



# Backing visionary entrepreneurs

EIC Accelerator Challenge: Novel technologies for  
resilient agriculture - Information day

Ivan Stefanic

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



# Agenda

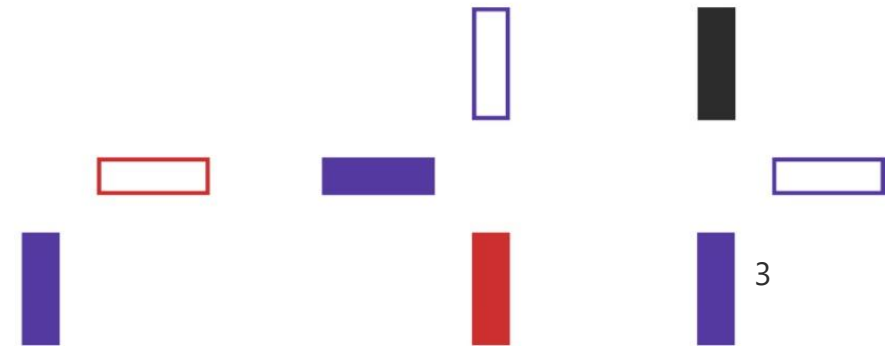


<b>14:00</b> 10 min	<b>Opening, EIC proactive management</b>	<b>Anne-Marie Sassen (EIC/EISMEA)</b>
<b>14:10</b> 25 min	<b>'Novel technologies for resilient agriculture' challenge</b>	<b>Ivan Stefanic, (EIC/EISMEA)</b>
<b>14:35</b> 35 min	<b>Q &amp; A session about the challenge and technical details of the challenge</b>	<b>Ivan Stefanic, Konstantinos Michos &amp; Anne-Marie Sassen (EIC/EISMEA)</b> <b>All participants via Sli.do</b>
<b>15:10</b> 15 min	<b>Experience of an EIC beneficiary</b>	<b>Matija Zulj, (EIC Ambassador)</b>
<b>15:25</b> 5 min	<b>Closing remarks</b>	<b>Anne-Marie Sassen &amp; Ivan Stefanic</b>
<b>15:30</b>	<b>End of the session</b>	

# The goal of the info day



- Is to help you to align your proposal with the parameters of this challenge call.
- Is to provide all relevant information, clarify doubts and prevent you from making unnecessary mistakes.
- Is not to provide you the feedback of appropriateness of your individual proposal to this challenge call.



# Housekeeping rules

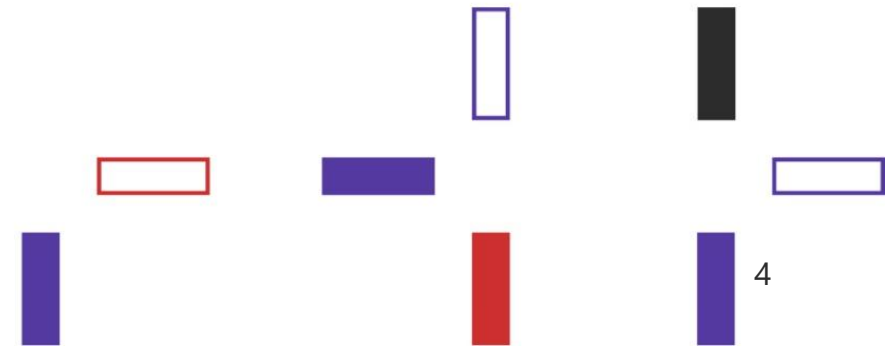


- Please note that **your camera and microphone are switched off** by default
- Be aware that **this meeting is recorded**. However, we will not record the pitching session. **Recording and slides** of the event will be available on the **event page**
- Join the discussion and **ask your questions via Sli.do**
- Please submit **your question as Anonymous** in Sli.do if you do not want your name to appear in the recording.

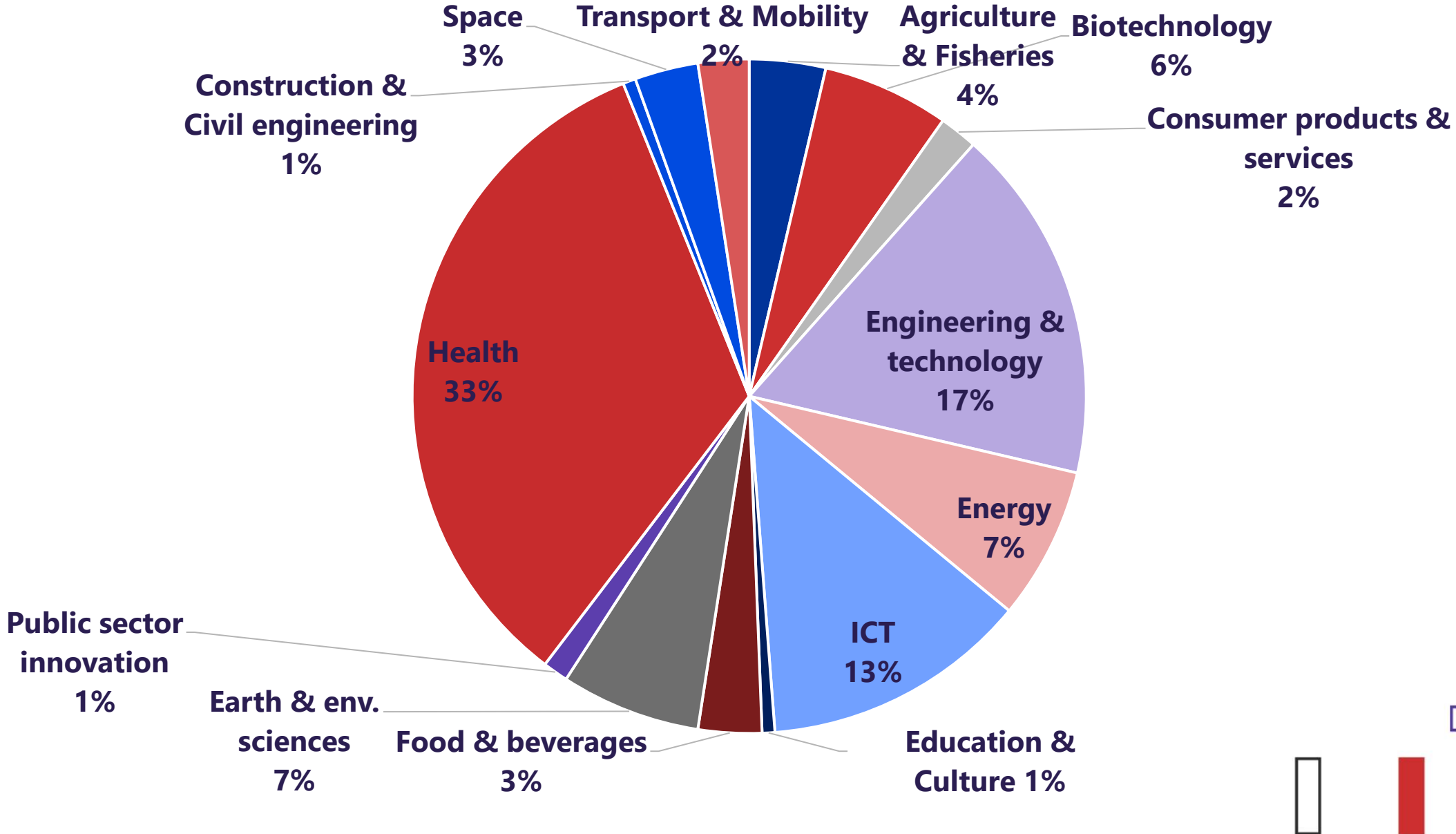


Join at **Sli.do**

With the event code  
**#Challenges**

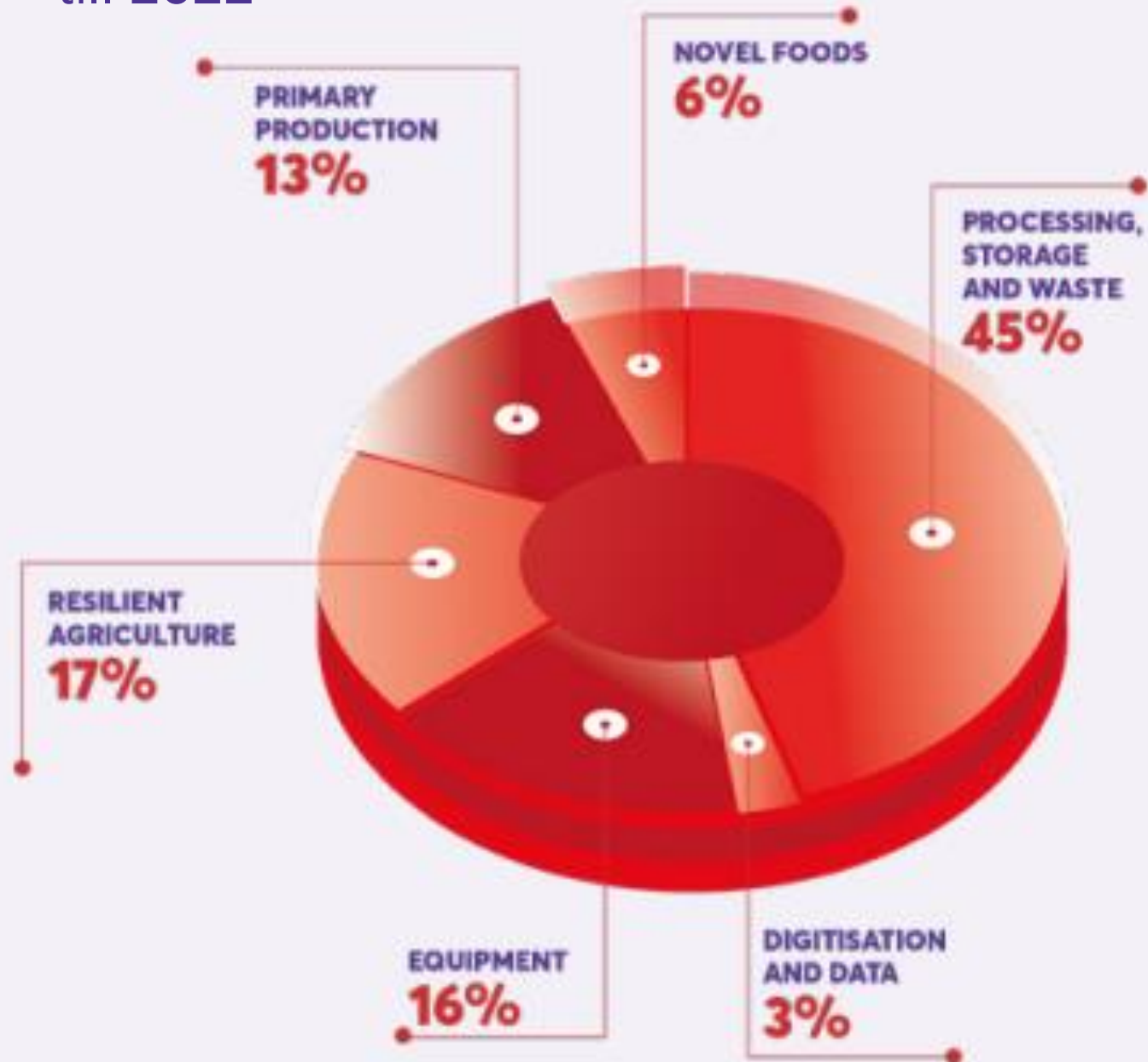


# EIC Accelerator 2021



# AGRIFOOD PORTFOLIO

till 2022



# Problems/opportunities in Agrifood sector

Innovations in Agrifood core technologies					KET TECHNOLOGIES and Industry 4.0		Novel foods	Eathing habits change	Resource management
Zero-emissions machinery and equipment	Improved fuel efficiency of fishing vehicles	GHG-focused breeding and genetic selection	Improved fertilization of rice	Anaerobic manure digestion	Virtual/Augmented reality	Internet of things (IoT)	Lab grown meats	Less (animal) protein	Urban Agriculture
Variable rate fertilization	Improved rice paddy water management	Livestock nutrient use Efficiency	N-inhibitors on pasture	Technologies increasing livestock production efficiencies	Advanced robotics	RFID technologies	Plant-based structured proteins	Less highly refined and processed food	Photovoltaics Alternative fuels including Hydrogen
Reduced N overapplicat ion in China and India	Improved rice straw Management	Optimal rice varietal selection	Improved fertilization timing	Animal feed mix optimization	Cloud computing	AI and Blockchain technologies	Hydroponics Aeroponics	Less sugar and sweeteners	GIS/GPS
Dry direct seeding	Improved animal health monitoring and illness prevention	Nitrogen-fixing rotations	Controlled-release and stabilized fertilizers	Conversion from flood to drip sprinkler irrigation	Big data/ Analytics	Mobile technologies	Insects & Algae	Functional food	Population growth
Low- or no-tillage	Feed-grain processing for improved digestibility	Improved equipment maintenance	Animal feed additives	Specialty crop nutrition amendments	Aditive manufacturing Food printing	Cognitive computing	Saprophytes Yeasts Enzymes	'Superfoods'	<b>Out of box solutions</b>

Source: Stefanic I. Climate-friendly farming practices for Transition Towards Sustainable Agriculture, LEAP Summit Zagreb, 14<sup>th</sup> May 2021,

# Projects in Agrifood sector till 2022

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

**Challenge calls**





# Projects in Agrifood sector

**A7**  
**Novel Technologies for Resilient Agriculture**

GHG REDUCING TECHNOLOGIES (incl. carbon syncs )

MACHINERY & EQUIPMENT

DIGITALIZING AGRICULTURE (incl. precision agriculture)

NOVEL FOODS

FOOD PROCESSING & PACKAGING

IMPROVED PLANT VARIETIES

CROP PROTECTION

SOIL HEALTH & MANAGEMENT

NUTRITION, LABELLING, TRACEABILITY

QUALITY OF FOOD & BEVERAGES

FOOD STORAGE & LOGISTICS

IRRIGATION & WATER MANAGEMENT

FERTILIZATION

URBAN AGRICULTURE & VERTICAL FARMING

FOOD WASTE

IMPROVEMENTS IN ANIMAL HUSBANDRY

AQUACULTURE (plants & animals)

OTHER IMPROVEMENTS IN CORE AGRICULTURAL TECHNOLOGIES

PRECISION FERMENTATION (EDIBLE &NON-EDIBLE)

OTHER

**Open calls**

FORESTRY

BIOFUELS

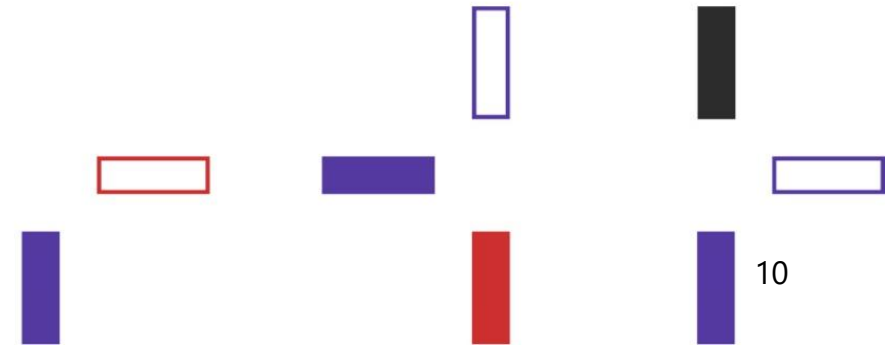
SOCIAL SCIENCES INNOVATIONS

# Novel technologies for resilient agriculture



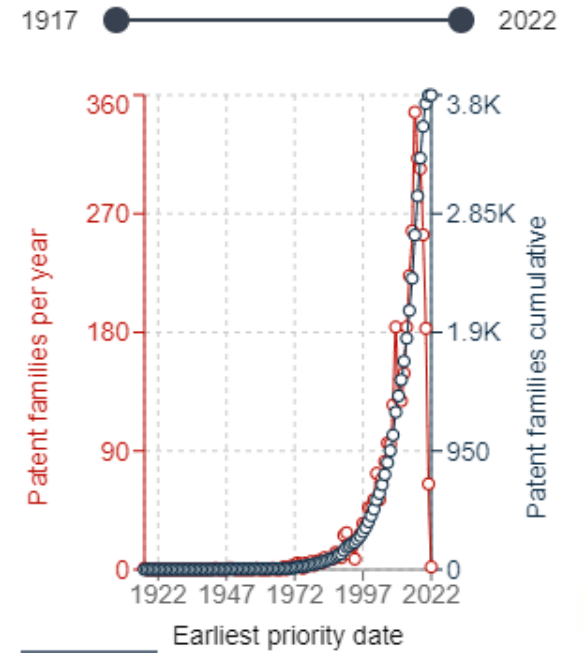
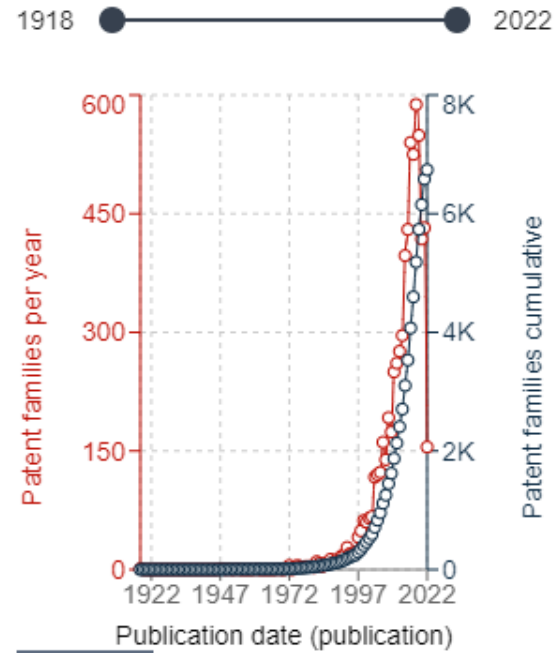
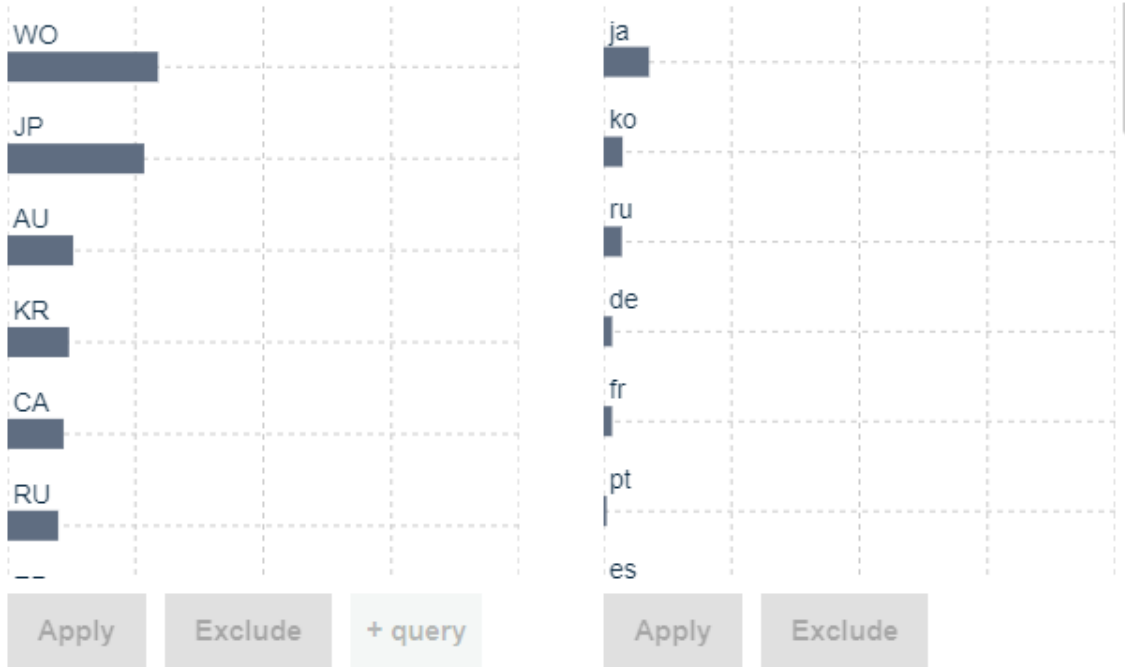
Challenge Proposal is defined

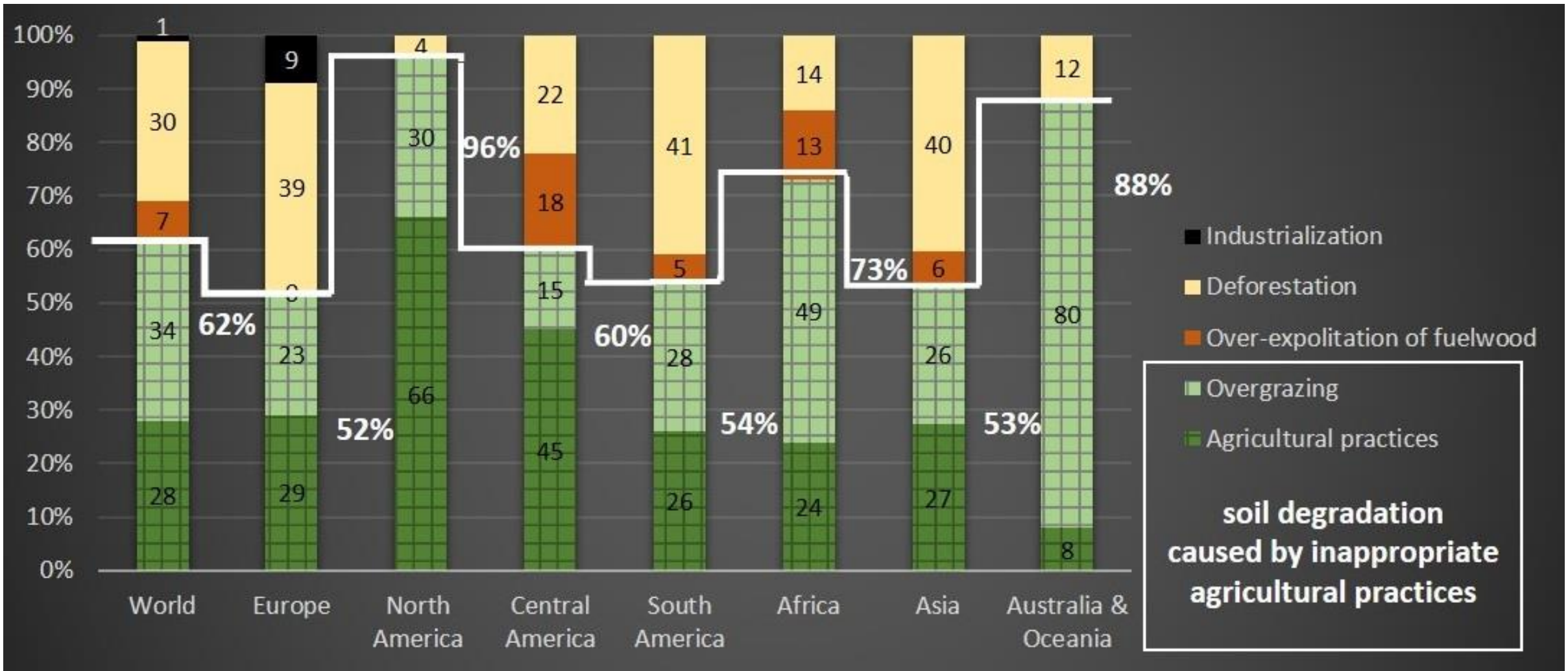
- using holistic approach,
  - using life-cycle approach,
  - to foster the EU technological autonomy and leadership,
  - with an account of EU strategic plans and relevant initiatives.
- Accelerator proposal aims to improve the resilience and security of the European food supply chain.





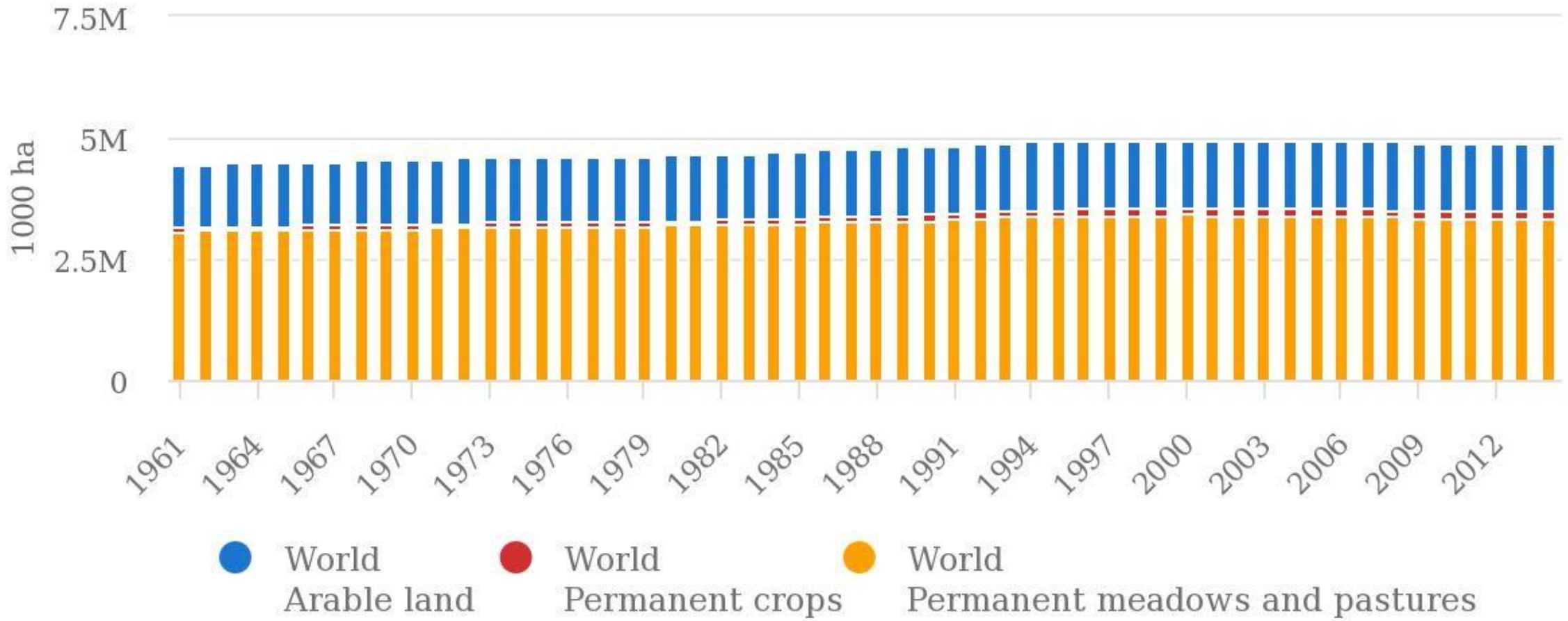
3 800 results found for: nftxt = "regenerative" AND nftxt = "agriculture"



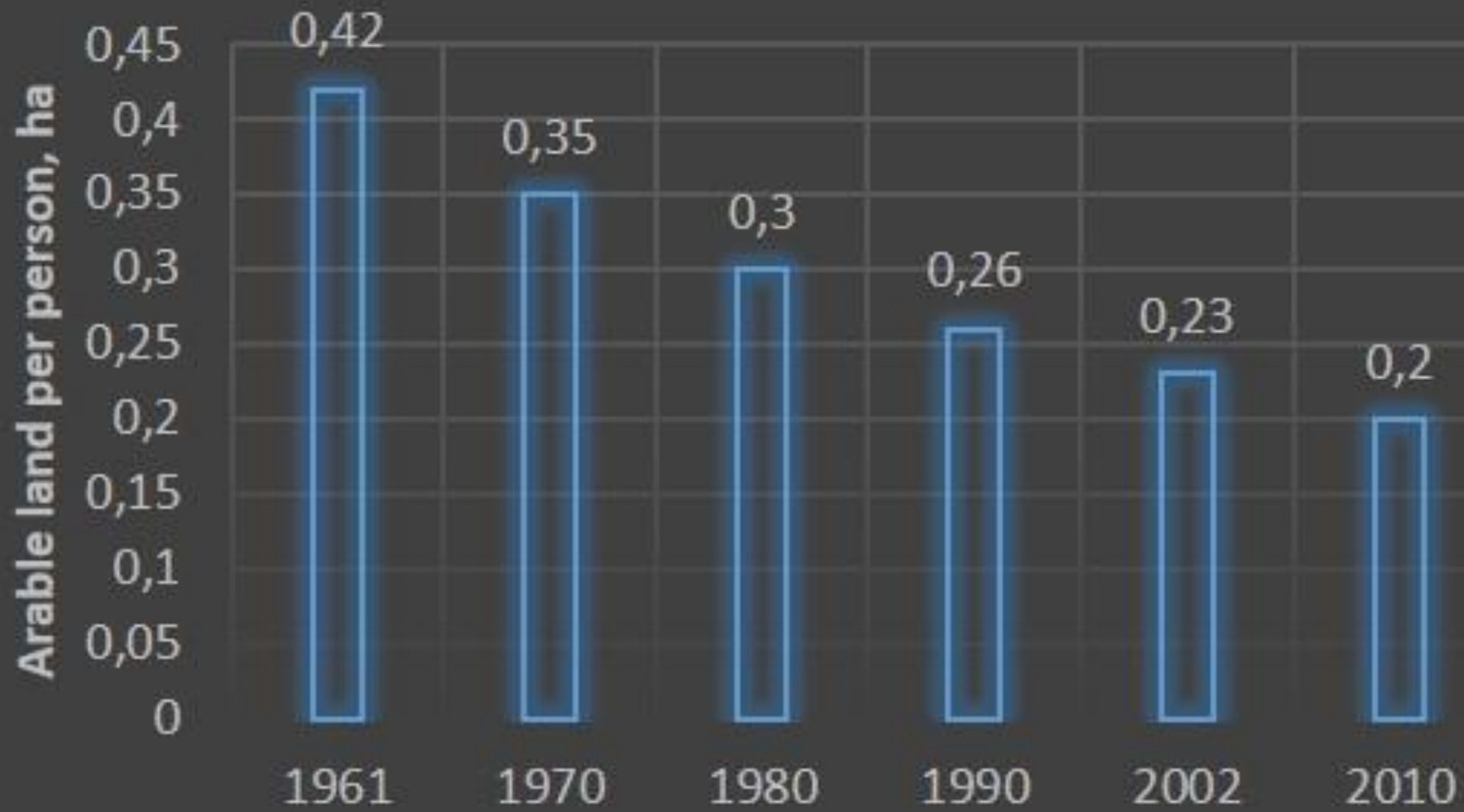


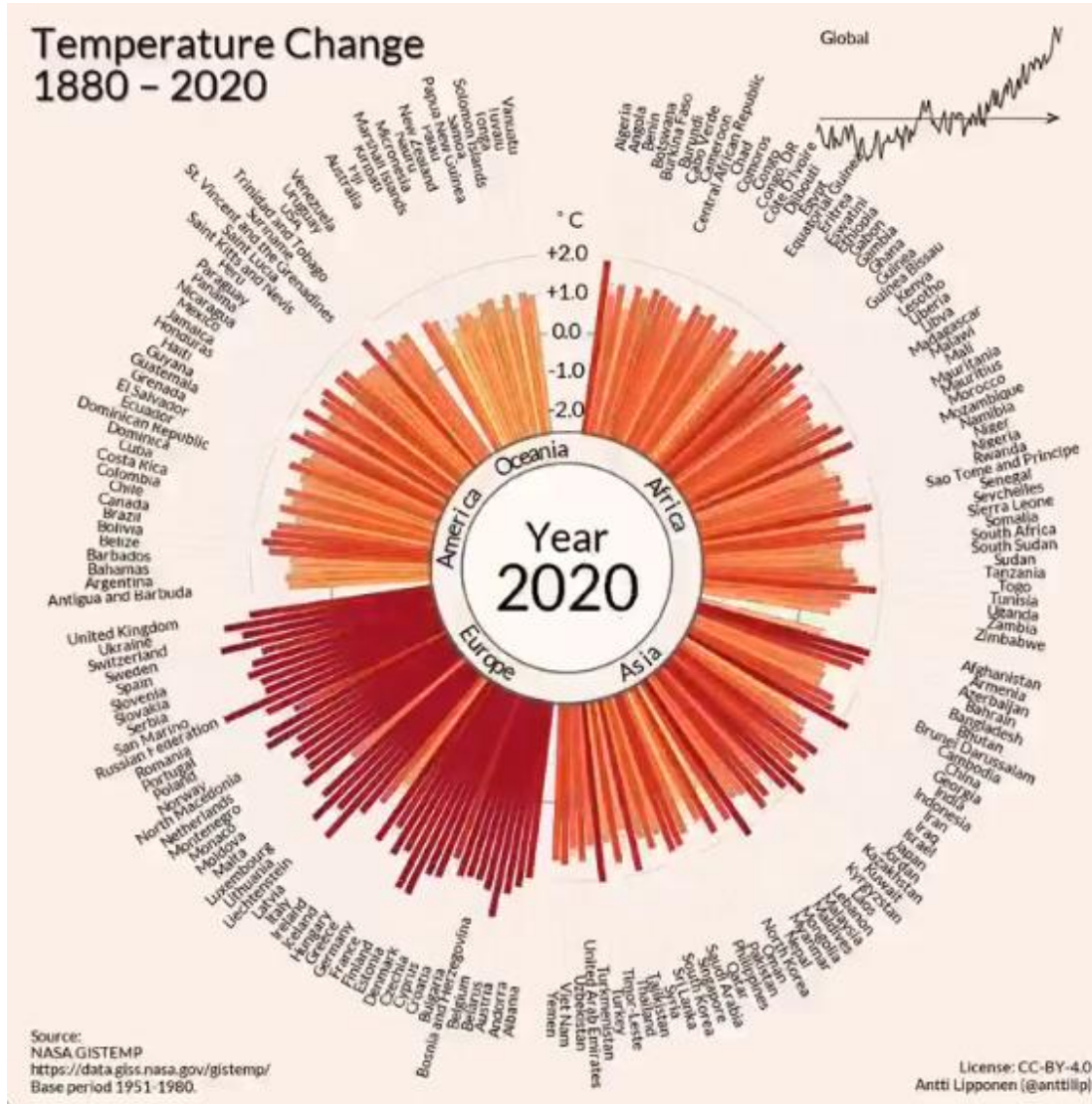
# Composition of agricultural area World + (Total)

1961 - 2014



Source: FAOSTAT (Oct 18, 2017)

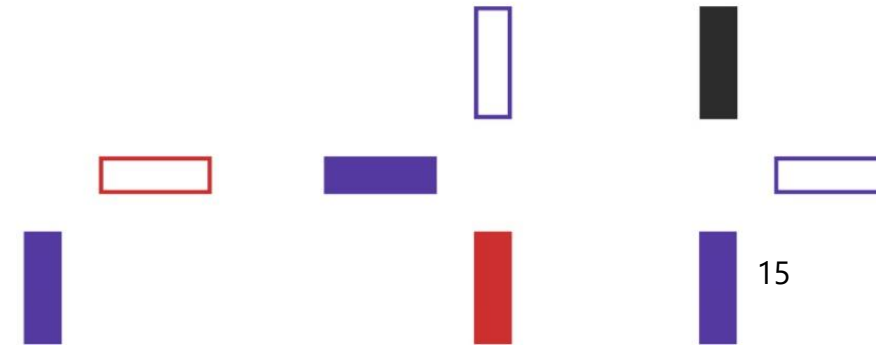




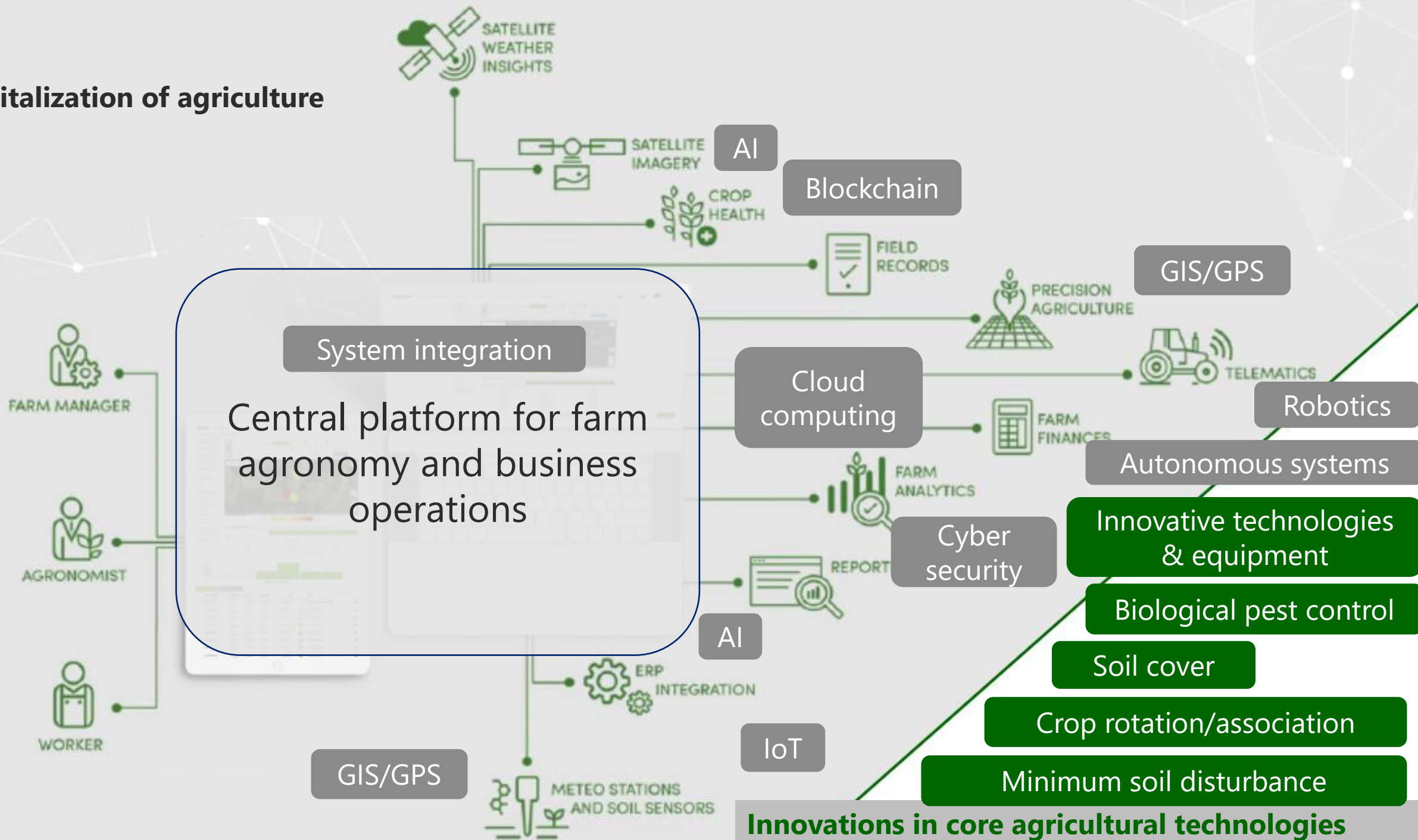
Plants most likely don't know or care about humans, their economy, and the rootcause of global warming.

They simply have to adapt.

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



# Digitalization of agriculture





# Challenge call - Background and scope



- EU food supply chain is considered a reliable source of a large variety of high-quality and safe foods.
- However, the food supply chain can be seriously affected by external factors such as global warming, biodiversity loss, pollution, loss of fertile soils, foreign dependencies and many inappropriate agricultural practices.
- Agriculture and food production are complex systems, which are very sensitive to even small negative perturbations if they appear in rapid succession along the whole value chain (not to mention pandemics and wars). All those factors could have potential consequences on Europe's crops production capacity in 2023.
- At the heart of a resilient agriculture and food systems lies biodiversity, including in the soil microbiota. Microbiomes are essential in mediating and catalysing many processes, they intertwine and sustain several ecological relationships which are key for the **One Health concept** (the link between environmental, animal and human health).

# Challenge call - Background and scope II



- Healthy ecosystem and biodiversity support not only food production, but a wide range of important functions needed for thriving agriculture, in particular pollination, air and water filtering.
- However, unsustainable agricultural practices, through the use of many widely spread and very efficient technologies and equipment for tillage, irrigation, crop protection and fertilisation, have contributed to reduction of this much needed biodiversity, resulting in more polluted and impoverished soils, increasing pressures over environment to avoid reduced crop yields and ultimately in a fragile food supply chain.
- To address this, breakthrough innovations are needed, such as for example new environmentally friendly technologies in fertilisation, innovative crop protection strategies, diversification of crops and varieties in agricultural use and diversification of land use system locally, as well as innovative technologies for tillage and irrigation.

# Challenge call –Key goal



- The key goal of this Challenge is to develop solutions contributing to the development of a sustainable agricultural and food production system resilient to environmental and social disruptions.
- To support:
  - EU Soil Mission,
  - EU Green Deal,
  - Farm to Fork strategy,
  - Fit for 55,
  - One health and
  - REPowerEU policy actions.
- By developing a new generation of technologies, equipment and materials (such as but not limited to soil tillage, crop protection and harvesting machinery and equipment) is needed, based on principles of regenerative agriculture and supported by Industry 4.0 technologies and in line with the core principles of Industry 5.0, humancentricity, sustainability, and resilience.

# The specific objectives of the Challenge



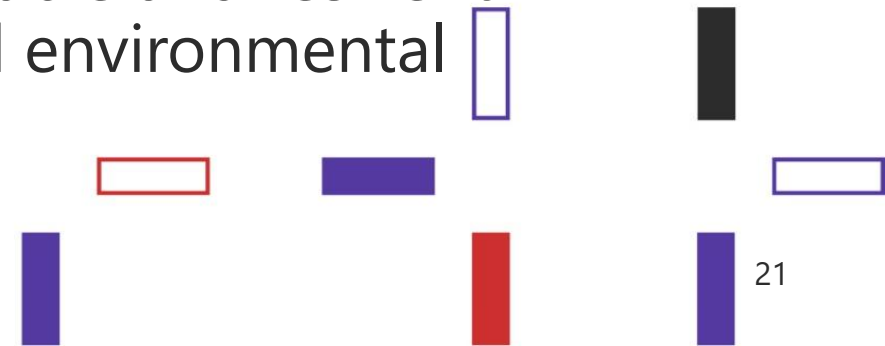
- Development and scaleup of interdisciplinary groundbreaking innovations that will lead to a transformation of the current solutions for regenerative agriculture and soil health in the areas of:
  - Sustainable fertilisation;
  - Crop protection under principles of Integrated Pest Management with a focus on mechanical/physical and biological measures;
  - Irrigation;
  - Soil management, protection and restoration;
  - Crop and livestock management.
- Novel processes, materials, equipment, management practices and microorganisms adapted to harsh environments, climate adaptation needs and resource scarcity including diversification of crops, mixed farming systems, interseasonal cropping and technologies to increase crops adaptation to climate changes



# Expected outcomes and impacts



- This Challenge aims to improve the resilience of the European food supply chain and security, notably by improving agricultural productivity and fostering environmentally sustainable technologies, all while regenerating and increasing soil health and ecosystem services.
- By aiming to valorise crop residues, this Challenge also aims to contribute to better carbon and nitrogen management practices, to mitigation of climate change and environmental challenges including biodiversity loss and pollution. In doing so, the results arising from this
- Challenge will foster the EU technological autonomy and leadership via focused support of innovations in the areas of sustainable and resilient agricultural production, food security, biodiversity and environmental protection.

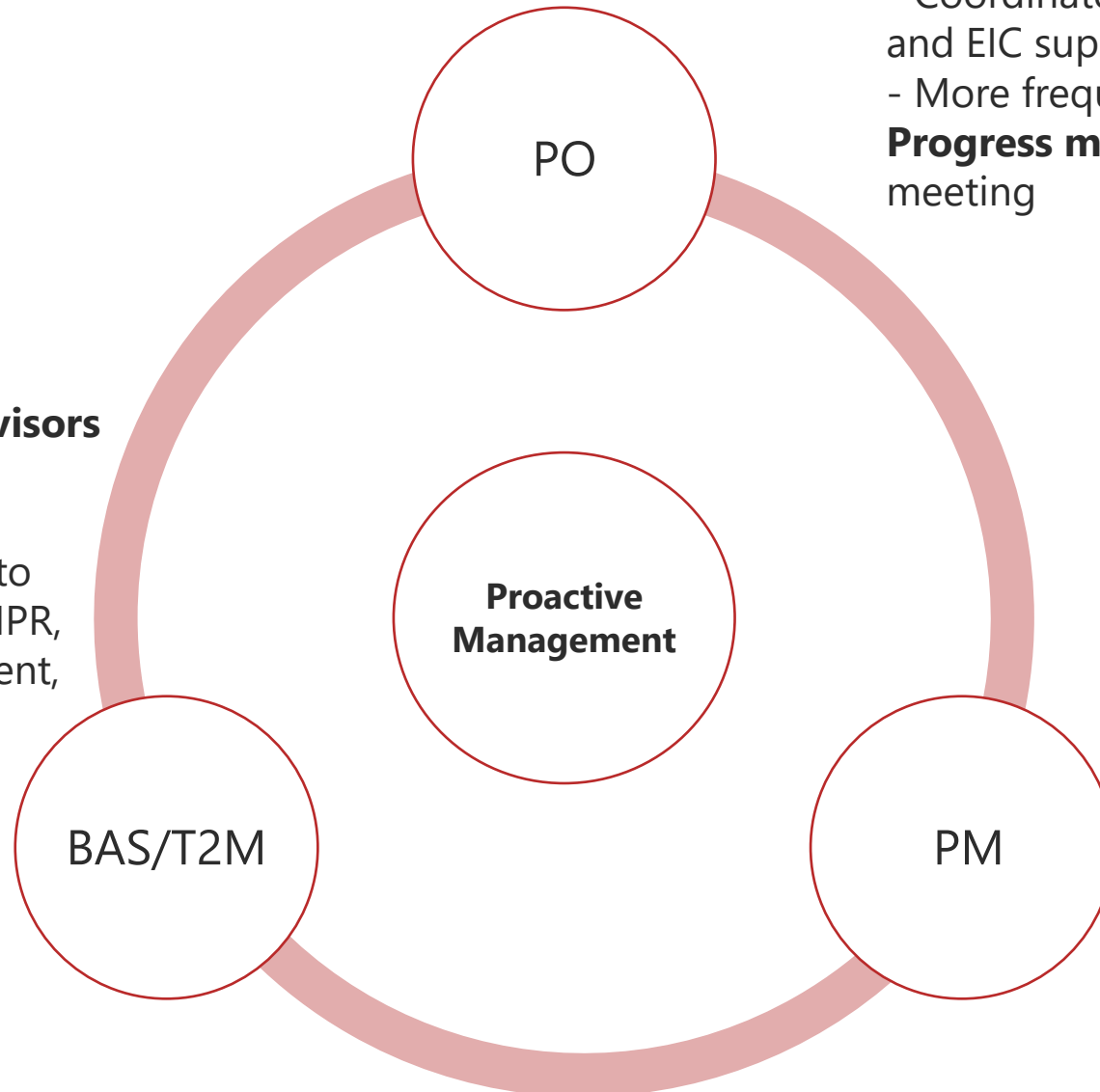


# Proactive Management Support



## EIC Project Officers

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



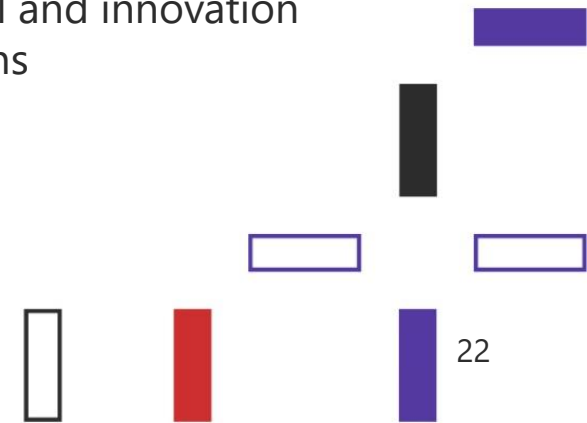
## EIC Tech-to-Market advisors and BAS team

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



Brussels  
7 — 8 December 2022

EUROPEAN  
INNOVATION  
COUNCIL  
SUMMIT 22

BOOSTER  
GRANTS

PATHFINDER

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

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

TRANSITION

- 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)

TECH 2  
MARKET

ACCELERATOR

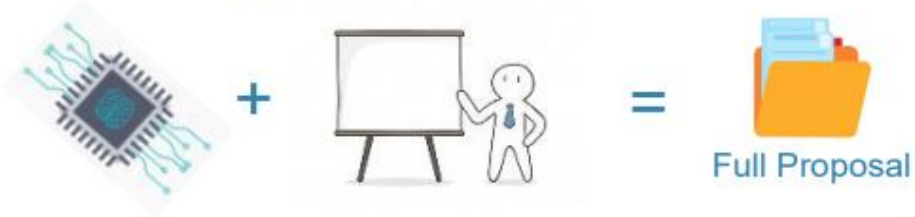
BUSINESS  
ACCELERATION  
SERVICES

#EICSUMMIT22

# EIC Accelerator – The evaluation process



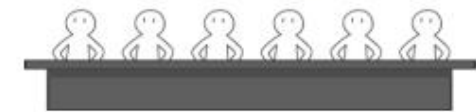
We will help **you** to prepare your **business plan** and draft a **proposal** with AI tool and coaching



You submit your full **proposal** which will be **assessed** by Remote evaluators



You will **pitch** your innovation in front of EIC Jury Members



If selected, you will sign the **contract**



Tell us your story in 5 pages

A four-steps process







project

BG  
T2M  
BAS



# Additional sources

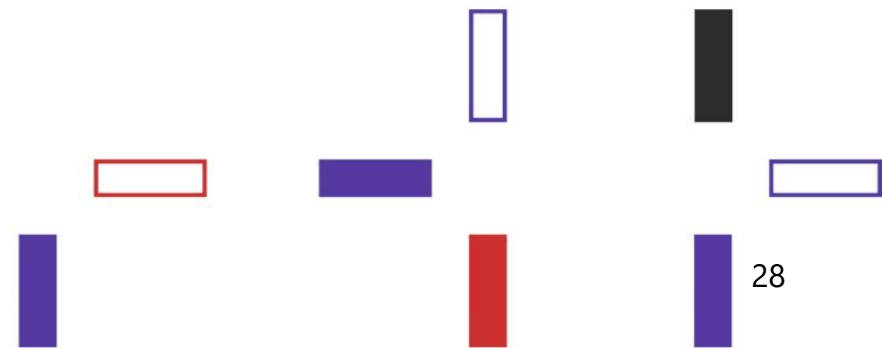
- **WP 2023** - [EIC 2023 work programme \(europa.eu\)](https://europa.eu/europa/en/eic-2023-work-programme)
  - Challenge guides
- **WP2023 Info Day** - [European Innovation Council online Info Day - Work Programme 2023 - 13 December 2022 \(europa.eu\)](https://europa.eu/europa/en/eic-2023-work-programme-2023-13-december-2022)
- **EIC Horizon scanning** for space signals for future EIC WP - [EUSurvey - Survey \(europa.eu\)](https://europa.eu/europa/en/eic-horizon-scanning)
- **EIC challenges information days** - [EIC Challenges information days \(europa.eu\)](https://europa.eu/europa/en/eic-challenges-information-days)





Join at **Sli.do**

With the event code  
**#Challenges**



Innovation  
made in Europe

Thank you

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[www.eic.ec.europa.eu](http://www.eic.ec.europa.eu)

European  
Innovation  
Council

