



Hochschule
Bonn-Rhein-Sieg
University of Applied Sciences

Fostering Interdisciplinary Research and Transfer Competencies in Doctoral Education at Universities of Applied Sciences in North-Rhine-Westfalia

Impact by Design

18.06.2026

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EUA
Council of Doctoral Education
Annual Meeting
Galway, IE



**PROMOTIONS-
KOLLEG NRW**

01

Why look at North Rhine-Westfalia in Doctoral Education?

02

What do Universities of Applied Sciences do differently from traditional Universities?

03

How does this shape our Approach to Transfer and Transfer Activities?

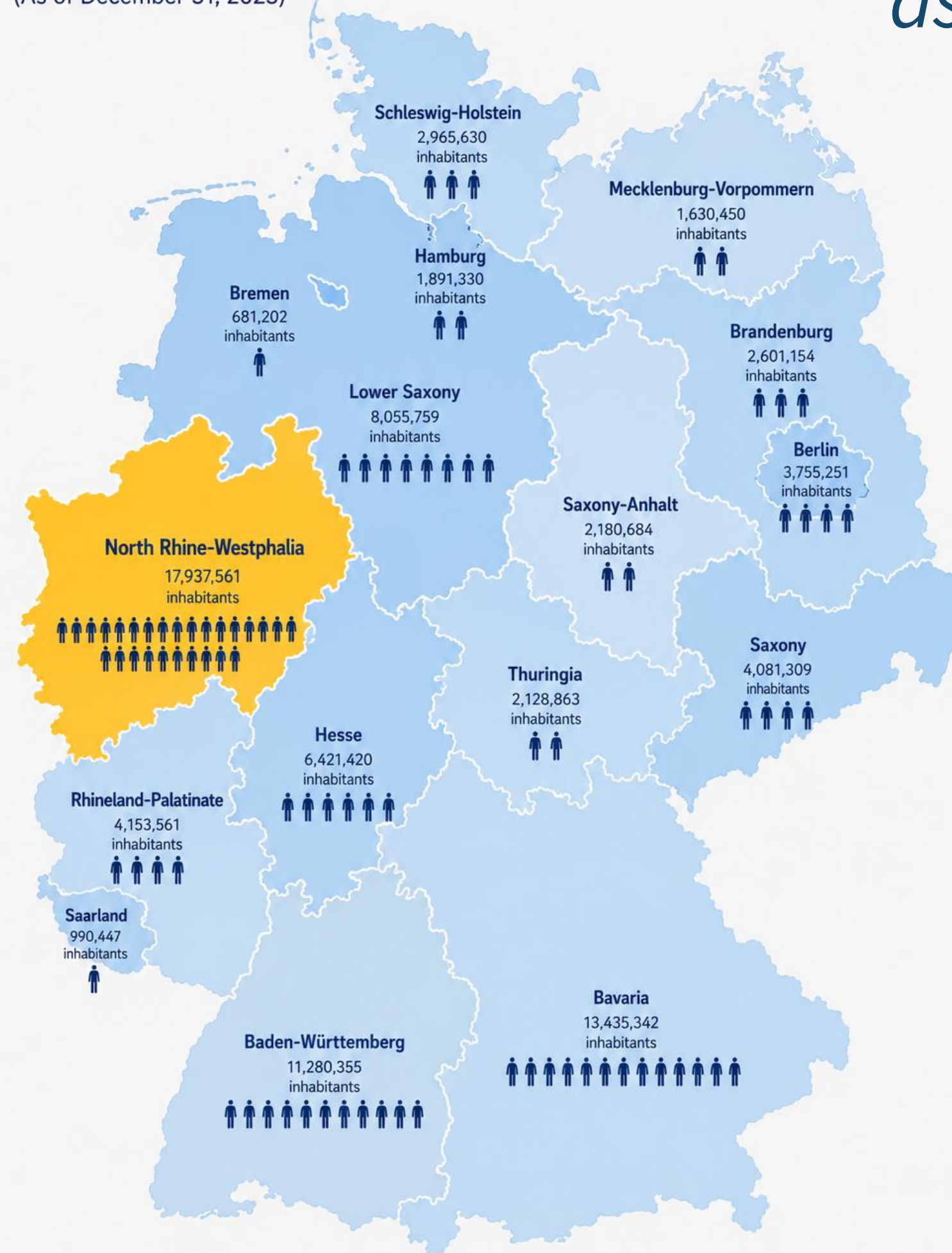
04

Is there a different Kind of Impact of PhDs at UAS? Can we measure this?

Why look at NRW? as a federal State

Germany

Federal States and Population
(As of December 31, 2023)



Germany total population 83,294,633 inhabitants
1 icon = 1,000,000 inhabitants (1 icon = 1 million people)
Source: Federal Statistical Office (Destatis)

NORTH RHINE-WESTPHALIA WELL CONNECTED.

The heart of Germany.
A strong partner in Europe.

- ECONOMIC POWERHOUSE**
No. 1 region in Germany
Strong industries, innovative companies, skilled workforce
- AT THE CENTER**
of Germany and Europe
- INTERNATIONALLY CONNECTED**
Strong ties across Europe and the world



18 MILLION+ PEOPLE | 750,000+ COMPANIES | EXPORTS TO 200+ COUNTRIES | 5 INTERNATIONAL AIRPORTS | DENSE RAIL NETWORK & EUROPEAN CORRIDORS | MAJOR PORTS ON THE RHINE AND BEYOND

Created with Open AI

- 1/4 of the German Population lives in NRW
- Good Connectivity within the State, within Germany and across Europe
- Strong industrial backbone with a mix of Small and Medium-sized Enterprises and large international Companies
- Former Capital Bonn: Large Number of NGOs and Central Organizations

Why look at NRW?

in Doctoral Education

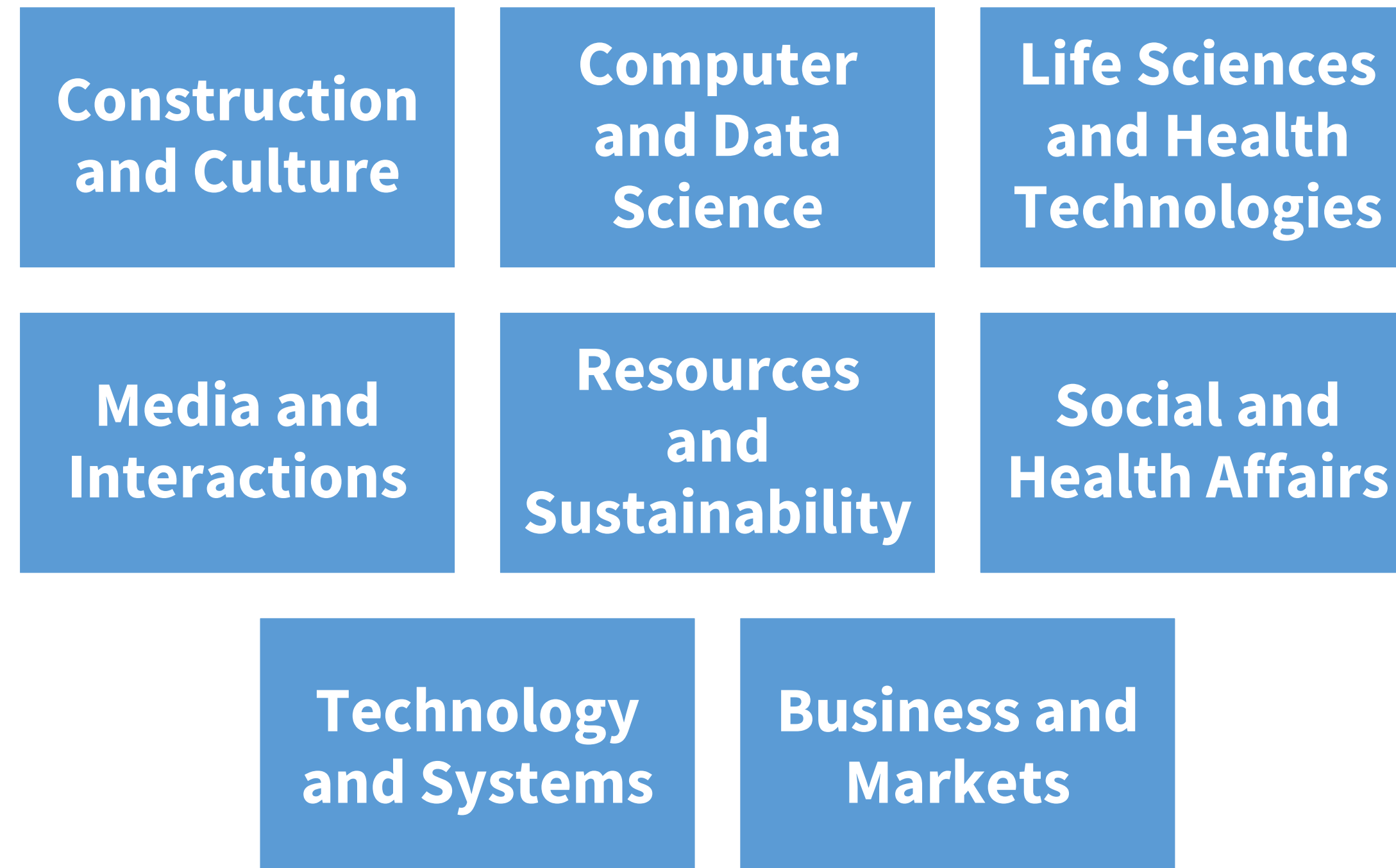
Europe's most dense and diverse Higher Education Ecosystem

- 14 state-run classical Universities
- 20 Universities of Applied Sciences (UAS)
- 700.000 Students
- 43.282 PhD Candidates
- Approx. **600 PhD Candidates** at Doctoral School of Applied Research NRW (PK NRW) (still growing)



What do UAS do differently in Doctoral Education?

#1 *Structural Differences from traditional Universities*



- 8 Departments
10 Doctoral Programmes
- No classical Faculty Structure
- Challenge-driven Research Areas covering a range of social and technological topics

The Doctoral School has been designed not only to allow for interdisciplinarity, but to enforce and promote it organizationally and structurally.

What do UAS do differently in Doctoral Education?

#2 *Team Supervision by 3 Supervisors*

Main Responsibilities

Primary Academic Supervisor

- Develop /refine topic
- Chose research methods
- Build supervision team
- Identify reviewers
- Develop research independence

Professoral Member of the Department

Formal Requirements

Additional Academic Supervisor

- Scientific / methodological supervision
- Regular feedback
- Support with disciplinary expertise, access to academic networks, scientific independence

Professoral Member of PK NRW, any Dpt. or External Professor



Mentor

- Mentoring throughout the doctoral phase
- Career guidance
- Conflict mediation
- Support during critical phases
- May supervise academically upon approval

Prof. Member or Associated Prof. of PK NRW or External Professor

What do UAS do differently in Doctoral Education?

#3 *UAS Professors are both: Scholars and Experienced Practitioners*

- Professors at Universities of Applied Sciences (UAS) in NRW must have at least **five years of professional experience, including at least three years outside higher education/university system.**

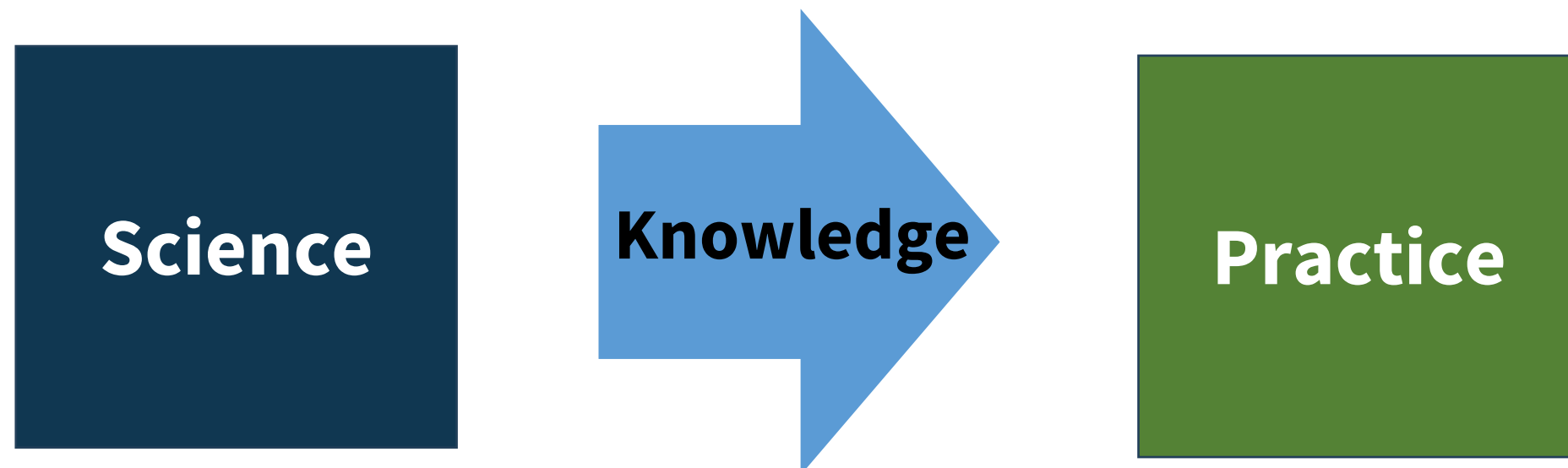
This means

- Doctoral projects are more likely to originate from **real-world Problems.**
- Easier access to **Professional Networks**, industrial partners and original data from industry, healthcare etc.
- Supervisors tend to actively encourage **Careers outside Academia.**



From Linear to Spiral:

Transfer as a Circular Knowledge Flow



Circular Knowledge Transfer in Doctoral Research at UAS in NRW

A continuous spiral of collaboration between practice and science



Interdisciplinarity and Transfer Put to Work

An Example from H-BRS University of Applied Sciences

#1: Joint Research Training Group

"Urban Future - Managing Change for Better Health in Blue Cities"

Partners

- University (Bonn) & University of Applied Science (Bonn-Rhine-Sieg)
- University Hospital (Bonn)
- Non-University Research Institute (German Institute of Development and Sustainability (IDOS))
- International Partners
- Sponsor: German Research Foundation (DFG)



H-BRS/ Bonn University

- ✓ **Interdisciplinary Topic** includes effects on humans, animals, plants and the environment
- ✓ **Scientists from 3 Departments** involved:
- ✓ Natural Sciences, Management Sciences and Social Policy and Social Security
- ✓ **Joint Supervision** with academic and external Partners

Interdisciplinarity and Transfer Put to Work

Example from Doctoral School NRW

#2: Call for PK Research Training Groups

- 4 Professors
4 PhD Candidates
4 Years
- Teaching Relief
- Fully funded Doctoral Positions / Young Researcher
- Supervision Experience for new Professors

Research Focus

Excellent Research Projects aimed at addressing current Challenges of Society

Selection Criteria

- Scientific Originality and Excellence
- Impact and Plausibility of Work Programme
- Inter-/ Transdisciplinary Orientation
- Team Composition
- Concept for Doctoral Supervision & Qualification
- Networking and Cooperation
- Contributions to Sustainability & Internationalization

Interdisciplinarity and Transfer Put to Work

*Services (not only) for PhDs
Outreach & Cooperation*

**Central Units managing
Transfer & Entrepreneurship On-site**

Centre for Science and Technology
Transfer (ZWT)

CENTIM - Centre for Entrepreneurship,
Innovation and SMEs



Co-Founder of **Innovation and Start-Up Hub** DIGITALHUB.DE accelerator programs, investments, coworking spaces, events, professional network



Hosting the regions largest
Career Fair



Five "**CitizenLabs**" at
the university
e.g. sustainable design
of home gardens

A different kind of Impact A different kind of Doctorate?

Balancing Practical Impact, Scientific Depth, and Strategic Career Value



Supervisors with practical Experience
+ applied Research Topics

➔ **Doctoral Candidates may be encouraged to produce**

- Prototypes
- Policy Recommendations
- Implementation Frameworks
- Software Systems
- Organizational Innovations

in addition to classical Academic Output
through Publications, Citations, etc.

Doctoral Education in Applied Sciences

- Ideally equally strong academic Expertise, **potentially less Academic Recognition**
- Knowledge Creation + **Implementation**
- Academic + **Professional** Networks
- Often **Interdisciplinary** Focus
- Scientific + **Societal** Impact

How to measure & evaluate this Output?

- Visualize Impact in Advance
- Make it Part of Proposal
- Implement Impact Criteria in Funding Programs



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Thank you for your attention!

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