This form of knowledge transfer is predominantly at the beginning of a study and thus also forms the entrance of the student into the
Characteristic of this quadrant is the active learner
The goal is to train people who can think and communicate across academic boundaries
The goal is to train people who can think and communicate across academic boundaries

HOCH^N Education

Re-orienting Curricula – Instruments for Innovation

University of Tübingen and University of Bremen

HOCH^N

Sustainability at universities: develop-network-report

Purpose and Goals of HOCH-N–Education

The UN-Decade on ESD produced a multitude of pathways for and research on integrating Sustainability in Higher Education (HESD). Yet these innovations are still localized in particular universities, programs and disciplines. Main challenges are different disciplinary cultures whose potential and openness to integrating ESD differ greatly, limited resources, and necessary capacity building for teachers.
HOCH-N–Education asks:

How can innovative HESD be further disseminated across universities in all disciplines and educational formats?

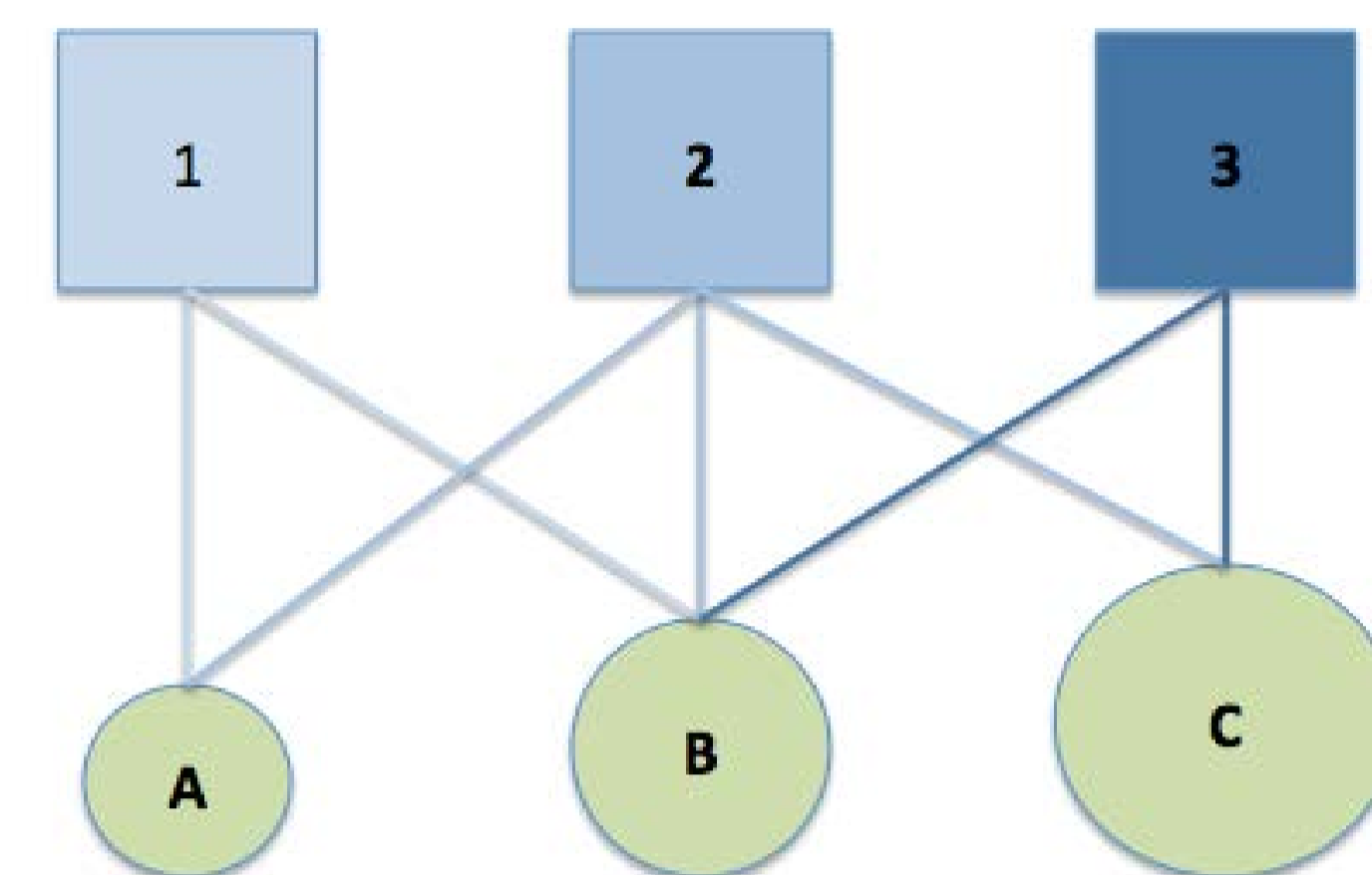### Approaches to integrating sustainability in HE

	Sustainability included as	Students opportunities	Teachers capacity building needed	Change necessary
A: „Add On" Entry level	topic	exposure to SD	low	none
B: „Weave Through" Intermediate	integrated in courses	engage SD as part of studies	medium	examination regulations
C: „Built in" Advanced	reorienting curricula, innovative forms	comprehensive development of key competencies	high + exteral experts	examination regulations + institutional change

Educational formats for HESD

1: disciplinary curricula
single courses or study programs focused on content and conventions of particular disciplines

2: cross-disciplinary curricula
minors, certificate programs etc., open to students from different disciplines

3: sustainability-curricula
sustainability-programs or disciplinary curricula with explicit sustainability focus

HOCH-N–Education offers
- a guidebook
- instruments for innovation

based on empirical evidence, to foster opportunities for integrating HESD on different levels:

An Image of Dynamic Interdependence
HESD Manifests at the Intersection of all University-Fields of Action

Each field contributes to HESD

Education develops interdisciplinary collaborations and real-world-oriented learning opportunities

Research offers research-based-learning, includes students in actual scientific practice

Transfer includes students in real-world projects; offers continuity of connections to local actors

Governance integrates sustainability criteria in accreditation and hiring; offers capacity building & resources

Reporting sets goals & indicators for HESD, and provides accountability in implementing HESD

Operations develops the campus as a real-world laboratory for sustainable living

HESD contributes to each field

⇔ HESD offers innovations in pedagogies and teaching-learning environments for all disciplines; attractive learning environments

⇔ HESD shapes innovative ideas for socially relevant research; improves mutual learning across disciplines & in transdisciplinary contexts
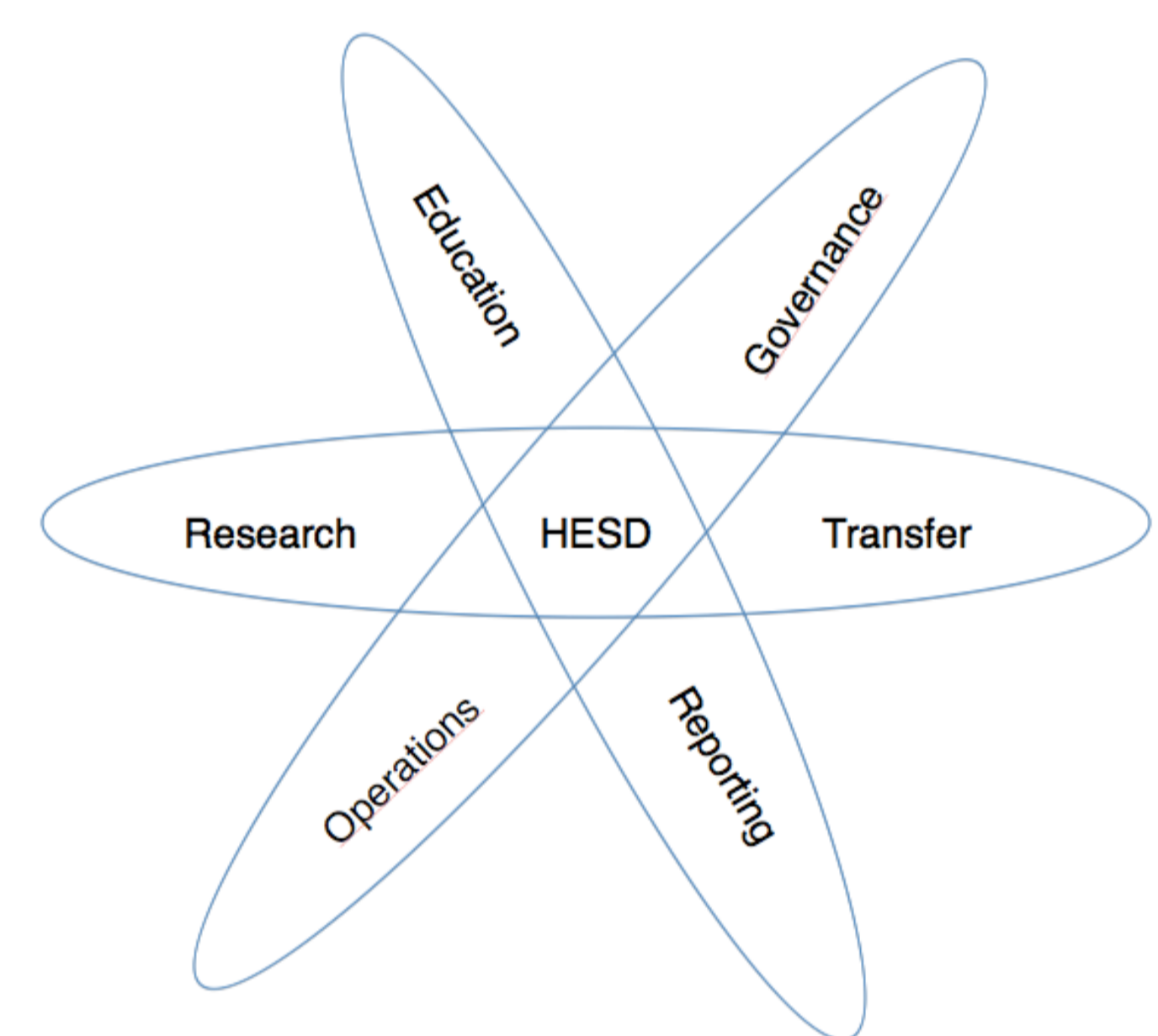
⇔ HESD provides impulses and contributions for societal innovation and functions as vehicle for transfer

⇔ HESD inspires transformation of governance structures, organizational innovation, and democratic participation in governance

⇔ HESD inspires development of reporting as transformative process and instrument for institutionalizing sustainable development

⇔ HESD provides arguments for green campus development, and collaboration with students/teachers on campus projects

HOCH-N–Education offers strategies for mutually beneficial collaborations

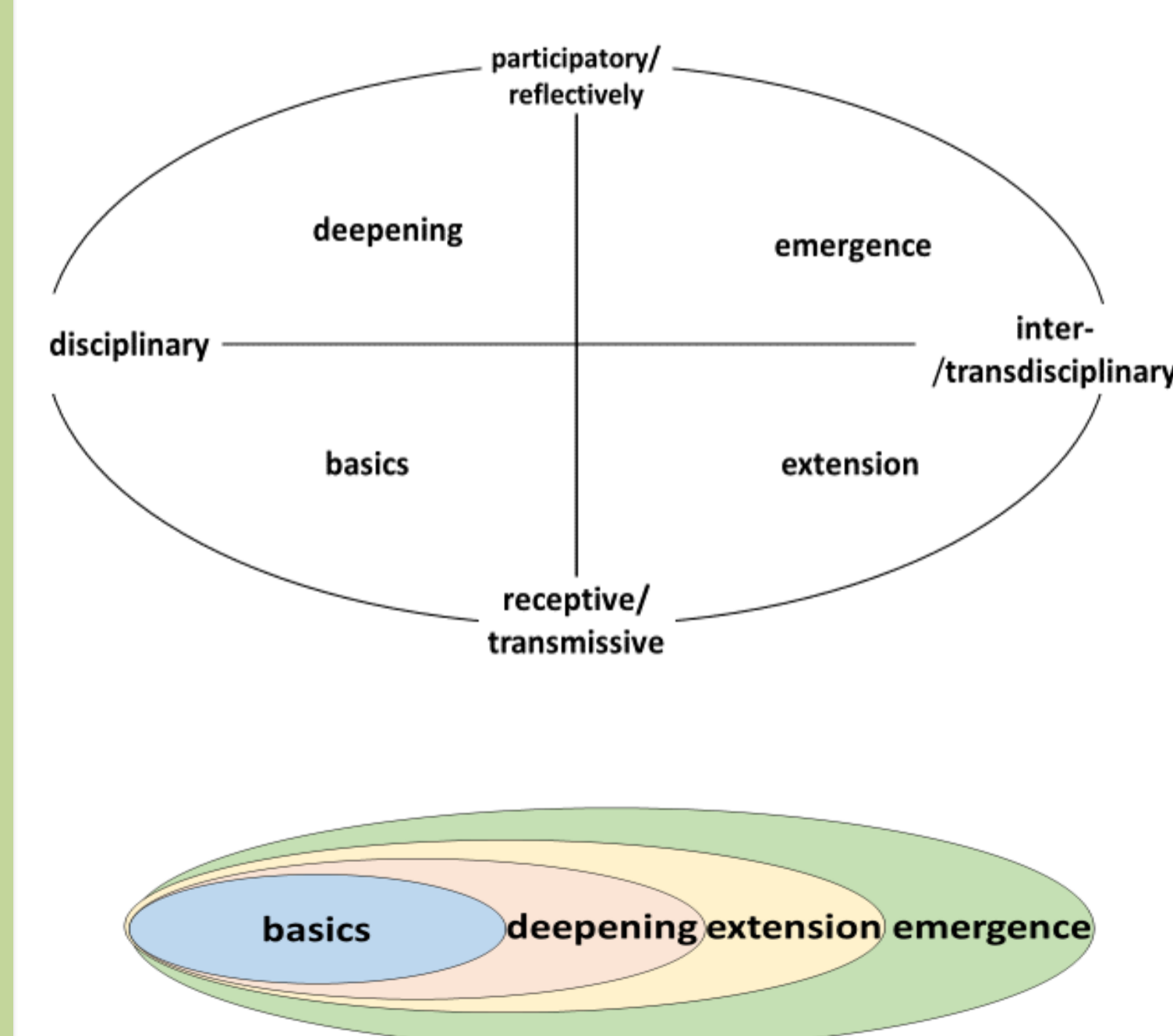## A Matrix for education processes with HESD
HESD Manifests in the Interplay of Different Educational Forms

- This Matrix serves as a visual-spatial representation of where and how teaching events are located in an educational "field of tension": on the disciplinary – interdisciplinary/transdisciplinary axis, and on the receptive/transmissive – participatory/reflective axis
- The matrix visualizes both the diversity of teaching events at universities as well as the different requirements they entail
- Its function is to visualize the diversity of teaching events that contribute to HESD, and to provide a tool for assessing and creatively shape individual HESD-curricula
- The learning objectives of the individual quadrants differ in their goals and their modes of teaching and learning, knowledge transfer and –production
- All four quadrants have different requirements for teachers and students

- **Basics:** This form of knowledge transfer is predominantly disciplinary-receptive and serves to provide students with foundational knowledge in their discipline
- **Deepening:** Characteristic of this quadrant is the active learner, the participatory teaching-learning relationship is to be understood as a continuum
- **Extension:** The aim is to train students who can think and communicate across academic boundaries
- **Emergence:** the narrative of the knowledge hub serves as a basic description; foundations and experience in the other three quadrants are necessary to become fully fluent and productive in this quadrant

HESD-Curricula will differ in how they utilize and move across the quadrants, but they need all four.
How does your curriculum fill this space?

Hoch-N–Education offers a Matrix for mapping transformative education

Quality-Criteria and -Management in HESD – Orientation Guidelines

HESD seeks to enable students to participate in transformative processes towards more sustainable and just societies. To achieve this, it requires several components and an educational practice that emerges at their intersection. HOCH-N–Education develops orientation guidelines for quality criteria and -management in the process of reorienting curricula. Method: a systematic review of relevant literature, and research with best-practice universities, students, and teachers. Expected publication date: 11/2018

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