



ENABLING INNOVATION AND PROVIDING GUIDELINES  
– A GOVERNANCE FRAMEWORK FOR AGRICULTURAL DATA –

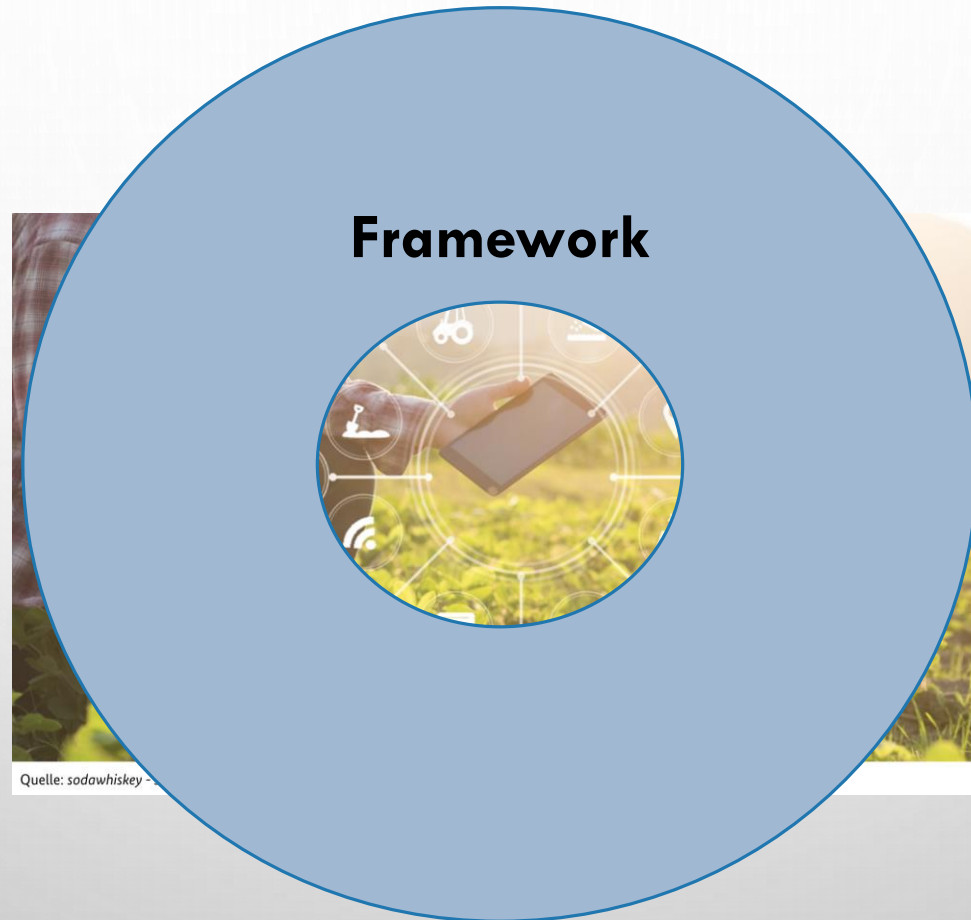
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# INNOVATION VS FRAMEWORK



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# INNOVATION VS FRAMEWORK



## THREE PREMISES

1. DIGITALISATION TAKES ALREADY PLACE
2. DIGITALISATION IS BASED ON FUNCTIONING GOVERNANCE STRUCTURES
3. DIGITALISATION IS A DYNAMIC PROCESS

## DIGITALISATION ALREADY EXISTS

- DIGITALISATION IS A SOCIAL, NOT A GOVERNMENTAL PHENOMENON
- THESE TECHNOLOGIES HAVE BEEN DEVELOPED IN AND BY SOCIETY (INVENTIONS)
- THEY ARE CURRENTLY BEING MADE READY FOR APPLICATION (INNOVATION)
- IN PRINCIPLE, THEY PROVE TO BE MARKETABLE (DIFFUSION).

# DIGITALISATION IS BASED ON FUNCTIONING GOVERNANCE STRUCTURES

## **DATA GOVERNANCE**

- ALL THE FRAMEWORK CONDITIONS AND REGULATIONS
- THAT DETERMINE
  - THE GENERATION,
  - STORAGE,
  - ANALYSIS AND
  - USE OF DATA.
- INCLUDES
  - LEGAL AND ADMINISTRATIVE INSTRUCTIONS,
  - ECONOMIC COMMITMENTS,
  - ETHICAL CODES AND
  - TECHNICAL STANDARDS

### Technical rules

Database architectures  
Information flow architectures  
BlockChains/ Smart contracts

### Ethical rules

**Compliance-by-design /  
Algorithm design**  
Transparency  
Fairness  
Non-discrimination  
Integrity  
Privacy

### Legal rules

#### Legislation

Data Protection Act  
Database law  
Competition Act  
Protection of intellectual property  
(Open Data Law )  
(Cyber security law)

#### Regulations or standards

Standards (ISO, etc.)  
Commitments

### Economic rules

#### Market dynamics

Market failure phenomena  
Behavioural Economics  
Incentive scheme  
Data "ownership" / public goods

#### Business Practices

Data analysis (incl. quality)  
Customer life-cycle management  
Metrics and guarantees  
Data assessment and monetization

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## TASK OF THE STATE / SCIENCE

- WE CAN ANALYSE WHETHER THE EXISTING SYSTEM
  - IS SUFFICIENT OR
  - NEEDS FURTHER DEVELOPMENT
- DIGITALISATION IS AN ONGOING PROCESS
- FURTHER TECHNICAL AND ECONOMIC DEVELOPMENT CANNOT EXACTLY BE PREDICTED
- THE PROPOSED CHANGES TO THE GOVERNANCE STRUCTURE MUST NOT HINDER DEVELOPMENT IN THE THREE AREAS OF
  - INVENTION,
  - INNOVATION AND
  - DIFFUSION



## THREE CRITERIA/QUESTIONS TO REVIEW THE EXISTING GOVERNANCE STRUCTURE

1. WHICH SOCIALLY DESIRABLE OUTCOMES ARE LINKED TO THE TECHNOLOGY?
2. HOW GREAT IS THE NEED TO ENSURE THAT THE DESIRED EFFECTS ARE ACHIEVED (COMMITMENT)?
3. WHO IS RESPONSIBLE FOR CHANGING THE GOVERNANCE STRUCTURE?

## WHAT SOCIALLY DESIRABLE OUTCOMES ARE LINKED TO THE TECHNOLOGY?

### DETERMINED BY LAW

- PROTECTION OF FUNDAMENTAL RIGHTS (DATA PROTECTION, INTELLECTUAL PROPERTY)
- CYBERSECURITY
- PROTECTION OF THE MARKET BALANCE

### TO BE ANSWERED BY EMPIRICAL SCIENCES/POLITICS

- PROMOTING ACCESS TO TECHNOLOGY?
- IMPROVED SCIENTIFIC KNOWLEDGE?
- MORE EFFICIENT / ECOLOGICAL AGRICULTURE?
- FREE ACCESS TO DATA / TRANSPARENCY?
- PROTECTION OF SMALL AND MEDIUM-SIZED FARMS?
- DEVELOPMENT AID?

**THE NEED TO ENSURE THAT THE DESIRED  
EFFECTS ARE ACHIEVED (COMMITMENT)**

- THE NEED FOR BINDING REGULATIONS BECAUSE OF CONSTITUTIONAL REQUIREMENTS
  - PROTECTION OF FUNDAMENTAL RIGHTS (DATA PROTECTION, INTELLECTUAL PROPERTY)
  - CYBERSECURITY
  - PROTECTION OF THE MARKET BALANCE
  - SAFEGUARDING AGRICULTURAL STRUCTURE/FOOD SECURITY

## WHO IS RESPONSIBLE FOR CHANGING THE GOVERNANCE STRUCTURE?

- EFFECTIVENESS, EFFICIENCY, ACCEPTANCE OR IMPLEMENTABILITY CAN ALSO (WITH PRIORITY) BE ACHIEVED THROUGH NON-LEGAL INSTRUMENTS

### **State/EU (exceptional case)**

### **Protection of fundamental rights**

- data protection,
  - intellectual property
- Cybersecurity**

### **Selfregulation or State/EU (regular case)**

### **In particular**

- Rights of use
- Standardisation
- Balancing particular interests

- NETWORKED REGULATIONS INSTEAD OF HIERARCHICAL TASK FULFILMENT
- EXTENSION OF THE FORMS OF ACTION
  - PRE-DESIGNING MODELS FOR SELF-REGULATION (E.G. CONTRACT-BASED MODELS)
  - INCENTIVES
- SELF-EVALUATION OF THE GOVERNANCE-SYSTEM
- TRANSDISCIPLINARY INVOLVEMENT OF ALL SCIENTIFIC DISCIPLINES
- TAKING INPUT FROM EXISTING GOVERNANCE-SYSTEMS



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**Invention**



**Innovation**



**Diffusion**



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**dynamic framework**



MANY THANKS FOR YOUR ATTENTION

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