

# G7 Environment

Universities for Sustainable Development



**G7** 2017  
ITALIA



MINISTERO DELL'AMBIENTE  
E DELLA TUTELA DEL TERRITORIO E DEL MARE

# Session 1: Teaching and Research for Sustainable Development

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# State of the Art of Higher Education for Sustainable Development (HESD) in Germany

Declaration “Universities for Sustainable Development” (German Commission for UNESCO – DUK / German Rectors Conference – HRK 2010)

195 projects in higher education officially recognised as Projects of the UN Decade (<http://www.dekade.org/datenbank/>) (10 % of all awarded projects)

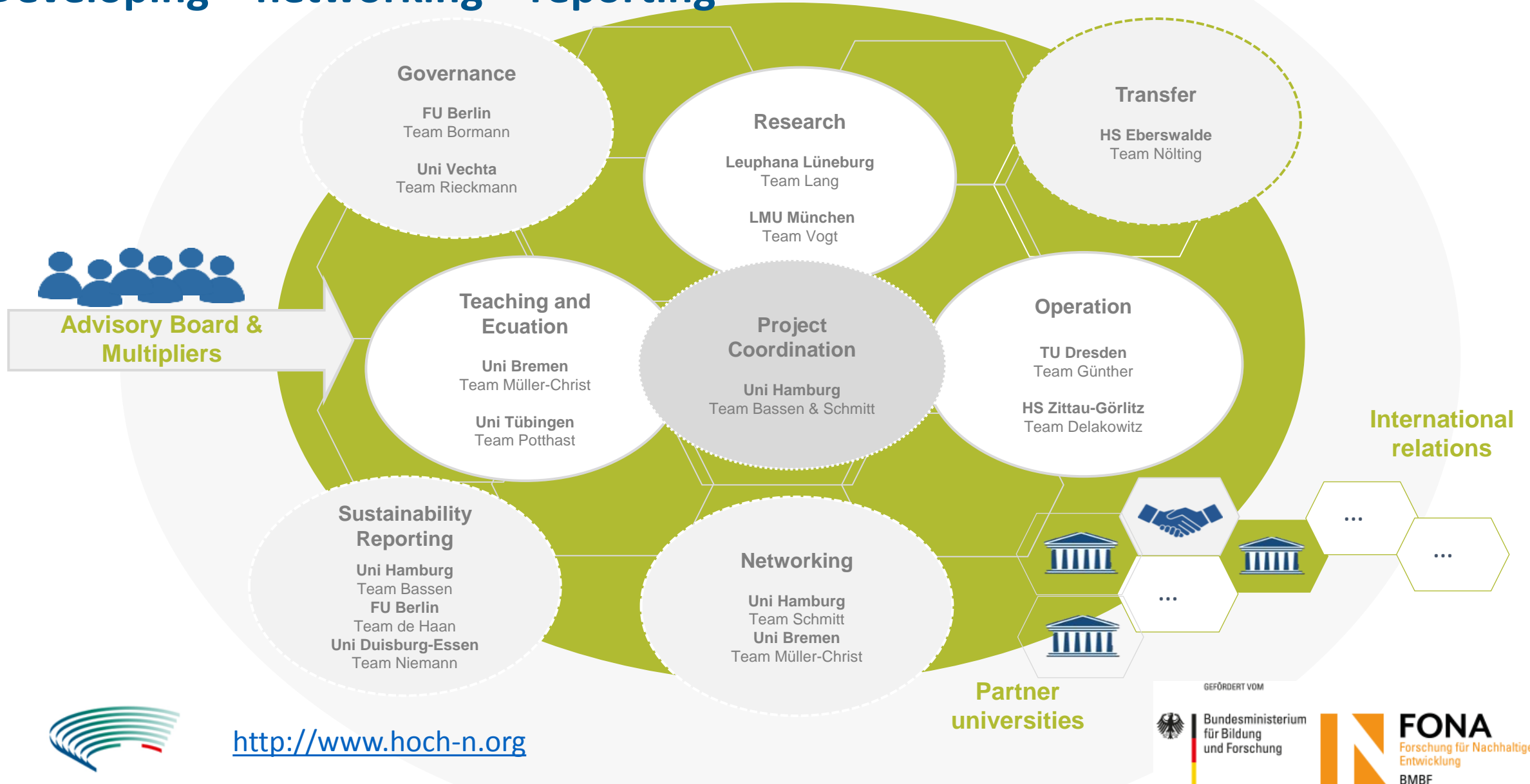
Global Action Programme on ESD (GAP): Expert Forum Higher Education

Numerous higher education institutions offer degree programmes related to issues of sustainable development

Certain consolidation of sustainability-orientated engagement of higher education institutions



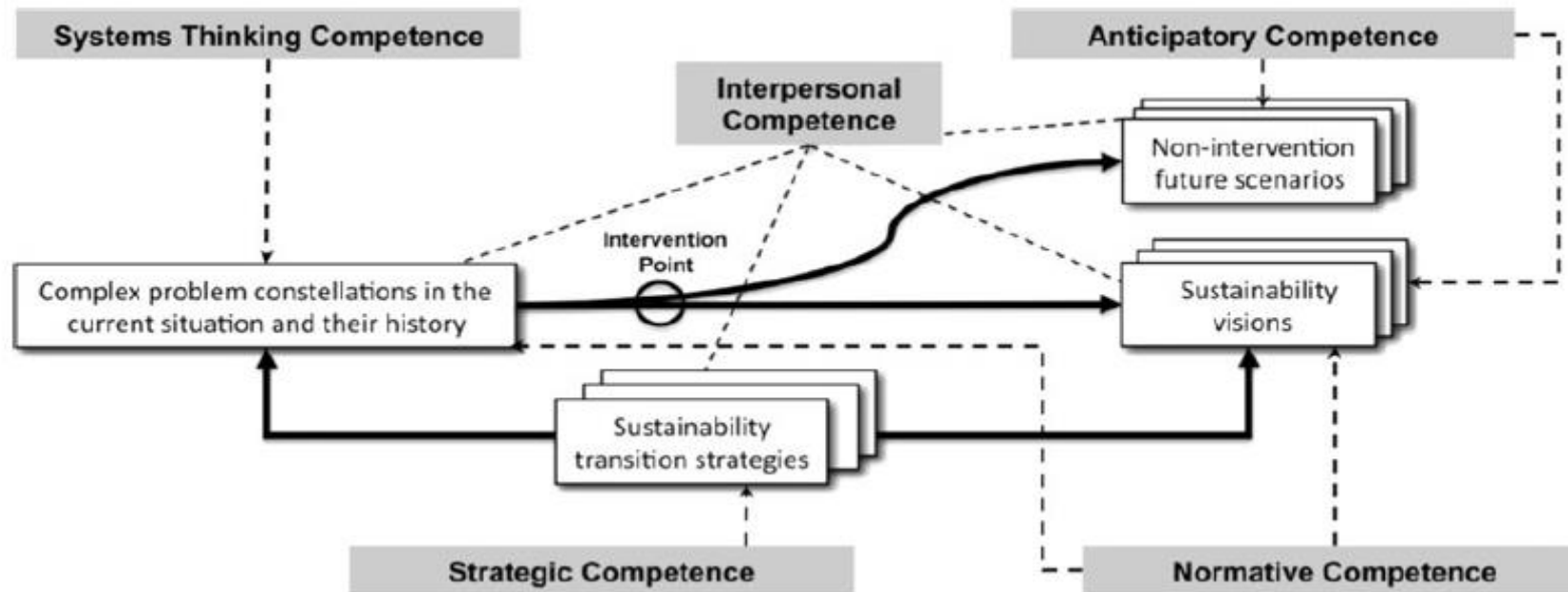
# Sustainability at Universities (HOCH-N): Developing – networking – reporting



<http://www.hoch-n.org>

# Higher Education for Sustainable Development and Sustainability Competencies

*Higher Education for Sustainable Development* should promote the development of such key competencies / generic skills which enable individuals to contribute to sustainable development (cf. Barth et al., 2007; Rieckmann, 2012; Wals, 2010; Wiek et al., 2011).



*Wiek et al., 2011*



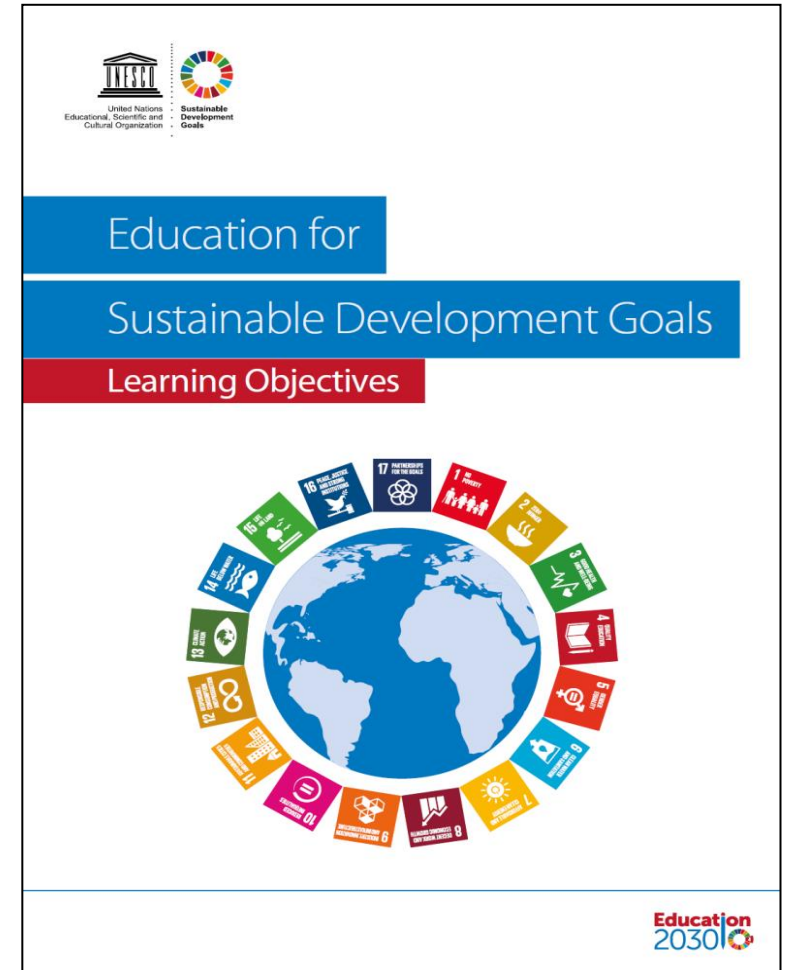
# Role of HESD for Achieving the Sustainable Development Goals (SDGs)

Development of sustainability key competencies and specific cognitive, socio-emotional and behavioural learning outcomes for dealing with the specific challenges of each SDG

UNESCO (2017): Education for Sustainable Development Goals. Learning Objectives. Paris: UNESCO.

<http://unesdoc.unesco.org/images/0024/002474/247444e.pdf>

(Lead authors: Marco Rieckmann, Lisa Mindt, Senan Gardiner)



# How can sustainability competencies be developed?

Assessment of adequate, state-of-the-art teaching and learning methods

*Research questions:* Which innovative approaches and methods of teaching and learning are used to date in higher education for sustainable development?

*Methodology:* systemic literature review, data bases: Web of Science and ERIC, analysis of 183 papers

*Mindt / Rieckmann, in review; Biberhofer et al., 2016*



# Pedagogical Approaches in HESD

	n	%
experiential learning	147	17,7
collaborative learning	138	16,6
problem-based learning	61	7,4
project-based learning	59	7,1
learner-centered learning	56	6,8
transformative learning	37	4,5
reflective learning	35	4,2
real-world learning	35	4,2
place-based learning	34	4,1
social learning	31	3,7
active learning	28	3,4
service-learning	24	2,9
interdisciplinary learning	23	2,8
traditional (lecture-based) learning	21	2,5
coaching & mentoring	16	1,9
virtual learning	11	1,3
transdisciplinary learning	10	1,2
creative learning	8	1,0
other	55	6,6



Mindt / Rieckmann, in review; Biberhofer et al., 2016



# University of Vechta towards a Sustainable University

Working Group Sustainable University (since 2014), Workshops (2015)

Sustainability Commissioner (since 2015), Sustainability Guidelines (to be adopted, 2017)

Research projects dealing with sustainable development (e.g. ESD in Teacher Education, CASE project, sustainable agriculture,...)

Courses on Sustainability in the area of General Studies

Courses on ESD in teacher education

Bachelor of Combined Studies: Major in Economics and Ethics

Student engagement / initiatives (e.g. SNEEP, support for refugees, food sharing)

Campus greening (e.g. Green IT, recycled paper)

Centre of Regional Learning

Regional Centre of Expertise in ESD Oldenburger Münsterland



# Conclusion

Higher Education for Sustainable Development as a Whole-Institution Approach

Higher Education for Sustainable Development develops sustainability key competencies

Higher Education for Sustainable Development needs an action-oriented, transformative pedagogy



# Thank you very much for your attention!

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