Workshop on Agrifood with Member States representatives

On 23rd 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
Challenge proposals in the Agrifood sector

Ivan Stefanić
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"
Agenda

- 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 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 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

PO
Proactive Management
PM
BAS/T2M
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

- Health: 33%
- Engineering & technology: 17%
- ICT: 13%
- Energy: 7%
- Transport & Mobility: 2%
- Agriculture & Fisheries: 4%
- Consumer products & services: 2%
- Education & Culture: 1%
- Food & beverages: 3%
- Earth & env. sciences: 7%
- Construction & Civil engineering: 1%
- Biotechnology: 6%
- Public sector innovation: 1%

Categories: Agriculture & Fisheries (4%), Biotechnology (6%), Consumer products & services (2%), Construction & Civil engineering (1%), Education & Culture (1%), Energy (7%), Engineering & technology (17%), Food & beverages (3%), Earth & env. sciences (7%), Health (33%), ICT (13%), Public sector innovation (1%), Space (3%), Transport & Mobility (2%).
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

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Precision nutrition

One size fits all

Precision (Stratified)

Personalized

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Precision nutrition

Genetics / Epigenetics

Microbiome

Glycome

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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.

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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

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## Classification of Accelerator projects in Agrifood sector

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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

Central platform for farm agronomy and business operations

Digitalization of agriculture

Digitalization of agriculture

System integration

Cloud computing

Blockchain

GIS/GPS

Robotics

Autonomous systems

Innovative equipment

Biological pest control

Soil cover

Crop rotation/association

Minimum soil disturbance

Innovations in core agricultural technologies

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Plants most likely don’t know or care about humans, their economy, and the root cause 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!**
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
- ...

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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.
Discussion

• Questions and comments on presented proposals.
• Topics of special interest of MS to be considered for future challenges.
Thank you!

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