

Leibniz-Zentrum für Agrarlandschaftsforschung (ZALF) e.V.

Panel III: Content, adaption to
(complex) research agenda

Staff skills and technical development

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universität**bonn**

www.zalf.de

EURAGRI, Dublin, 25-26 September 2017

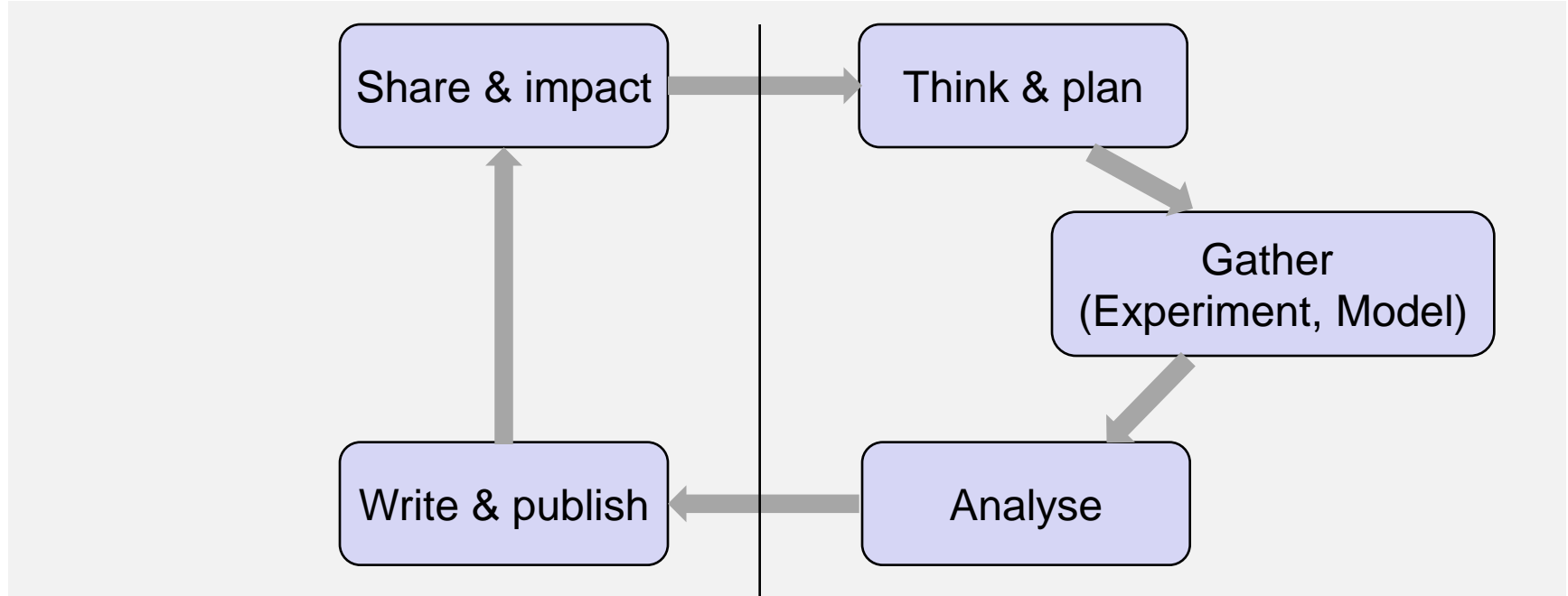


Bundesministerium für
Ernährung, Landwirtschaft
und Verbraucherschutz



LAND
BRANDENBURG
Ministerium für Wissenschaft,
Forschung und Kultur

Research Cycle



Demand / Interest

- Scientific interest
- Societal relevance
- agric. practices
- consumers
- Industry
- ...

Research resources

- Staff size
- Qualitfication
- Infrastructure
- Organisational structure
- Cooperations
- ...

Background ZALF (status 2016)

- 6 Institutes
- 339 Employees
- 28,5 Mio. EUR total budget
- Sustainability of land use and ecosystems (ecosystem services)
- Multi-scale approaches
→ from field to landscape ... to globe



intensive cropland

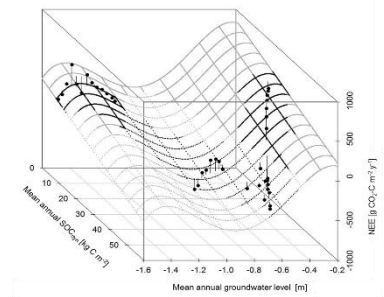
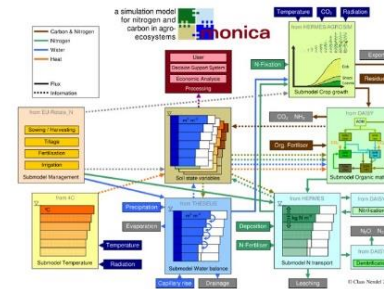
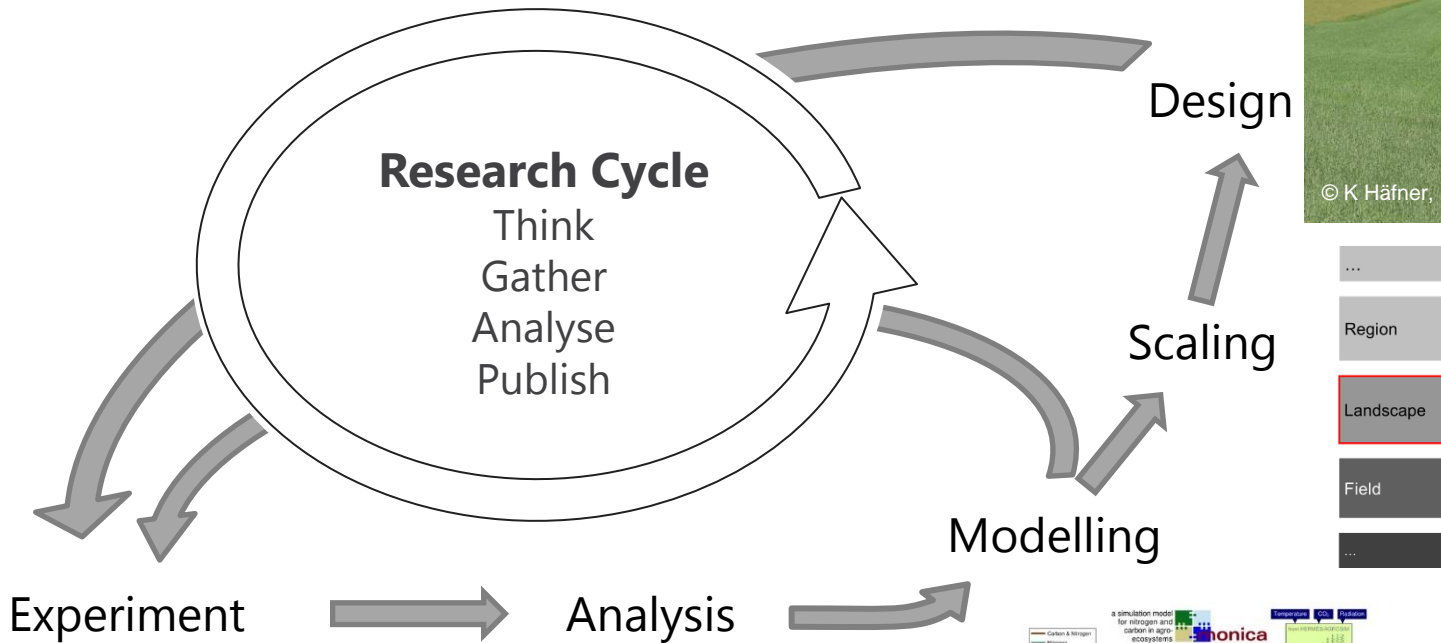


cropland with restored ecosystem services

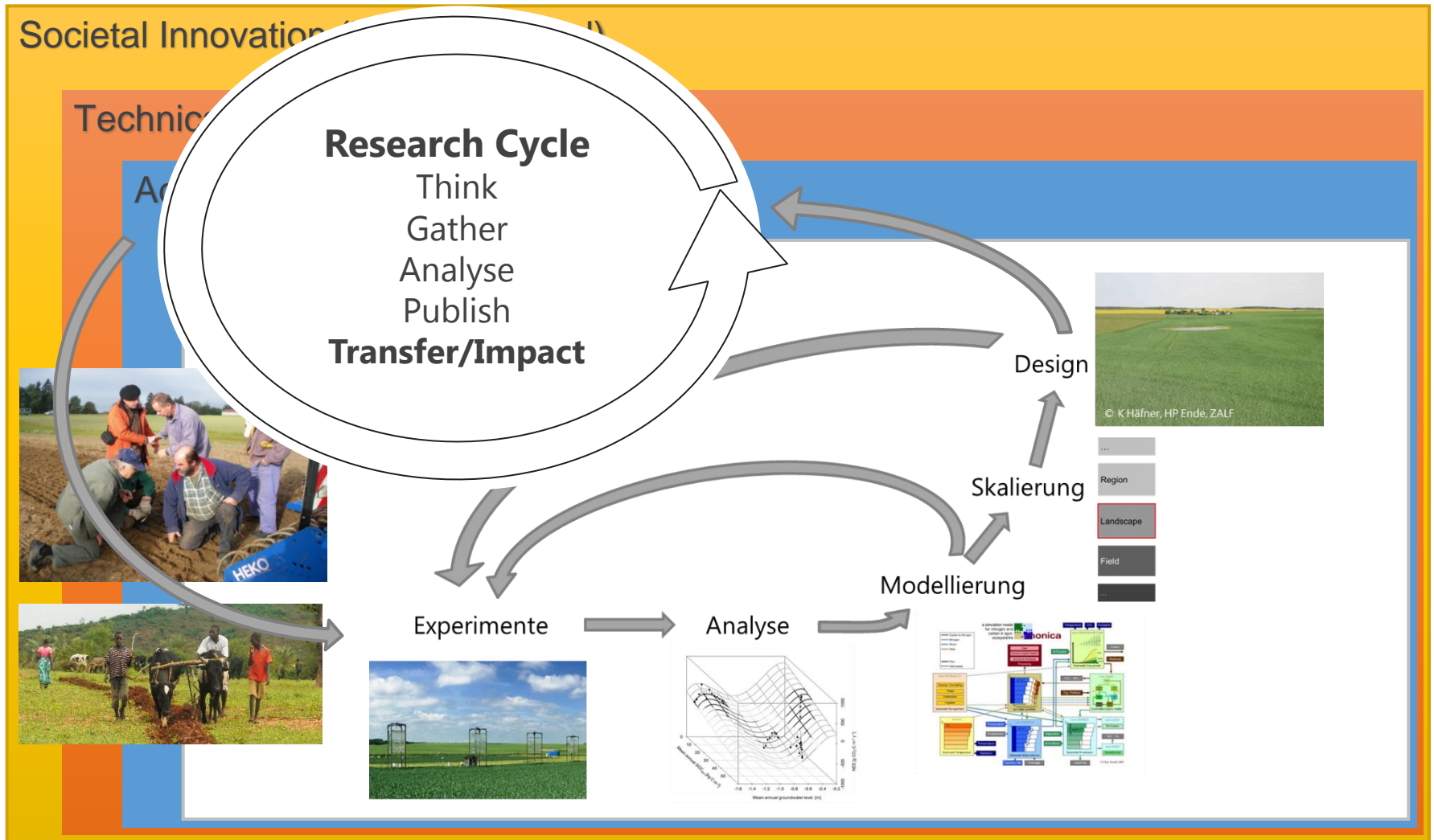


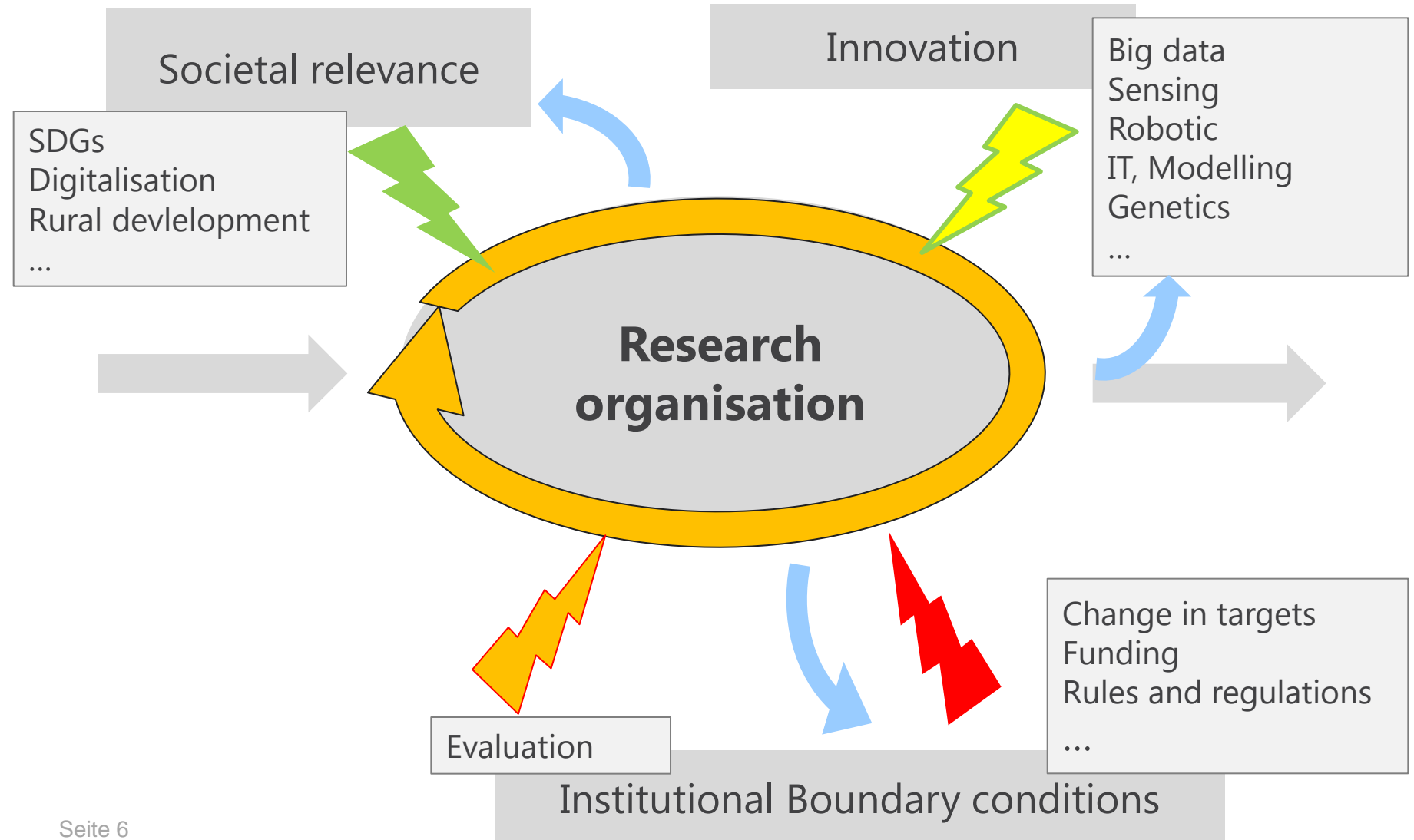
Knowledge through experimentation, data and models

→ Integrated systems research



Research, application and transfer

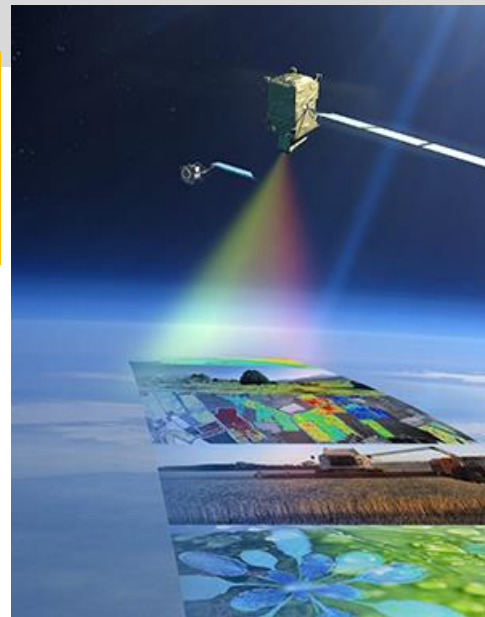




New technologies

New technologies will influence experimental activities and their use for modelling

- Sensing (near and far)
- Robotik
- IT (soft- and hardware)
- Data assimilation
- Big data
- ...



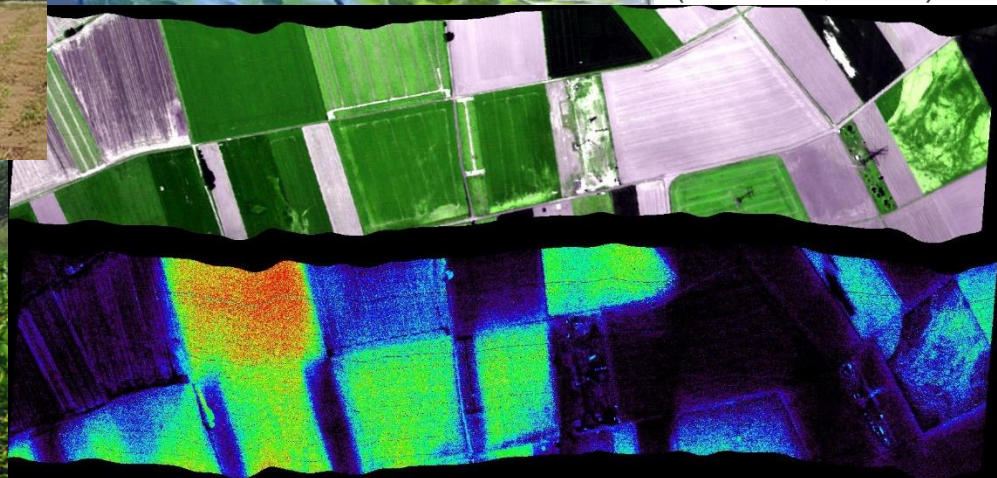
Drone at ZALF

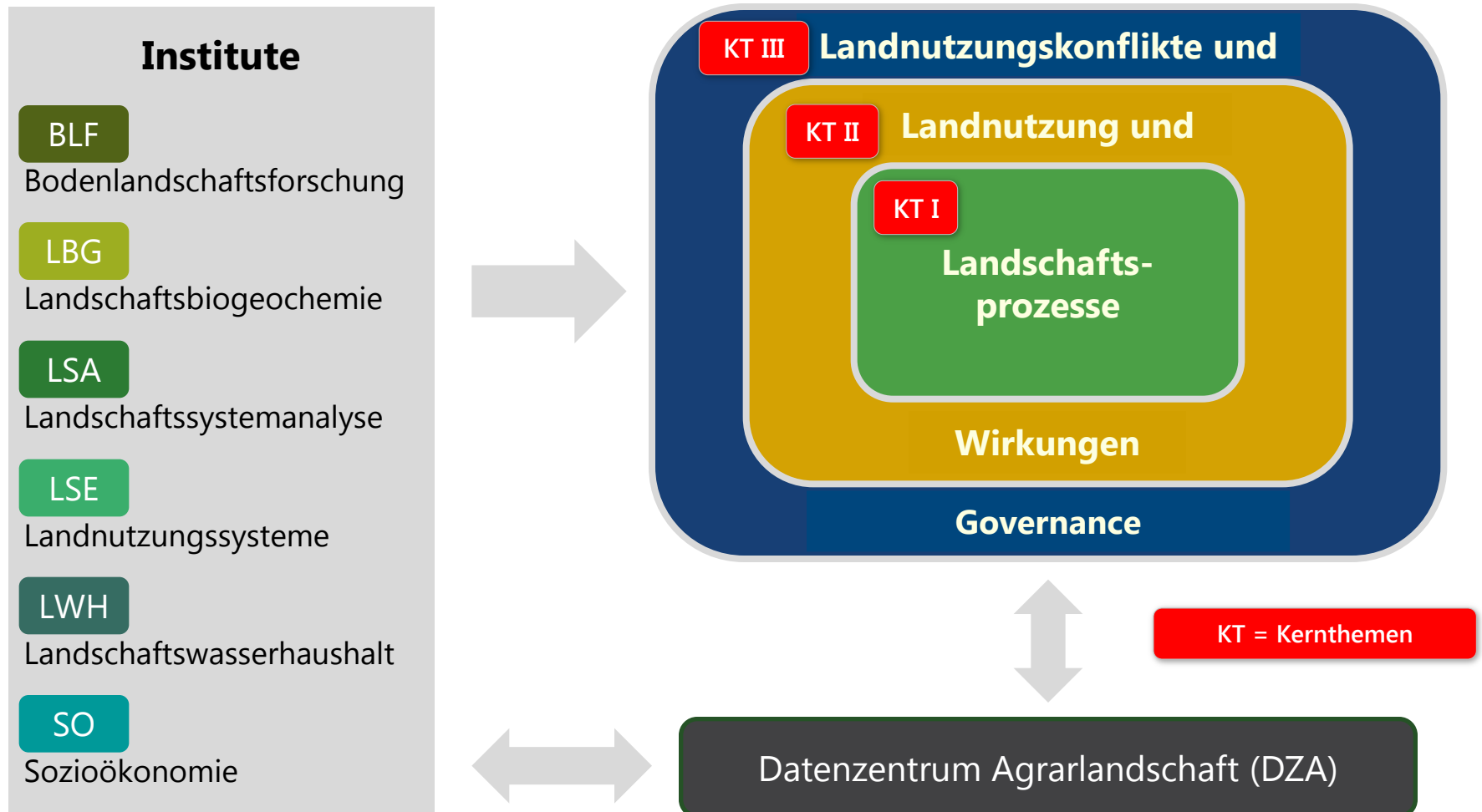
FLEX/Sentinel 3
Tandem Mission,
Photosynthesis
Study

Fluorescence from
different vegetation
(Rascher, 2014)



BoniRob
deepfield-robotics





- › Landscape processes
- › Land use and Governance
- › Synthesis of landscape research

RA₁

RA₂

RA₃

- › Research Platform Data

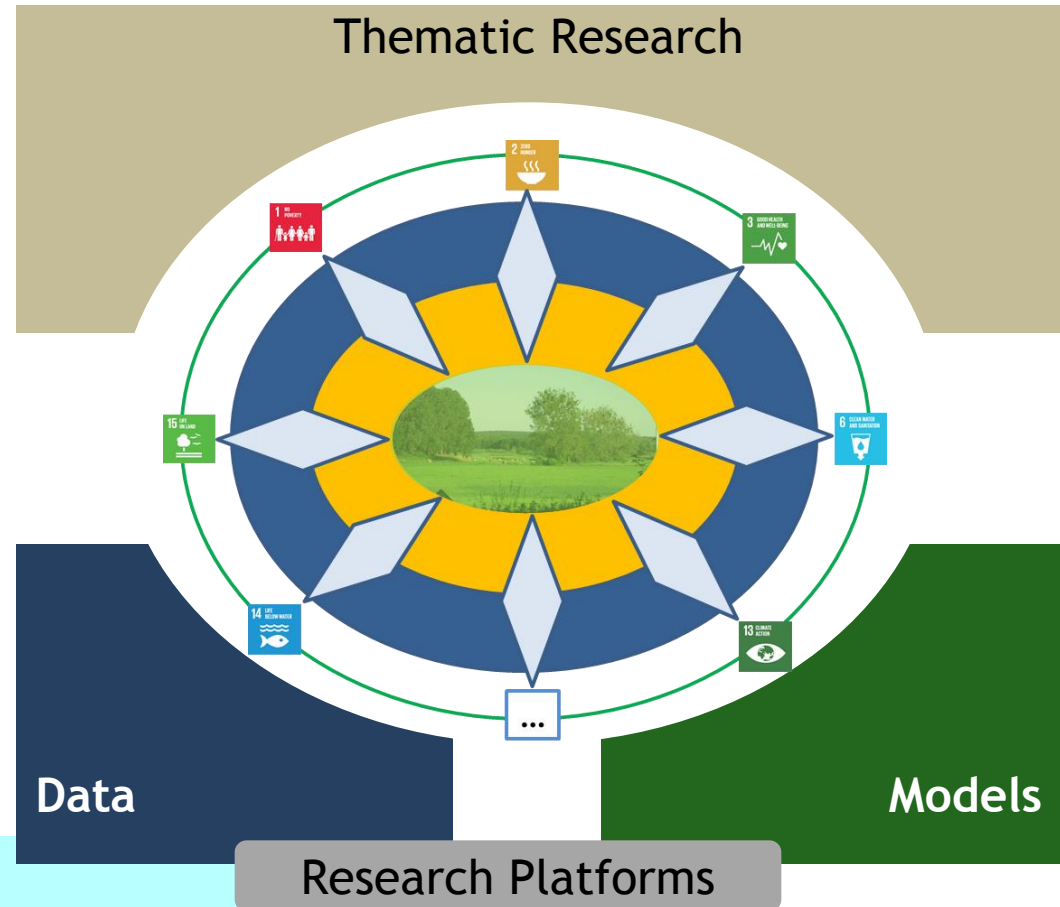
RP_M

- › Research Platform Models

RP_D

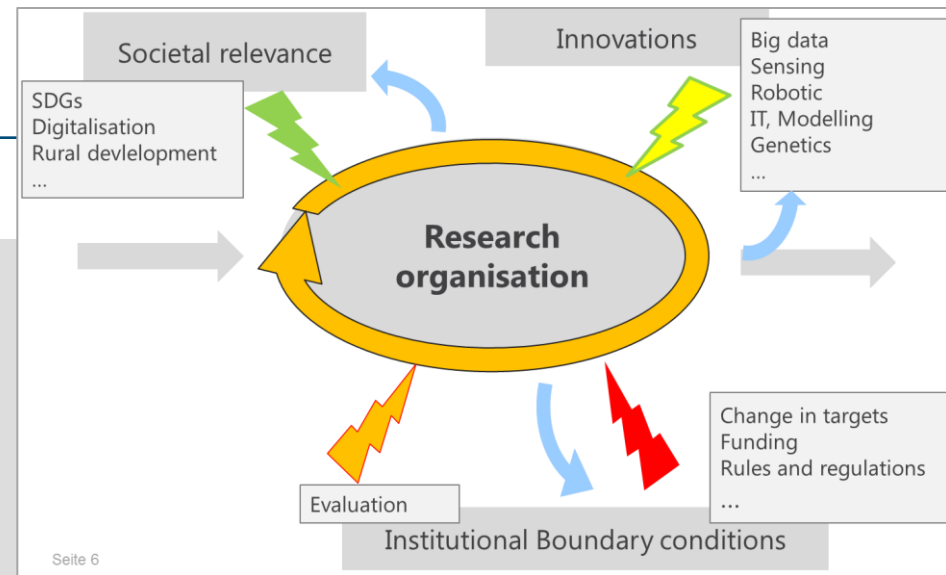
› 3 level-structur (working groups)

- › Clearly defined sub-units with own responsibilities
- › Smaller leadership-gap
- › Better alignment of competences
- › Targeted qualification within sub-units



Challenges

- Synchronize rates of change
- Continuous adjustment of:
 - research focus
 - Staff (size and qualifications)
 - infrastructure
- General (institutional/organizational) boundary conditions
 - Need to anticipate (rate of) change in research directions
 - Internationalization of research
- Evaluation criteria
 - Need to anticipate research demands
- ...



- Research input
- Research activities
- Research output
- Research outcome
- Impact