



Imagining Futures of Husbandry Farming: What are Possible Business Models for the Sustainable Transition

WORKING PAPER FOR EAAP - AUGUST 2023

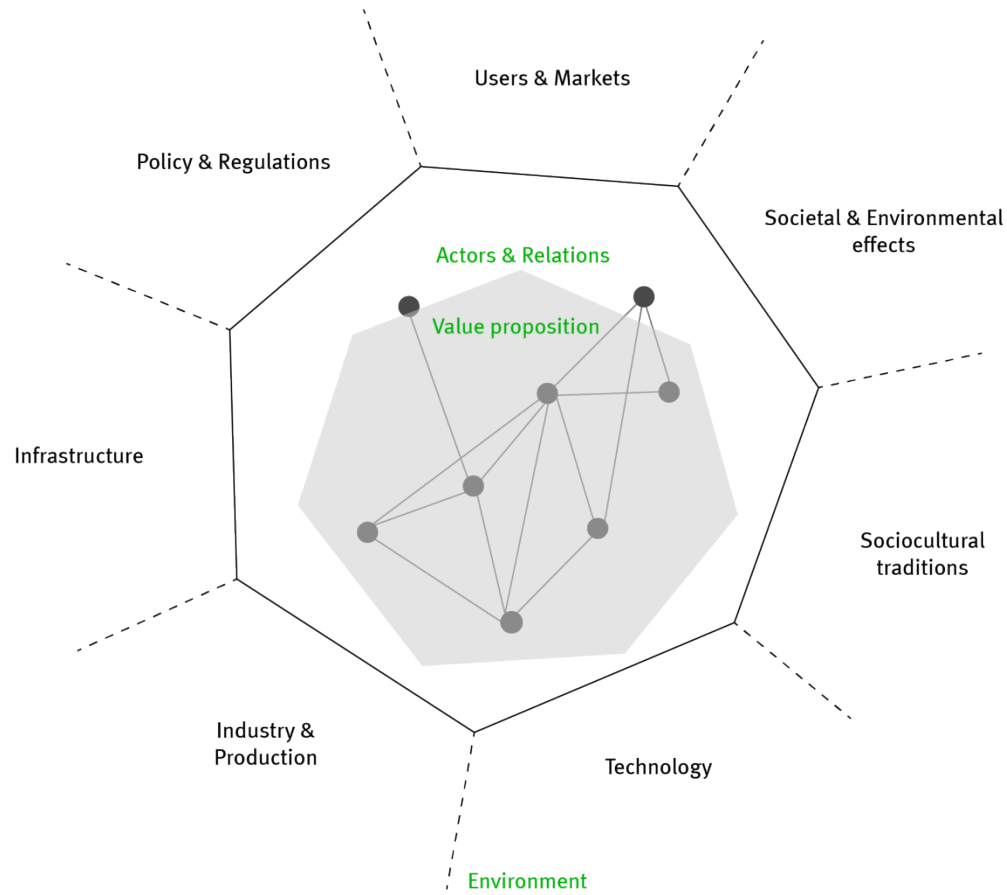
Britt Smulders, PhD Candidate – Rianne Valkenburg & Maria Anastasi

Join the mentimeter



Menti.com

Join with code: **3230
7043**

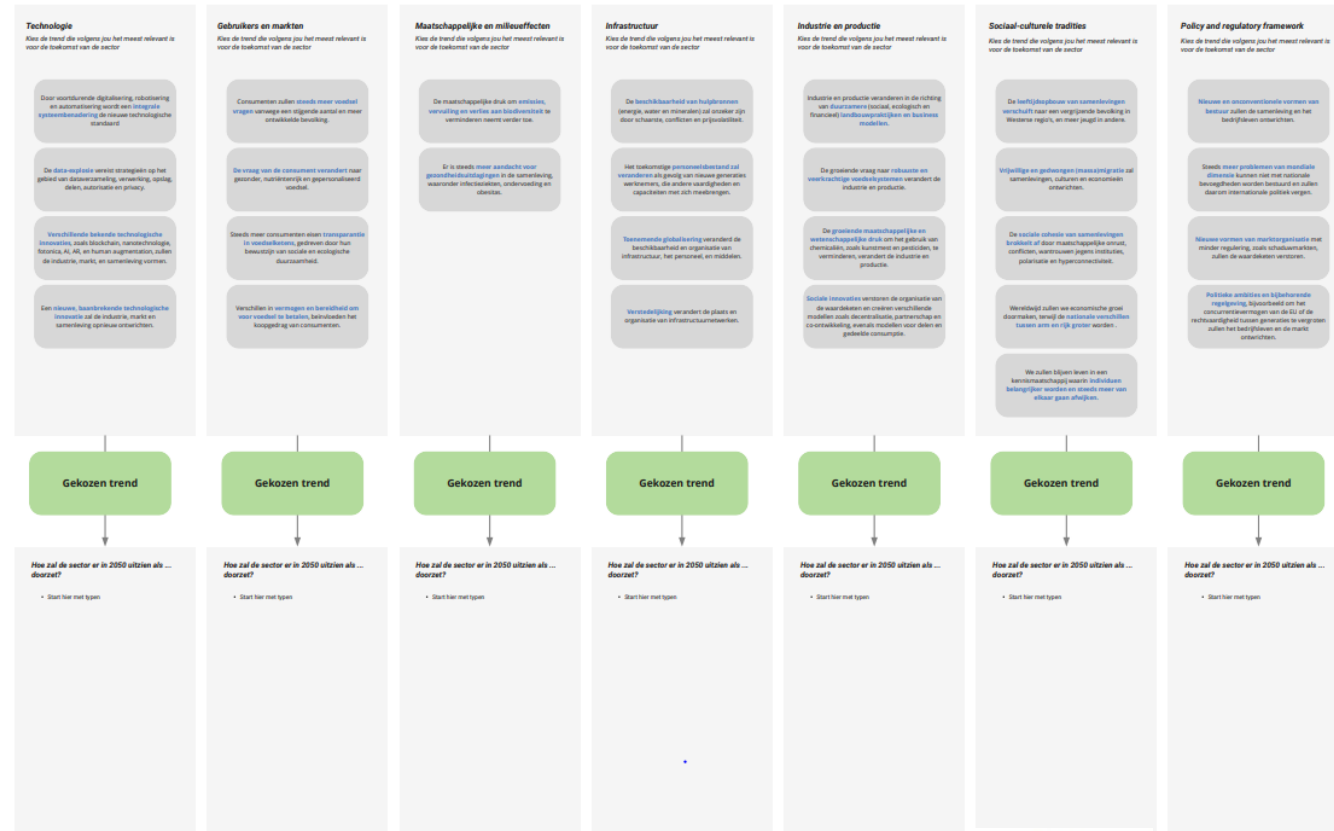


Toekomst trends in de sector: de impact van maatschappelijke ontwikkelingen op de sector

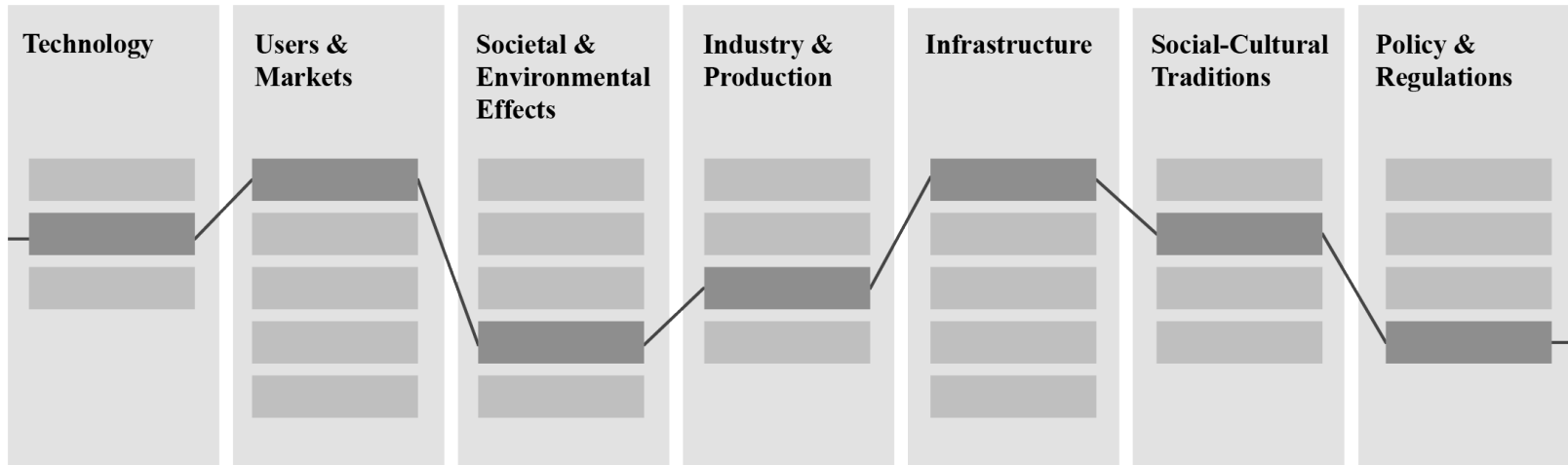
Een aanpak om beter te snappen hoe maatschappelijke ontwikkelingen de toekomst van de sector beïnvloeden. How ziet de sector eruit in 2050 als deze trends doorzetten?

Naam: Naam

Rol in ecosysteem: Rol



Crafting story lines – thematic analysis



Crafting story lines – configuring

	Scenario A	Scenario B	Scenario C	Scenario D	Scenario E	Scenario F
Perspective	<i>Policy Development</i>	<i>Farmers</i>	<i>Collaborative ecosystem</i>	<i>Society at large</i>	<i>Happy animal & healthy human</i>	<i>Knowledge economy</i>
Driving theme	<i>Attention to emissions</i>	<i>Entrepreneurship & innovation</i>	<i>Cooperation & fair organization</i>	<i>Socio-ecological systems</i>	<i>Welfare & wellbeing</i>	<i>Export of knowledge & know-how</i>
Frame	<i>In 2050 there is zero-emission policy and regulation</i>	<i>In 2050 there is a diversity of concepts in response to a more diverse society</i>	<i>In 2050 there is an ecosystem based on fair cooperation and shared responsibility</i>	<i>In 2050 our food system is resilient</i>	<i>In 2050 production is animal friendly with impact on people and society</i>	<i>In 2050 the sector is a living lab for new developments</i>
Technology	<i>Management in the production chain: emission reduction</i>	<i>Skill development</i>	<i>Downsides digitalization Digital optimization Integration chain links Right to exist</i>	<i>Alternative technology</i>	<i>Alternative technology Management in the production chain: animal welfare Transparency and tracking (marketing)</i>	<i>Management in production chain Skill development Alternative technology</i>
Users & Markets	<i>Market growth of concepts and quality marks</i>	<i>Consumer spending patterns for niche products Nichemarkets</i>	<i>Transparency in production chain</i>	<i>Transition from animal to plant-based protein Ability to spend money on high quality protein Husbandry systems based on income Population growth Carcass utilization</i>	<i>New products Social organization influence consumer demand Demand for products guarantee sustainability and animal welfare</i>	<i>Consumer spending patterns Nichemarkets</i>
Societal & Environmental Effects	<i>Increasing societal attention to emission reduction Expanding the role of technology for emission reduction</i>	<i>Societal transition towards social and ecological indicators</i>	<i>Trade-offs financial vs environmental and social sustainability</i>	<i>Trade-off: feed-food Trade-off: integral food system Trade-off: surface area Trade-off: well-being & emissions</i>	<i>Health and security concerns 'Greener' business operations resulting from pressure social organizations Biodiversity Social debate steered by NGOs</i>	<i>Trade-offs</i>

Join the mentimeter

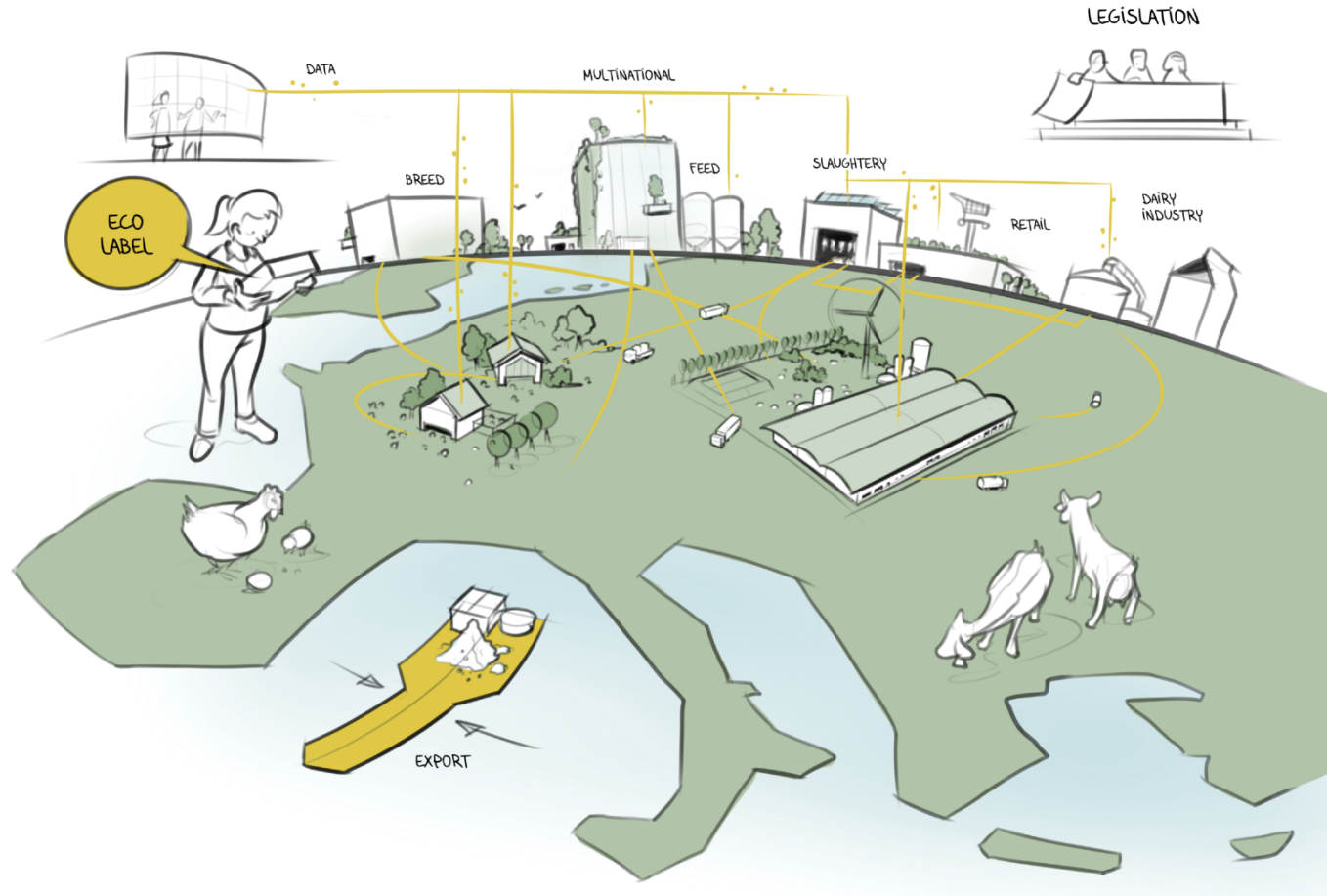


Menti.com

Join with code: **3230
7043**

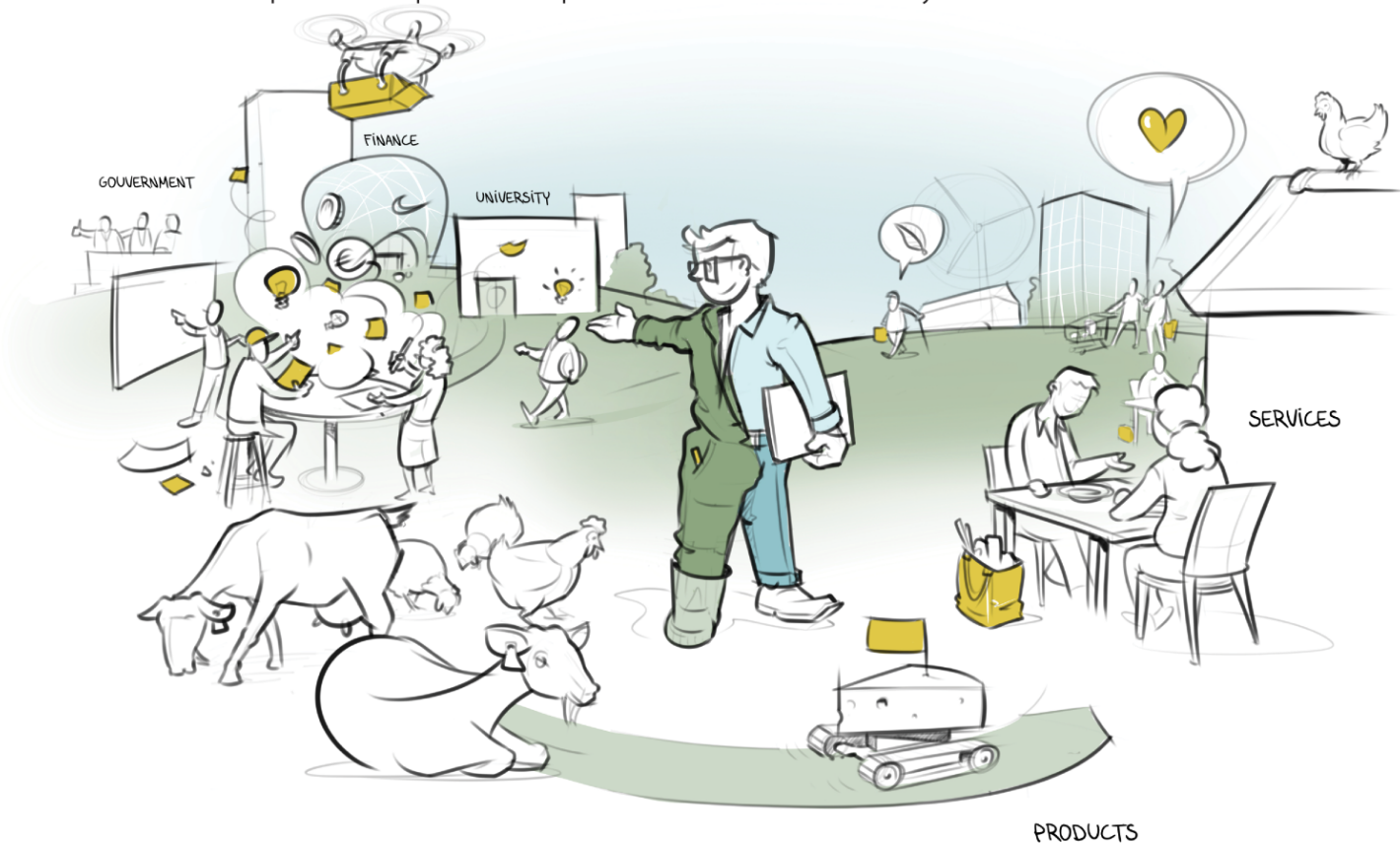
ZERO-EMISSION POLICY AGENDA

2050, Europe. - Attention to the environment and reducing emissions to net zero are at the top of every national policy agenda. The environment and natural reserves have received the full attention of policymakers that aim to protect them from particle matter and other emissions.



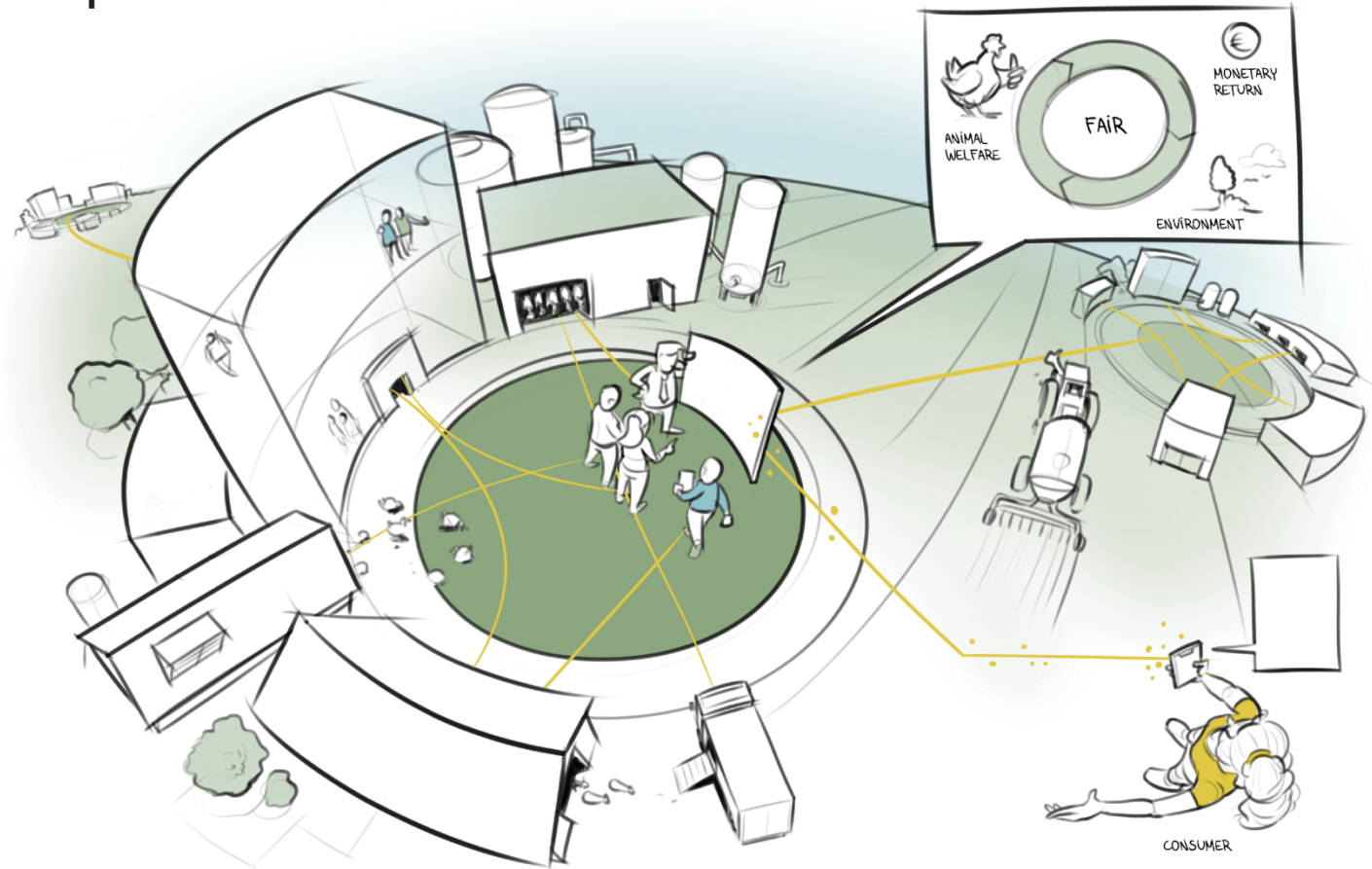
**LIVESTOCK FARMERS
AS ENTREPRENEURIAL
INNOVATORS**

2050, Europe. – Consumers are more aware than ever of the impact of agriculture on the environment and animal welfare. In a diverse society, this has resulted in a wide range of different customer groups with specific needs and demands. Farmers have risen to the challenge and closely listen to society to adapt to the changing demands of customers. Leading to the development of new concepts and niche products that push the boundaries of the industry.



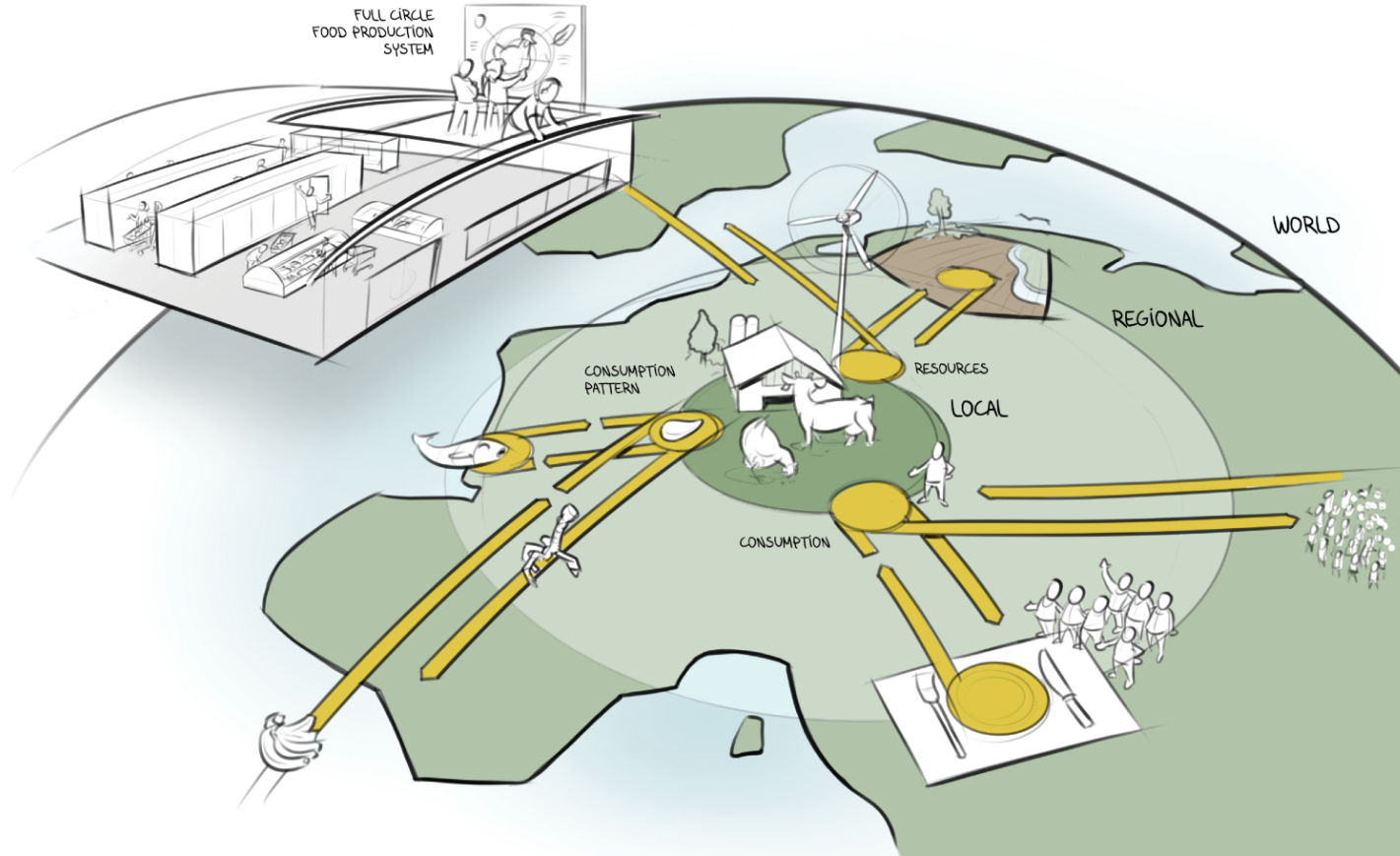
COLLABORATIVE ECOSYSTEM

2050, Europe. - Organizations in the agriculture sector take responsibility for addressing trade-off between finances, animal welfare and the environment that has plagued the industry for a long time. The central objective of the food system is a fair price for all actors while ensuring social and environmental sustainability.



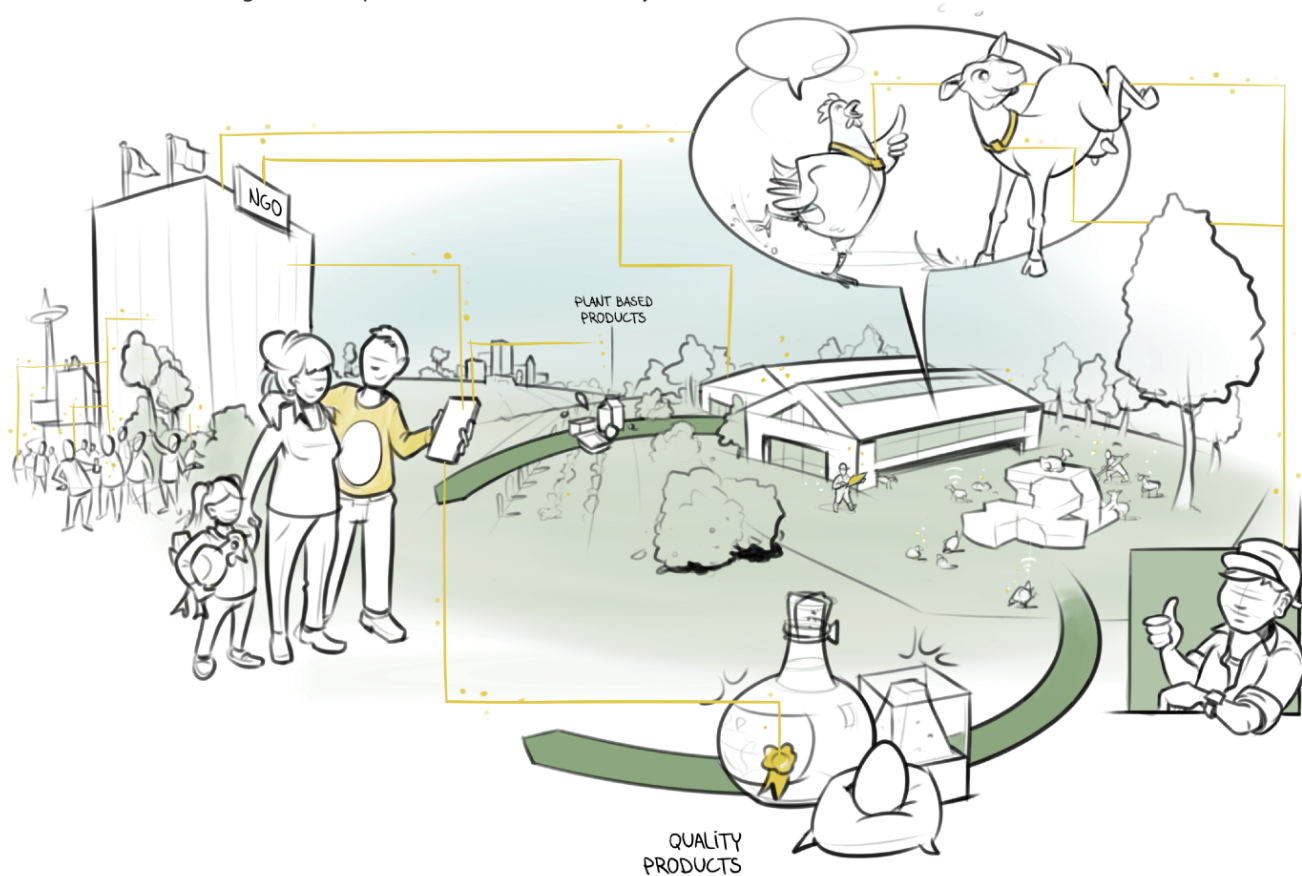
RESILIENT WORLD FOOD SYSTEM

2050, Europe. – Retailers, farmers, and production partners work together to create a resilient food system that sustainably produces food, withstands shocks, and ensures accessibility of food for a growing world population. Retailers must balance available resources, consumption of food, and consumption patterns, in collaboration with farmers and production partners at local, regional, and international level which poses design challenges.



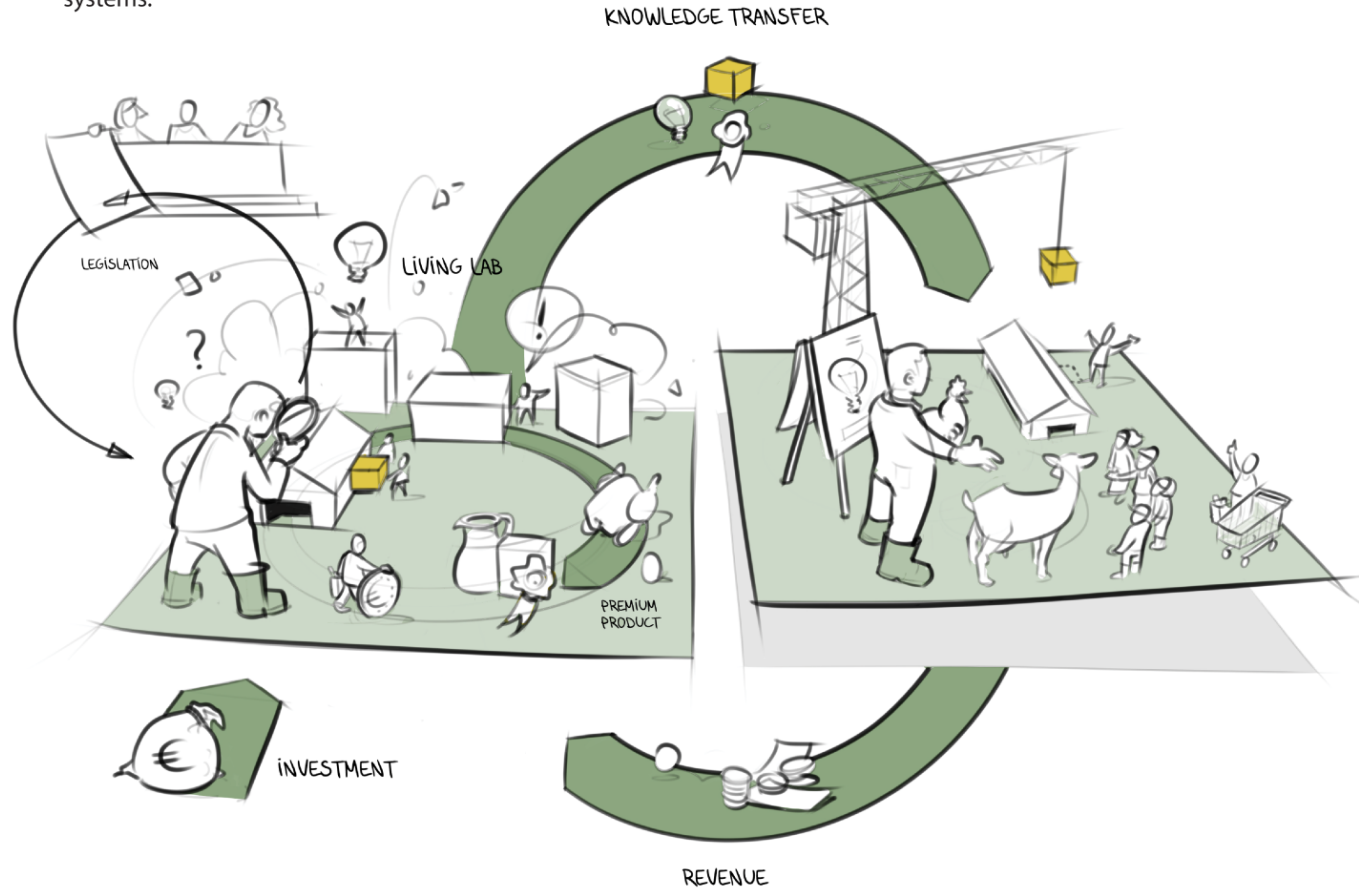
HAPPY ANIMALS & HEALTHY HUMAN

2050, Europe. – For both animals and people, life is good. Animal welfare is the top priority of farming systems and as a result it had a positive effect on people and society. In Europe we see two groups of customers. A large group focuses on the consumption of 'high-quality' products that prioritize animal welfare, even though these come at a premium. Another group of consumers are now vegetarian or plant-based, but still closely in touch with farmers.

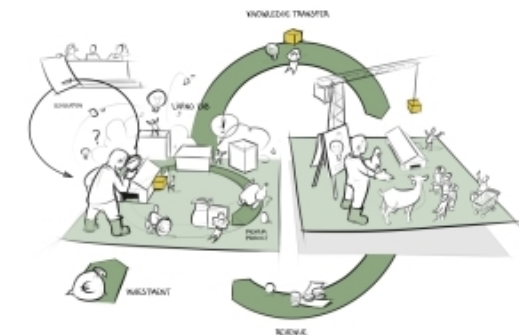
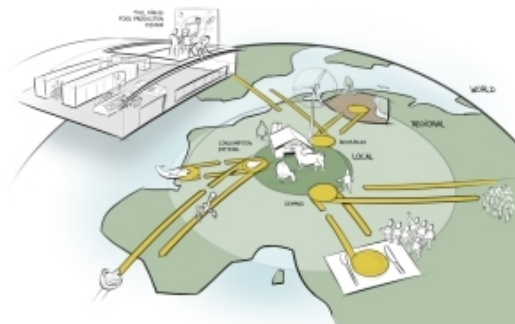
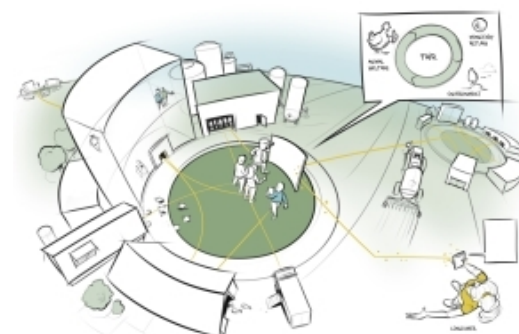


LIVING LABS IN THE KNOWLEDGE ECONOMY

2050, Europe. – In the heart of the agricultural industries, groups of farmers, producers, suppliers, and retailers have come together to form a new value-creating initiative – a chain encompassing food living lab. Their mission is simple: to continuously innovate and experiment with different production methods and business models, with the ultimate goal of creating sustainable food systems.

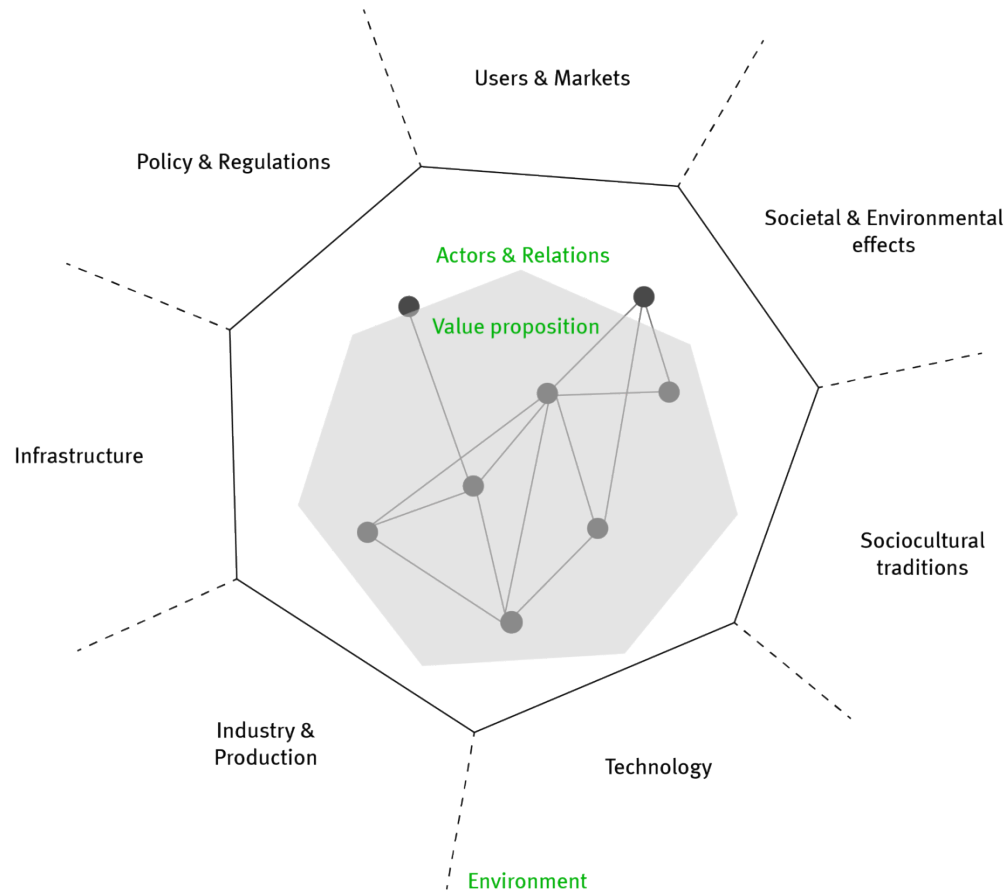


Future images



Ecosystem value propositions

[WHO] DELIVERS	[WHAT VALUE]	WITH [ACTIVITY/ PRODUCT/ SERVICE]	TO [CUSTOMER]	IN COLLABORATION WITH [KEY PARTNERS].
Research centers	access to healthy and sustainable food	sensors and dashboards for measuring emissions	the whole value chain, government, and society	universities, private innovators, and producers using crowdsourcing
Government	understandable information about emissions for consumers	one label for food using standardized measures and clear information	Consumers	poultry farmers, marketing bureaus, academics
Poultry farmers	zero-emission and zero-kilometer value chain	maximized carcass utilization through product and process innovation	Consumers	feed (residual waste flows) and retail





Imagining Futures of Husbandry Farming: What are Possible Business Models for the Sustainable Transition

WORKING PAPER FOR EAAP - AUGUST 2023

Britt Smulders, PhD Candidate – Rianne Valkenburg & Maria Anastasi