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The New Paradigm I

An Introduction to Paradigm Shift in Food, Agriculture, Water and Energy Sectors

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we're working for **the future of food**

Kök Projekt is an agri-food startup accelerator and an innovation partner for **the food, agriculture and water sector companies**.

We work together with companies, NGO's and governmental organizations to establish interfaces for entrepreneurs to reach beyond their potential.

food agri water energy

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we work through **the food value chain**


producers of production inputs


farmers & growers


processors & traders


retailers


consumers

The New Paradigm

What is a Paradigm?

Paradigm & Paradigm Shift

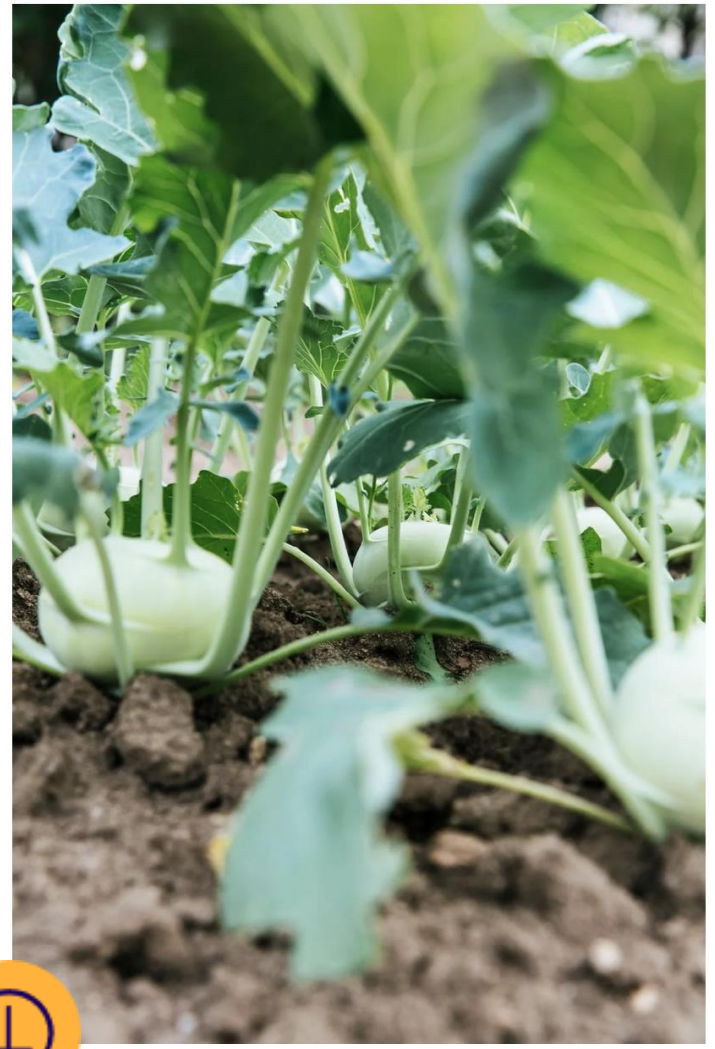
- According to Oxford Dictionary, paradigm means*: a large-scale and generalized model that provides a viewpoint from which the real world may be investigated.*
- Wiktionary defines paradigm as *"a system of beliefs, ideas, values, and habits that is a way of thinking about the real world."*
- *In simple words we can define paradigm as the way something is done or thought about.*
- In our new report series we are talking about a *paradigm* shift in the food, agriculture ,water and energy sectors by which we mean a great and important change in the way of how we grow, distribute, eat our food and how we generate our energy.

What is the Current Food Paradigm?

Challenges of Our Food System I

- In 1798, T.R. Malthous famously predicted that, human population will increase faster than food production and this will lead many problems. Malthous predictions have not come through so far. We managed to produce enough food for a global population which exceeds 7 billion people.

- However our food system is extremely broken. It can not meet the international targets for food waste, hunger, obesity, land protection, and healthy diets.



What is the Current Food Paradigm?

Challenges of Our Food System II

- Statistics show how big is the problem with the food we produce and consume;
- According to FAO, between 720 and 811 million people in the world faced hunger in 2020.(FAO)
- World Health Organization mentions that in 2016, more than 1.9 billion adults were overweight of these over 650 million were obese. Over 340 million children and adolescents aged 5-19 were overweight or obese in 2016. (WHO)
- Roughly one-third of the food produced in the world for human consumption every year gets lost or wasted. (WFP)

Increasing Pressure On Natural Resources

> Most studies estimate that food and agriculture are responsible for 25% to 35% of global greenhouse gas emissions.

Source: Our World In Data

What is the Current Agriculture Paradigm?

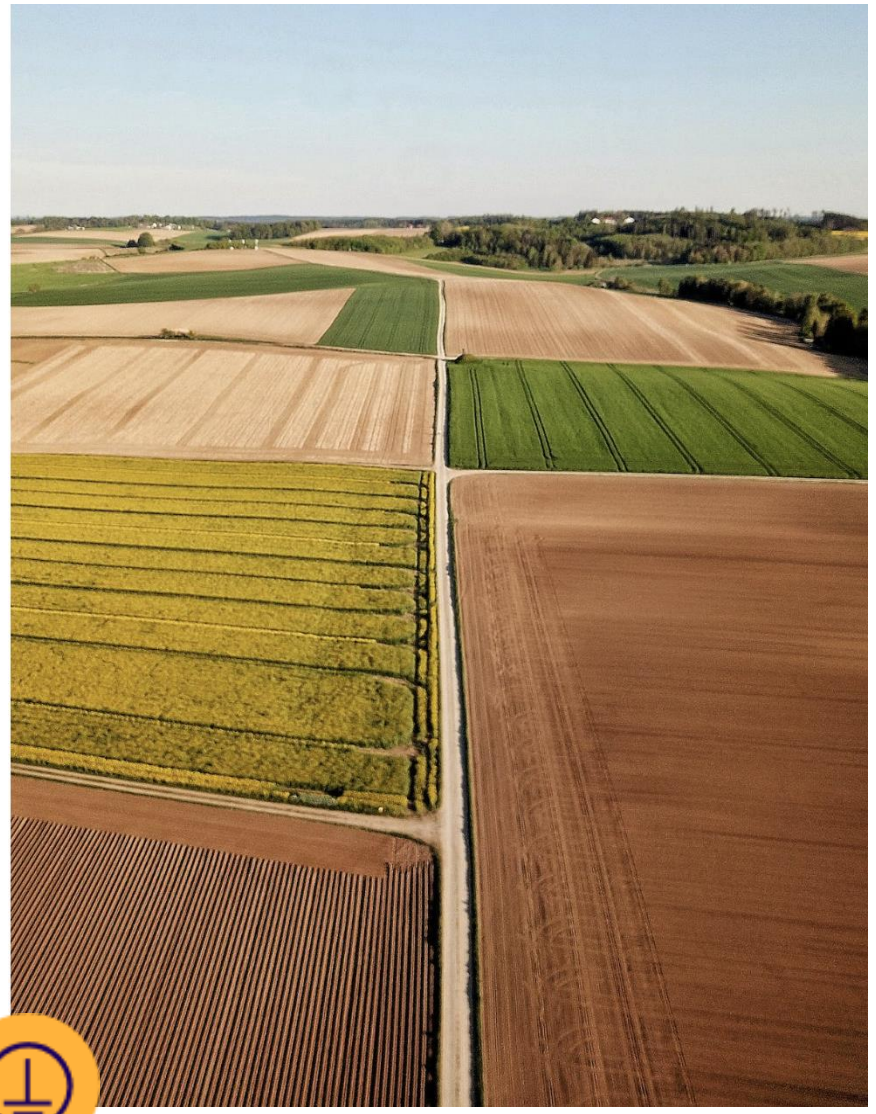
Challenges of Our Agriculture System I

- The world population is expected to reach 9,8 billion people in 2050.
- The big question is how to offer a sustainable, healthy diet within planetary boundaries to this growing population?
- People will consume more resource-intensive, animal-based diets as their wages rise. At the same time we need to cut greenhouse gas emissions caused by agriculture and deforestation.
- Cutting forest area and tilling grassland to meet the rising population's food requirements, results in soil degradation.

What is the Current Agriculture Paradigm?

Challenges of Our Agriculture System II

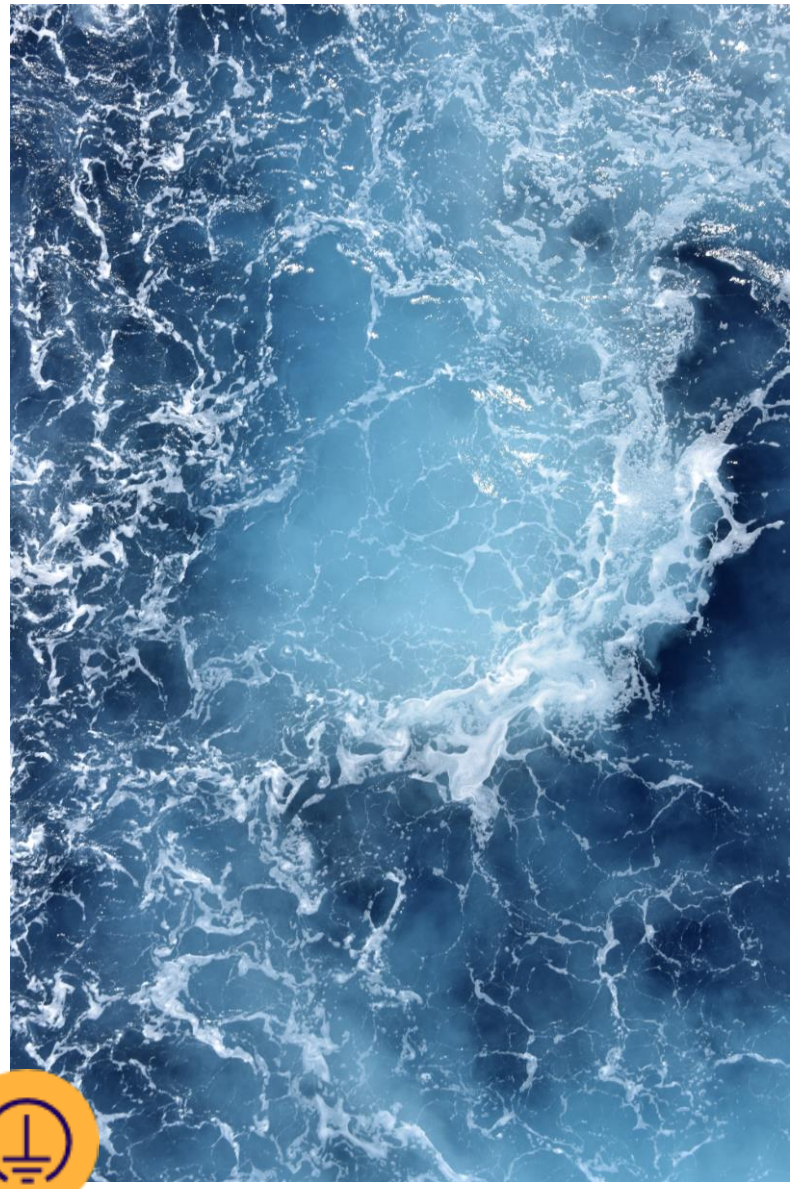
- Today, agriculture is both a victim of and a contributor to climate change.
- On the one hand, agricultural activities contribute to global warming mainly due to the use of chemical fertilizers, pesticides, and animal waste.
- On the other hand, greenhouse gasses produced by agricultural activities contribute to climate change, and global warming has a profound impact on natural resources thereby on the sustainability of agriculture systems.
- The rising population and climate change create enormous pressure on natural systems. Our agriculture methods need to be revised.



What is the Current Agriculture Paradigm?

Challenges of Our Water System

- Modern societies need lots of fresh water for industrial, municipal, and agricultural use. Demands are varied, from hydro energy, drinking, and irrigation to sanitation.
- More people than ever before may now get better-quality food because of recent enormous advancements in food production.
- But far too frequently, this is done at the price of water supplies and the well-being of the ecosystems they support.
- The water we eat daily, is huge, just a quick example we need 15 000 liters of water to produce one kilo of meat. (FAO, Water)



What is the Current Energy Paradigm?

Challenges and Opportunities

- Energy is central to the climate crisis and essential to finding a solution.
- Generating electricity and heat by burning fossil fuels – coal, oil, or gas – causes a large chunk of the greenhouse gases, such as carbon dioxide and nitrous oxide, which are the greatest cause of climate change.
- Most of the energy production is still generated by burning fossil fuels however cleaner sources of energy such as wind and solar are gaining ground (UN).
- The new paradigm for the energy sector will be the one in which the world is increasingly electrified and where renewable energy can supply 100% of electricity demand(Cameron Barney).

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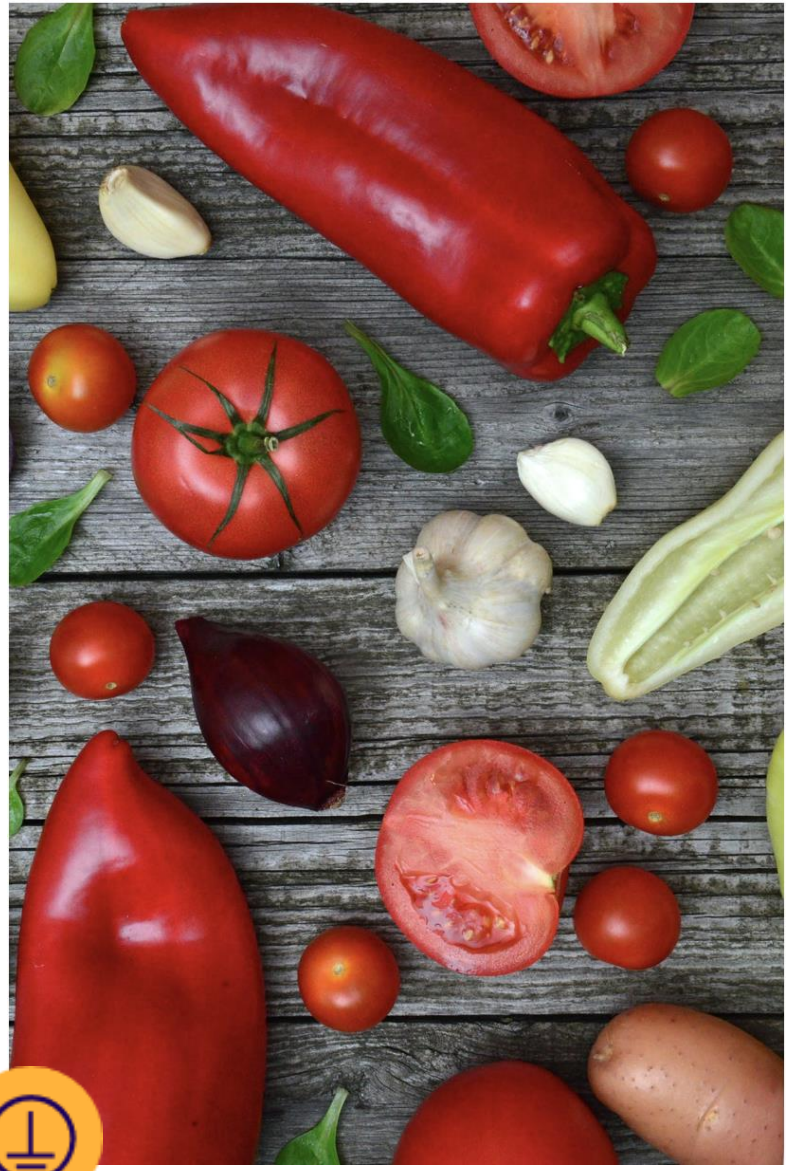
Paradigm Shift

“It always seems impossible until it’s done.”

Nelson Mandela

Changing Consumer Demands and Risk Perception

- World Economic Forum just released its global risk report with natural disasters and extreme weather and failure to mitigate climate change ranking at the top of the list over the next 10 years. (WEF)
- More and more consumers are willing to know how and where their food is growing, and how it comes to their table.
- Demand for sustainable, efficient, and fair supply chains is on the rise.
- International society is also willing to create a more sustainable, efficient, and fair food system. One good example is Green Deal where the EU is making promises to create an agriculture and food system respecting planetary boundaries.



Global Risks Perception Survey

Global risks ranked by severity over the short and long term

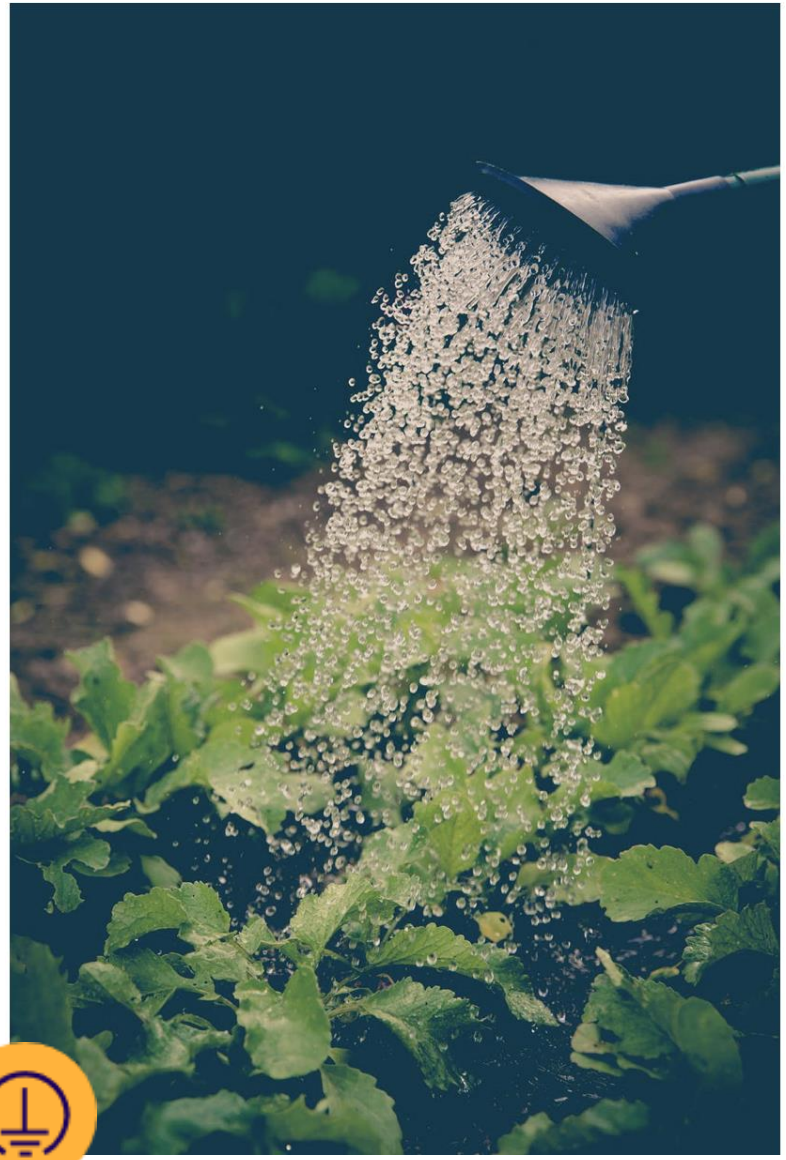
"Please estimate the likely impact (severity) of the following risks over a 2-year and 10-year period"

Source: World Economic Forum Global Risks Perception Survey 2022-2023.

Paradigm Shift

A new food, agriculture, water and energy systems ?

- As we have seen, our food, agriculture, water, energy systems have many challenges. We need to create a more sustainable, efficient, healthy, and fair one.
- Since they specify how we understand reality and how to act within it, paradigms are significant. Thus we need a paradigm shift in the food, agriculture, water and energy sectors.
- Business as usual is no more an option.
- We need to recognize planetary boundaries, act to mitigate and adapt to climate change, regain biodiversity and be conscious that our time is scarce.



Impact of Technology

Technology in the service of paradigm shift

- Although technology can not be a silver bullet for the current food system problems, it may help to create more sustainable, efficient, fair, and healthy food supply chains.
- In our new report series, we will see tech solutions in collaboration with nature. Regenerative agriculture, alternative proteins, and smart nutrition are some of the headlines that we will study in our next reports.
- To begin with ,we choose three startups that work to make a paradigm shift in the food system.

UMIAMI

Umiami

The next generation of plant-based meat

- Umiami is a French foodtech company founded in 2020 with the goal of reducing global meat consumption and the effects it has on human health, animal welfare, and the environment.
- The start-up is a pioneer in the creation of the patented "umisation" method for texturizing vegetarian proteins, which mimics the texture and flavor of whole-cut meat without sacrificing quality.

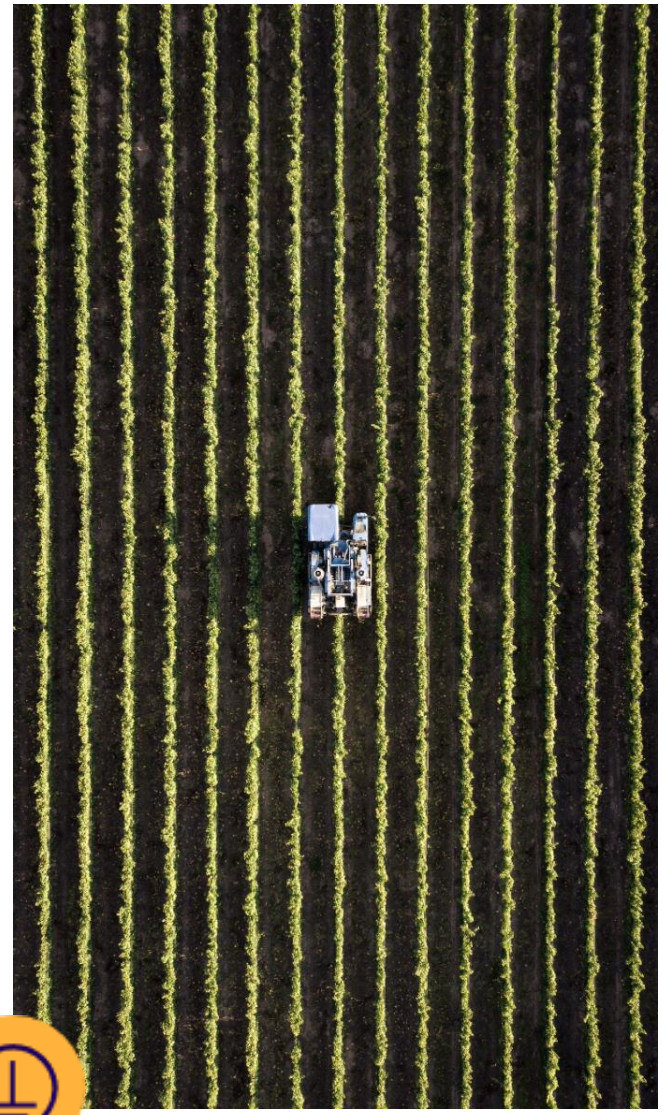
Taranis

Scout With Precision

- Taranis is a premier precision agriculture intelligence platform that uses powerful computer vision, data science and deep learning algorithms to successfully monitor fields.

- For high-precision aerial surveillance photography to reduce crop yield loss from insects, Taranis provides a full-stack solution. Every season, crop diseases, insects, and weeds cause farmers to lose 30–40% of their harvest.

- The company defines their mission as “Help growers maximize crop yield, improve productivity, and adopt sustainable practices in order to ensure prosperity, starting in our local communities and for the benefit of the world.”



Chomp

Food Saving Companion

- CHOMP is a new food-saving software created in Hong Kong to promote sustainable living and alter people's attitudes around food consumption.

- The company connect customers to F&B businesses who have food in need of rescuing and make that food available to customers to purchase as a Mystery Box, and pickup directly at their favourite stores with a great deal.

- Inside the Mystery Box, consumers can find Perfectly edible foods that have gone unsold during the day or have a short shelf life. That could include pastries, cakes, sandwiches, lunch boxes, rice bowls, salads, groceries, etc.

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Source

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