Japan & The Netherlands

Challenges for future farming

IPCSA, July 15th, 2026
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WAGENINGEN
UNIVERSITY & RESEARCH

Who is Jos Verstegen?

BSc and MSc Animal Sciences Wageningen University
PhD economic value of management information systems in pig farming
Professor Aeres University of Applied Sciences, Master Agribusiness Development
Senior Researcher Business Innovation Wageningen Social & Economic Research
Visiting professor Miyazaki Sangyo-keiei University + Kochi University Japan

宮崎産業経営大学
Miyazaki Sangyo-keiei University

高知大学
Kochi University

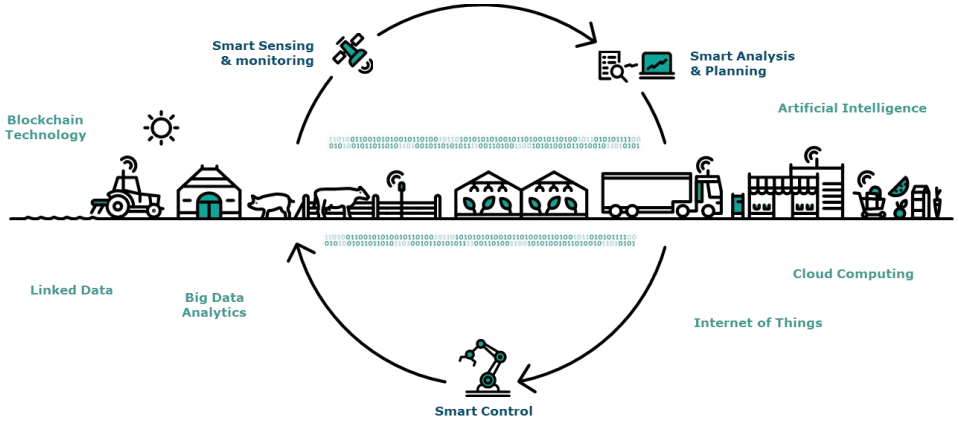
- Research topics: business models and governance in big data, entrepreneurial competence, opportunity identification, environmental awareness, rural development, open innovation, strategic decision making
- Professor Entrepreneurship @ Aeres University of Applied Sciences: developed a master program
- Supervised 4 PhD candidates @ Wageningen University, and 1 @ the University of Tokyo
- Education: BSc/MSc Animal Science, Extension Science, Farm Management; PhD Farm Economics

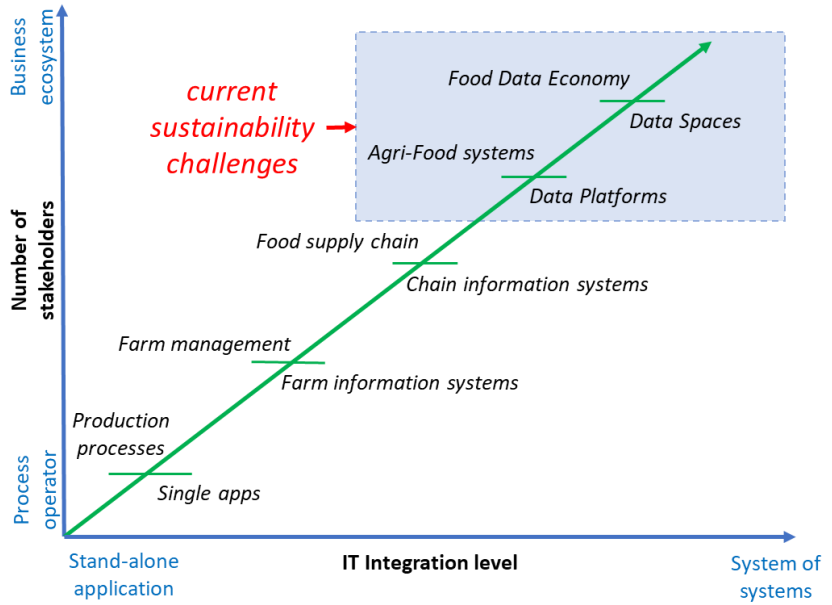
Innovation Challenge for Digital Innovation

How to build data-driven innovation ecosystems that deliver business solutions utilizing the potential of digital data to address the grand challenges of producing healthy and sustainable food?

Address technical and organizational issues at the same time:

- Data infrastructure & Data Analytics
- Data-driven Business modelling
- Responsible Data Governance





Challenges in The Netherlands and Japan

The Netherlands

Competing land claims

Societal pressure (livestock, pollution, pesticide use)

Economic perspective / scale enlargement

EU bird and habitat regulations

EU water quality regulations

EU GHG / CO_2 regulations

Japan

Ageing farmers / few successors

People move to the city

Inefficient subsidized production

Abandoned land

Loss of cultural heritage

Innovation paradox on technology use

Decreasing self-sufficiency

Six dilemmas

(WUR perspectives on agriculture, food and nature, October 2023)

1. Produce for NL, EU or for the global market?
2. Livestock farming only with grass and rest products?
3. May we exploit animals for food, and if yes, how?
4. How many nature and climate goals do we want to meet?
5. Will we separate or intertwine agriculture and nature?
6. Do we restrict consumers' choice for climate, nature, environment?

Source: Bos, A. P., Breman, B. C., de Wolf, P. L., van Meijl, J. C. M., Geerling-Eiff, F. A., Jellema, A., de Jonge, E. L., Dekker, J., Fuchs, L. M., Puente-Rodríguez, D., van Ree, M., van Wassenaer, L., Wesselink, M., & Wigboldus, S. A. (2023). *WUR-perspectieven op landbouw, voedsel en natuur*. Wageningen University & Research. https://doi.org/10.18174/638953

Vicious cycle in Japanese Agriculture

Low incomes from farming

Subsidies provided

Old-fashioned methods used

Attractive to own land and work elsewhere

Ageing farmer population

No restructuring in agriculture

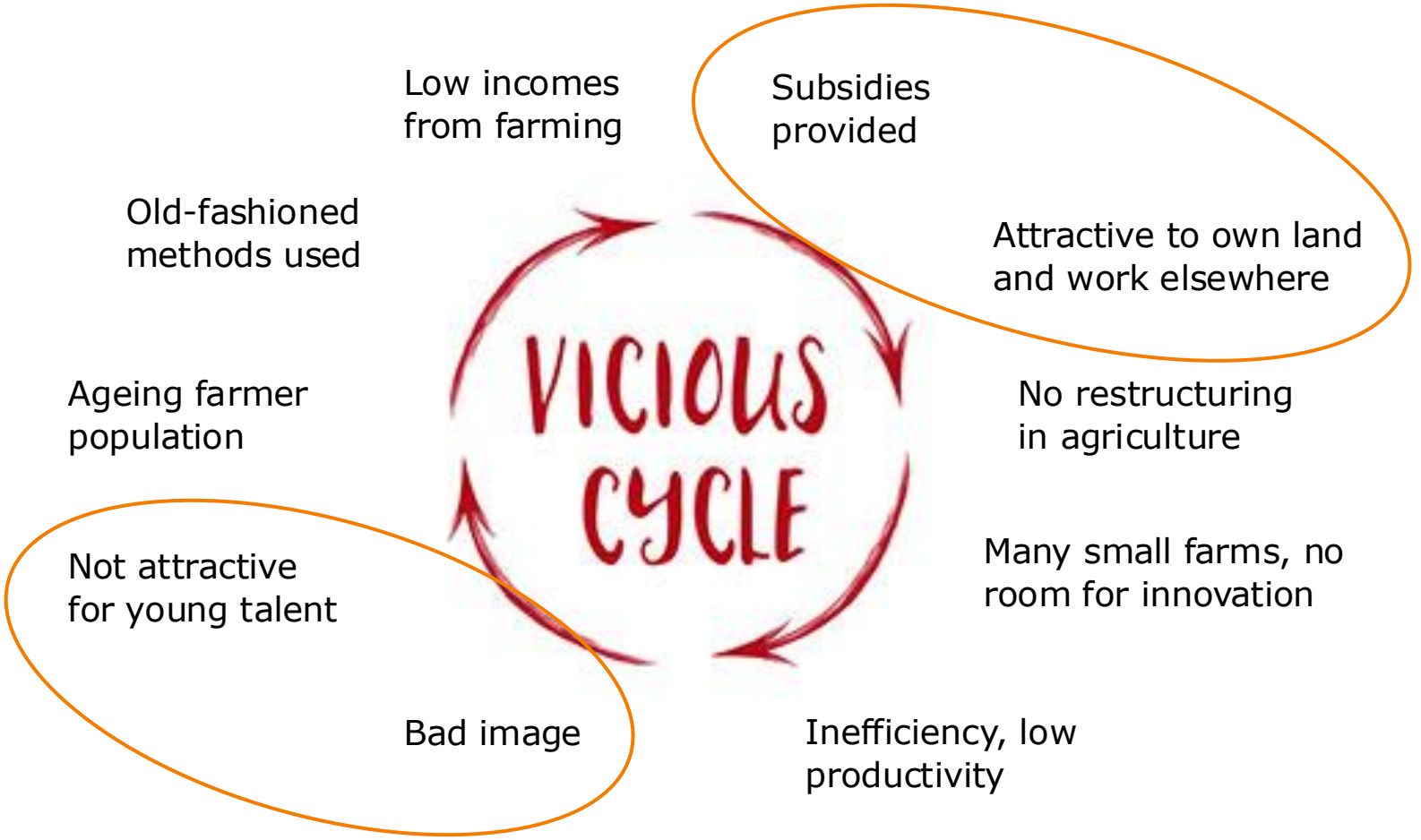
Not attractive for young talent

Many small farms, no room for innovation

Bad image

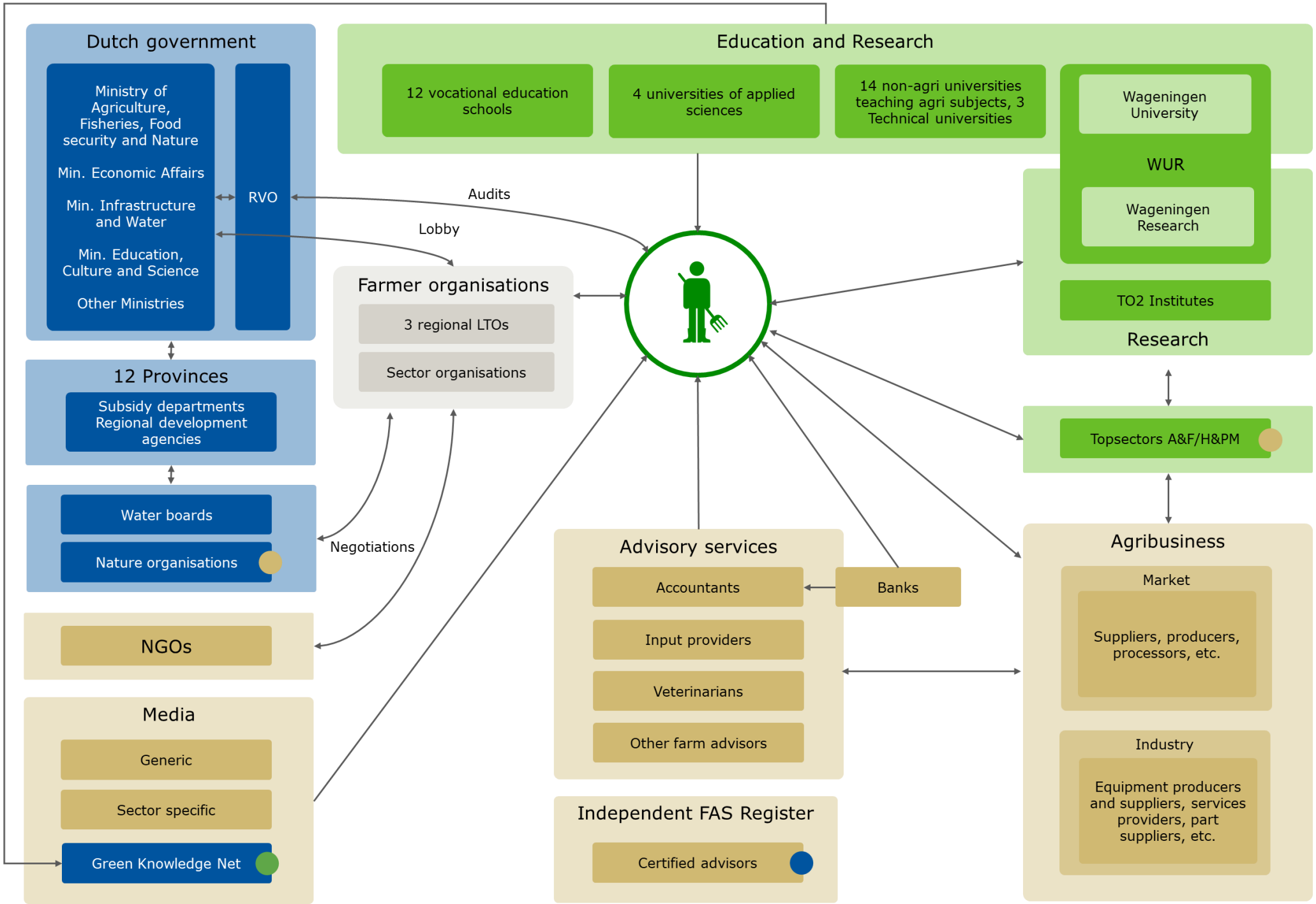
Inefficiency, low productivity

Where to break through the vicious cycle?



How to break through the vicious cycle?

- Decouple subsidies from land ownership
- Attract and keep young talent for farming
- Agricultural education and exchange programs are key:
  - Improve curriculum (level, management, entrepreneurship, 21st century skills), show the high-tech
  - Bring role model farmers in the classroom (masterclasses)
  - Employ teachers who are enthusiastic about agriculture and provide them with cases
  - Get students and young farmers inspired by international exchange



Thank you for your attention!

よろしくお願いします

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