

Zurich University  
of Applied Sciences



**Zurich University  
of Applied Sciences**

**The ZHAW OER Community at  
the heart of fostering strategic  
aims of the university**





**Winterthur**



**zhaw**

**Wädenswil**



**Zurich**

## Students

14'382

Total ZHAW

zhaw

## Employees

271

Professors

946

Lecturers

3'516

Total ZHAW  
2646 full time equivalent

ZHAW (2022)



OER-Team at the  
ZHAW University Library

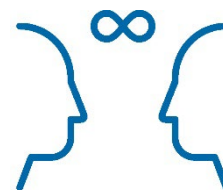
# ZHAW strategic goals



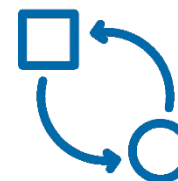
Sustainability



Societal integration



Lifelong learning

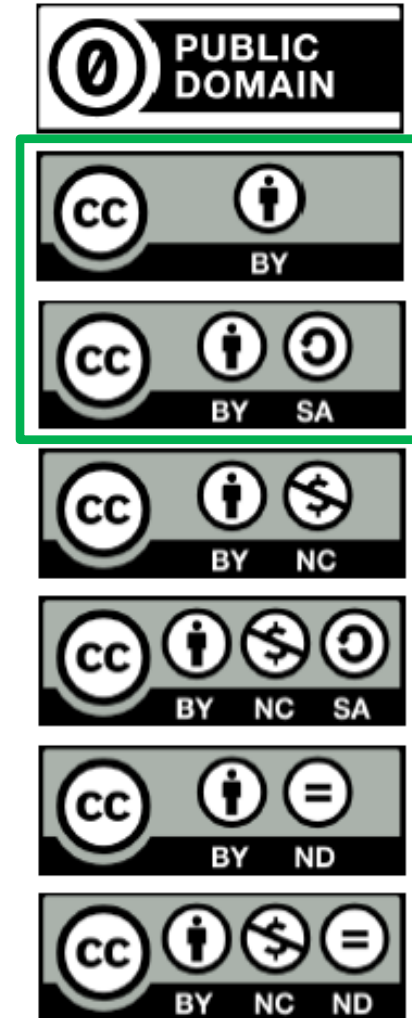


Digital transformation

# OER - Open Educational Resources

text books  
slides  
assignments  
work sheets  
tables  
images  
graphs  
videos  
quizzes  
tutorials

+



[UNESCO definition of OER](#)

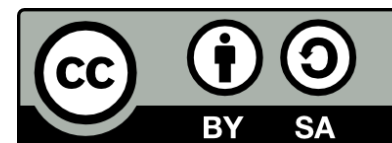


## UNESCO Recommendation on OER

Developing supportive policy

## ZHAW OER Policy

“The ZHAW expects its members of staff to publish their open educational resources under one of the following Creative Commons licences:”





Know  
How

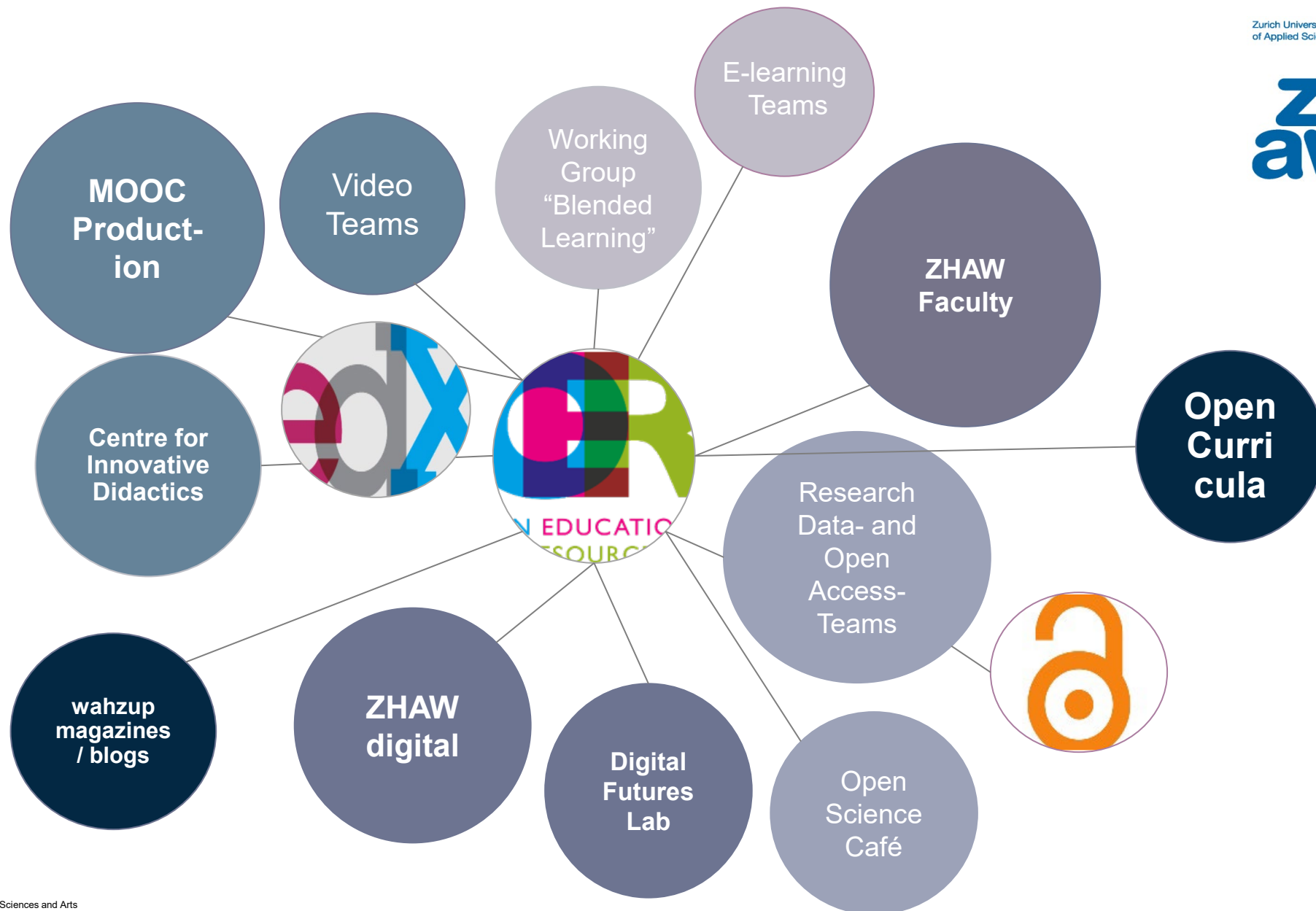
## UNESCO Recommendation on OER

**Building capacity of stakeholders to create, access, re-use, adapt and redistribute OER**

## OER Competence Centre at the University Library

- **Know-how**
- **Courses and support with copyright, Creative Commons and OER**
- **Guidelines, FAQ and checklist**

# Networking





Know  
How

Culture

Allgemein Beiträge Dateien SPS-Notizbuch 2 weitere +

## Willkommen im Team!

Versuchen Sie, den Teamnamen oder die Namen von Lehrern zu @erwähnen, um mit dem Idee

Krüger Nicole (krun) 28.07 11:36 Bearbeitet



# OER Community

## Sei Teil der OER Community an der ZHAW

Erfahre Neues und teile dein Wissen, [teile OER-Materialien](#) und [stelle Fragen](#) an die Community.

# Sharing new OER within the Community

Enclosed I would like to share my **script** for "Applied Atmospheric Sciences for Aviation Engineers". It was created under CC BY-NC-SA, with the help of a freelancer (freelancer.com), ...

On my SwitchTube channel you can find **videos** from different disciplines on protein analytics, published under CC BY-SA 4.0: ...

..., I have created a **guide** on the use of machine translation specifically for communication with refugees from Ukraine. ...

# Comments, discussions and likes



Here are our materials from the course "Computational Movement Analysis" in which we share the materials as well as their source code publicly on Github ...

[10 Answers from ...](#)



**Discussion**

about licenses for open source code.

Knowledge from the community

was much broader than just from the OER team.



**Interdisciplinary Exchange**

# Sharing OER related information

Hi everyone, The UNESCO is organizing a webinar on OER next Monday from 3:00 to 4:00 pm. I thought some of you might be interested in joining this Zoom meeting.

One of my favorite authors, ..., has published a book in 2014 that ... presents the problematics of "copyright" and its alternatives....

The SNSF is organizing a competition for scientific images. They are to be made available to the media and the public under an open license. ...

Dear OER community, happy new year to you all! Prof. ... and myself are working on a project to promote accessible Open Educational Resources (OERs).

# Podcasts / Video Interviews

Voices from the community  
promoting the community.



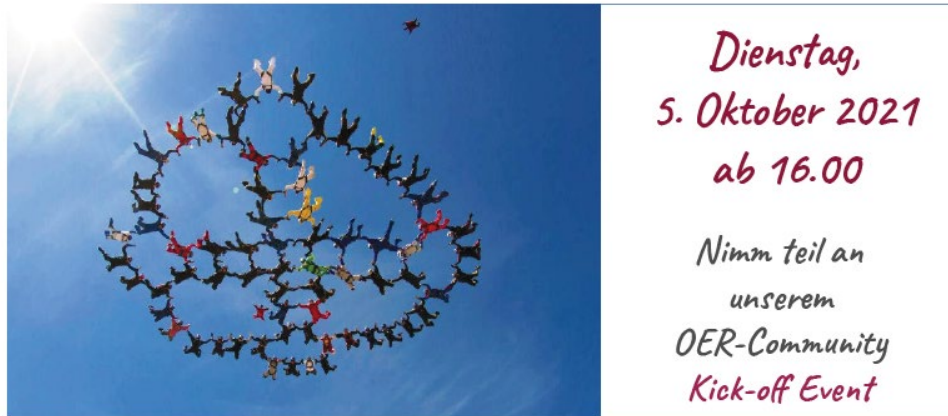
Video [“OER-Digital Campus”](#) by Daniel Baumann, Managing Director ZHAW Digital and ZHAW OER Competence Centre under [CC BY 4.0](#)  
[Blog entry](#) “OER und der digitale Campus der ZHAW”



Video [“OER Open Curriculum”](#) by Maya Ladner, Programme Director, MSc Preneurship for Regenerative Food Systems (PREFS) and ZHAW OER Competence Centre under [CC BY 4.0](#),  
[Blog entry](#) “Vom Lehren und Lernen in Netzwerken”

# Community Kickoff-Event in October 2021

Save the date  
und geh **OER** dazu!



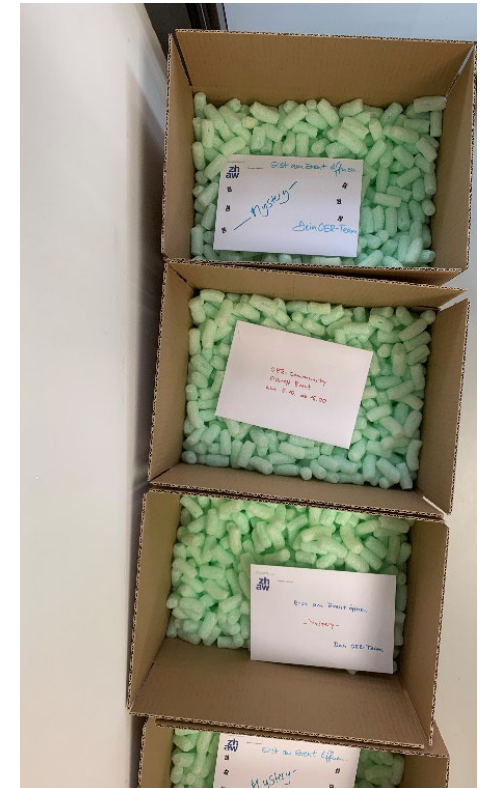
"File:P3 skydiving formation 79 way 2012.jpg" <https://commons.wikimedia.org/w/index.php?curid=83761791> by Princi19skydiver is licensed under CC BY-SA 4.0. <https://creativecommons.org/licenses/by-sa/4.0/>

*Join the conversation!*

Werde Teil der OER-Community in unserem **TEAMS-Kanal**

"[P3 skydiving formation 79 way 2012.jpg](#)" by Princi19skydiver under [CC BY-SA 4.0](#)

- Invited Speaker
- OER best practice at ZHAW
- Discussions among participants
- Social event



Boxes by ZHAW University Library, [CC BY 4.0](#)

# How does OER support the achievement of strategic goals?



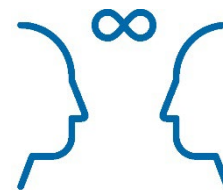
## Sustainability

Visibility, community building and student experience are part of ZHAW's strategy for sustainability. [OER-Community](#) and [Students4OER project](#), funded by ZHAW sustainable.



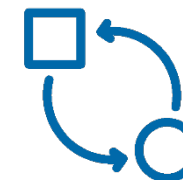
## Societal integration

Increasing community integration and inclusion in our society: [OER Creator Workshop](#), [Accessibility](#); examples from the [OER Community](#)



## Lifelong learning

[ZHAW edx](#) and [MOOCs](#), and [Open Curricula](#) → Lifelong Learning Strategy and its Challenges



## Digital transformation

[ZHAW digital](#) and [Digital Futures Lab](#), interdisciplinary networking



# How does OER support the achievement of strategic goals? Sustainability – Students4OER competition

## Sustainability

Visibility, community building and student experience are part of ZHAW's strategy for sustainability. OER-Community and the Students4OER project, funded by ZHAW sustainable.

supported by



- ✓ Students produced their own OER addressing one of the 17 SDG of the UN
- ✓ Active involvement of OER Community through outreach to students, their expertise and on the judging panel
- ✓ Outreach to students through student groups on sustainability, social media and workshops





Sustainability

Visibility, community building and student experience are part of ZHAW's strategy for sustainability. OER-Community and the Students4OER project, funded by ZHAW sustainable.



# How does OER support the achievement of strategic goals? Sustainability – Students' experience in OER development

**Kann Deutschland unabhängig werden von russischem Gas?**

Ein Nachhaltigkeitsvergleich zwischen der lokalen Produktion von synthetischem Methan und russischen Gasimporten für Mobilität auf Erdgasbasis.

**Synthetisches Methan wurde als Alternative hinsichtlich Umwelt-, Sozial- und Wirtschaftspoliken analysiert**

- Deutschland ist der größte Gasimporteur Europas. Im Jahr 2020 wurden 28 Milliarden m³ Gas aus Russland importiert [1].
- Synthetisches Methan könnte eine Alternative sein, um die Abhängigkeit Deutschlands von fossilen Ressourcen zu verringern und somit auch die russischen CO<sub>2</sub>-Emissionen für 2020 zu senken.
- Um die Klimabelastung durch Methan zu verringern, wurde eine Nachhaltigkeitsbewertung für Umwelt-, Sozial- und Wirtschaftspoliken vorgenommen. Synthetisches Methan wurde mit russischem Erdgas verglichen, wobei 2,8 t CO<sub>2</sub> pro t Methan und 1,2 t CO<sub>2</sub> pro t Erdgas angesetzt.
- Strom aus Photovoltaik (PV) wurde als Energiequelle für die synthetische Methanproduktion gewählt. Allerdings ist die Stromerzeugung zu berücksichtigen.

**Synthetisches Methan verursacht in der persönlichen Mobilität weniger CO<sub>2</sub> pro km als Erdgas, andere Umweltauswirkungen sind jedoch sichtbar**

- Durch PV erzeugtes synthetisches Methan emittiert 0,16 t CO<sub>2</sub> pro km. Dies ist weniger als bei russischem Erdgas mit 0,21 t CO<sub>2</sub> pro km. Bei russischem Erdgas wird CO<sub>2</sub> bei der Erzeugung in der Erdoberfläche freigesetzt, während bei synthetischem Methan CO<sub>2</sub> bei der Erzeugung in der Erdoberfläche freigesetzt wird.
- Die Gesamtwirkungen (gemäß der Vorläufigkeit der jüngsten Methan 2020) sind bei synthetischem Methan niedriger als bei russischem Erdgas. Dies ist auf die Nutzung von PV zur Erzeugung von Strom und die Nutzung von synthetischem Methan zur Erzeugung von Wärme zurückzuführen.
- Der für die synthetische Methanproduktion verursachte Strom und die CO<sub>2</sub>-Quelle (Methan) sind zu berücksichtigen und sollten in die Nachhaltigkeitsbewertung einfließen. Die Abhängigkeit von CO<sub>2</sub> aus der Atmosphäre ist durch synthetisches Methan gemindert, da die CO<sub>2</sub>-Emissionen bei der Erzeugung von synthetischem Methan geringer sind als bei der Erzeugung von russischem Erdgas.

**Synthetisches Methan ermöglicht mehr Autonomie**

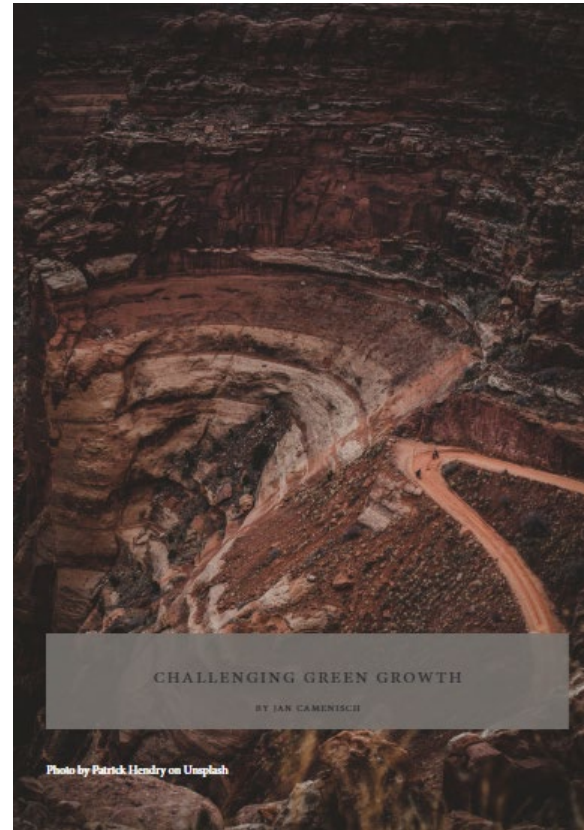
- Es ist zu erwarten, dass synthetisches Methan aus Russland zu synthetischem Methan aus Deutschland wird, was die Abhängigkeit von Dritten verringert.
- Die Nutzung von PV zur Erzeugung von synthetischem Methan ist eine nachhaltige Alternative, um die Abhängigkeit von Dritten zu verringern.
- Die Abhängigkeit von Dritten ist ein wichtiger Faktor bei der Bewertung der Nachhaltigkeit von synthetischem Methan.

**Die regionale Wirtschaft wird gestärkt, jedoch steigen die Kosten**

- Die Kosten für synthetisches Methan sind niedriger als die Kosten für russisches Erdgas. Dies ist auf die Nutzung von PV zur Erzeugung von Strom und die Nutzung von synthetischem Methan zur Erzeugung von Wärme zurückzuführen.
- Synthetisches Methan ist eine nachhaltige Alternative, um die Abhängigkeit von Dritten zu verringern.
- Die Abhängigkeit von Dritten ist ein wichtiger Faktor bei der Bewertung der Nachhaltigkeit von synthetischem Methan.

**Fazit: Synthetisches Methan ist eine nachhaltige Alternative, um die Erdgasimportabhängigkeit zu minimieren.**

- Die vorgeschlagene Nachhaltigkeitsbewertung zeigt ein positives Ergebnis von CO<sub>2</sub>-Ausstoß und für einen niedrigeren CO<sub>2</sub>-Ausstoß pro km bei synthetischem Methan im Vergleich zu russischem Erdgas.
- Die Abhängigkeit von Dritten ist ein wichtiger Faktor bei der Bewertung der Nachhaltigkeit von synthetischem Methan.
- Die Abhängigkeit von Dritten ist ein wichtiger Faktor bei der Bewertung der Nachhaltigkeit von synthetischem Methan.



All outputs that were released under an open licence are accessible on the [Zenodo platform](#).



## Sustainability

Visibility, community building and student experience are part of ZHAW's strategy for sustainability. OER-Community and the Students4OER project, funded by ZHAW sustainable.

- Jan Camenisch
- Challenging Green Growth
- Paper

## CHALLENGING GREEN GROWTH

BY JAN CAMENISCH

Photo by Patrick Hendry on Unsplash

## Introduction

In 2015 all UN member states adopted the UN's 2030 Agenda for Sustainable Development. The core of this Agenda are the sustainable development goals (SDG's). It includes 17 goals with specific targets. The 8<sup>th</sup> UN sustainable development goal (SDG 8) aims for sustainable economic growth and targets the development of fair and human worthy employment. In this text I want to focus on the first part of this goal, the sustainable economic growth. Specifically, this focuses on the targets 8.1, a minimum of 7 per cent growth of the gross domestic product (GDP), and 8.4, increase progressively global resource efficiency in consumption and production. With this framework we can see that SDG 8 targets us growth.

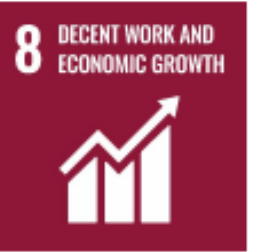


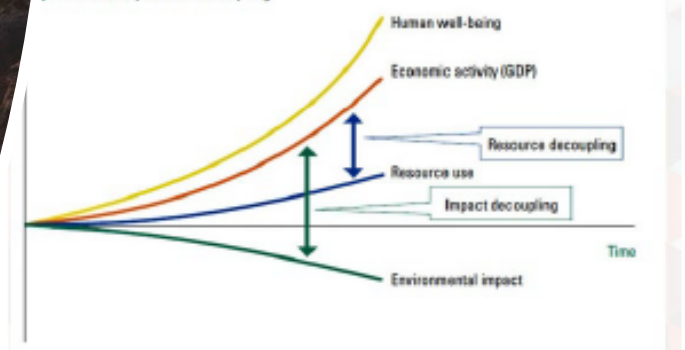
Figure 1 SDG 8 Decent Work and economic growth (Public Domain)

Green growth is an idea that is present in most strategies in the fight against climate change. The goal of this text is not only to challenge the SDG's insistence on growth but also to encourage the reader to explore a variety of ideas and theories in their opinion making. I want to establish a definition for Green Growth and Decoupling, afterwards I want to examine some Challenges of Green Growth using the example of solar panels) and finally I will present the Debanking Decoupling Report by Jan Camenisch as an example of research critical against green growth.

## Green Growth and Decoupling

We should define what is meant by green growth. Green growth focuses on environmentally sustainable economic growth. The term decoupling is usually used in discussions about green growth, as mentioned in the target 8.4 of the SDG 8. Decoupling is the separation of economic growth from the usage of resources (resource decoupling) or environmental impact (impact decoupling). It can be divided into relative decoupling, which would lower the material use or environmental impact in relation to economic growth and absolute decoupling, which would mean that the economy can grow without the usage of resources or without environmental impact. Decoupling is imperative for green growth because it is the only way to grow the economy more sustainable.

Figure 1. Two aspects of 'decoupling'





## Sustainability

Visibility, community building and student experience are part of ZHAW's strategy for sustainability.

OER-Community

and the

Students4OER

project, funded by

ZHAW sustainable.

# • Ajadin Nuredini Can Germany become independent of Russian gas?

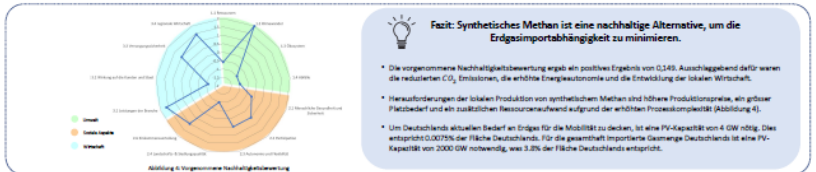
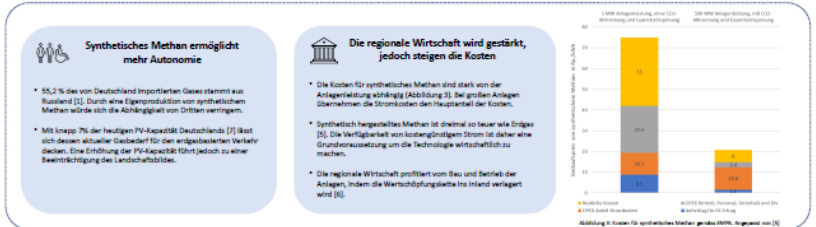
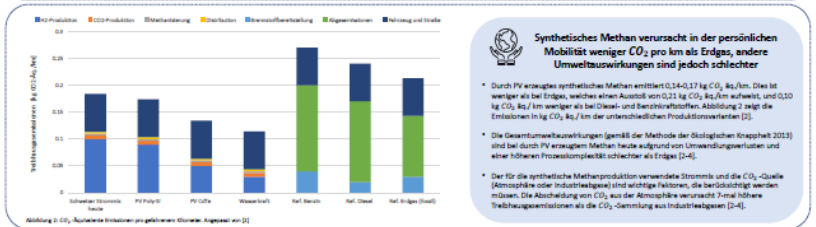
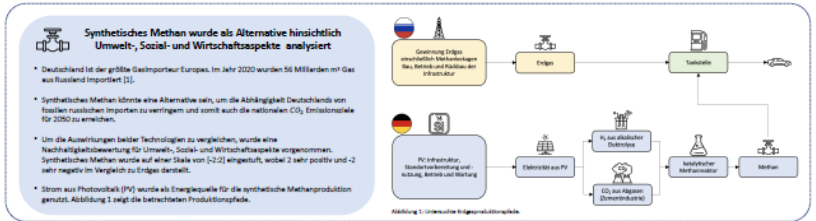
## • Poster

## Kann Deutschland unabhängig werden von russischem Gas?

Ein Nachhaltigkeitsvergleich zwischen der lokalen Produktion von synthetischem Methan und russischen Gasimporten für Mobilität auf Erdgasbasis.



Büniger Arturo, Bender Bruno, Eröhan Kaya, Nuredini Ajadin, Schneider Andrin  
10.10.2022, 14.02.2022, 14.02.2022



[1] IEA, Statistical Review of World Energy 2021 10th Edition, 2021, Zugriffen: 1. Februar 2022, [Online]. Verfügbar unter: <https://www.bp.com/content/dam/bp/business-operations/publications/statistical-review/2021-review-2022-full-report.pdf>  
 [2] Leach, M. et al., «Life Cycle Assessment of Renewable Methane for Transport and Mobility», 2018, Zugriffen: 5. Februar 2022, [Online]. Verfügbar unter: <https://doi.org/10.1016/j.jclepro.2018.08.104>  
 [3] UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE (UNECE), «Life Cycle Assessment of Electricity Generation Options», Geneva, 2013, Zugriffen: 1. Februar 2022, [Online]. Verfügbar unter: <https://www.unece.org/energy/energy-centre/publications/2013/life-cycle-assessment-electricity-generation-options>  
 [4] W. J. N. et al., «Life Cycle Assessment of Carbon Dioxide-Based Production of Methane and Methanol and Derived Polypropylene: A Case of CO<sub>2</sub>-Based Chemicals», Ind. Eng. Chem., vol. 5, p. 427-440, Apr. 2016, doi: 10.1021/acs.iecr.5b01644.  
 [5] T. Eröhan, M. Bender, M. Büniger, M. Nuredini, B. Schneider, S. Eröhan, «Synthetische Methan-Produktion: Eine Analyse der Wirtschaftlichkeit», 2021, Zugriffen: 5. Februar 2022, [Online]. Verfügbar unter: <https://doi.org/10.1007/978-3-319-54817-7>  
 [6] Lindner, J. et al., «Mining and Energy: A Life Cycle Assessment of Energy Sector Jobs globally», Zugriffen: 1. Februar 2022, [Online]. Verfügbar unter: <https://www.sciencedirect.com/science/article/pii/S2352484721000476>  
 [7] HEP, «100% erneuerbare Energie aus Photovoltaik in Deutschland 2021», München: HEP, Zugriffen: 05. Februar 2022, [Online]. Verfügbar unter: <https://www.hep.ch/de/100-erneuerbare-energie-aus-photovoltaik-in-deutschland-2021>

Das studentische Projekt «Kann Deutschland unabhängig werden von russischem Gas?» von Arturo Büniger, Bruno Bender, Kaya Eröhan, Ajadin Nuredini und Andrin Schneider steht unter der Lizenz [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/). Die Marke ZHAW ist von der vorliegenden Lizenz unberührt.



Sustainability

# How does OER support the achievement of strategic goals? Sustainability – Students4OER awards ceremony



[Roundtable](#) with students and university staff, ZHAW University Library, [CC BY 4.0](#)



Roger Flüher in conversation with Simona Flüher, student, at the [Roundtable](#), ZHAW University Library, [CC BY 4.0](#)



Nicole Krüger (right) and Yvonne Klein (2nd from left) present the prize for the best competition entry to [Kim Jäggi \(left\)](#) and [Silvana Capaul](#) (2nd from right), ZHAW University Library, [CC BY-ND 4.0](#)



From left to right: Yvonne Klein with [Sophia Graupner](#) (3<sup>rd</sup> place), ZHAW University Library, [CC BY 4.0](#)



## Societal integration

Increasing community integration and inclusion in our society:

OER Creator Workshop;  
Accessibility;  
examples from the OER Community

# How does OER support the achievement of strategic goals? Societal integration – OER from our OER Community



Dr. Alice Delorme Benites created a guide in March 22 on the use of machine translation tools specifically for communicating with refugees from Ukraine. She published it under CC BY 4.0 to distribute and make it widely available to others for reuse and further development.



## Societal integration

Increasing community integration and inclusion in our society:

OER Creator Workshop;  
Accessibility;  
examples from the OER Community

# How does OER support the achievement of strategic goals? Societal integration – Digital Skills Project

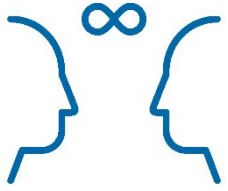


## OER Creator Workshop 2022

- Collaborate with others to create and release your learning materials under an open licence

### Focus on:

- Practical, 'how-to' create & publish OER
- OER and accessibility
- Networking and connecting
- Collaborating and exchanging ideas



## How does OER support the achievement of strategic goals? **Lifelong learning – ZHAW edx and MOOCs**

### Lifelong learning

ZHAW edx and  
MOOCs, and  
Open Curricula  
→ Lifelong  
Learning Strategy  
and its  
Challenges

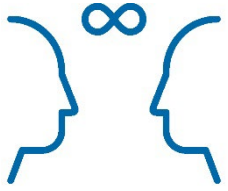


### MOOC Vision 2030

This MOOC has openly licensed introductory materials on Sustainable Development, Food Value Chains, Urban Development and Social Justice.

Starts 27 June

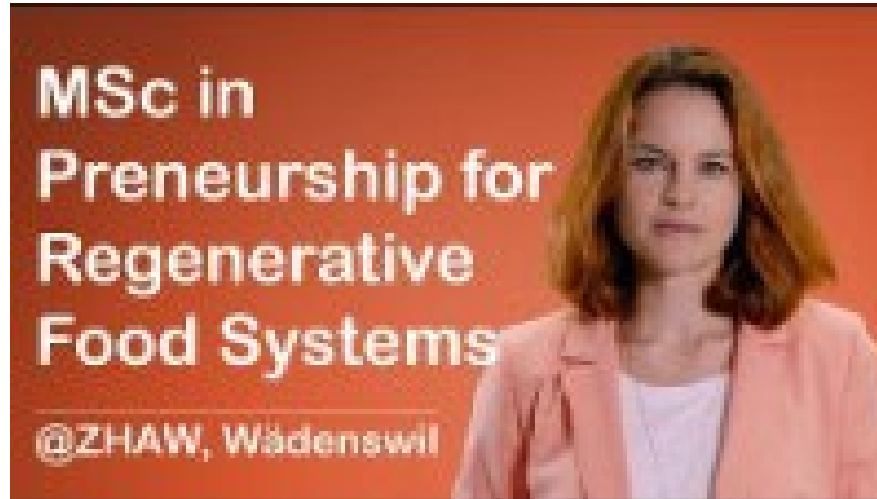
**Challenge: We have several MOOCs in production. Although MOOCs are open to everyone, it does not mean that the process to producing these MOOCs is aligned with planning to release this material under open licences, so it can be truly open. We are working towards this goal.**



Lifelong learning

ZHAW edx and  
MOOCs, and  
Open Curricula  
→ Lifelong  
Learning Strategy  
and its  
Challenges

## How does OER support the achievement of strategic goals? Lifelong learning – Open Curricula



### Master's in Preneurship for Regenerative Food Systems (MSc PREFS)

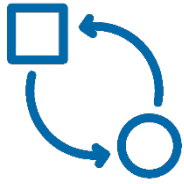
- Open curricula, where students can design their own curriculum and focus on their personal learning journey.

The format was predestined to produce a wealth of learning resources that could – set-up through a proper framework – increase our pool of OER materials immensely.

#### Challenge:

New course, new structure, new teaching staff, tight schedule however meant that it was impossible to create and release newly developed learning materials under an open licence before the semester started. At the moment re-evaluated for a later stage.





How does OER support the achievement of strategic goals?

## Digital transformation – ZHAW digital and Digital Futures Lab

Digital transformation

ZHAW digital and Digital Futures Lab, interdisciplinary networking



Our OER Team is part of [ZHAW digital](#) and active member of the [Digital Futures Lab \(DFL\)](#). We cross-link events that happen in our OER Community or in the DFL Community and seek interdisciplinary networking opportunities for both, which fosters new collaborations.

We advertise our projects, raise awareness for OER and have an active exchange with members on their experiences on current topics and offer our expertise in the area of OER for their projects.

With its strategic initiative “ZHAW digital”, the ZHAW addresses the dynamic changes involved in the digital transformation. The goal is to pool expertise in education and research in order to take an active part in shaping the digital transformation.

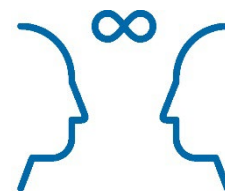
Promoting digital transformation in education.

# Concluding

## The ZHAW OER Community at the heart of fostering strategic aims of the university



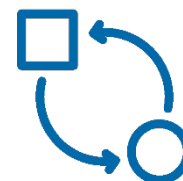
Sustainability



Lifelong learning



Societal integration



Digital transformation

# References

Bänziger Arturo, Bender Bruno, Ercihan Kaya, Nuredini Ajadin, Schneider Andrin. (2022). Kann Deutschland unabhängig werden von russischem Gas. Zenodo. <https://doi.org/10.5281/zenodo.6566932> (last checked, 28 June 2022).

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ZHAW (n.d.). The five focus topics of the ZHAW, <https://www.zhaw.ch/en/focus-topics/> (last checked, 28 June 2022).

# Attributions

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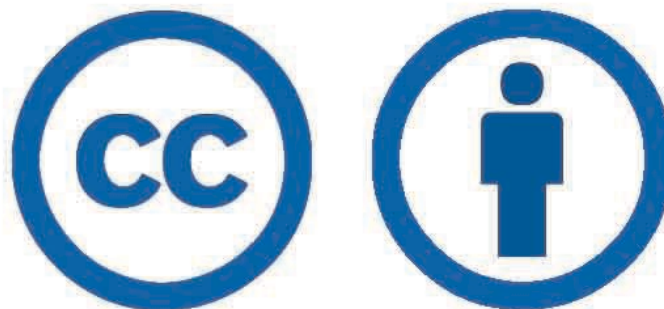
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