



Extreme events: Food Systems Seismology

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Objectives and methods

Food systems seismology (FSS) aims to set a research and action agenda for better preparing for shocks and preventing loss of food security in food systems. FSS combines data science techniques with a deep understanding of the structure, functioning and governance of food systems to identify potential early warning signals of system change and produce actionable knowledge for managing the vulnerabilities in the system.

The methods used for FSS consist of co-design of **knowledge graphs** to connect siloed data sources and models, and joint developments of scenarios and examples with key stakeholders supported by state-of-the-art data science technologies and insights.

Results, solutions and contribution to transitions

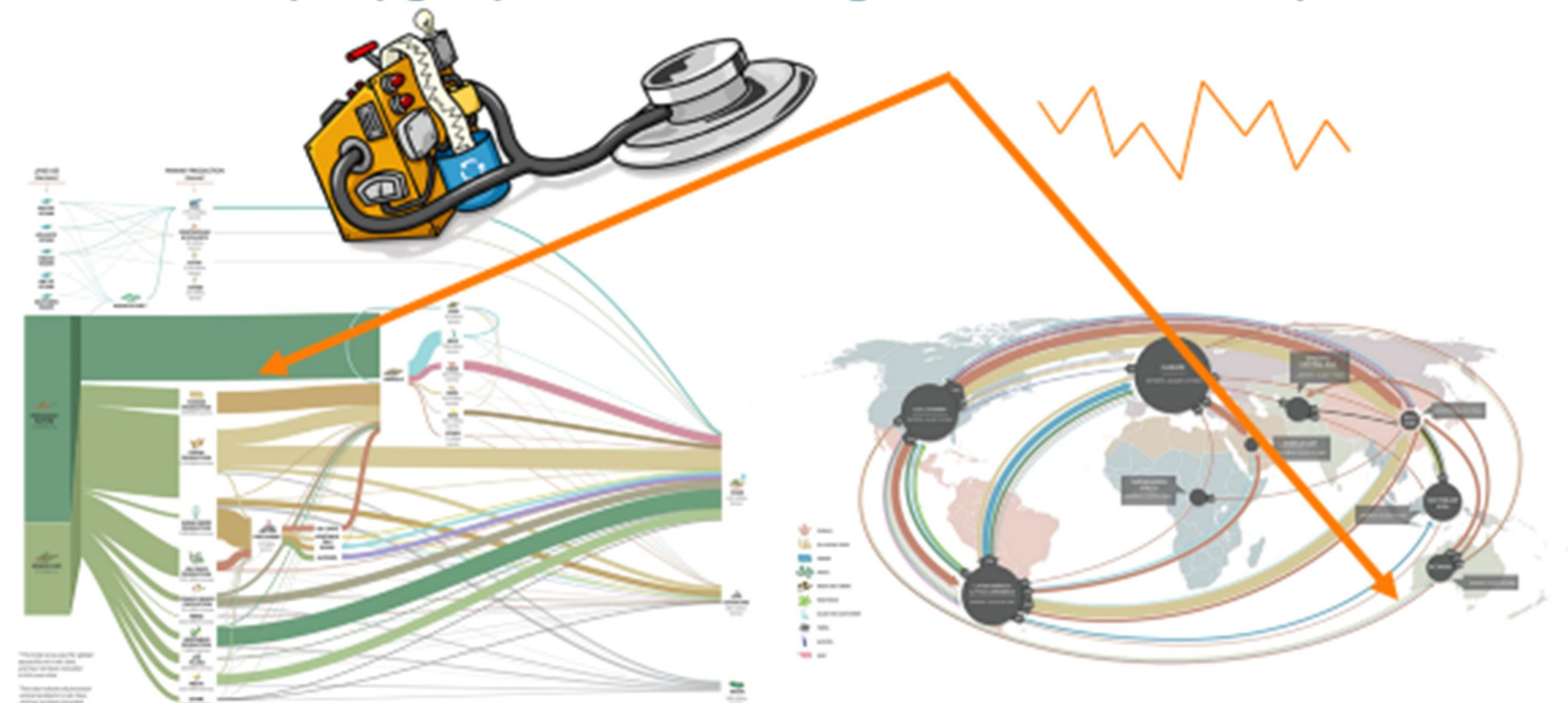
Started in 2021, research on FSS has resulted in the following:

- A vision document elaborating the need and strategy for FSS
- A data landscape visualizing the global data ecosystem relevant to FSS and gaps in data
- Alignments with different WUR researchers and research groups on the vision and strategy
- Liaison with external stakeholders (e.g. FAO) in the global information system for food security

What's next?

- Enriching the data landscape and publishing position paper on FSS
- Connecting the dots and identifying 'tectonic plates' and gaps in the global data ecosystem for food systems
- Building alliances with external stakeholders for methodological developments and practical applications
- Business development
- Value creation

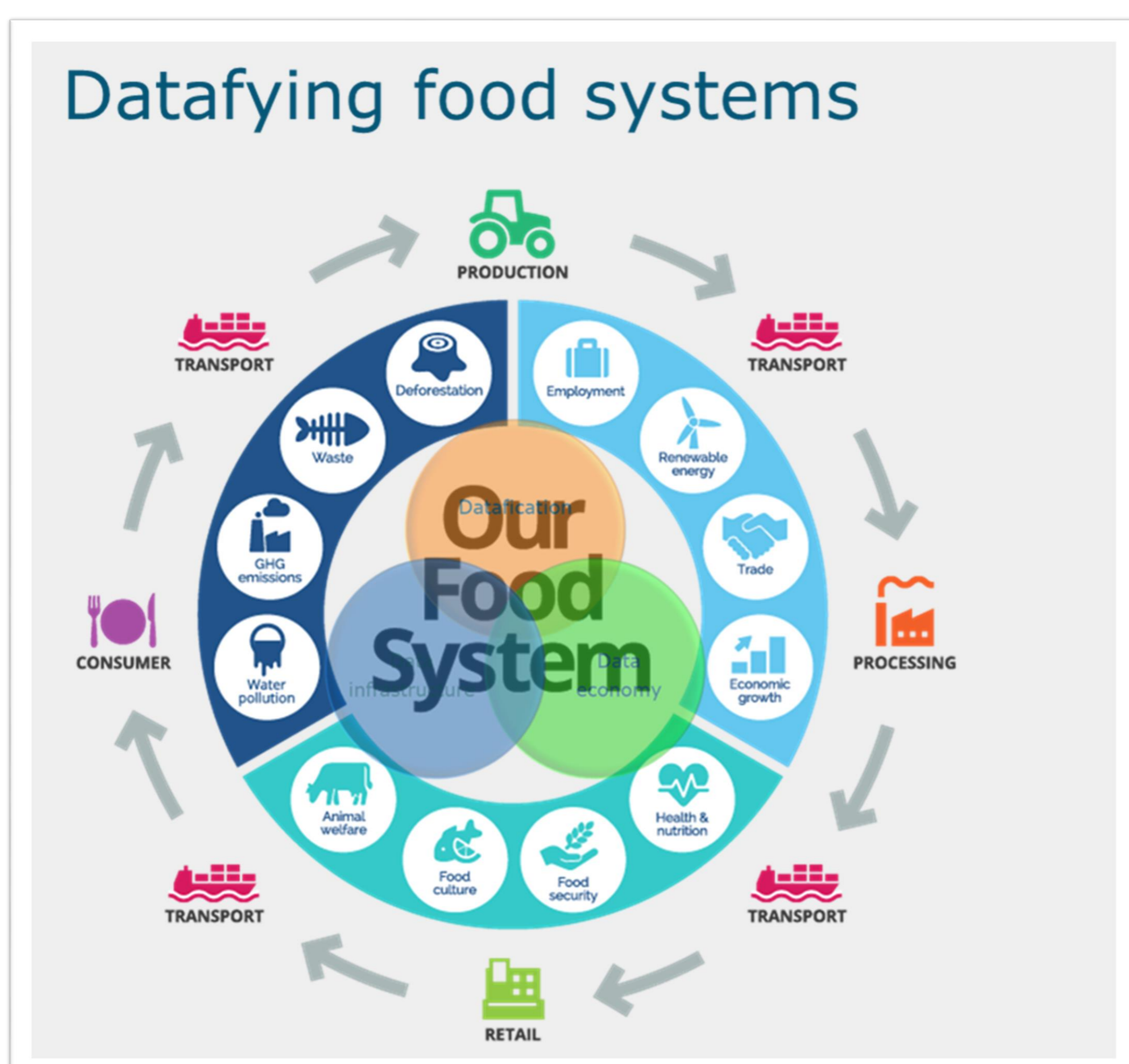
Food Systems Seismology: A virtual polygraph based on global data ecosystem



Source: own illustration based on [Metabolic](#)

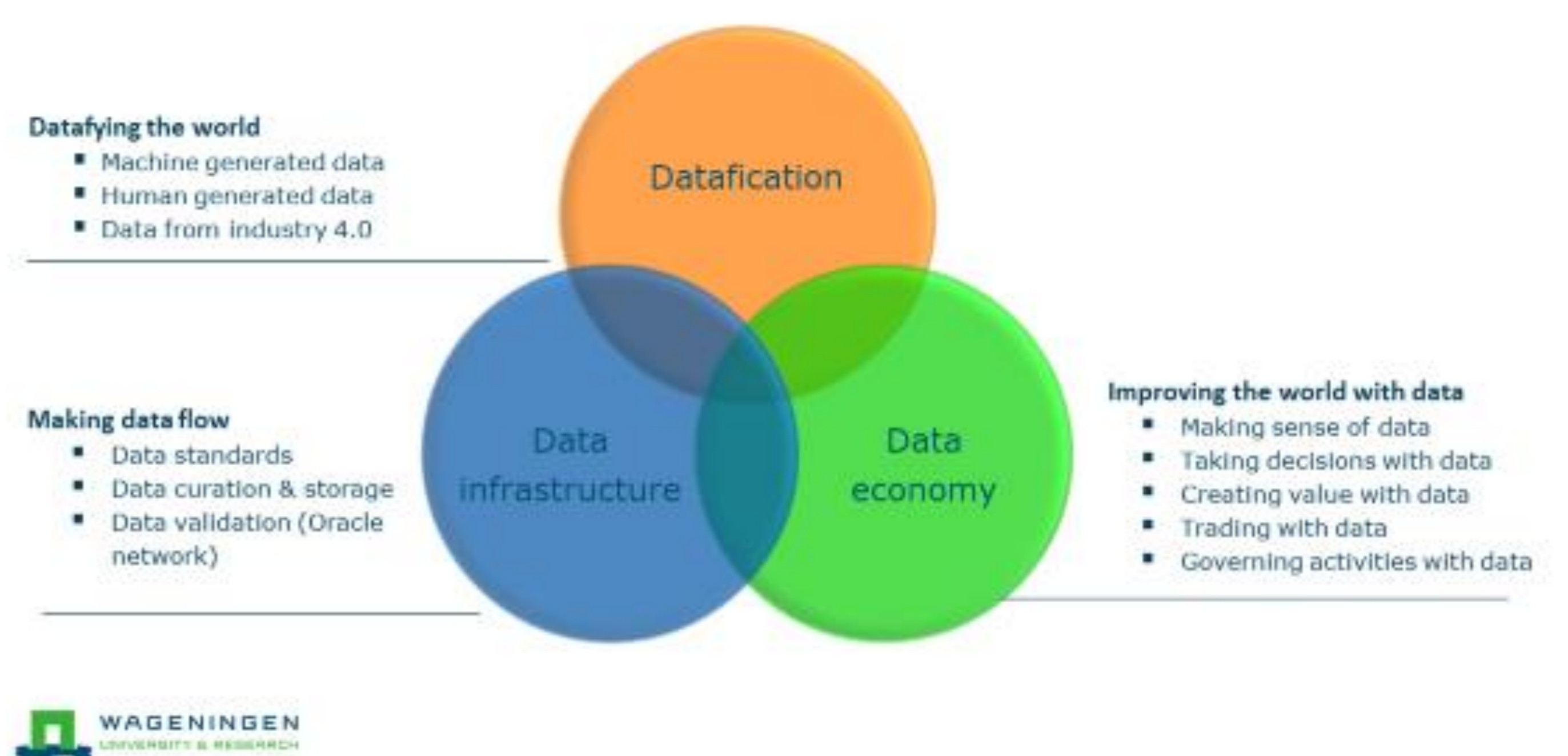
External partners

- FAO, WFP, Google



Source: Own Illustration based on [Food Systems Summit 2021](#)

Cultivating the data ecosystem for food systems



Questions for the audience

- Two questions for audience:
 - Which connections do you see with your own work?
 - How would you like to contribute to this work?

