Facts and figures 2022 | Knowledge Base Programme 38 | Data Driven & High Tech

9 projects

Smart & privacy conserving infrastructures for farm generated data
Rob Lokers and Claudia Kamphuis
Budget 2022 €500.000

Farm generated data (will) provide a wealth of (sensor) data in an operational and geographically distributed environment. Efficient combination of these data from different sources is necessary to exploit the full potential of data driven decision making. Here, not only technological but also various challenges in governance are encountered.

Advances in data-driven phenotyping
Rick van de Zedde and Sander Mucher
Budget 2022 €210.000

The enormous growth in available geno- and phenotyping data poses challenges to FAIR data management, and also for developing efficient and reliable analytical approaches.

Small Innovative Projects
Hans Marvin
Budget 2022 €225.000

The current projects address a limited number of research fields and challenges. Small scale investigations outside these fields are needed to survey possible other applications and provide information for programming further research.

AI in animal and arable systems
Roel Veerkamp, Claudia Kamphuis and Corné Kempenaar
Budget 2022 €440.000

The (theoretical) promise of artificial intelligence requires validation by practical experience in the domains of WUR through pilot applications in different areas.

More information on KB-38 and how to get in touch scan the QR-code

Knowledge management
Jan Top & Jene van der Heide
Budget 2022 €198.347

The rapidly developing field of data driven science and high tech applications will continue to change our (working and research) environment. Efficient sharing of knowledge between projects, programme organization, research organization, and partners is required to exploit the potential.

Autonomous Robots for agri-food processes
Ard Nieuwenhuizen and Aneesh Chauhan
Budget 2022 €240.000

Autonomous collaborative robots (in precision agriculture and food production processes) will change the current production paradigm. Their implementation first poses practical (availability of sensor information, reliability of analytics) challenges, which are quickly followed by societal challenges (e.g. ethical dilemmas and legal responsibilities).

Non-destructive and non-invasive sensor technologies in food supply chains
Aneesh Chauhan
Budget 2022 €175.000

Sensing technology is pervading environmental, agriculture, and food production systems. Efficient application requires data connectivity, adapting analytics to the available sensor information, and evaluation of different sensing options.

Data analytics for food chains and consumer-oriented research
Görkem Simsek-Senel and Robbert Robbemond
Budget 2022 €380.000

In food and consumer research data is unstructured and distributed over small and large data holders. Decision support for producers and consumers requires not only better algorithms and tools, but also well-structured and readily available data.

Community management of natural resources using high tech, mobile technology
Arun Pratihast
Budget 2022 €80.000

High tech (mobile) solutions are especially promising in environments with limited data infrastructures based on landlines. This enables developing modern data infrastructures in low tech and non-western societies.

Collaboration with

- Aarhus University
- Almende
- AVANS
- CNRS (France)
- Deutsches Institut für Lebensmitteltechnik
- Distribute
- EEA (Denmark)
- ESA (Italy)
- EU
- Farm Technology Group
- HAN
- HAS
- Institute of Agrifood Research and Technology
- International Institute of Tropical Agriculture (IITA)
- ISPR-I Roadmap
- Javier de la Cueva & Asociados
- Józef Stephan Institute
- Lely
- Mantispectra
- Ministry of LNV
- National Cocoa Research Institutes of Cameroon (IRAD)
- Nofima
- Noldus Information Technology BV.
- OnePlanet
- PhotonDelta
- Quantum Amsterdam
- Quantum Application LAB
- Slovak University of Agriculture
- Sociedade Portuguesa de Inovação
- SOVON
- Stichting Akkerweb
- SURF
- TO2 institutes
- TU/e
- TU-Delft
- TU-Twente
- University of Amsterdam
- University of Bologna
- University of Surrey
- University of Trento
- University of Turku
- VITO (Belgium)

440+ researchers were actively involved in the projects

20+ workshops were organized

500+ researchers (internal and external WUR) were reached

3 building blocks

Digital
1010111
0101011
0111010
1001101

- Code
- Model
- Algorithm
- Data
- Software
- Infrastructure
- … [this can be saved and run from somewhere]

Human
- Knowledge
- Network
- Ethics
- Position
- Organisation
- Training
- Course
- … [this has enlightened an individual or a group]

Documents
- Papers
- Publications
- Presentations
- Podcasts
- Movies
- … [this can be read, watched or listened to]

2021

Impact 2023 and beyond