

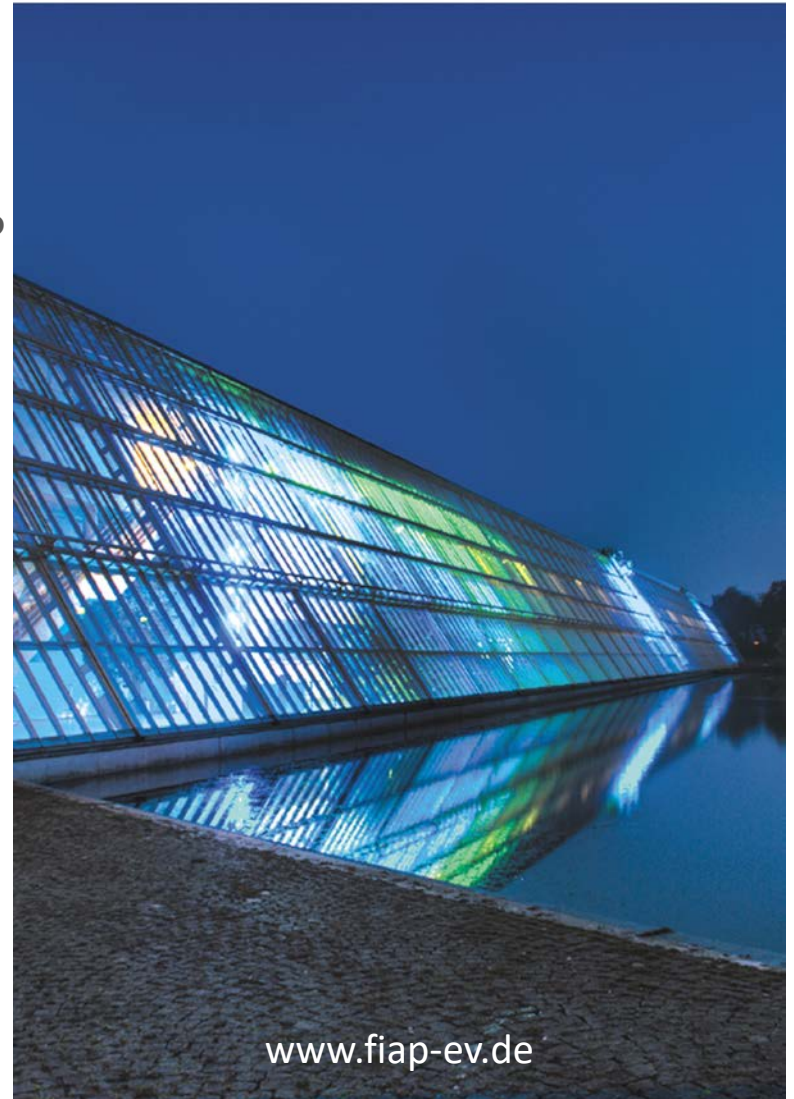
**GREEN APPRENTICESHIP AS SYSTEMIC CHANGE
AGENT FOR GREEN AND SOCIAL TRANSITION IN
EUROPE**

**CEDEFOP/OECD symposium: Apprenticeships for greener economies and societies
Virtual Event
21. & 22. October 2021**

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FIAP E.V. – APPLIED RESEARCH FOR SUSTAINABLE SOLUTIONS

- The non-profit Research Institute for Innovative Work Design and Prevention (FIAP e.V.) is a network of scientists and experts from various disciplines
- interdisciplinary, international projects to research fundamental & application-related problems in the areas of ecological, economical, social & cultural transition
- Main goal is to support knowledge exchange and innovation management for transformative processes



STRUCTURE

1. Methodological approach of paper & presentation
2. Starting hypothesis & transformation model
3. Transformation areas in the field of apprenticeships
4. Specific characteristics & transformative potential of the green transition
5. Case study GRÆDUCATION
 - Structure of the project
 - Results in the area of EPAS schemes
 - Results in the area of EPAL schemes
 - Conclusion

1. METHODOLOGICAL APPROACH OF PAPER & PRESENTATION

Objective of the paper:

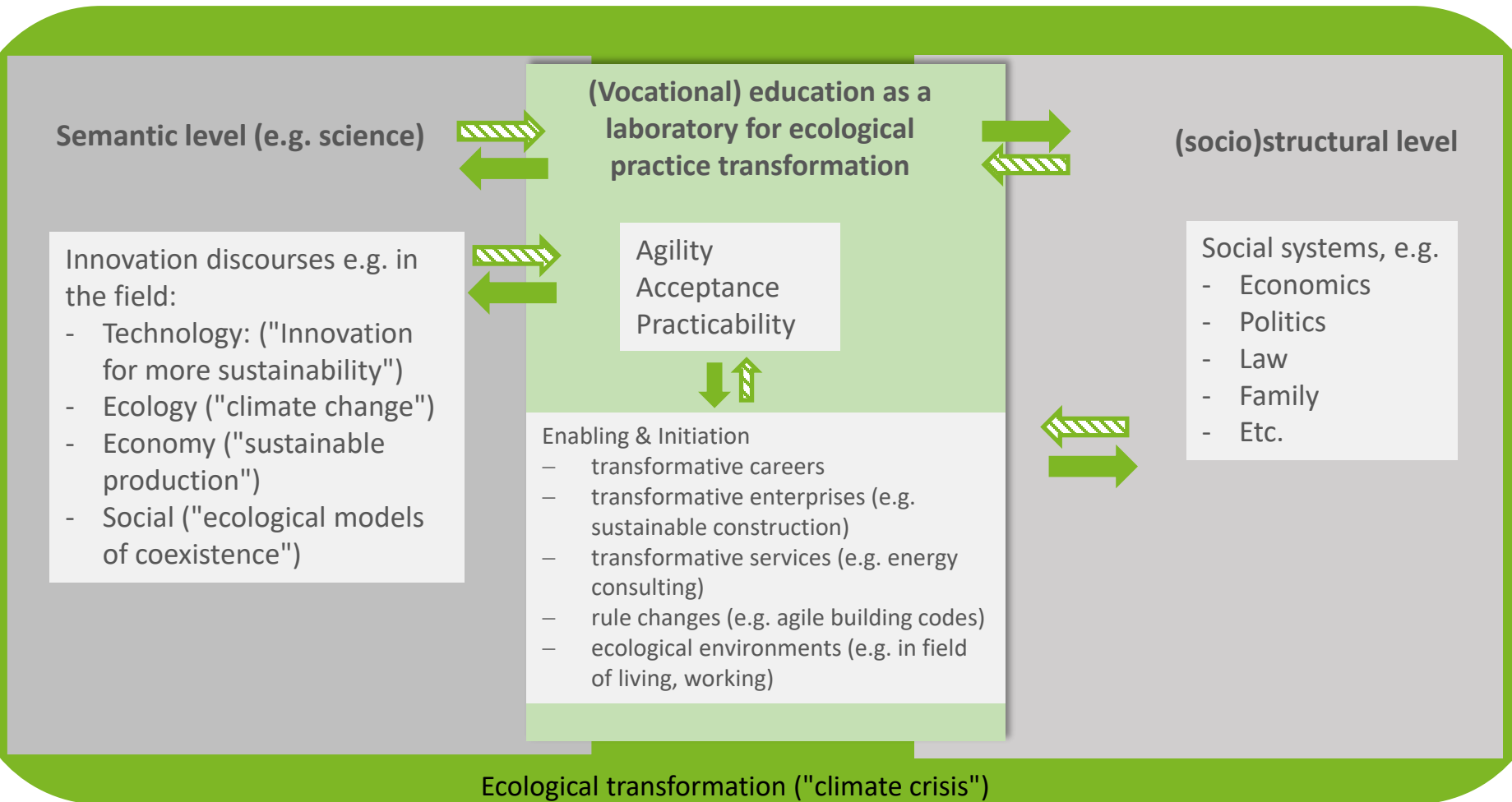
Analysing the transformative power of green apprenticeships within

- the VET system (using the EFQEA criteria of the European council)
 - adjacent social systems (involved in VET)
 - civil society
-
- Analysis is based on the in-depth case study of the Greek-German cooperation project GRÆDUCATION (funded by the Federal Ministry of Education and Research since 2017). Results & process model are transferable to other European countries.

Instruments:

- qualitative social research based on interview analysis (groups and individual); Participant observation; Moderation and accompanying evaluation of creative workshops with Greek and German vocational educators; Project management experiences; Participatory evaluation of the project process

FIAP PROCESS MODEL: VOCATIONAL TRAINING FOR ECOLOGICAL PRACTICE TRANSFORMATION



2. STARTING HYPOTHESIS

Apprenticeship in the eco-system of Green Transition becomes a change agent within VET systems and, from the perspective of society as a whole, for the neighbouring social systems if the approach to apprenticeship is designed in an appropriate way.

The criteria of the European framework for quality and effective apprenticeship (EFQEA) can offer a development basis for that design.

They have to be reflected and adapted to the specifics of the eco-system of green transition.



3. TRANSFORMATION AREAS IN THE FIELD OF APPRENTICESHIPS

On the background of the EFQEA criteria of the European council it becomes clear that apprenticeship in the field of green skills helps to improve the design of apprenticeship in general.

- **Balance between technical and interdisciplinary competences:** innovative, green technologies, digitalisation, customer/user oriented services, need of entrepreneurial skills
- **Interplay between theoretical and practical training:** involvement of companies in the field of new technologies, new entrepreneurial cultures, shortage of skilled workers in new technologies



3. TRANSFORMATION AREAS IN THE FIELD OF APPRENTICESHIPS

- **Inclusion of different social systems in planning, organising and implementing the training:** new learning outcomes have to be defined in accordance with new markets and social partners
- Need of **flexibel transition** between vocational and academic institutions in terms of new technologies
- Need of **lifelong learning concepts** because of the agile development of new technologies



4. SPECIFIC CHARACTERISTICS & TRANSFORMATIVE POTENTIAL OF THE GREEN TRANSITION

- Climate goals of the European Union (European Green Deal) in general and regarding our case study especially these of the Greek government are creating great pressure to act because they are triggering intensive structural change in some regions.
- In these regions new green markets emerge and new companies are established.
- A change of culture is needed in all areas of society.
- The educational sector is affected by the challenges in a special way:
New technical and interdisciplinary competences in companies are needed and must be provided by the VET system.
- The Eco system green Economy can make VET more attractive.
It includes new, digital and sustainability-oriented learning offers.

5. CASE STUDY GRÆDUCATION: STRUCTURE OF THE PROJECT

**Project-Partner:
Germany**

HBZ - Chamber of
Crafts Training
Centre Münster
(TVET)

FIAP e.V.
(innovation
management/coor
dination)

Science Park
Gelsenkirchen
(Vocational.
orientation)



**Project-Partner:
Greece**

German-greek
Chamber of
Commerce

IEP – Institute
of Educational
Policy

OAED –
Labor Agency

Enterprises in
Greece

5. CASE STUDY GRÆDUCATION: RESULTS IN THE AREA OF EPAS SCHEMES

- **Greening and Modernisation** of training structures in Greek TVET system – CoCreative Approach
- **3 green curricula** for EPAS apprenticeship (electrician; technician for thermal & hydraulic installations, mechatronics technician for refrigeration technology (air conditioning-EPAS))
- Flexible modules of **interdisciplinary qualifications** (soft skills, entrepreneurship)
- focus on **innovation management**
- **Marketing concepts** for VET ("Girl's Day"/career orientation)
- **Virtual Reality** in VET/working group
- **Green VET Campus**: Concept and planning for a joint green VET campus with OAED in Kozani (conceptual and structural design, German-Greek exchange of experts for structural change in Western Macedonia; involvement of local stakeholders and companies)

5. CASE STUDY GRÆDUCATION: RESULTS IN THE AREA OF EPAL SCHEMES

- New **green modules in climate-relevant professions** (Train the Trainer/ Focus 4th year of EPAL schemes)
- Digital support and remodeling of learning and teaching processes, individual training programmes (e-learning platform), transnational collaboration without travelling (virtual classroom for greening), making invisible visible, virtual duplication of machines and training rooms, testing of dangerous work (VR/AR applications)/Focus EPAL schemes first to 4th year
- **Networking with university programmes** to cover innovative technologies (e.g. solar cooling)
- **Interdisciplinary modules:**
 - Soft Skills (creativity, communication, collaboration)
 - Entrepreneurship (new service ideas in Green Economy)
 - Digital skills to facilitate open innovation, collaboration and internationalization
 - Corporate training: Sustainable building; approaches to solutions for in-company training

**THANK YOU FOR
YOUR ATTENTION.**

FIAP e.V.

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