



Workshop on Agrifood with Member States representatives

On 23th September 2022, [Ivan Stefanic](#), EIC Programme Manager (PM) for Food Chain Technologies, Novel & Sustainable Food, hosted a workshop to present future EIC challenges to European Union Member States and European Union Associated States. The online workshop was moderated by the Head of Unit Anne-Marie Sassen. Each part of the agenda was followed by an interactive part in which representatives gave their input and raised questions.

The PM started his presentation by giving an overview of the different EIC funding schemes and the proactive management support. The challenges presented were *Precision Nutrition* (Pathfinder) and *New Technologies for Resilient Agriculture* (Accelerator). Ivan recalled that projects that do not fit in the specific challenge calls are welcome to apply for the open calls.

Participants highlighted the ethical implication of precision nutrition, such as the large amounts of sensitive data created by combining epigenomics, microbiomics and glycomics and whether the market is prepared for this. Furthermore, given the current global climate challenges and the substantial increase in food prices, participants highlighted that food preservation (e.g. cooling) is a central topic for future consideration. In this regard, Sassen pointed out that Programme Managers [Francesco Matteucci](#) and [Antonio Marco Pantaleo](#) have defined a challenge on cooling. Although it is not specifically directed towards the agricultural sector, applicants proposing cooling-related solutions are welcome to apply for this call.

A further issue identified by representatives is the lack of labour in both agri- and horticultural sectors, which could potentially be alleviated by the use of robotics. Programme Manager Stefanic indicated that this topic as well as crops resistant to climate change, the use of by-products in agri-food and electrification of parcels will be taken into consideration in future challenges.

Anne-Marie Sassen closed the session by informing participants that the slides will be made available in the upcoming weeks and reiterated that representatives are welcome to share their inputs by reaching out to EISMEA-D.02@ec.europa.eu



Brussels, 23rd September 2022

Challenge proposals in the Agrifood sector

Ivan Stefanic

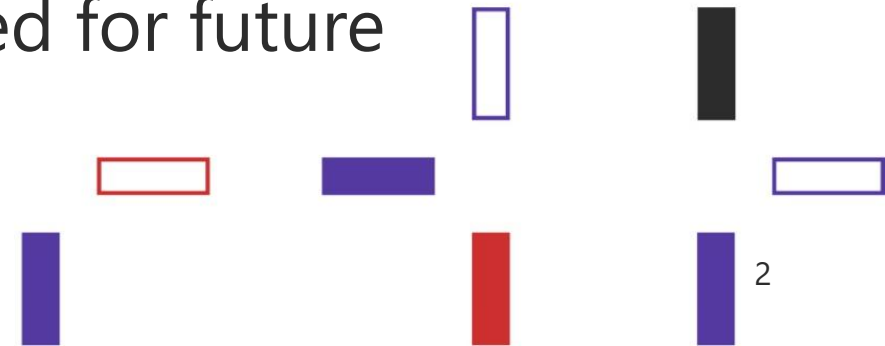
EIC Programme Manager for Food Chain
Technologies and Novel & Sustainable Food

"The view expressed in this presentation is
the sole responsibility of the Programme
Manager and does not necessarily reflect
the views of the European Commission"





- EIC Programmes
- TRL
- Proactive management
- 2021 statistics
- Pathfinder challenge proposal 'Precision nutrition'
- Accelerator challenge proposal 'New technologies for resilient agriculture'
- Topics of special interest of MS to be considered for future challenges
- Possible outreach events



Pathfinder

- Early stage research on breakthrough technologies (TRL 1-4)
- Grants up to 3 to 4 million EUR

Transition

- Technology maturation from proof of concept to validation (TRL 3-6)
- Grants up to 2.5 million EUR

Accelerator

- Development & scale up of deep-tech/disruptive innovations by startups/SMEs (TRL 6-9)
- Blended finance (grants up to 2.5 million EUR; equity investment up to 15 million EUR)

European Innovation Council (EIC)

TRL levels & EIC programmes

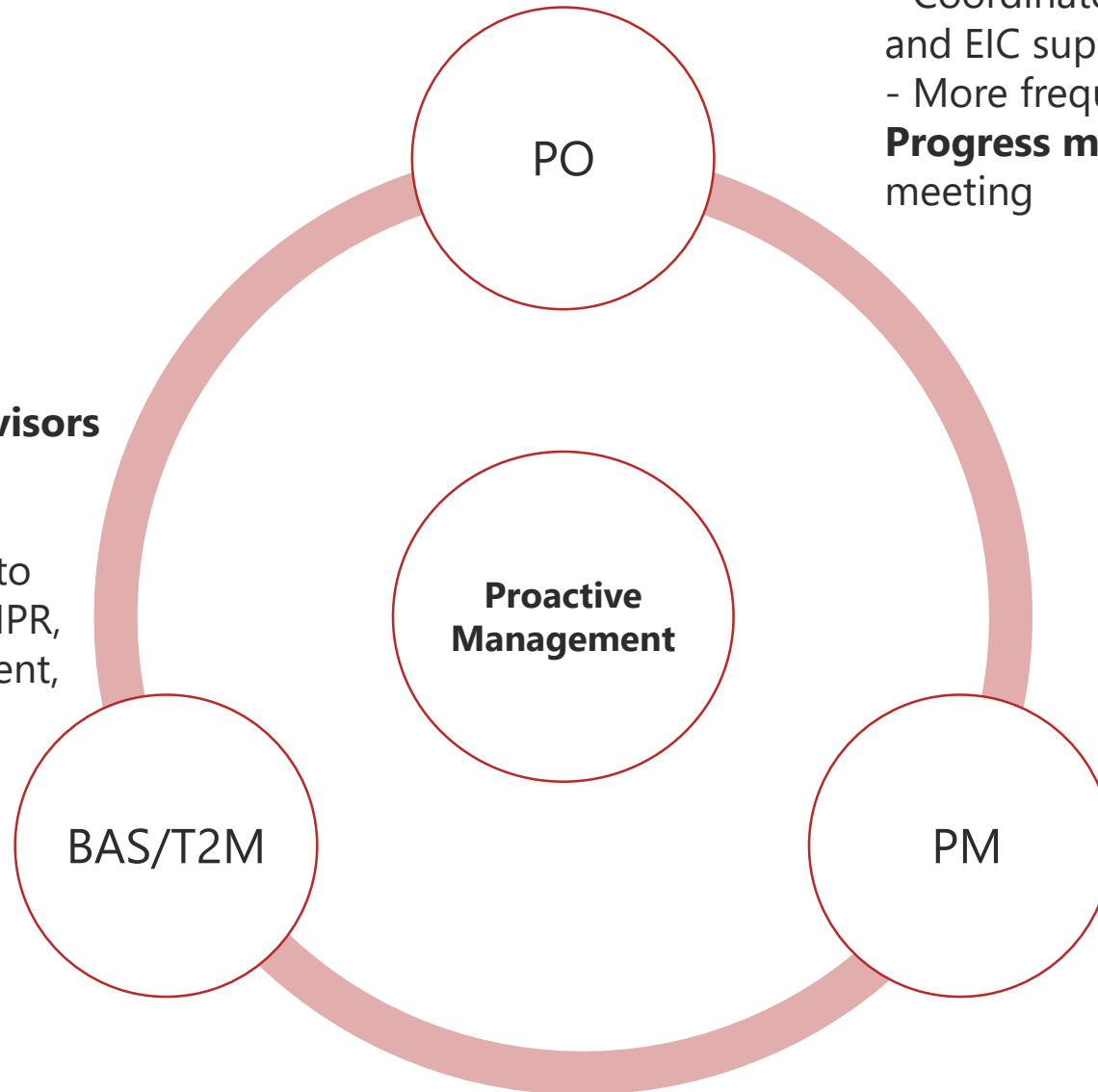
- TRL1 - basic principles observed
- TRL2 - technology concept formulated
- TRL3 - experimental proof of concept
- TRL4 - technology validated in lab
- TRL5 - technology validated in relevant environment
- TRL6 - technology demonstrated in relevant environment
- TRL7 - system prototype demonstration in operational environment
- TRL8 - system complete and qualified
- TRL9 - actual system proven in operational environment

Proactive Management Support



EIC Project Officers

- Main contact person
- Effectively guide the project
- Coordinate project monitoring and EIC support activities
- More frequent communication > **Progress meetings**, Review meeting



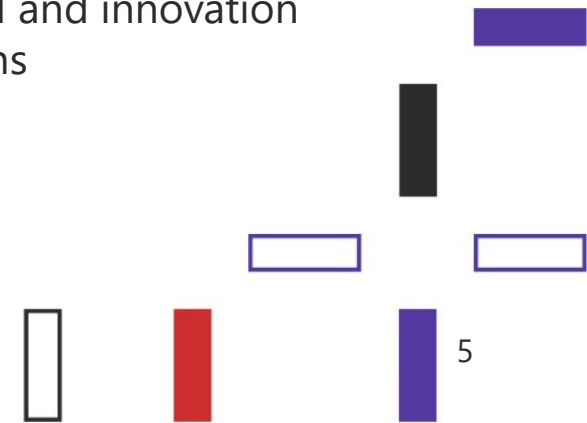
EIC Tech-to-Market advisors and BAS team

additional support on **Transition plan** and go to market aspects such as IPR, business plan development, Early stage funding

EIC Programme Managers

Experts bringing deep thematic expertise from years in the field. They:

- foster a proactive management culture towards Go to Market.
- nurture portfolios of projects for technological and innovation breakthroughs





EIC Programme Managers (EIC PMs): key roles



Oversees a thematic sector working both on science/innovation contents and on community building



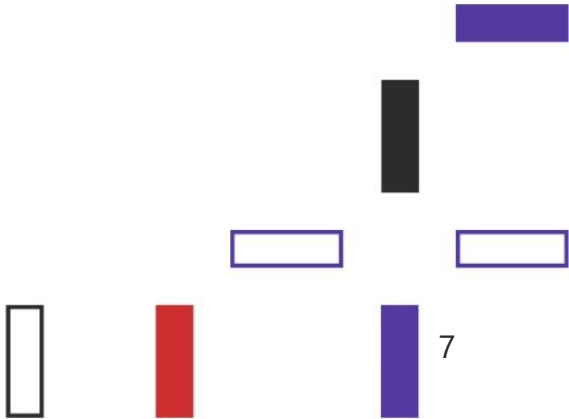
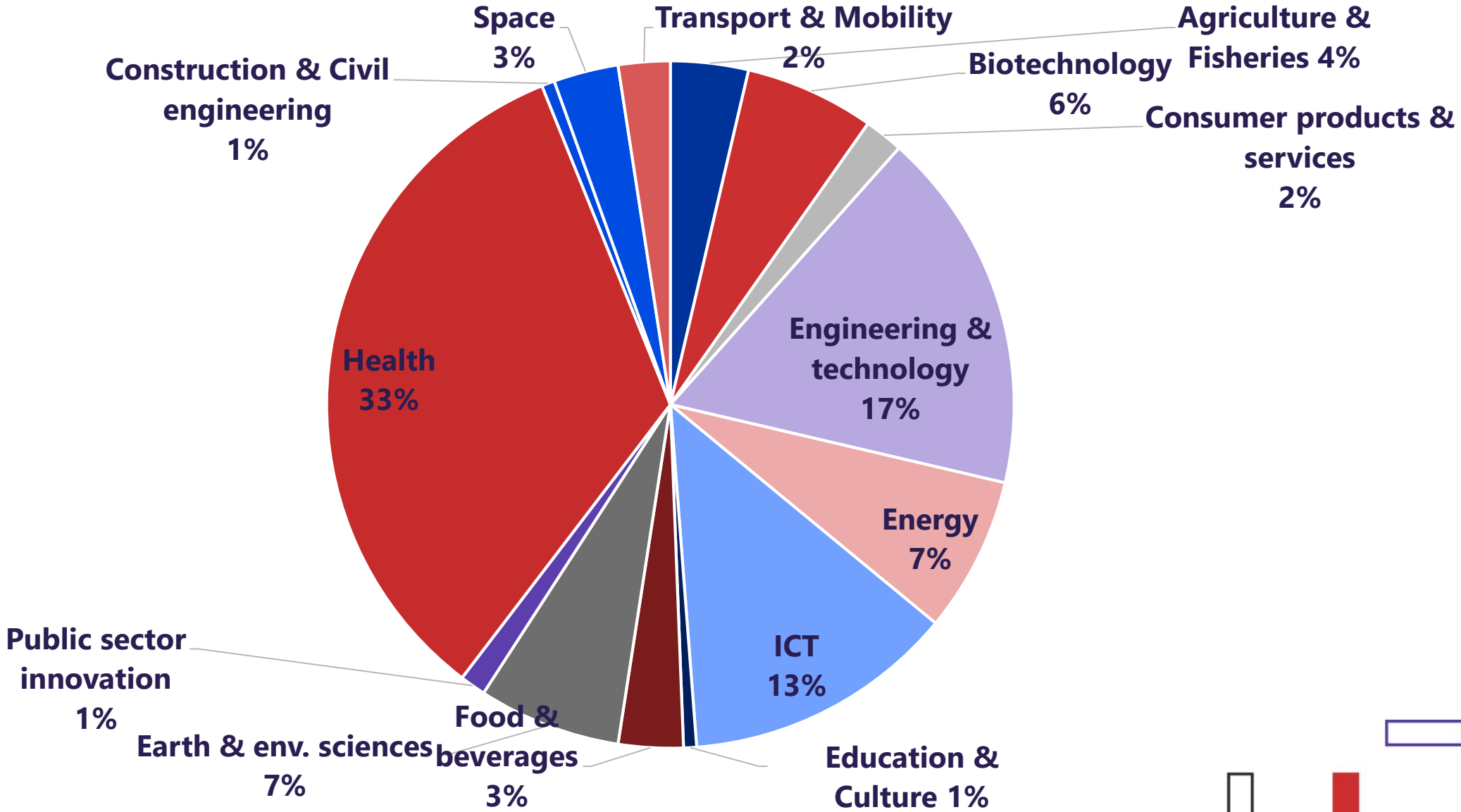
Identifies S/T critical thematic areas, pre-select topics within these areas and validates the topics for the purpose of **developing Challenge Calls**



Content-wise management of sector-specific portfolios (cluster of projects with shared perspectives) created on the basis of the ongoing projects or as outcome of the Open and Challenge Calls



EIC Accelerator 2021



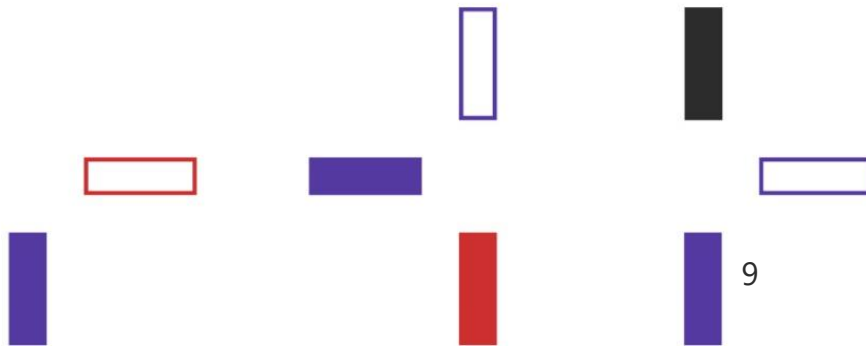
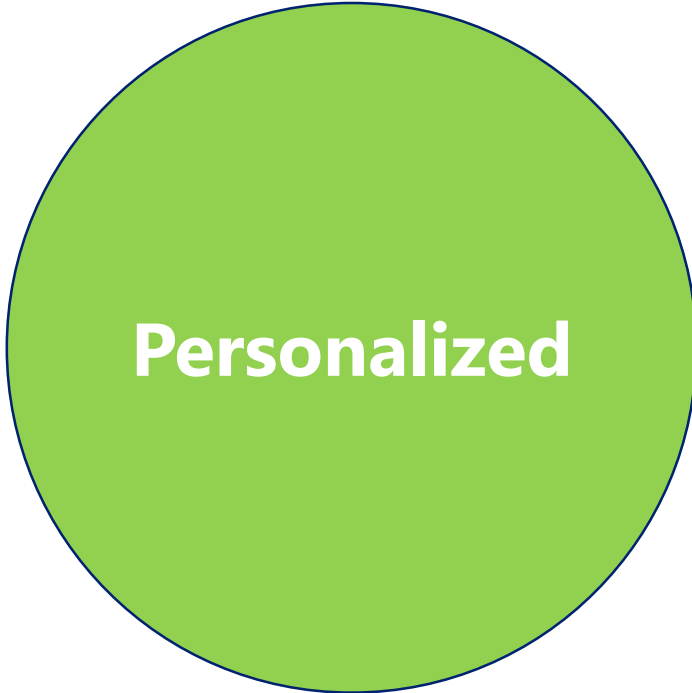
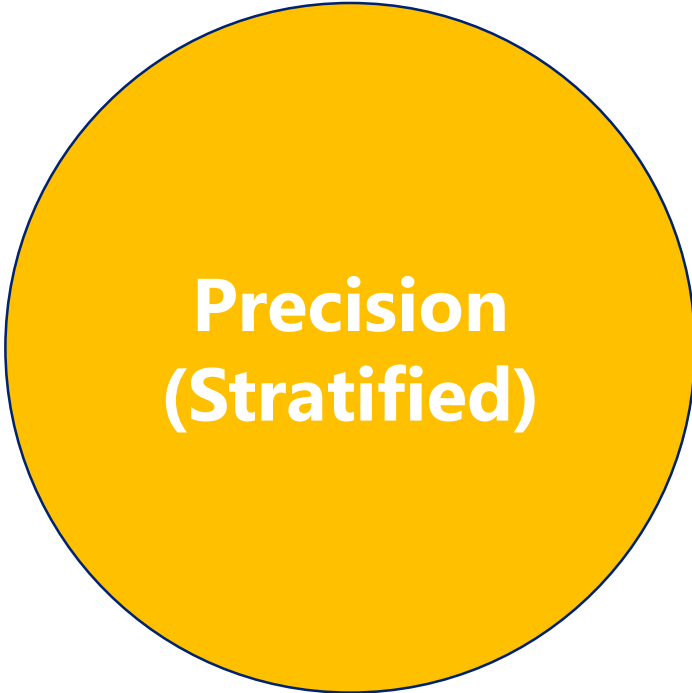
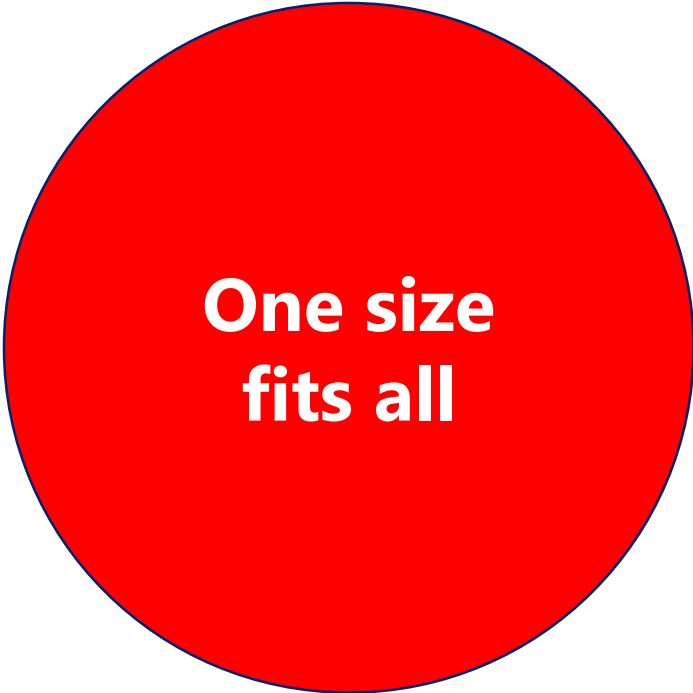


PRECISION NUTRITION

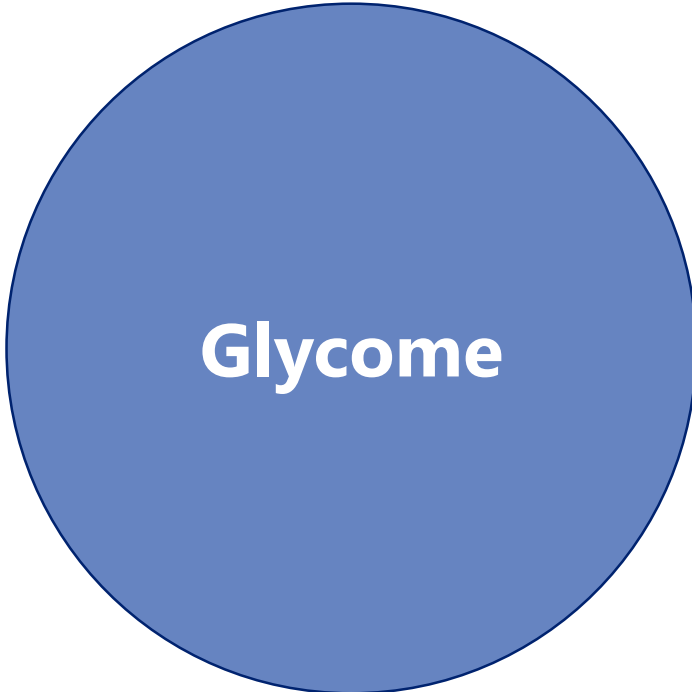
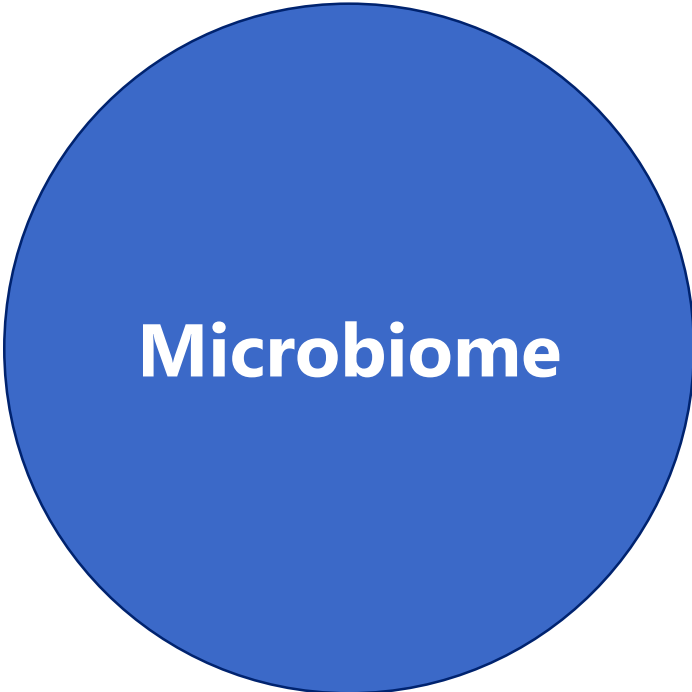
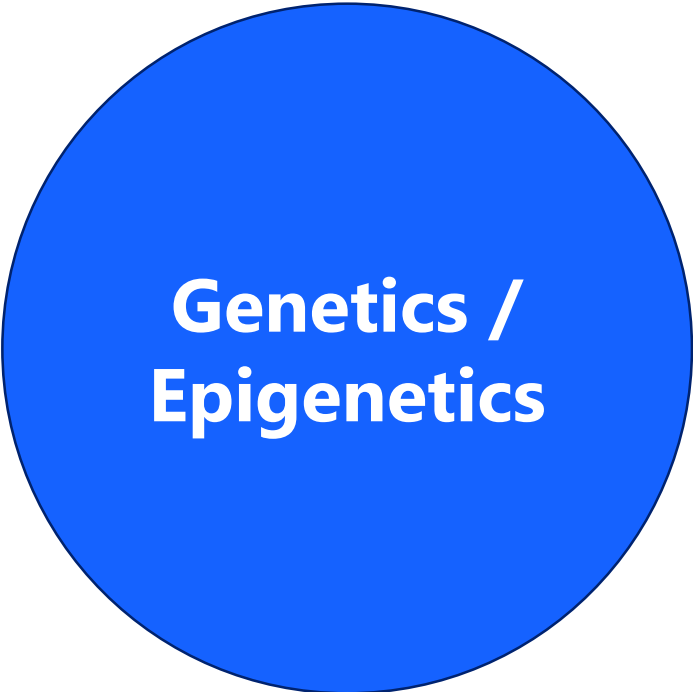
- Goal: The goal of this Challenge is to investigate the role of diet in obesity and NCDs, to provide scientific evidence for alleviating the consequences of obesity and NCDs on health and wellbeing and to pave the way towards the design of novel foods, tailored to individual dietary needs
- Allocated budget: 33,5 M

Note: Topic still under discussion with Member States

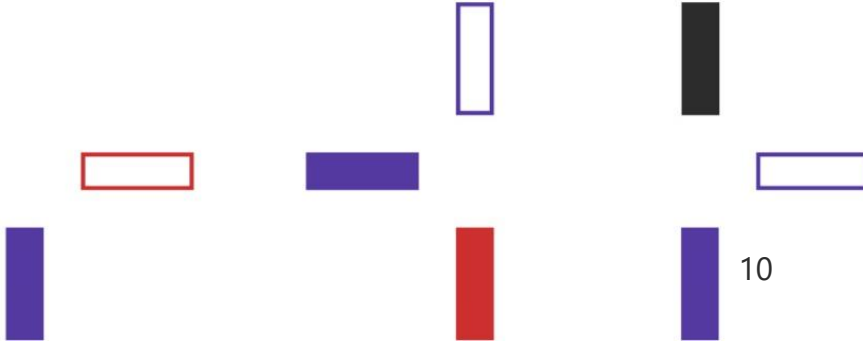
Precision nutrition

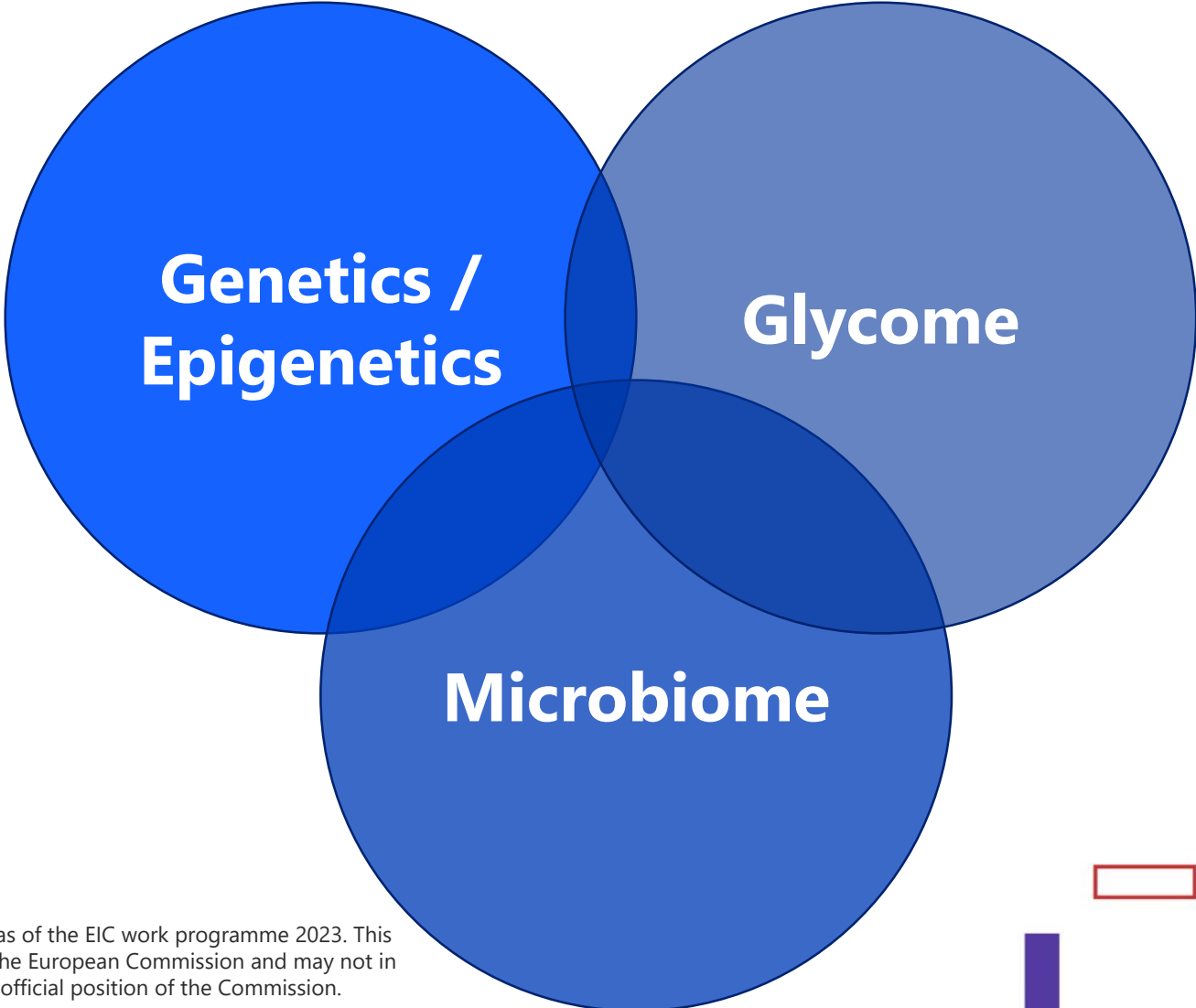


Precision nutrition

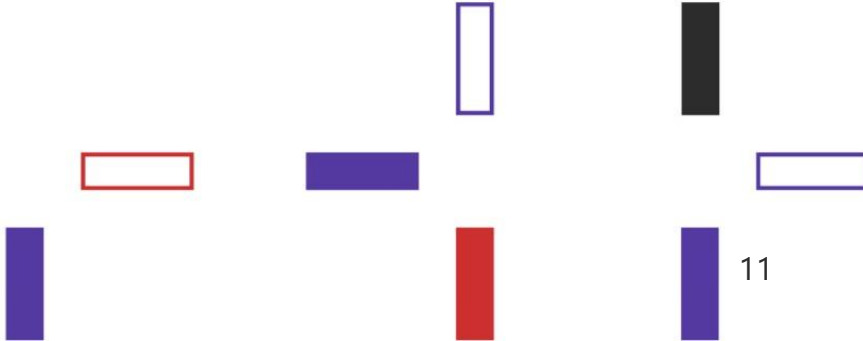


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Why?

- Almost 2 billion people globally are overweight or obese.
- NCDs are significant cause of death and decreased quality of life.
- One diet plan fits all definitely isn't working.
- Personalized nutrition is very expensive.
- Precision nutrition is a feasible solution that can improve well being of individuals while reducing aggregate costs.

Accelerator Challenge Proposal 2.6



NEW TECHNOLOGIES FOR RESILIENT AGRICULTURE

- Goal: The goal of this Challenge is to develop solutions contributing to the development of an agricultural and food production system resilient to environmental and social disruptions. To achieve progress in this area a new generation of technologies, equipment and materials is needed, based on principles of regenerative agriculture and supported by Industry 4.0 technologies and in line with principles of Industry 5.0.
- Allocated budget: 65M

Note: Topic still under discussion with Member States

Problems in Food Chain Technologies and Novel & Sustainable Food

GHG REDUCING TECHNOLOGIES (carbon sinks included)	DIGITALIZING AGRICULTURE (precision agriculture included)	NOVEL FOODS	
IMPROVED PLANT VARIETIES	FOOD PROCESSING & PACKAGING	URBAN AGRICULTURE & VERTICAL FARMING	
FOOD STORAGE & LOGISTICS	NUTRITION, LABELLING, TRACEABILITY	FOOD WASTE	
FERTILIZATION	IRRIGATION & WATER MANAGEMENT	SOIL HEALTH & MANAGEMENT	
CROP PROTECTION	IMPROVEMENTS IN ANIMAL HUSBANDRY	MACHINERY & EQUIPMENT	
OTHER IMPROVEMENTS IN CORE AGRICULTURAL TECHNOLOGIES (regenerative agriculture included)		PRECISION FERMENTATION (EDIBLE & NON-EDIBLE)	
FORESTRY	BIOFUELS	SOCIAL SCIENCES	OTHER

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Classification of Accelerator projects in Agrifood sector

GHG REDUCING TECHNOLOGIES (incl. carbon syncs) A x 2	MACHINERY & EQUIPMENT A x 4	DIGITALIZING AGRICULTURE (incl. precision agriculture) A x 3	NOVEL FOODS A x 4	FOOD PROCESSING & PACKAGING A x 20
IMPROVED PLANT VARIETIES P x 2 T x 1 A x 0	CROP PROTECTION A x 4	SOIL HEALTH & MANAGEMENT A x 0	NUTRITION, LABELLING, TRACEABILITY A x 3	QUALITY OF FOOD & BEVERAGES A x 10
FOOD STORAGE & LOGISTICS A x 3	IRRIGATION & WATER MANAGEMENT A x 6	FERTILIZATION A x 4	URBAN AGRICULTURE & VERTICAL FARMING A x 1	FOOD WASTE A x 2
IMPROVEMENTS IN ANIMAL HUSBANDRY A x 8	AQUACULTURE (plants & animals) A x 1	OTHER IMPROVEMENTS IN CORE AGRICULTURAL TECHNOLOGIES A x 8	PRECISION FERMENTATION (EDIBLE & NON-EDIBLE) A x 1	OTHER A x 1

**New
Technologies for
Resilient
Agriculture**



Suffolk, UK, 2015

rdian.com/environment/2015/dec/02/arable-land-soil-food-security-shortage

In the **United States**, **wind erosion** is the dominant problem on about 30 million hectares (73.6 million acres) and moderately to severely damages approximately 2 million hectares (4.9 million acres) annually (USDA, 1965). 2. ruj 2012.







Possible challenge portfolio in Agrifood sector

Top Farm Management Software

Agrivi, Granular, Trimble, FarmERP, FarmLogs, Agworld, AgriWebb, Conservisare some of the Top Farm Management Software. Source: <https://www.predictiveanalyticstoday.com/top-farm-management-software/>

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System integration

Central platform for farm agronomy and business operations



GIS/GPS



AI

Blockchain

Cloud computing



Robotics

Autonomous systems



Cyber security

Innovative equipment

Biological pest control



AI

Soil cover



Crop rotation/association

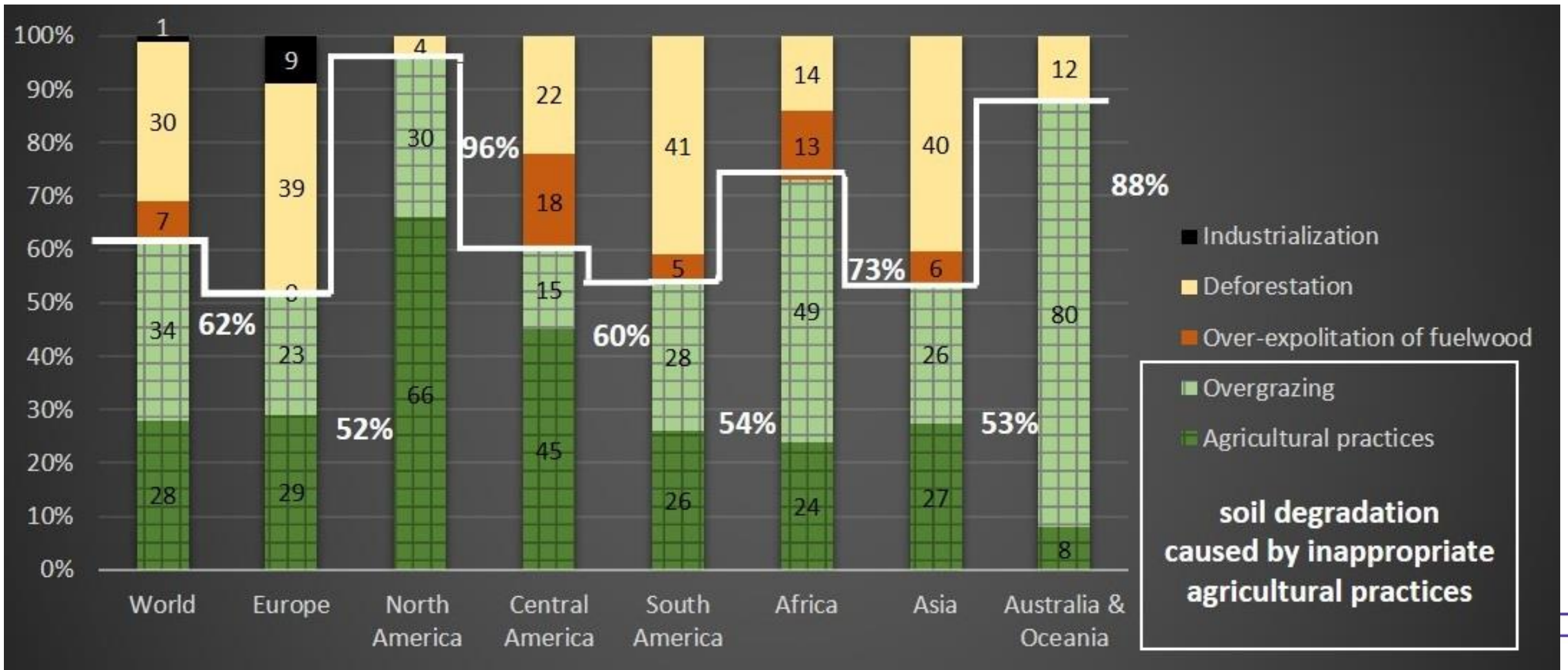
IoT

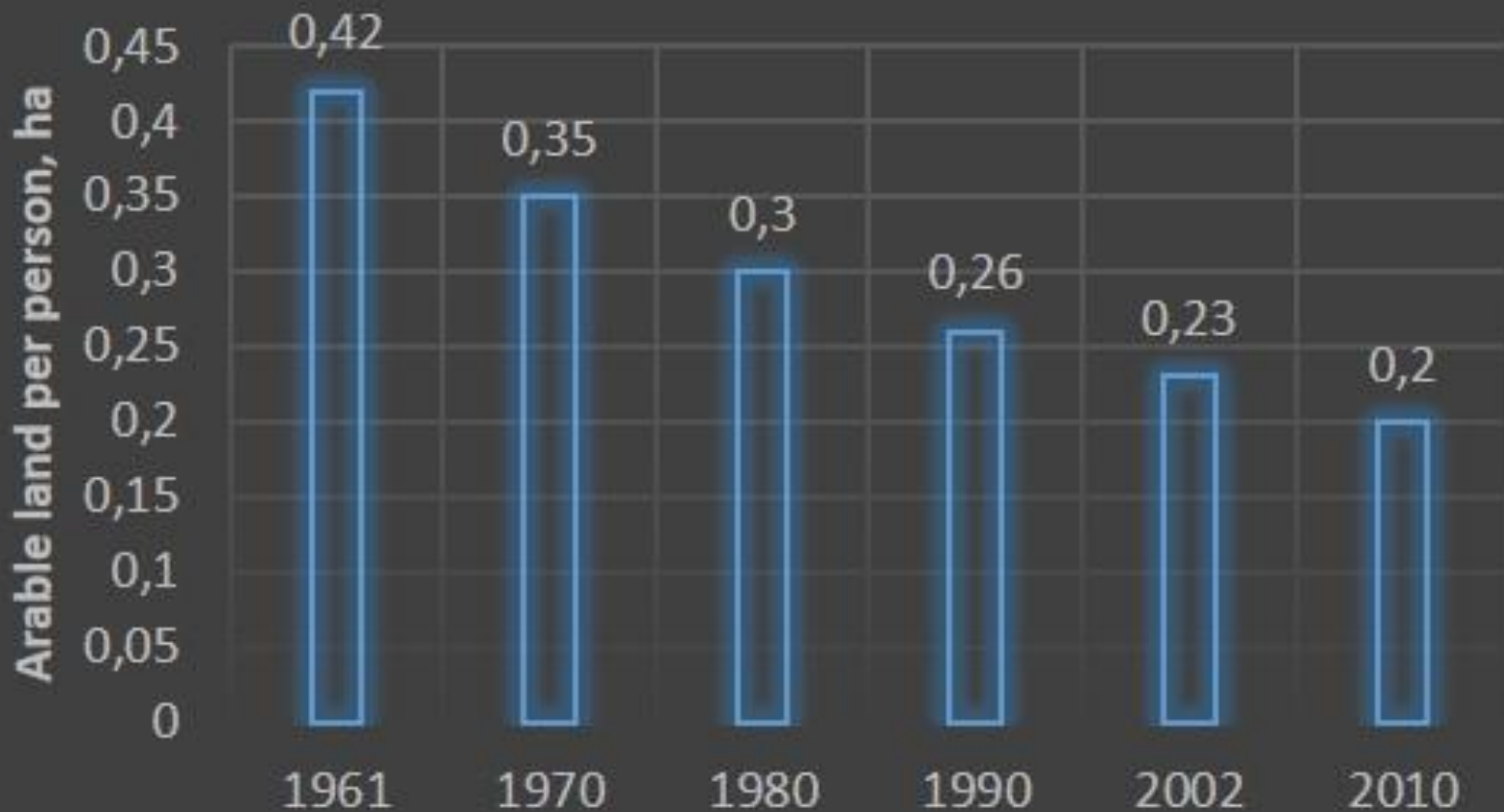
Minimum soil disturbance

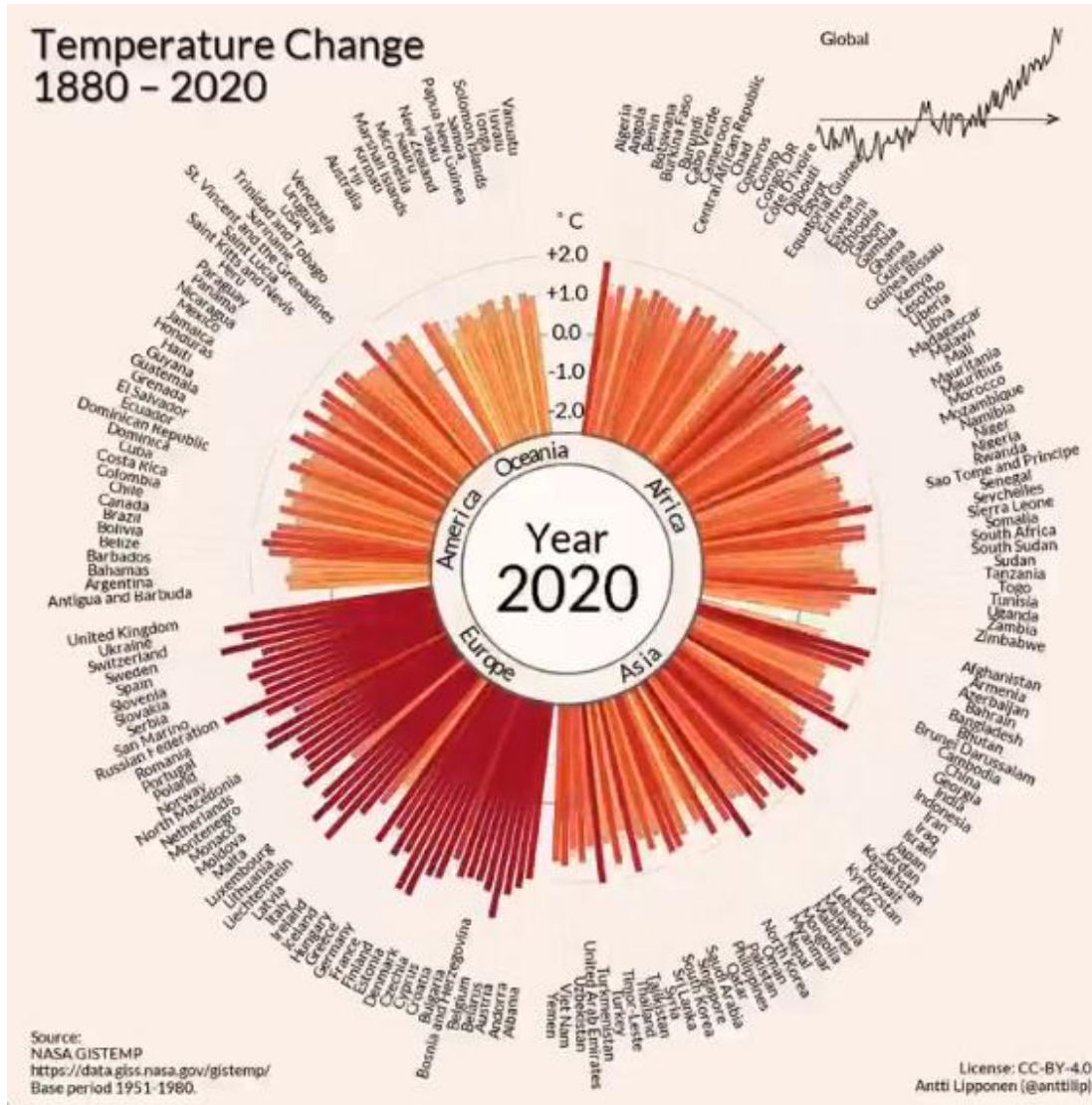


Innovations in core agricultural technologies

Digitalization of agriculture







Plants most likely don't know or care about humans, their economy, and the rootcause of global warming.

They simply have to adapt.

If we fail in complying with 1,5°C agenda we still need viable food production system.

Earth's orbital cycles could cause further global warming we need that viable food production system even more!

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What about ?

- Water scarcity including harsh and long term droughts
- Damaged ozone layer
- Wuthering winds, floods and flesh floods, tsunamis, rise of ocean level
- Stratospheric aerosol including volcanic ash and ash from other sources
- Pesticide residues and nitrates in soil and water
- Pests' invasions such as like locust swarms
- Biodiversity & extinction
- Distances your food travell to get to your table?
- Earth's orbital cycles
- ...





Challenge Proposals 2023 are defined

- using holistic approach,
 - using life-cycle approach,
 - to foster the EU technological autonomy and leadership,
 - with an account of EU strategic plans and relevant initiatives.
- Accelerator proposal aims to improve the resilience and security of the European food supply chain.
 - Both proposals already passed through the first round of discussions with DGs and MS.



- Questions and comments on presented proposals.
- Topics of special interest of MS to be considered for future challenges.



Thank you!

@EUeic

#Eueic

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