

# Virtual Exchange

New formats of teaching and digital collaboration

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ASEM Education Action Plan 2030 Workshop

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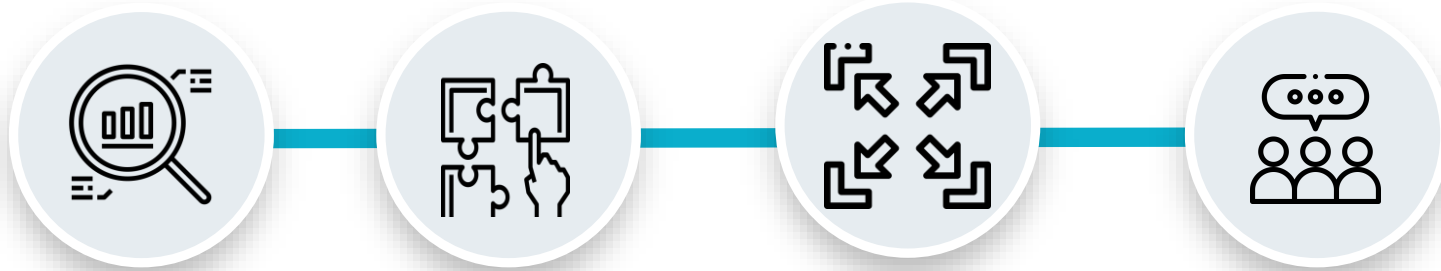
Foto: starline via Freepik

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# Outline of the presentation



**State of the Art**

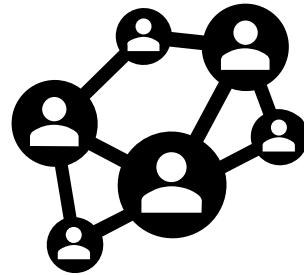
**VE as element  
of mobility**

**Paving the way  
for VE**

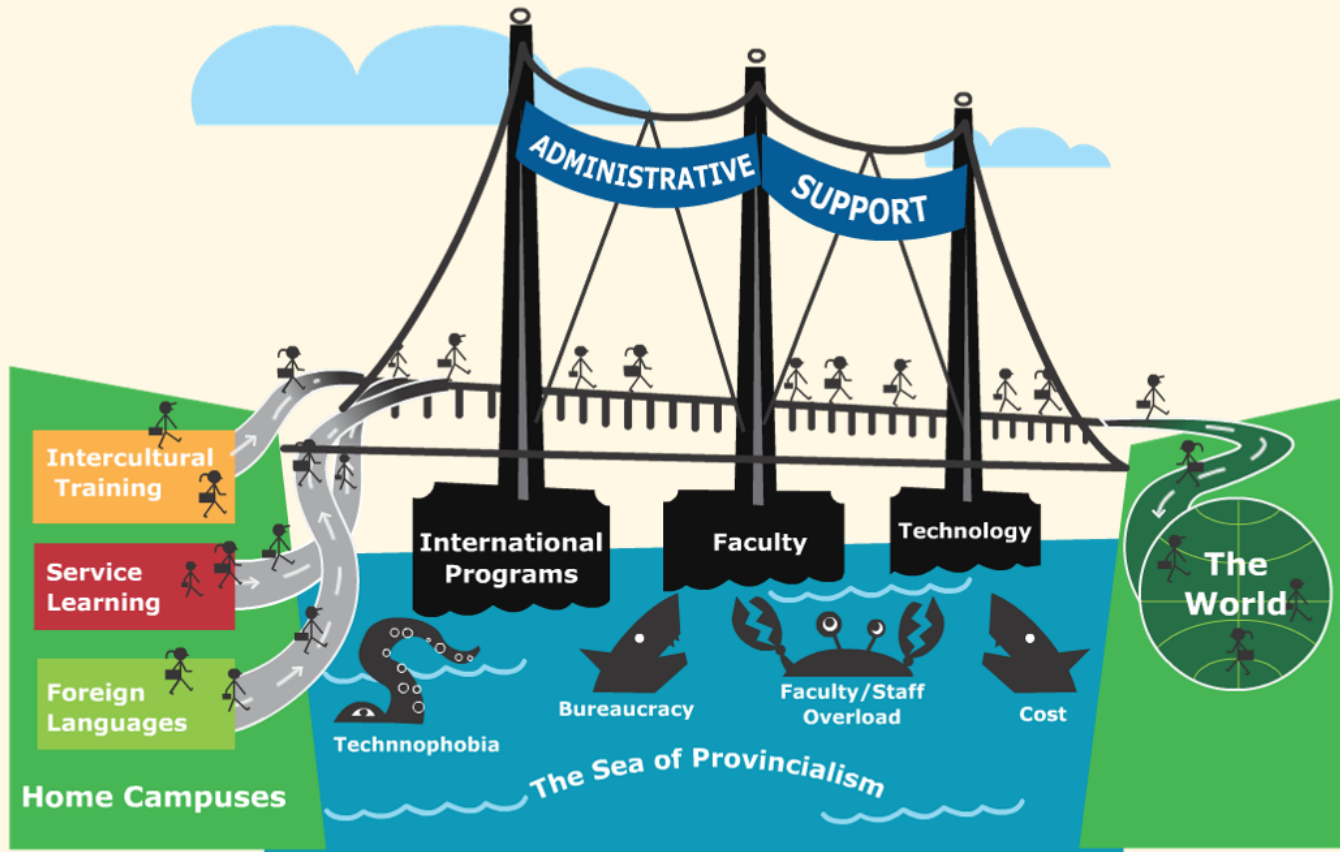
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Icons: surang, Freepik, phatplus via [Flaticon.com](#)

# Collaboration as the New Currency



# A Bridge to the World (and back)



Grafik: SUNY Coil Center

# What is Virtual Exchange?

## Central Elements

Groups of learners

Extended periods

Online

Intercultural

Interaction and collaboration

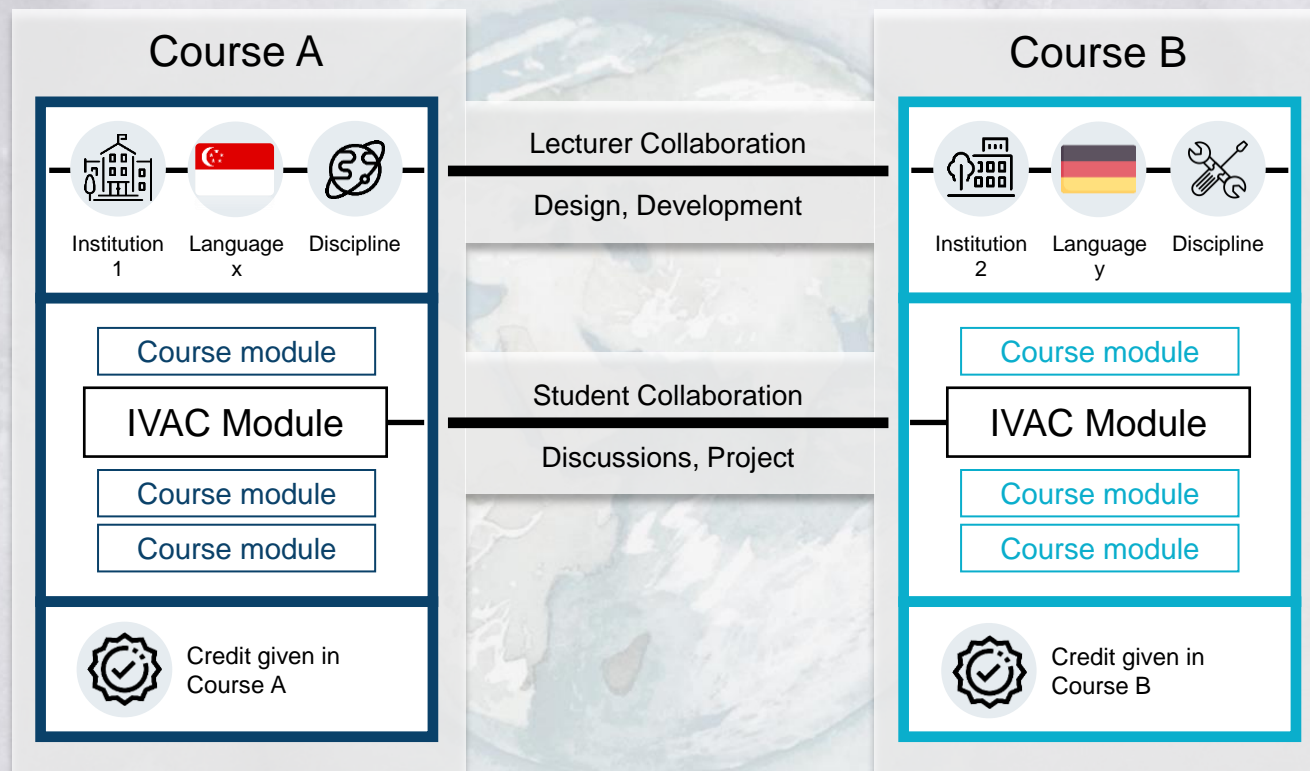
Integrated part of education

Guidance of an expert

Virtual Exchange involves the engagements of **groups of learners** in **extended periods** of **online intercultural interaction** and **collaboration** with partners from other cultural context or geographic location as an **integrated part** of their **education** and under the **guidance of an educator/expert** facilitator.

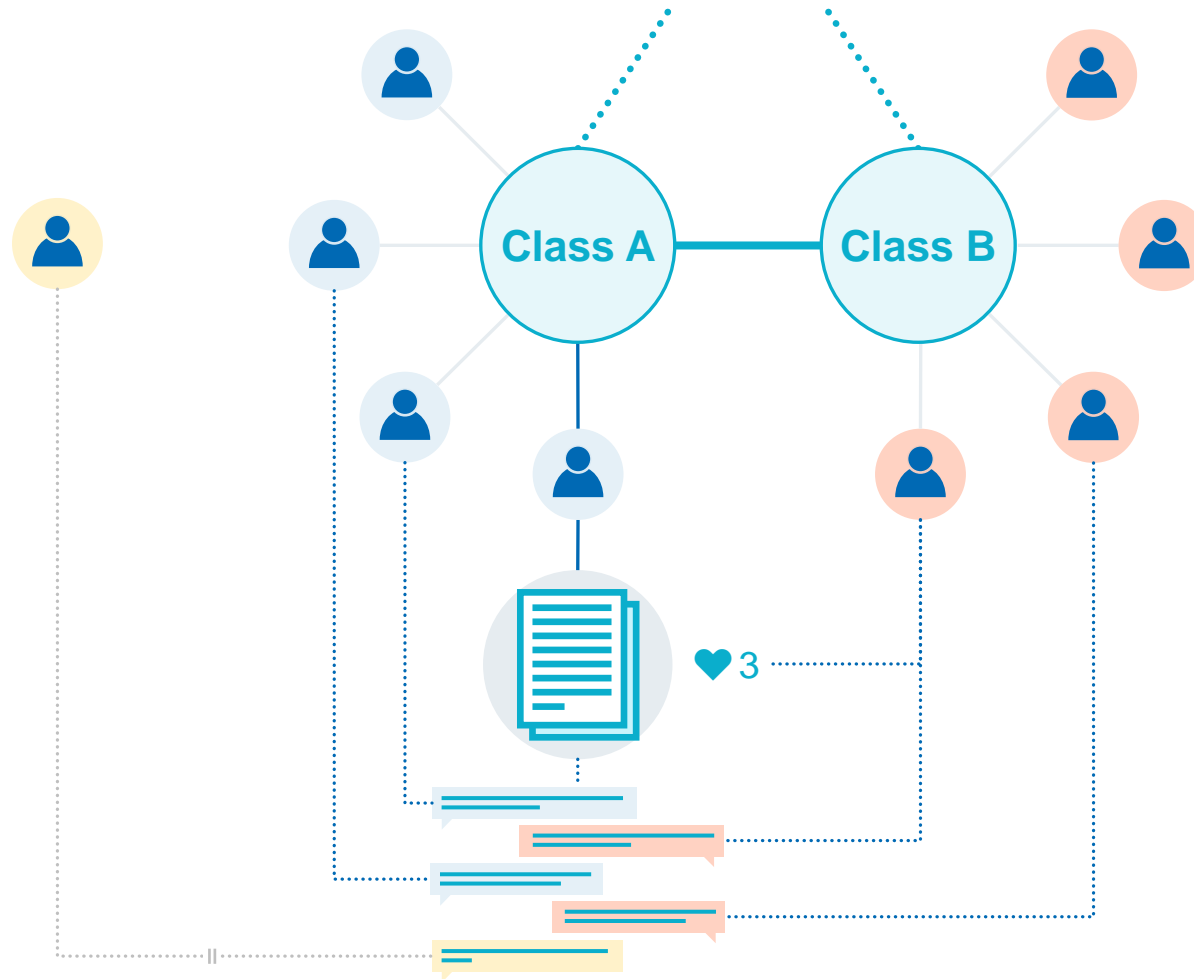
O'Dowd (2018): <https://files.eric.ed.gov/fulltext/ED592404.pdf>

# International Virtual Academic Collaboration



Darstellung basiert auf: SUNY Coil Center <https://innovate.suny.edu/introtocoil/suny-coil-what-is/>  
Icons: Freepik (5), Zlatko Najdenovski (1), Pixelmeetup (1) via Flaticon.com  
Foto: [Elena Mozvilov](#) on [Unsplash](#)

# Interaction: Student centered



# What can be achieved by VE ?

**Example: „Teaching for Critical Digital Literacy“**

***Newly established cooperation*** between:

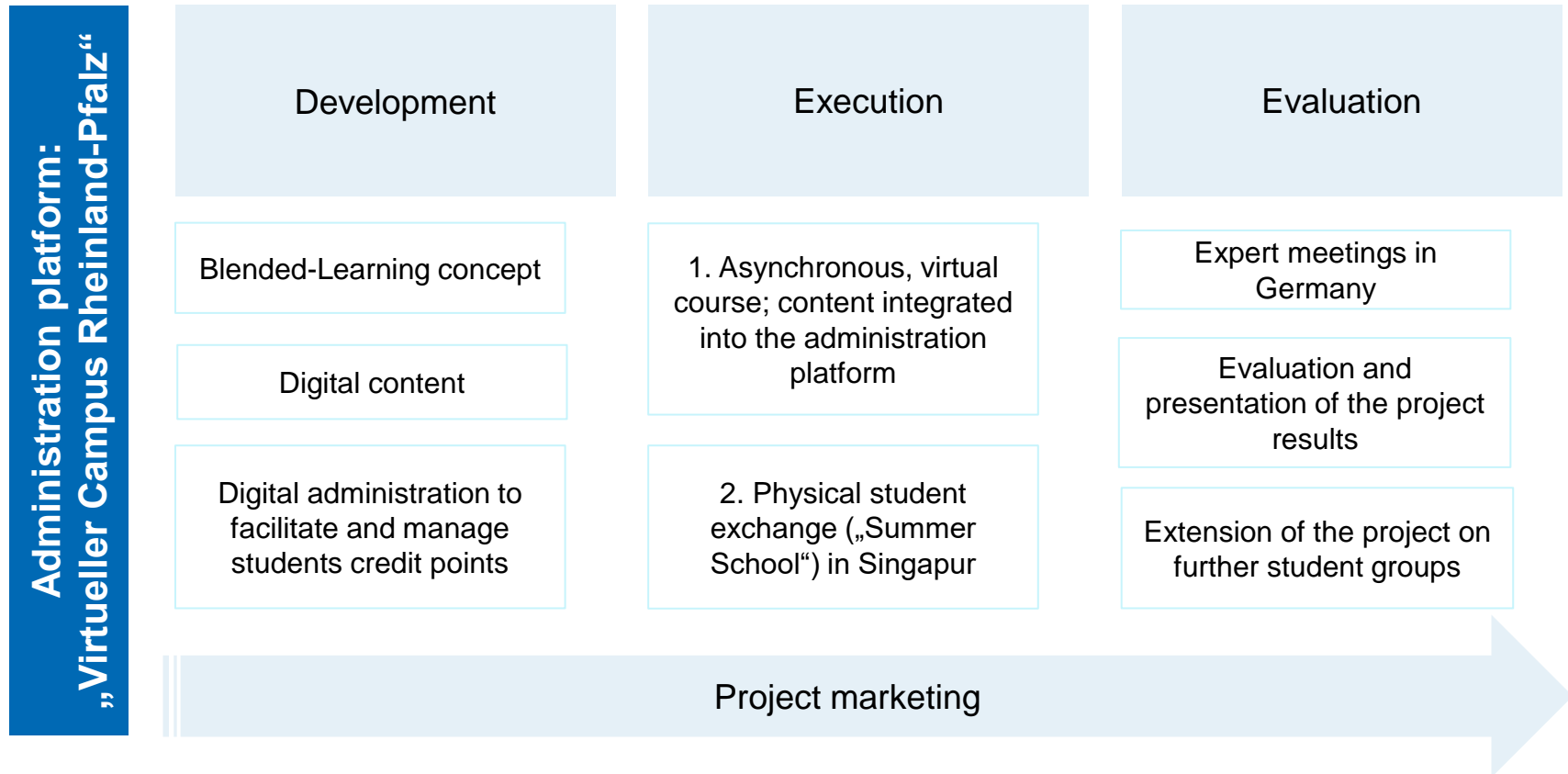
- Technical University Kaiserslautern
- National University Singapore
- Nanyang Technological University Singapore

Students learn and exchange their culturally different perspectives on topics like e.g. algorithms, fake news, big data

**Objective: development of an asynchronous, virtual master's course with an additional physical student exchange program**



## Example: „Teaching for Critical Digital Literacy“



# What can be achieved by VE ?

## *Virtual Reality Learning Environment (VRLE): „Digi Chem Lab“*

- Existing International cooperation since 1995:
  - Student exchange program between the University Paderborn & Qingdao University of Science and Technology
- Chemistry students from China can finish their last semesters in Paderborn (partly in german language)
- German students can finish one semester in Qingdao at the Sino-German Eco-Park in Qingdao (build in 2019)

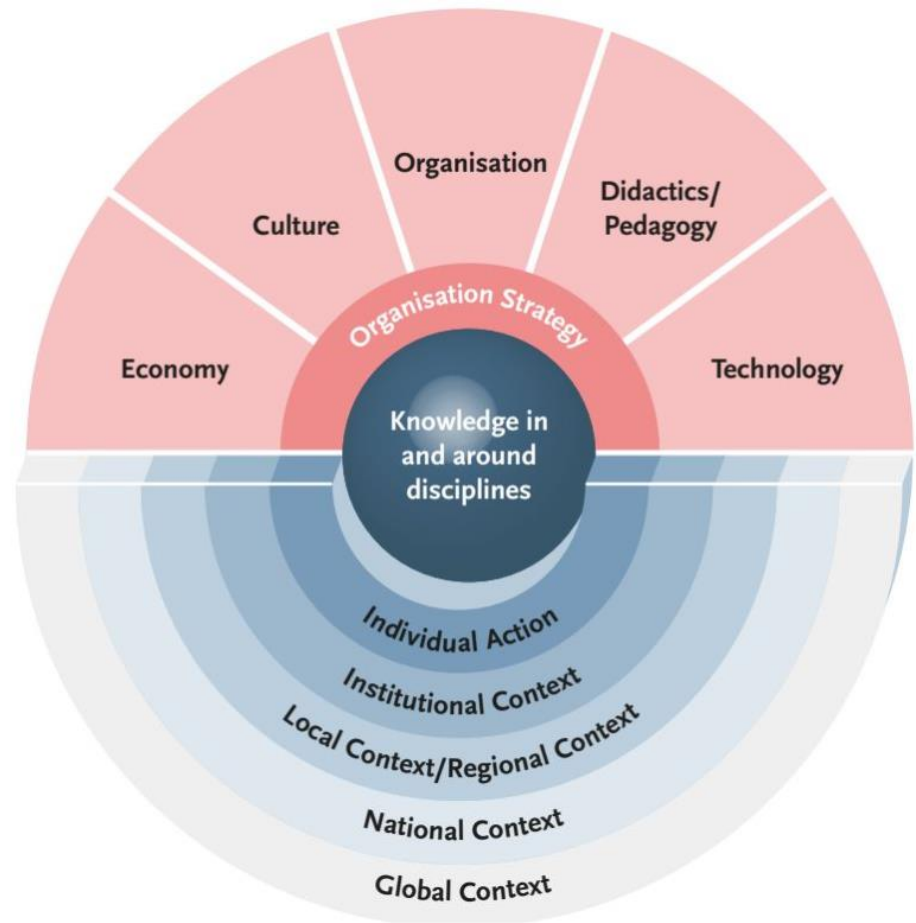
**Objective: integrating a VR chemistry laboratory for Bachelorstudents in “Materials Science” to acquire technical and practical skills in a chemistry laboratory environment**

# Advantages of VE in Internationalization

- Reach target groups who cannot be physically mobile
- Provide international collaborative experience to a broad number of students
- Can be integrated into the curriculum and tailored to the specific context
- making collaboration more permanent:  
rethinking networks, expanding cooperation
- Skill development at teachers and learners level
- Resilience: pandemic experience shows vulnerability of current system; Climate crisis calls for conscious management of physical mobility

# Factors of Internationalisation

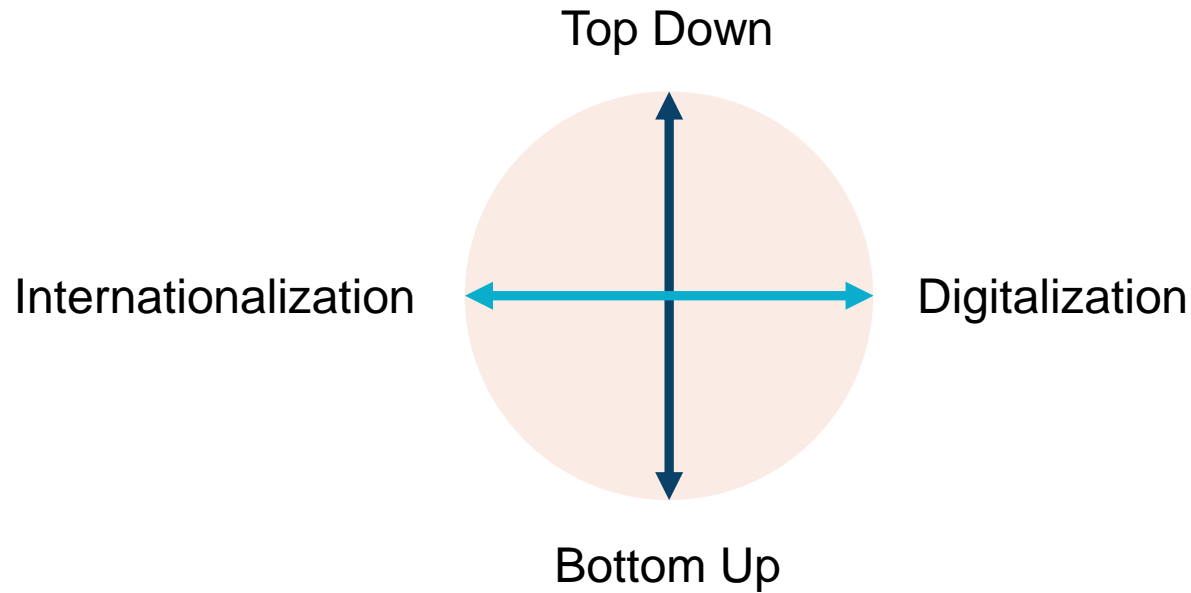
Virtual Exchange involves the engagements of **groups of learners** in extended periods of **online intercultural interaction** and **collaboration** with **partners** from other cultural context or geographic location as an **integrated** part of their education and under the **guidance** of an **educator/expert facilitator**.



O'Dowd (2018): <https://files.eric.ed.gov/fulltext/ED592404.pdf>

Figure: Knoth, A.; Kiy, A.: Reflecting the challenges in internationalised teaching and learning: The systematic approach COIL.UP. In: 2018 COIL Conference Proceedings. The State University of New York, New York City, S. 85-105, March 2018.

# Top Down and Bottom Up Approach



# Obstacles to institutionalise VE

|  |  |  |  |
|--|--|--|--|
| Mix between semester and trimester                         | Data & privacy security issues                         | No motivation to participate in non-obligatory courses | Very diverse distribution of LMS – students have many accounts                           |
| Time difference  | Development and execution of mutual exams              | Accreditation of newly developed VE courses            | No official recognition for preparing VE courses – Lecturers „sacrifice“ their free time |
| Missing strategy for internationalisation + digitalisation | Reluctance of university management                    | Missing resources (technical, staff, professional)     |  |
| Foreign project partners do not receive fundings           | Administrative integration of the international office | Time-extensive consulting                              | Skills and acceptance at teacher and student level                                       |



# International Virtual Academic Collaboration

Foto: [Hans-Peter Gauster](#) via [Unsplash](#).

# IVAC Program Goals



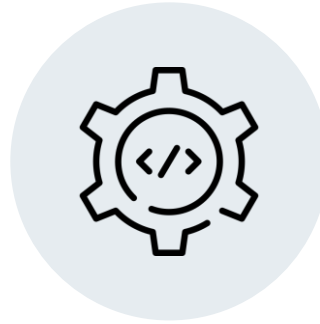
1

German lecturers and their international partners have **integrated digital collaboration formats** into their courses and plan to integrate them into the curriculum.



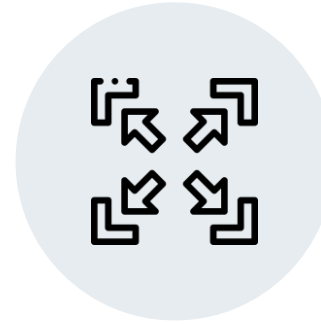
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Students and lecturers apply the **digital skills acquired** through virtual cooperation.



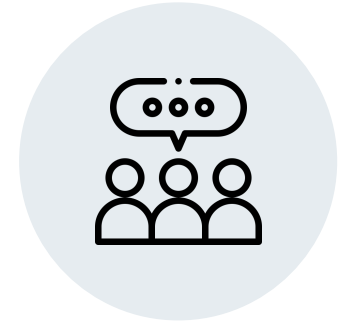
3

**Processes** in the areas of study, teaching and blended mobility are **digitised across universities** and contribute to the development of interoperable student data ecosystems (in the interest of the Groningen Declaration).



4

International digital cooperation formats are accessible to **further target groups**, which makes intercultural experiences possible, for example, for students who's financial or family situation hinders physical mobility.



5

A **community of practice** has formed.

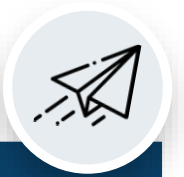
Further Information: <https://www.daad.de/de/infos-services-fuer-hochschulen/weiterfuehrende-infos-zu-daad-foerderprogrammen/ivac/>



Strategic Objective:

# Enhancing Connectivity between Asia and Europe by Boosting Inclusive and Balanced Mobility and Exchanges

# How to stimulate VE?



| Policy-Level   | Institutional Level   |
|--|---|
| Fund institutional measures to promote VE at institutional level (see right column)                                | Motivate teachers for new collaborative formats (incentives, competitions, awards,...)                            |
| Foster network building and exchange in communities of practice  | Enable experimentation and co-development (save space to fail – it is about learning);                            |
| Policy Dialogue  | Setting low barriers: Start small, but start  |
| Work together in terms of standards, quality assurance, recognition, organisational agreements for digital formats | Build competence (technical, didactical), Offer Peer-to-Peer-Training, Co-Teaching                                |
| Find partners/stakeholder from adjacent that might adapt/transform the approach                                    | Integrate VE offerings into the curriculum  |
|  | Build VE into larger strategy (thereby securing necessary resources through backing via institutional leadership) |
|  | Broaden/deepen network of partners  |

# Thank you!

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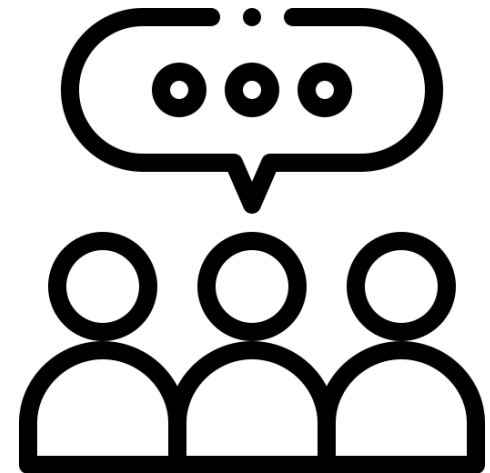
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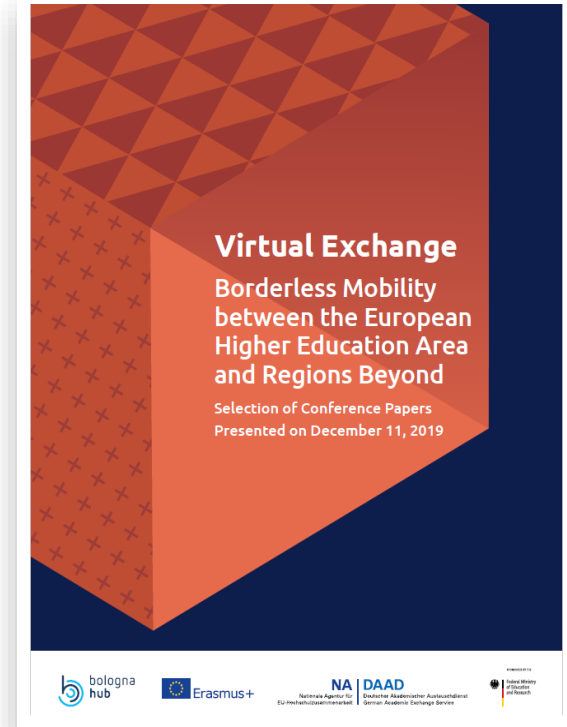
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# Virtual Exchange Borderless Mobility

## between the European Higher Education Area and Regions Beyond

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<https://www.daad.de/kataloge/epaper-daadkonferenzband/#0>

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# Short and long-term challenges

## **Short-term**

redesigning learning spaces

Blended Learning Designs

## **Medium-term**

Promotion of innovation cultures

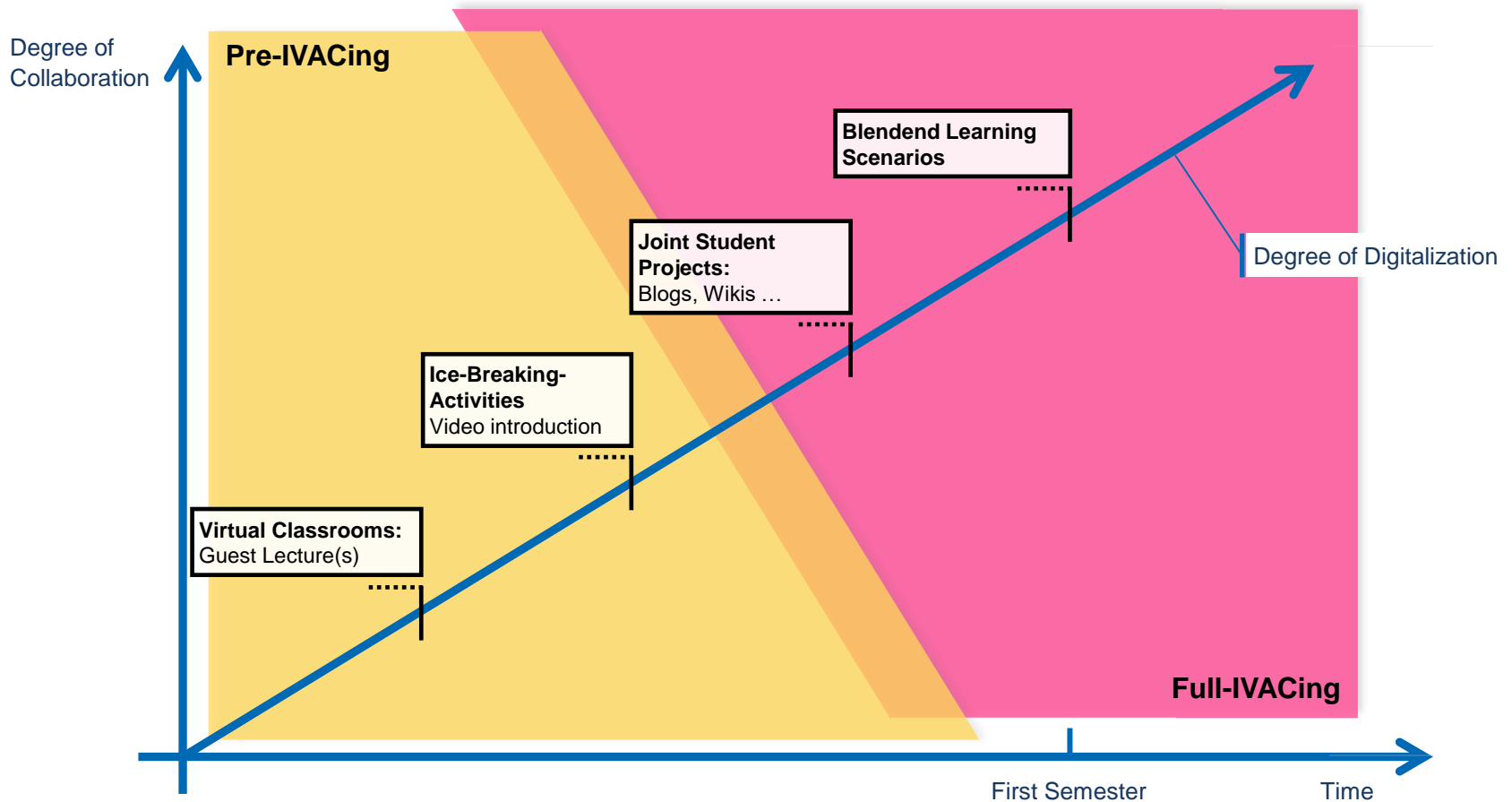
Growing focus on measuring learning success

## **Long-term**

Rethinking how institutions function

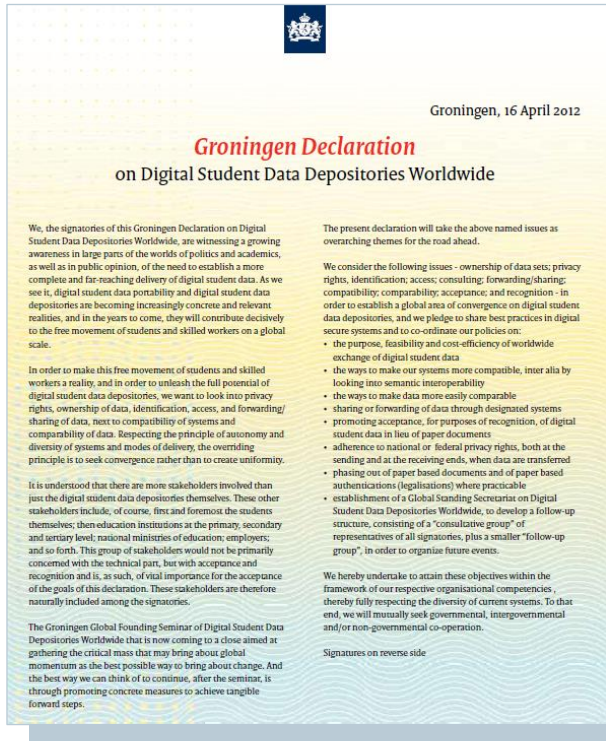
Modularized and disaggregated degrees

# Change by Dialing it up





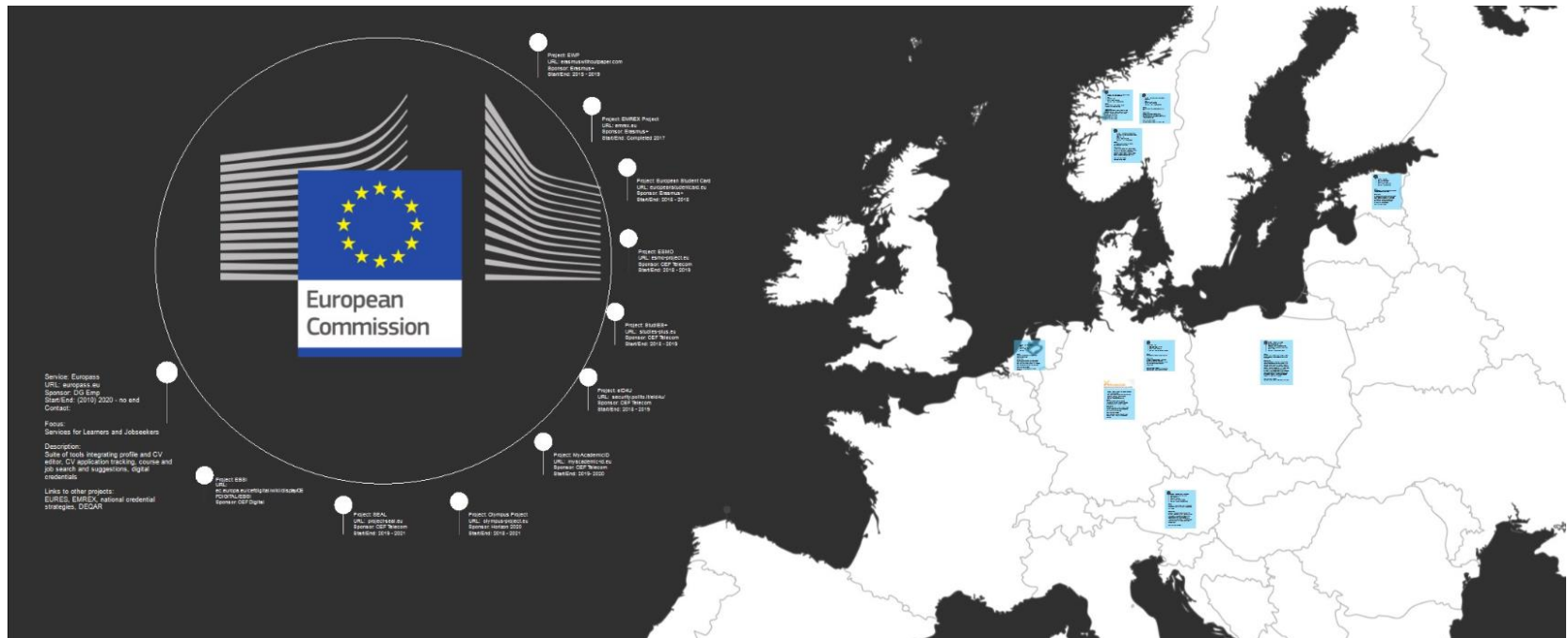
# Groningen Declaration



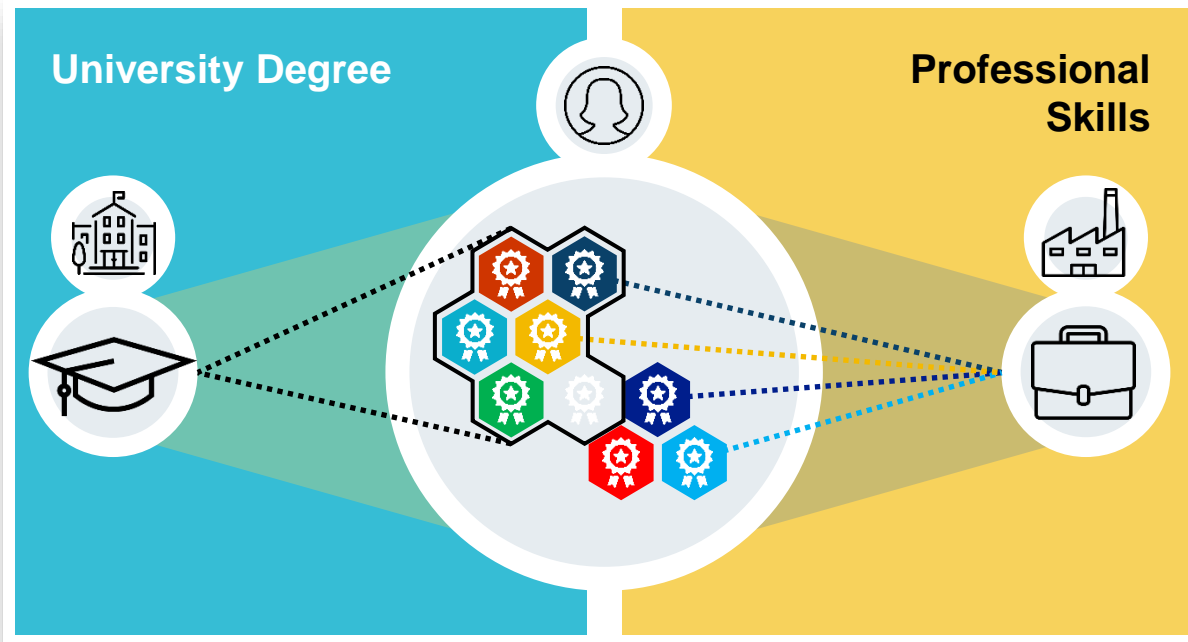
... policies on:

- the purpose, feasibility and cost-efficiency of worldwide exchange of digital student data
- the ways to make our systems more compatible, inter alia by
- looking into semantic interoperability
- the ways to make data more easily comparable
- sharing or forwarding of data through designated systems
- promoting acceptance, for purposes of recognition, of digital
- student data in lieu of paper documents
- establishment of a Global Standing Secretariat on Digital
- Student Data Depositories Worldwide

# Approaches to Secure Student Data Transfer in Europe

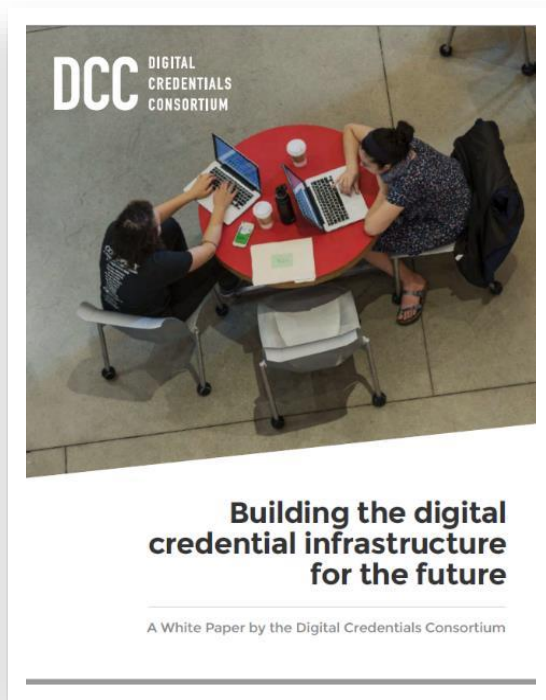


# Micro Credentials



Icons: Gregor Cresnar, monkik, Zlatko Najdenovski, srip, Freepik via [Flaticon.com](https://www.flaticon.com)

# Digital Credentials Consortium (DCC)



- Technische Universität München (TUM),
- Hasso-Plattner-Institut für Digital Engineering (HPI),
- Georgia Institute of Technology,
- Harvard University, Massachusetts Institute of Technology,
- McMaster University,
- Tecnologico de Monterrey,
- TU Delft,
- UC Berkeley,
- UC Irvine,
- University di Milano-Bicocca,
- University of Toronto

<https://digitalcredentials.mit.edu/wp-content/uploads/2020/02/white-paper-building-digital-credential-infrastructure-future.pdf>

# Technological obstacles for VE

Different technical requirements

Insufficient technological infrastructure

Limited access of students from other universities on partners LMS

Technical compability of LMS

Staff requires further digital competences

Lack of motivation to acquire new digital competences

Privacy & data security differences

Choosing the right digital tools

# Didactic obstacles for VE

Language barrier

Ensuring sustainable learning achievements

Lack of motivation to continuously participate in VE

Development of effective, virtual exams

Development and Monitoring of qualitative standards

Foreign language anxiety

Lack of motivation to acquire new digital competences

Cultural differences

Different approaches on teamwork

# IVAC – 23 funded VE-projects between Germany and non-european countries

- Kaiserslautern – Singapore: “Teaching Critical digital literacy”
- Bonn – Tokyo, Japan: “Online Development Studies and Research Community
- Paderborn – Qingdao/Shandong, China: “DigiChemLab”
- Göttingen – Pune/Sonepat, India: “Perspektivenwechsel – Globales Lernen: Interkulturelle Erfahrungen und interdisziplinäre Vielfalt“
- Jena – Beijing, China: „Blended collaboration in intercultural simulation games”
- Düsseldorf – Seoul, South Korea: “Intercultural Cross-site Teaching“
- Würzburg – New Dehli, India: „WueGlobal - Teaching, Learning, Digital Connection”

# IVAC – 23 funded VE-projects between Germany and non-european countries

- Hildesheim – Pune, India: “Intercultural perspectives on information literacy”
- Freiburg – Yogyakarta, Indonesia: "Virtuelle Lehr-Lern-Kooperationen“
- Frankfurt – Guwahati, India: „Creating Virtual Spaces in the Academic Collaboration between FRAUAS and ADBU“
- Heidelberg – Cochin, India: „Transforming Global Health Education in a Digital Age - Indo German Partnership“
- Köln – New Dehli, India: „EduVEnture Cologne“
- Wuppertal – New Dheli/Mumbai/Pune, India: „Community of Practice Interculturalism and Literary Theory (CoPIT)“



# IVAC – 23 funded VE-projects between Germany and non-european countries

- Köln – Hanoi, Vietnam: „Hybrid International Teaching and Learning Community (hyTLC)”
- Heilbronn – Ho Chi Minh City, Vietnam: “VIT<sup>3</sup>A“
- Fulda – Sippy Downs, Australia: „Social Work in a Globalised World”
- Hamburg – Sydney, Australia: “In others’ shoes: But how?”
- Gießen – Springfield, Australia: “VIP-CONCEPT“
- Potsdam – Sydney, Australia: „Children's Rights Studies Online (CRS Online”

# IVAC – 23 funded VE-projects between Germany and non-european countries

- Freiburg – Melbourne, Australia: „CoCo - A Collaborative Course on Conservation and Communication at BTU and DU“
- Ludwigsburg – Casuarina, Australia: „DIVA - Digital and International Virtual Academic Cooperation“
- Greifswald – St. Petersburg, Russia: “Mobility in the Medieval and Early Modern Baltic Sea Region”
- Freiberg – Moskau, Russia: “Blended-Mobility-Kurs „Production Planning in Additive Manufacturing“ PPAM“

