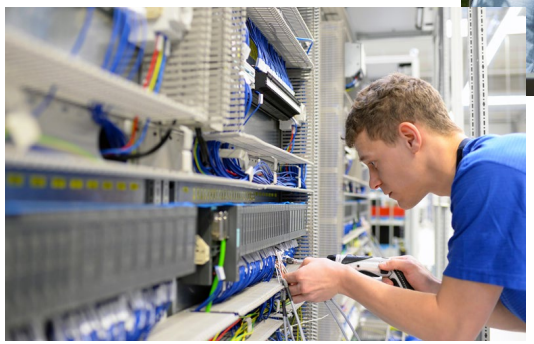
Our Study Programmes

Our more than 70 Bachelor's and Master's degree programmes are accredited.

- Engineering and Natural Sciences
- Building and Housing
- Communication and Media
- Business
- Environment
- Health
- Further education / Dual Programmes

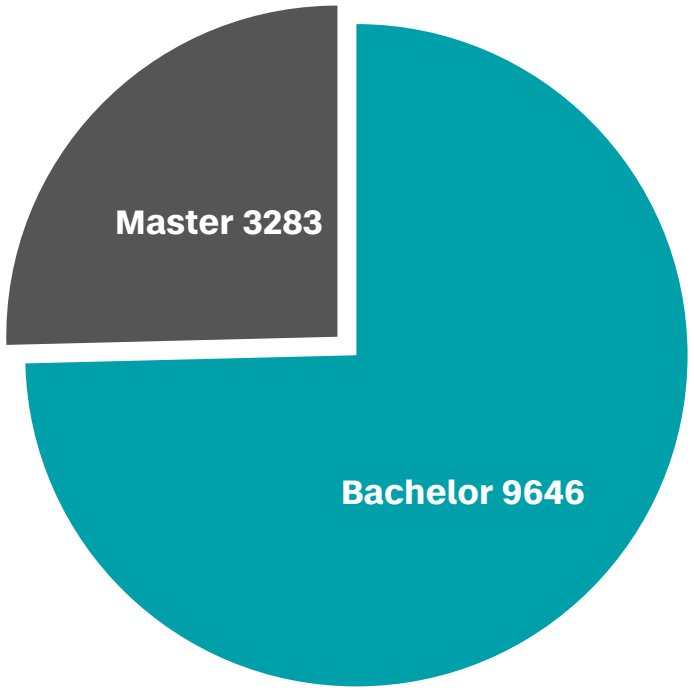






Facts and Figures

Students



Departments

I	Economics and Social Sciences
II	Mathematics, Physics, Chemistry
III	Surveying, Cartography, Civil Engineering
IV	Architecture, Facility Management
V	Biotechnology, Food Techn., Horticulture, Packaging Techn., Landscape Architecture
VI	Computer Science, Print + Media Techn., Media Science
VII	Electrical Eng., Mechatronics, Optometry
VIII	Mechanical Eng., Chemical Eng., Theatre Techn., Audiovisual Media
IX ¾	Institute of Distance Learning

Competence Centres „City of the Future“

Life in the city of the future

Education

Economy

Health

Social Sciences

Infrastructure

For the city of the future

Mobility

Communication

Media

Leisure Time

Urban Technologies in the city of the future

Energy and Resource efficiency

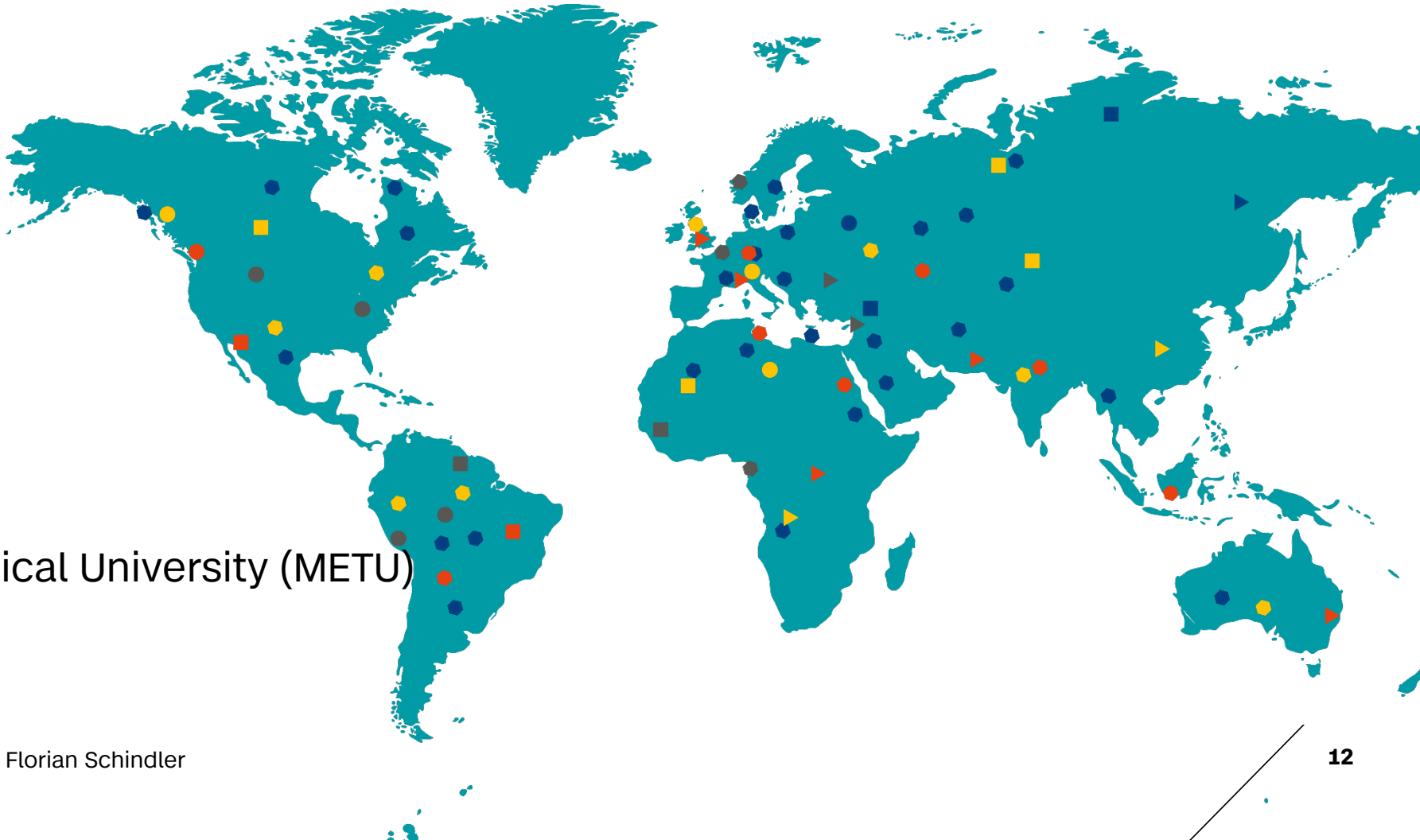
Renewable Energies

Green Buildings

International Cooperations

with

- New Jersey, USA
- Rio de Janeiro, Brasilien
- Adelaide, Australien
- Strasbourg, Frankreich
- Beijing, China
- Jerusalem, Israel
- Bischkek, Kirgisistan
- Cartago, Costa Rica
- Ankara, Middle East Technical University (METU)



Institute of Distance Learning

- 6 Distance master courses
- Distance Learning and Online Courses
- International Projects
- Professional Education
- **Dual Study Programmes**
- Training of Trainers

Berliner Hochschule für Technik

Studiere Zukunft

Institute of Distance Learning

Berlin University of Applied Sciences
and Technology

Institute of Distance Learning

Postgraduate education with Blended Learning:

- Full Master Degree Programs
- Term Courses
- Single Modules

Further education with Blended Learning :

- International Summer Schools
- On-the-job Trainings for Companies
- University HR Trainings

International Cooperation

with

- New Jersey, USA
- Rio de Janeiro, Brasilien
- Adelaide, Australien
- Strasbourg, Frankreich
- Beijing, China
- Jerusalem, Israel
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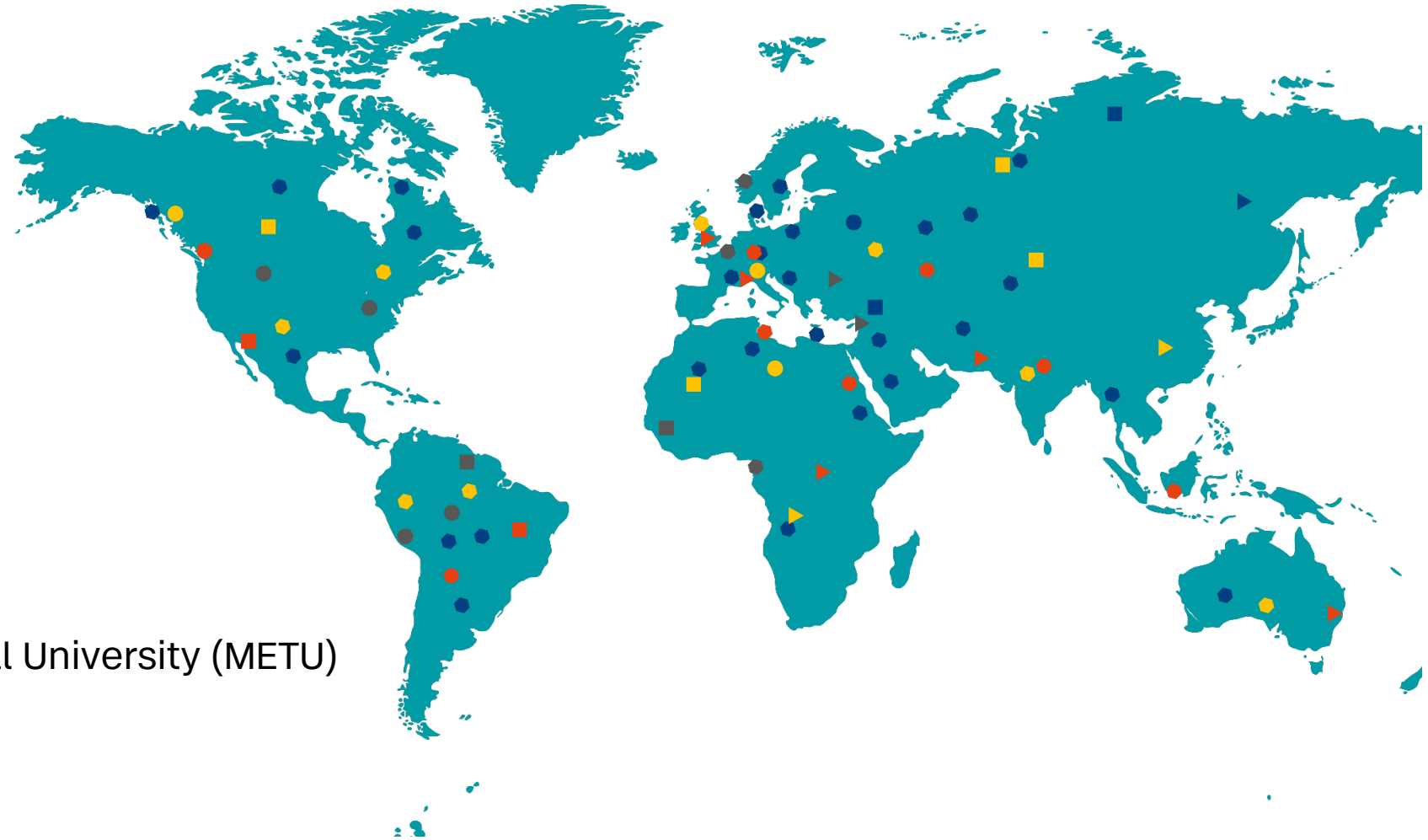


Blended Learning
Part I

Blended Learning

PART I

- Preparation
- Set-up
- Learning Environment
- Tools
- Reflection

PART II

- The Blend

PREPARATION

Assessment

Analyze the training needs:
- Content
- Scope
- Future perspective

Resources

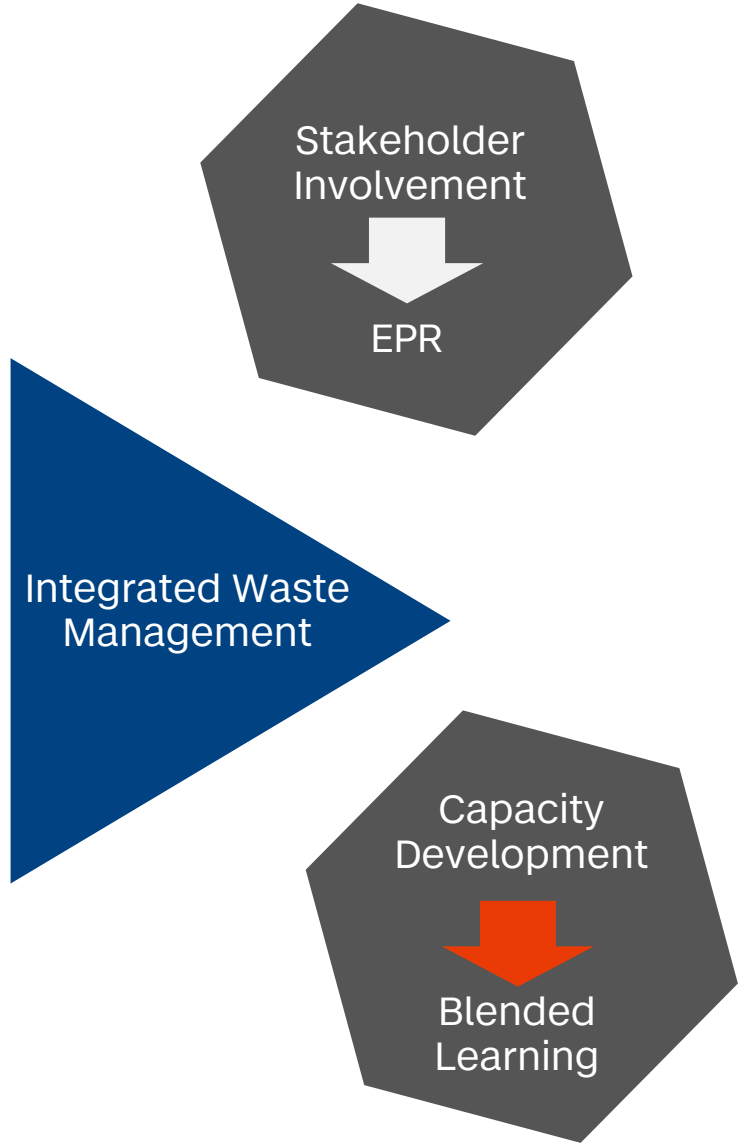
Check the training resources:
Human resources, time, money, existing material and experiences, training sites, etc.

Target group

Define the target group:
- Number of participants
- Pre-education for the subject
- Learning Outcome!

SET-UP

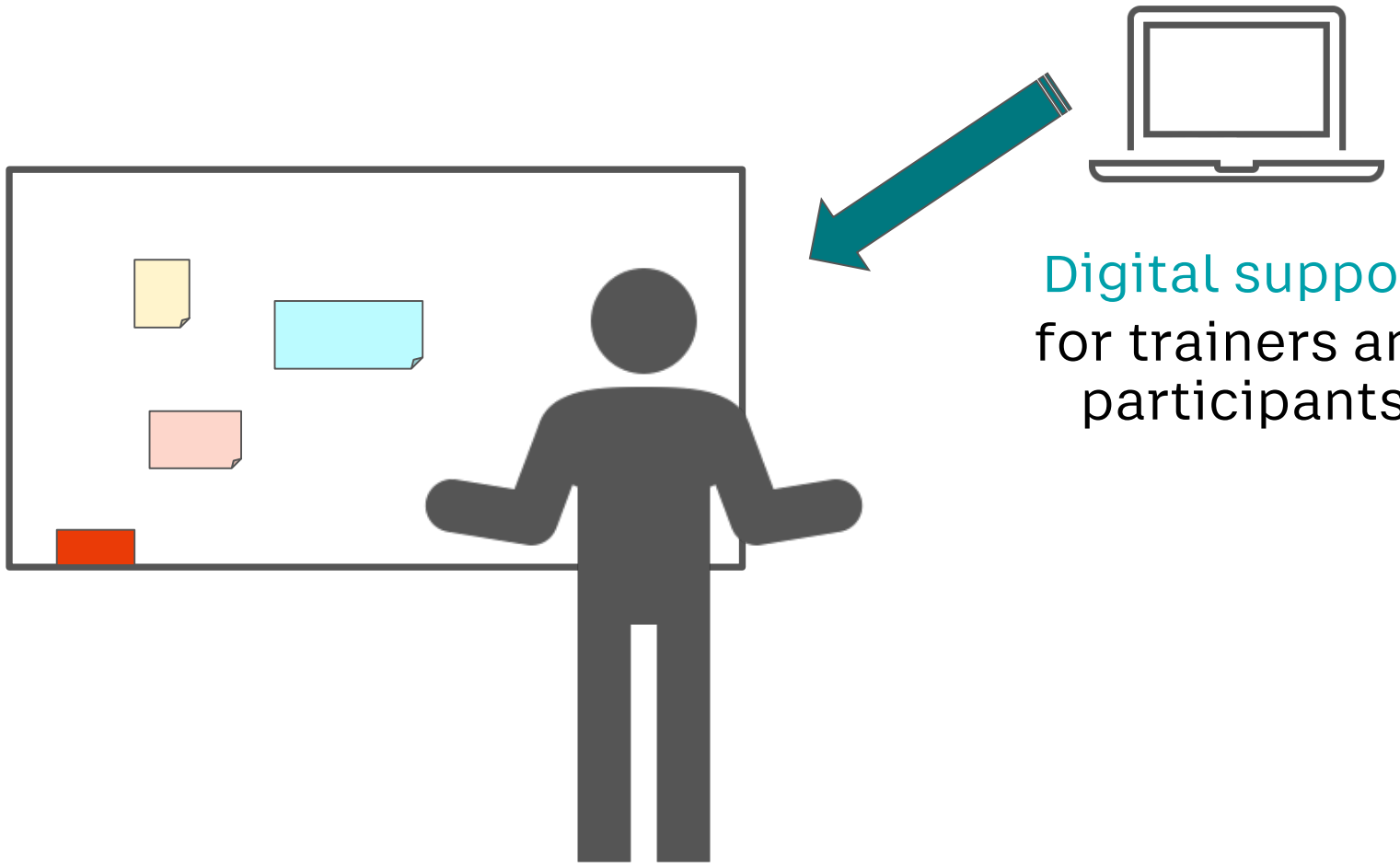
- **Organizer**
- **Trainers**
- **Language**
- **Duration (Intervals)**
- **Completion with certificate**
- **Assignments / home work**
- **Interaction / discussion**
- **Accompanying material**



LEARNING ENVIRONMENT

Face-to-Face learning

1. Workshop
2. On-the job training
3. Classroom / Course
4. Agile learning



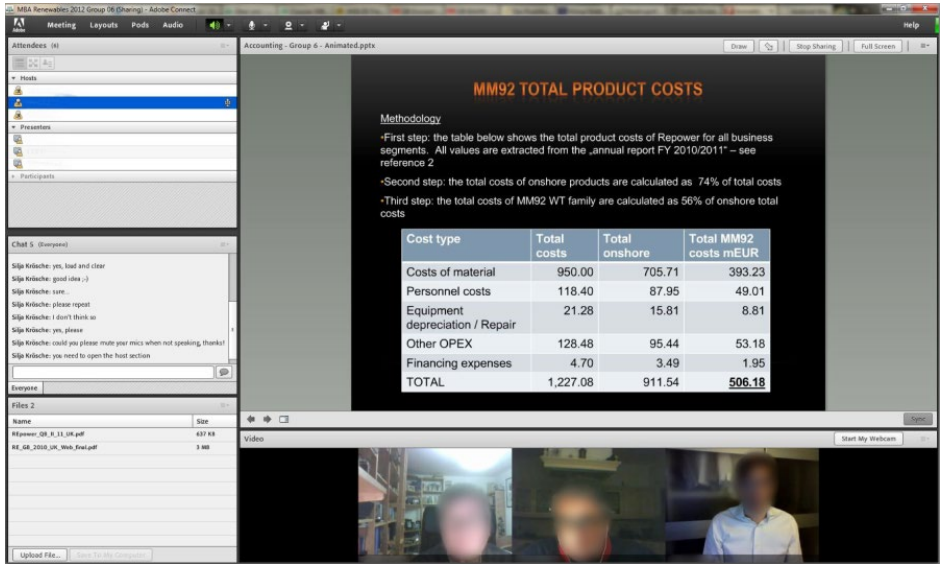
Digital support
for trainers and participants

LEARNING ENVIRONMENT

1. Workshop

Face-to face only

Online format only



Hybrid format

Workshop-photos: Maryam Sepher, giz GmbH

LEARNING ENVIRONMENT

2. On-the-job training

Practical exercises

Lab work

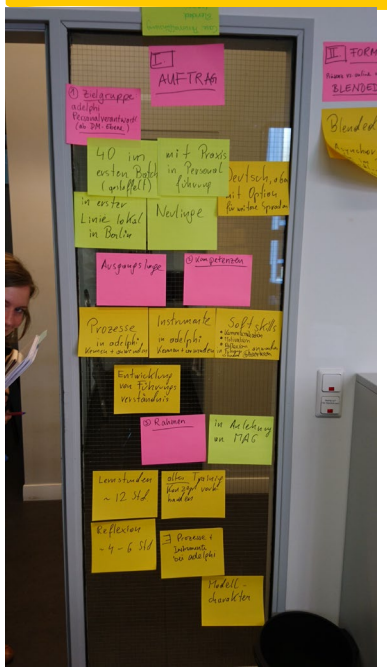
Field trip

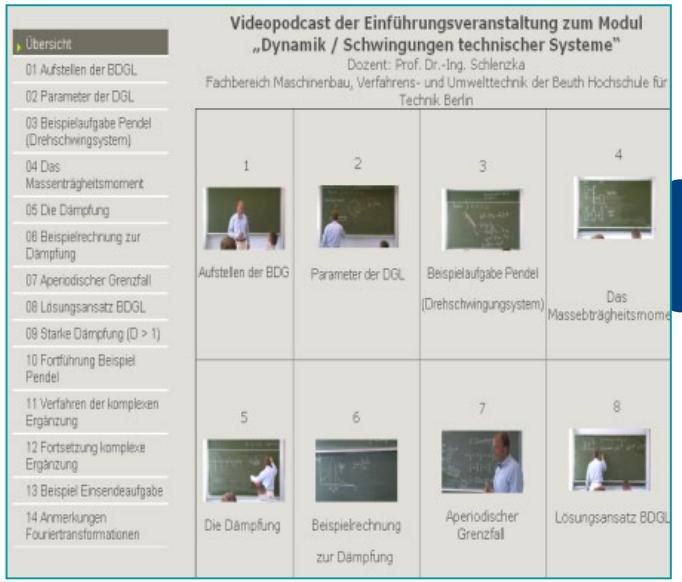
LEARNING ENVIRONMENT

3. Classroom / Courses

Semester (study program, years)

Seminar (1-3 days)





Module (1 – 3 months)

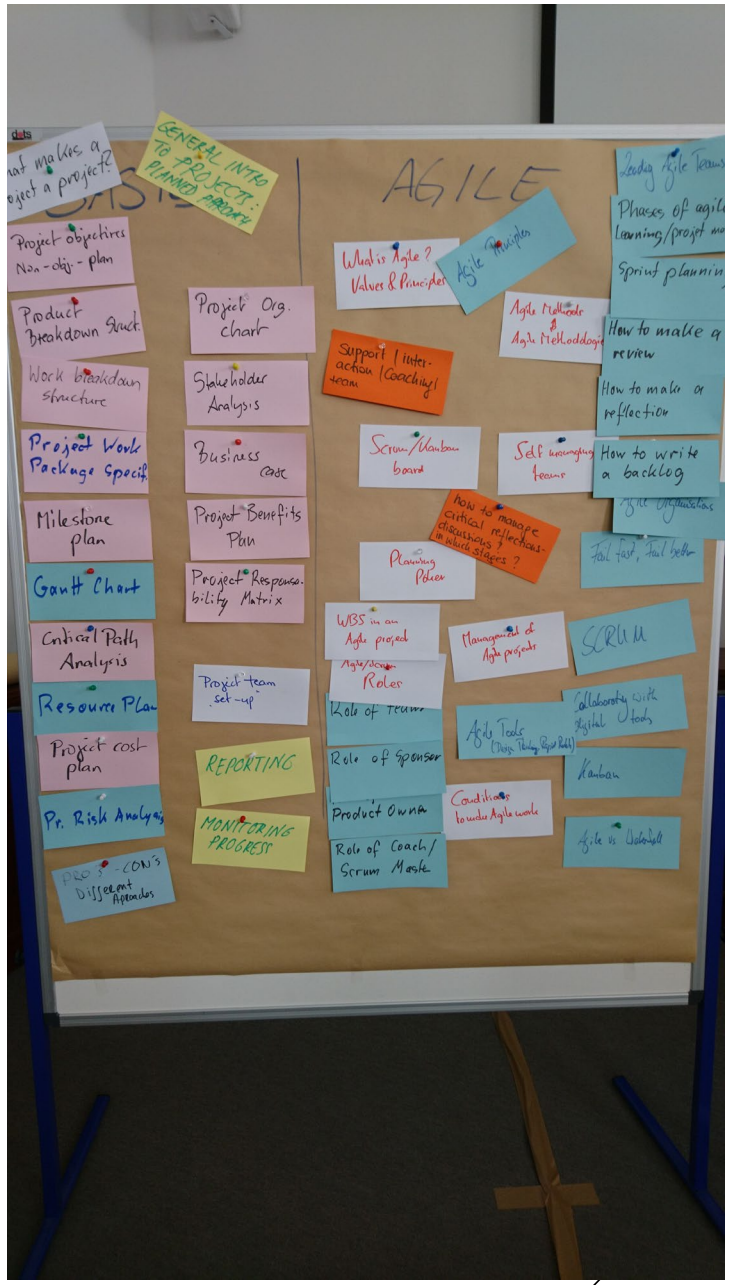
Summer School (3 weeks)

LEARNING ENVIRONMENT

4. Agile Learning

Learning goes AGILE

- Alternating phases of learning and adopting (Learn-Test-Adjust)
- Generating personalized, work-related learning goals
- Iterative sprints for adaption to changing conditions
- Learning in a self-directed manner
- Engaging in a community of practice



Agile Learning Projects

Kick-Off

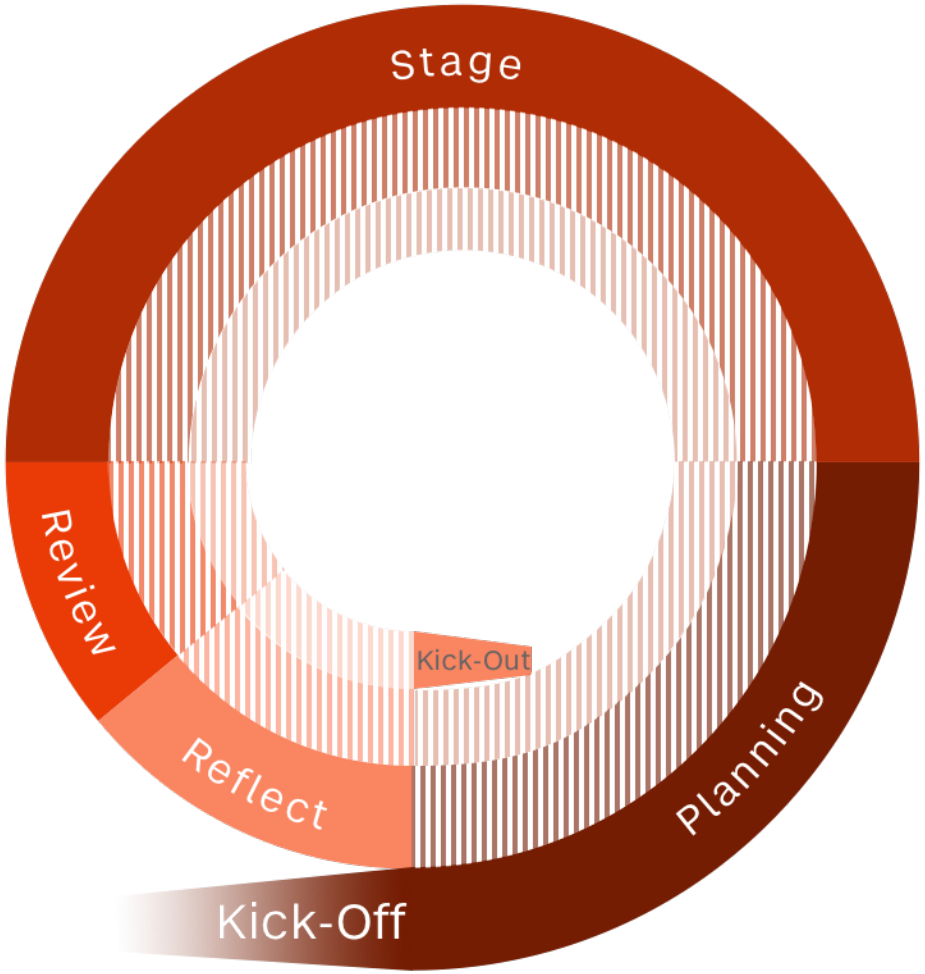
- Contracting & scope
- Familiarize with agile methods

Planning

- Plan a new stage (2-4 weeks)
- Get needed resources (experts, e-learning, etc.)

Stage

- Work on practical tasks
- Get on-demand support



Review

- Review quality of solutions
- Get professional feedback

Reflect

- Reflect learning strategies
- Monitor competence development

Kick-Out

- Measure development
- Assign new responsibilities

Adopted from Longmuß et al., 2021

Learning Methods

Learning Outcome based:

- ✓ Workshop
- ✓ Classroom / courses

Learning Problem Based:

- ✓ On-the-job training
- ✓ Agile learning

Photo: Nareeta Martin, Unsplash

TOOLS

LMS

Online platform like Moodle or shared space like MS Teams for communication. Up- and download of information material and document sharing.

Webmeetings

Live sessions with international experts, lecturers and guests as video, audio or chat only as well as video and audio recordings of live meetings.

Microlearning

Small sequences of just-in time learning while working on the job .

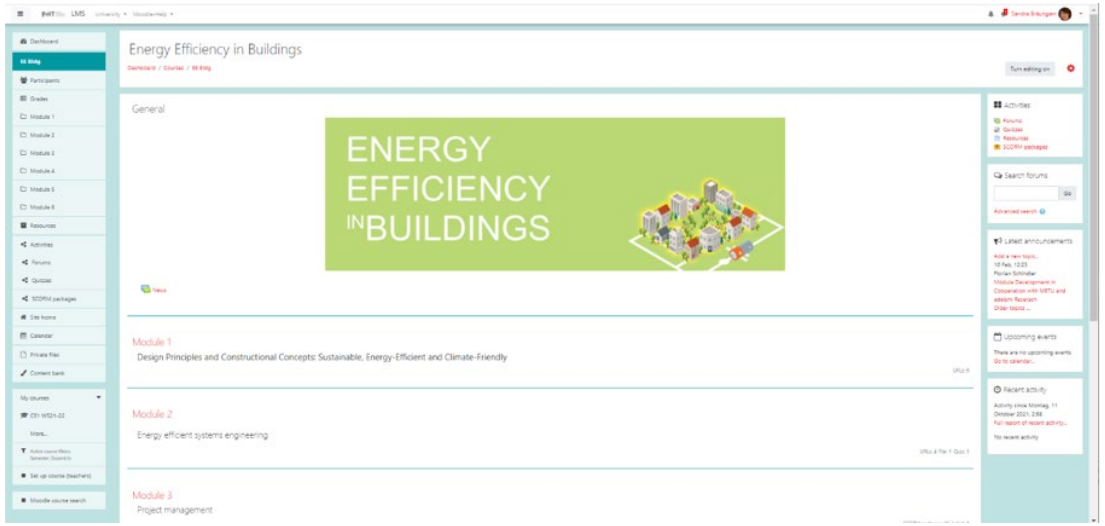
Tutorials

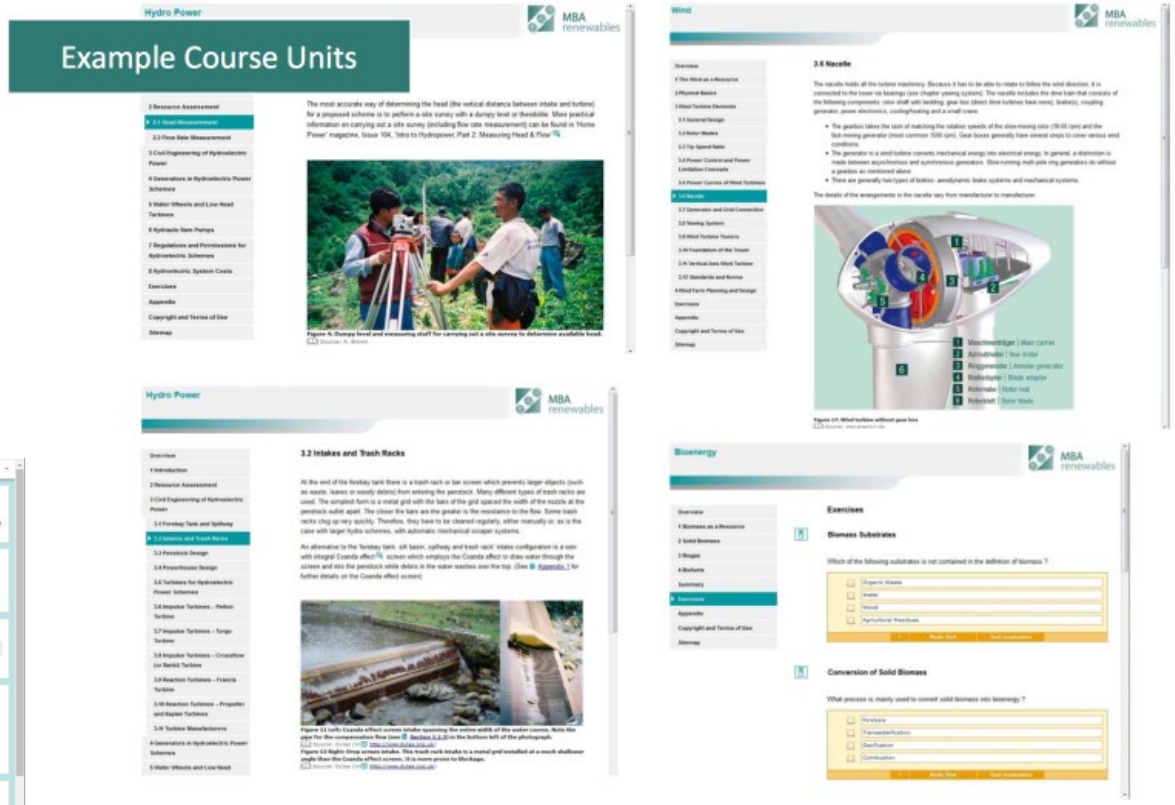
Video tutorials for lecturers and students to familiarize with the different functionalities and use cases of the available tools.

TOOLS

LMS

Online platform like Moodle or shared space like MS Teams for communication. Up- and download of information material and document sharing.





TOOLS

Self Learning Material

Didactically tailor-made self-study material with a clear structure:

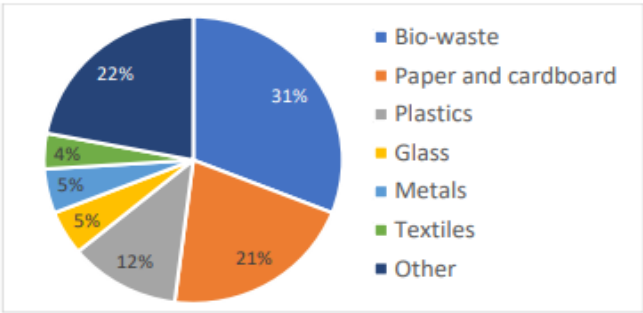
- Clearly defined learning units with a clear scope
- Each learning units starts with the Learning Outcomes and ends with a summary
- The content is motivating, practical and understandable (different from textbooks)

TOOLS

Resources

These resources can be used for different learning types:

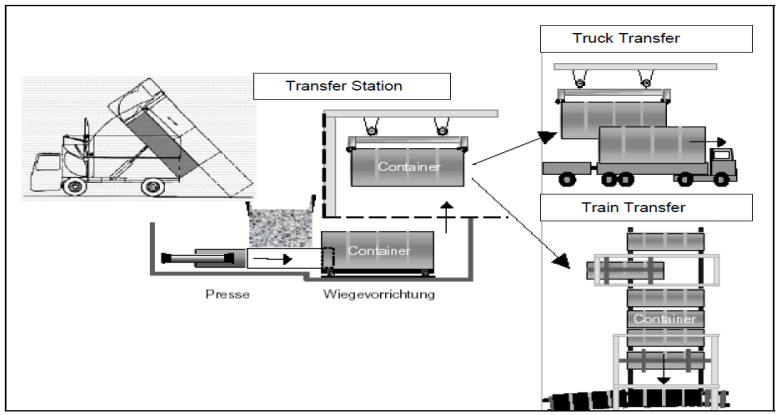
- PowerPoint
- Spoken PowerPoint
- Checklists
- Flowcharts
- Videos
- Photos
- Infographics



Source: based on Worldbank (2018) and Eurostat (2008)[5]

Economic and Infrastructure Features

☐	Economic viability of management and site concept Revenue generation of park management
☐	Fiscal effects on the municipality Direct and indirect costs and revenues , job creation
☐	Infrastructure provision Roads, bicycle and pedestrian infrastructure, access points, water network, sewage system, common effluent treatment plant, telecommunication
☐	Energy generation and distribution Integrated energy concept comprising electricity grid, gas and steam distribution network, energy efficiency measures and integration of renewable energies
☐	Waste management Waste prevention, handling, treatment, recycling and disposal
☐	Water and wastewater management Drinking and process water supply, rain water harvesting, wastewater prevention, treatment, reuse and disposal
☐	Eco-efficient transport system Provision of car sharing options, electric vehicles, compressed natural gas buses



Ref: Prof. Dr. Schindler F., Söling, Frieder , Prof. Dr.-Ing. Joachim Weiland, (2010/12) Waste management/recycling techniques, Institute of Distance Learning Berlin

REFLECTION

Participants: self-evaluation of learning experience

Organizer:

- ✓ Feedback from participants
- ✓ Evaluation

Methods for the exchange of experiences:

REFLECTION

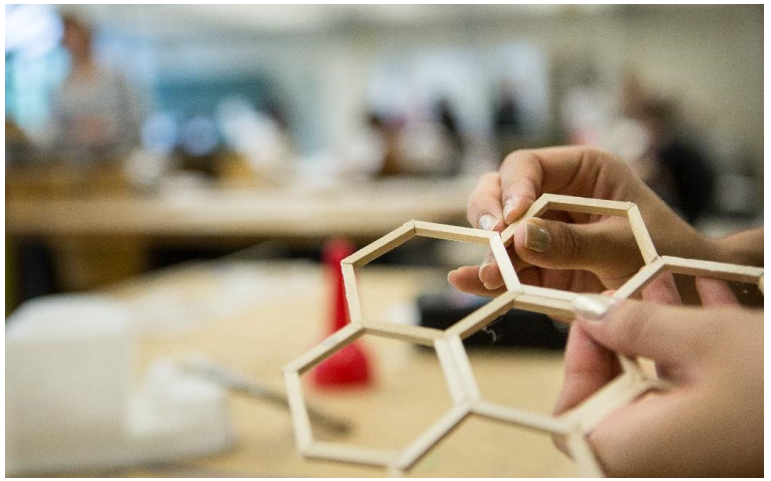
methods	Reflection	expression		Visual	Experience	Subject	Comments	Type of exchange
		Written	Verbal					
After action review	X	X	X			Learning from positive and negative experiences	Interview, lessons learned, micro article, best practice	P O M R
Best and good practice	X	X	X			Identify best (good) practices, present and communicate, benefit	As well: lessons learned, micro article	P M O R
Lessons learned	X	X	X			Positive and negative experiences, monitoring, reflection, presentation – used as internal method		P O M R
Reunion / Debriefing	X	X	X			Workshop or meeting after action (quick, effective, cheap), group reflection, collection of ideas for improvement	As well: lessons learned	P M
Communities of Practice		X	X		X	Formal and informal networks for exchange (need confidence and reciprocity)	As well: experts network	R P O M
Experts Networks		X				Exchange of experiences (local, national, international)	As well: best practice	R
Micro Article	X	X				Documentation of an individual experience (verbal, written, audio, blog)	As well: story telling	P O M

P = Knowledge of Process	O = Knowledge of Objectives
M = Knowledge of Proceedings	R = Knowledge of Relations
C = Knowledge of Competences	

Blended Learning
Part II

Hybrid Didactic Design

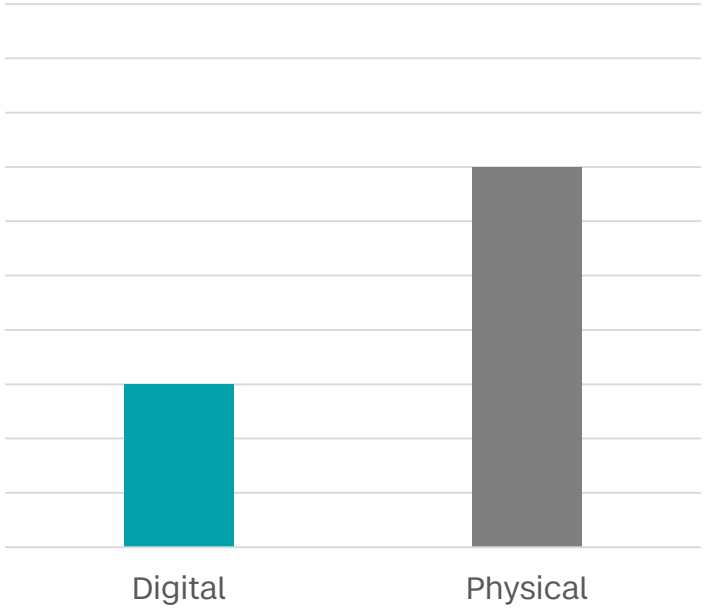
Students and lecturers share documents securely, upload assignments and communicate via online learning platforms.



International and local experts create high quality distance learning material for digital and analogue usage.

Teaching sessions in modern labs, in the classroom and online with international experts

Finding a fitting blend



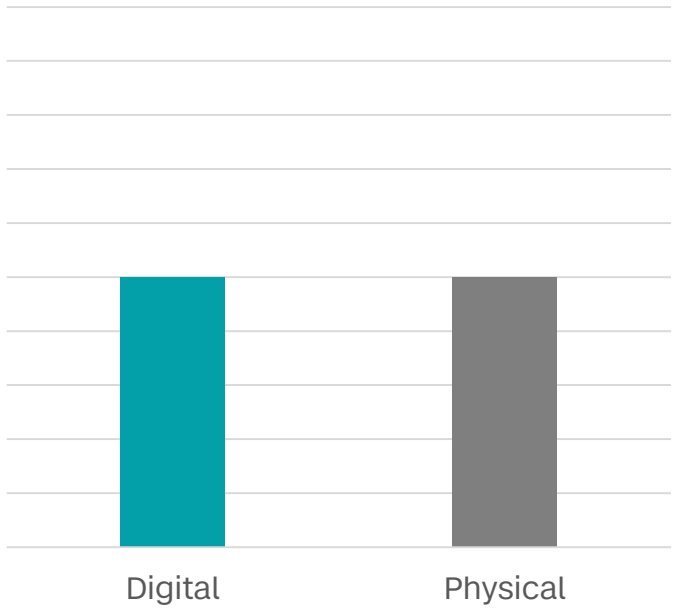
Physical Elements

- Focus on physical trainings and practical application
- Focus on good trainers and practical case studies
- Create learning projects over a longer time span (2-6 months)

Digital Elements

- Use digital resources if available
  - Do not create new material
- Use existing online platforms for on-demand collaboration needs (google docs, MS Teams, etc.)

Finding a fitting blend



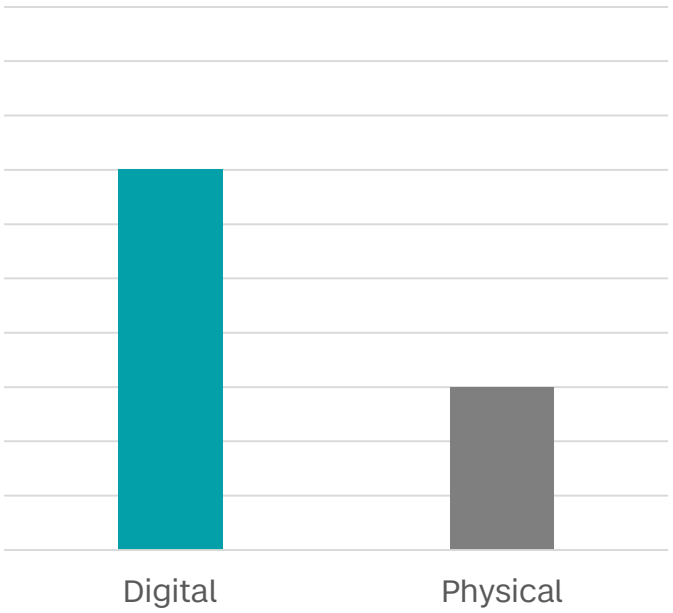
Physical Elements

- Focus on physical trainings and practical application
- Use existing trainers with specific expertise
- Get remote experts for missing fields

Digital Elements

- Focus on a solid online collaboration platform
- Acquire remote experts for fields where local expertise is missing
- Create learning material for areas where local trainers are lacking

Finding a fitting blend



Physical Elements

- Focus on experienced experts delivering practical application
- Focus on on-the-job feedback

Digital Elements

- Create customized e-learning resources for target group
- Involve international experts
- Use real life case studies with a local/regional application
- Utilize virtual collaboration to engage an international community of practice in the target group

THANK YOU!

Questions?

BHT
Berliner Hochschule für Technik

Studiere Zukunft

We wish you gained new knowledge

Prof. Dr. Florian Schindler

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