

**CATALPA**

Center of Advanced  
Technology for  
Assisted Learning and  
Predictive Analytics

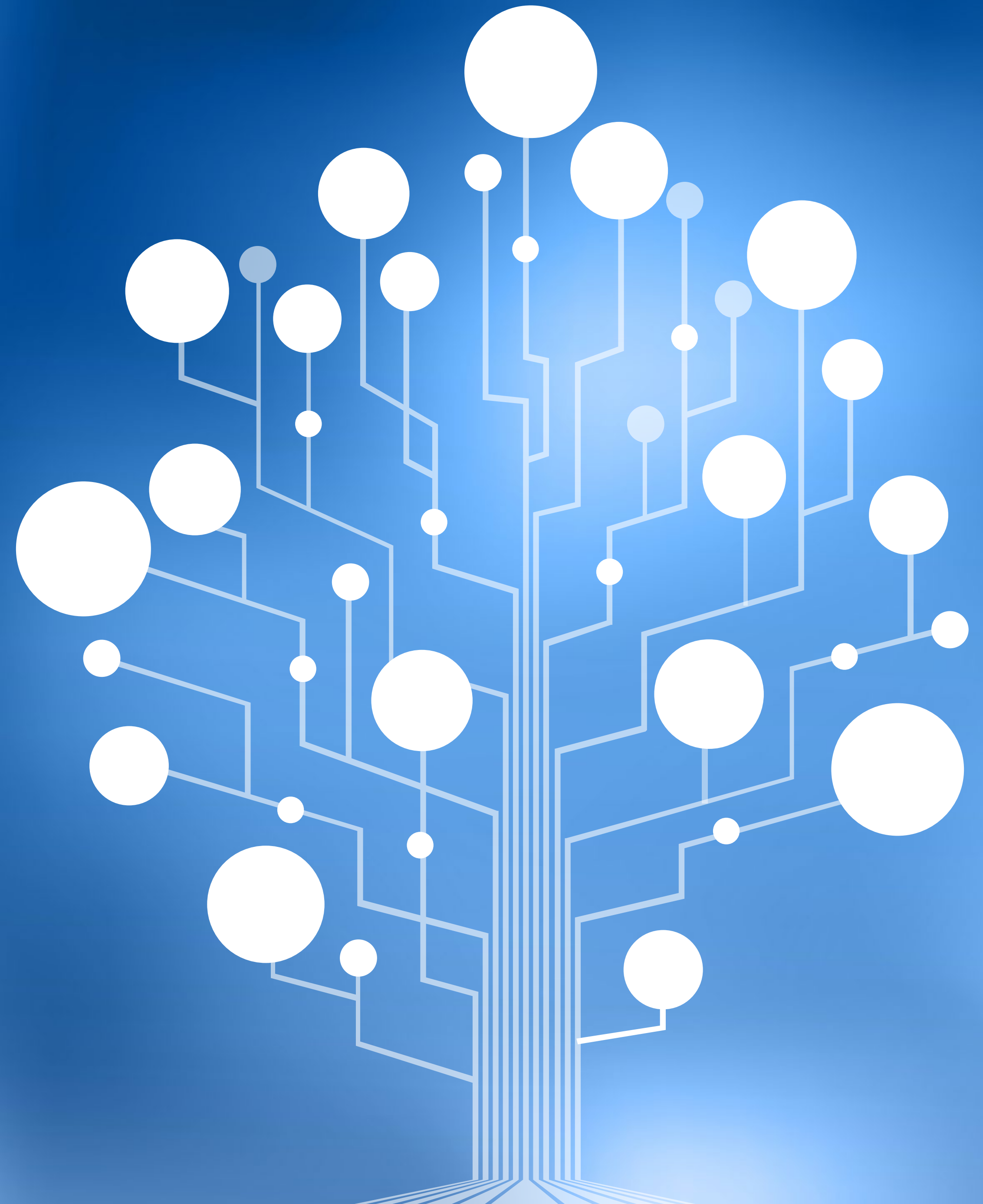
# Living Lab for the Future of Higher Education



**FernUniversität in Hagen**

# What Happens in Our Living Lab?

- We support learning and teaching through AI and learning technologies.
- We optimize teaching and learning processes. We examine how technology can support self-regulation, understanding and self-assessment, for example, by providing automated feedback.
- We try to pinpoint which characteristics learners bring to the table at an individual and group level and attempt to find supportive interventions that facilitate the smooth running of modules and (online) examinations.
- We identify the conditions for the success of the higher education of the future at an organizational level.



# Research Findings Inspire Innovations in Higher Education

## From Prototype Application to Technical Implementation in Daily Operation

AI in higher education, customized learning, and targeted support for students – this is what CATALPA, the Center of Advanced Technology for Assisted Learning and Predictive Analytics, is all about. As a key scientific center at the FernUniversität in Hagen, CATALPA combines **theoretical knowledge** with **practical application**. This leads to **scalable findings** and **AI-supported prototypes** for innovations in higher education – including feedback, self-regulation, assessments, teaching-learning concepts, and group processes.

## Interdisciplinary Approach for a Shared Vision

Over 60 scientists work together on CATALPA's interdisciplinary projects. They look at practical issues from the perspective of **psychology**, **computational linguistics** and **educational sciences** as well as **computer science** and **organizational sociology**. The CATALPA researchers share a common vision: providing every student with optimum support targeted to their specific needs.

## Living Lab Research with Real-World Application

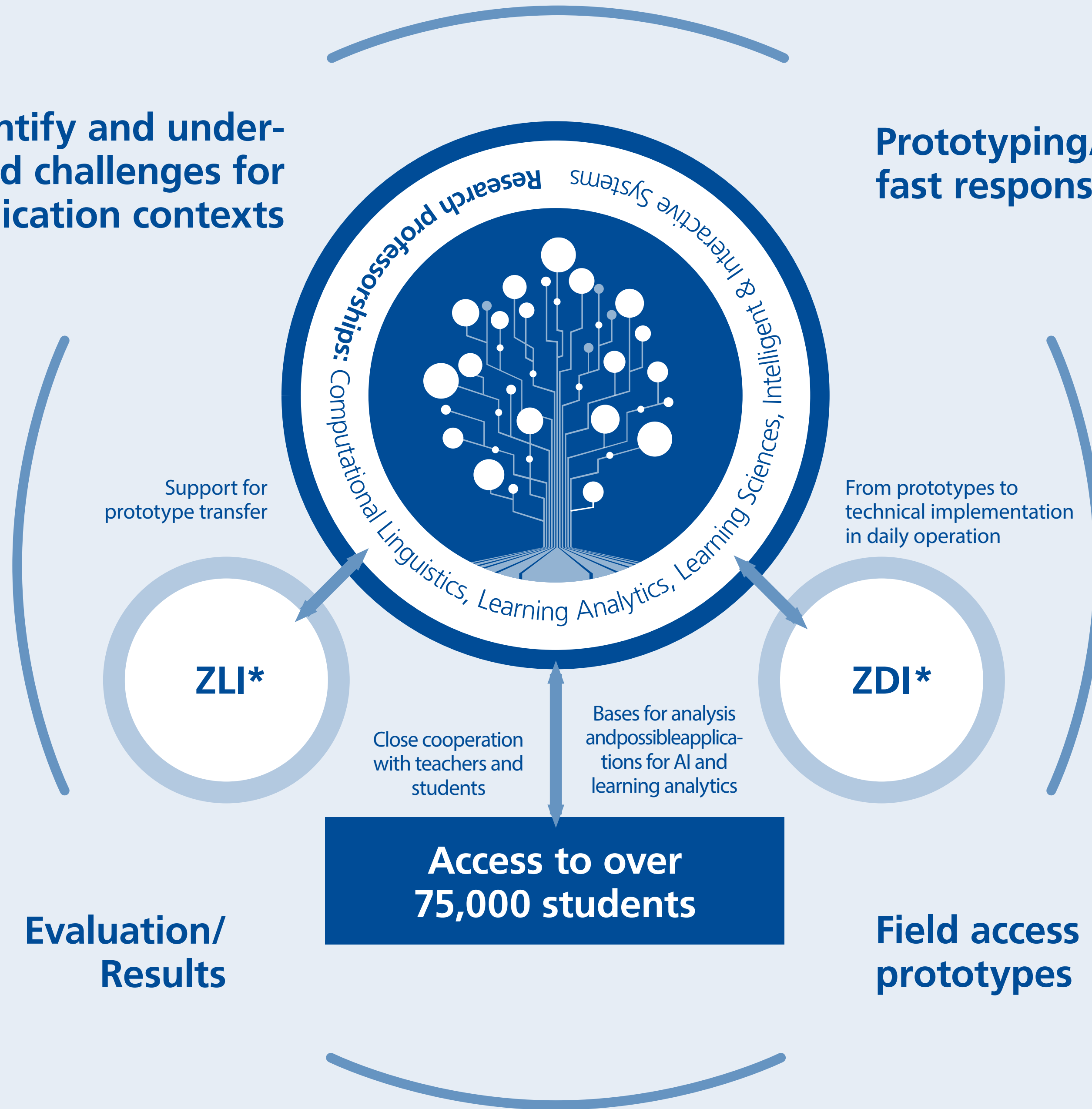
With over 70,000 students, the FernUniversität in Hagen boasts one of the most diverse student bodies in Germany, encompassing a wide range of ages, backgrounds, and educational experiences. So where, if not here, would be a better place to explore how digital systems can enhance teaching and learning?

In this living laboratory, CATALPA gathers real-world insights that flow seamlessly back into practice. We explore the effects and potential of AI in a controlled environment, and test prototypes in real-world settings in close cooperation with the Center for Learning and Innovation (ZLI) and the Center for Digitization and IT (ZDI) at the FernUni.

# The Living Lab Approach

Identify and understand challenges for application contexts

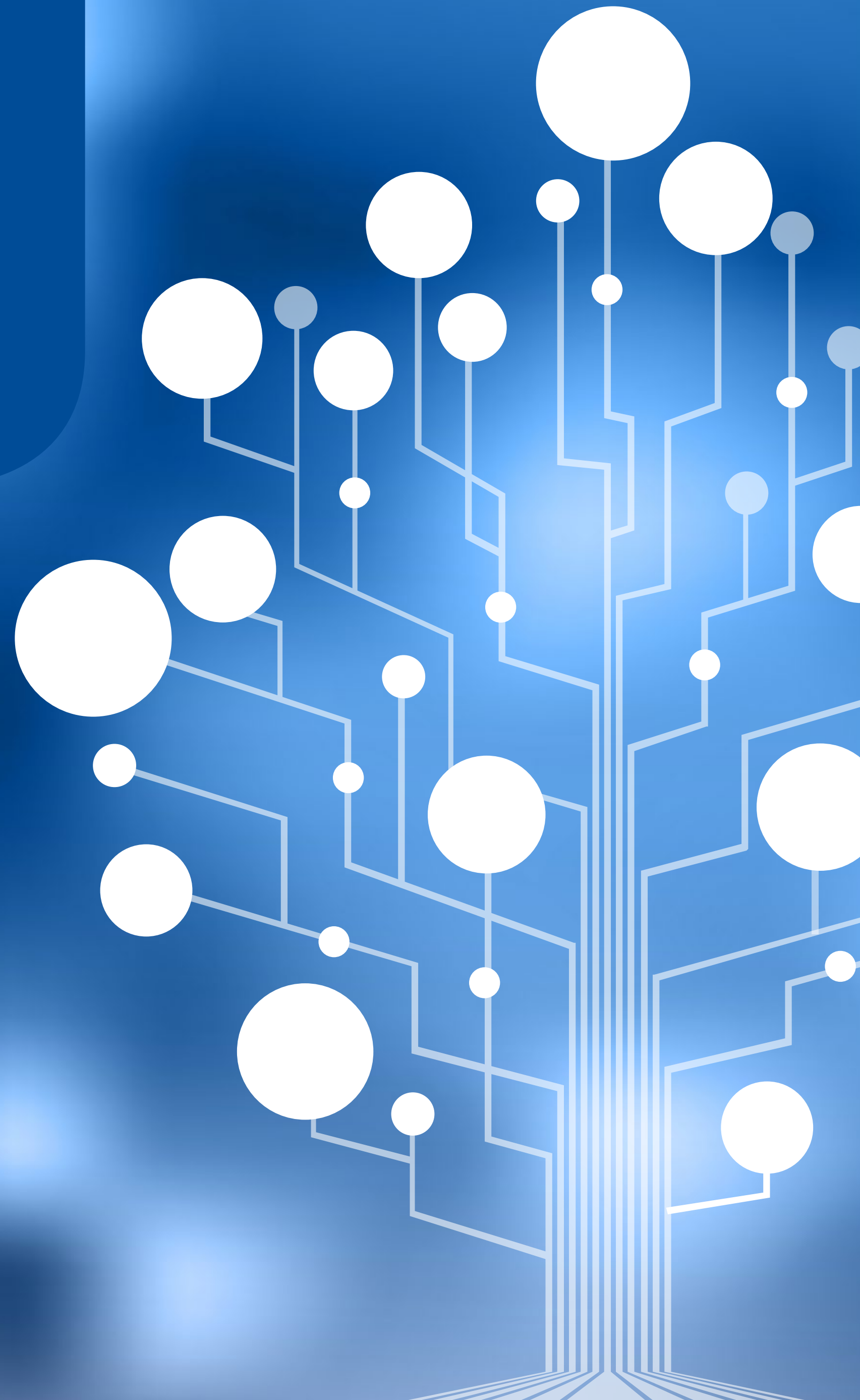
Prototyping/  
fast responses



\* **ZLI:** Center for Learning and Innovation  
\* **ZDI:** Center for Digitalization and IT

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## Contact:

**CATALPA –  
Center of Advanced Technology for Assisted  
Learning and Predictive Analytics**

**FernUniversität in Hagen**

Building 5

Philipp-Reis-Gebäude (PRG)

Universitätsstraße 27

58097 Hagen

[catalpa@fernuni-hagen.de](mailto:catalpa@fernuni-hagen.de)

[www.catalpa.de](http://www.catalpa.de)



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