1st Open Annual Workshop on Future ICT

ΕΘΝΙΚΟ ΚΕΝΤΡΟ ΤΕΚΜΗΡΙΩΣΗΣ &
ΗΛΕΚΤΡΟΝΙΚΟΥ ΠΕΡΙΕΧΟΜΕΝΟΥ

Georgios Megas
Horizon Europe NCP, Coordinating NCP for Cluster 4 (Digital Industry, Space)
EIT Health HUB Greece - Coordinator
EKTgr

25 May 2022

Blended Services

Horizon Europe

Enterprise Europe Network

EIT Health

Knowledge Bridges

Metrics Publications

Communication
Dissemination

EKT

Public body supervised by the
Ministry of Digital Governance

InnovationEKT

Summary:

- Introduction to EKT and its services for RnI support
- The Enterprise Europe Network and how it is supporting EU collaborations
- Horizon Europe Types of actions/funding
- Cluster 4 Digital Industry Space:
  - Policies and Strategies
  - CL4 Digital Open calls/topics
  - Topic analysis: AI, Data and Robotics for Industry optimization (production and services)
  - The AI, Data and Robotics partnership
- Digital Europe, Intro to TEF & Open Calls on Security
- Evaluators' comments on recent ESR's summary

EKT

Public body supervised by the Ministry of Digital Governance

InnovationEKT

Enterprise Europe Network: The Biggest SME Internationalization and Innovation support network in the world

Business & innovation database

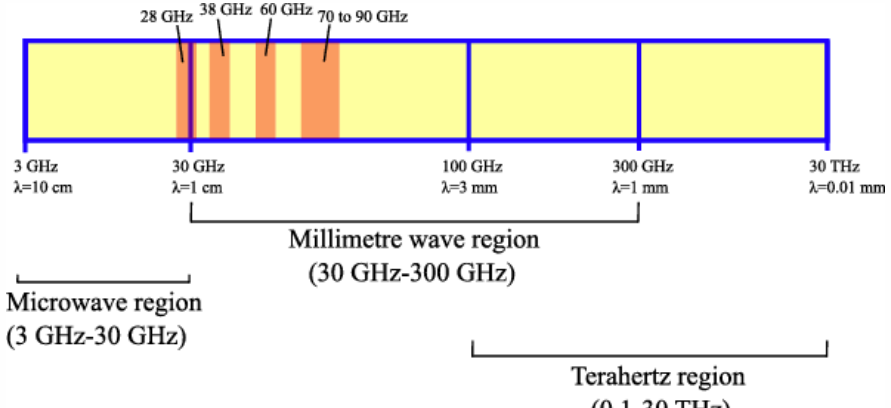
https://een.ec.europa.eu/partners

Method for communication device tracking, search for a research partner

A German research institute has developed a concept for the alignment of transmitting and receiving antennas of future communication systems in the mm wave and terahertz frequency range.

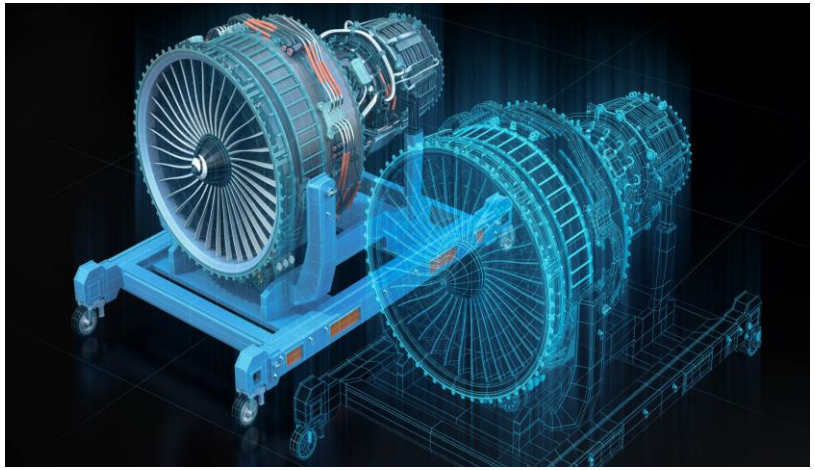
A partner for cooperative research and development is being sought for the new basic technology.

POD Reference **TODE20220304012**



A French SME designs and offers: User-centered digital twins with intuitive use for visualization, supervision and exploitation of complex systems. The company seeks industrial partners to develop DT in maintainance, security, etc.

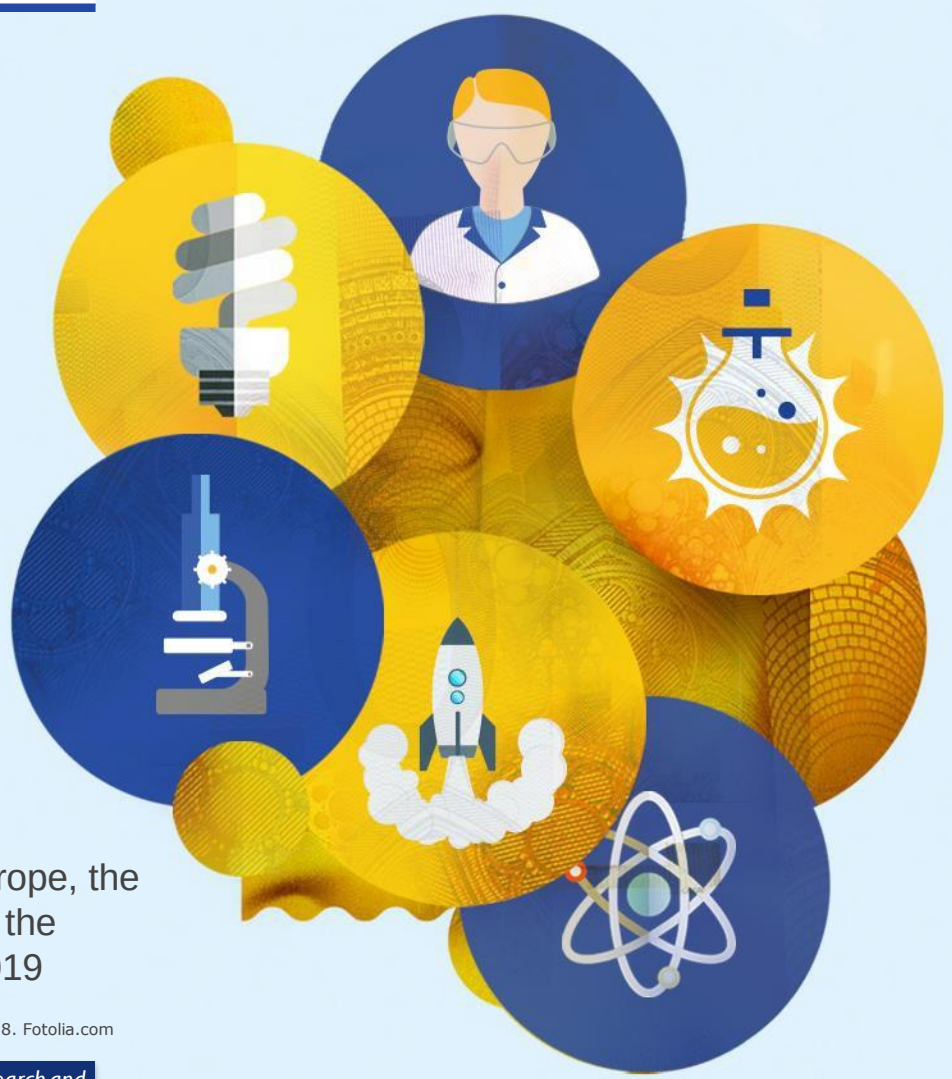
POD Reference **TOFR20200914001**



European Commission

Horizon Europe

THE NEXT EU RESEARCH & INNOVATION INVESTMENT PROGRAMME (2021 – 2027)



#HorizonEU

Based on the Commission Proposal for Horizon Europe, the common understanding between co-legislators and the Partial General Approach, both approved in April 2019

© European Union, 2019. | Images source: © darkovujic, #82863476; © **Konovalov Pavel**, #109031193; 2018. Fotolia.com

Research and Innovation

Horizon Europe: Preliminary structure

European Commission

Adaptation to climate change, including societal transformation

Healthy oceans, seas, coastal and inland waters

Mission areas

Cancer

Climate-neutral and smart cities

Soil health and food

European Commission

New approach to European Partnerships

New generation of objective-driven and more ambitious partnerships in support of agreed EU policy objectives

Key features

- **Simple architecture and toolbox**
- **Coherent life-cycle approach**
- **Strategic orientation**

Co-programmed

Based on Memoranda of Understanding / contractual arrangements; implemented independently by the partners and by Horizon Europe

Co-funded

Based on a joint programme agreed and implemented by partners; commitment of partners for financial and in-kind contributions

Institutionalised

Based on long-term dimension and need for high integration; partnerships based on Articles 185 / 187 of TFEU and the EIT-Regulation supported by Horizon Europe

megas
2020-05-21 12:22:00

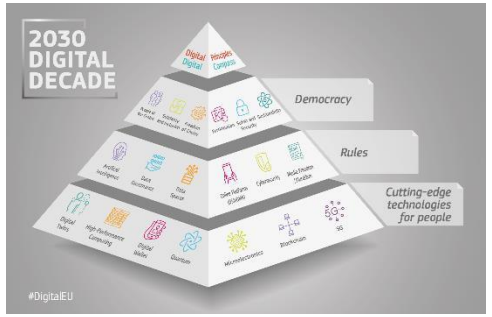
The actions supported may cover subjects not directly linked to the themes of Horizon 2020, as far as they have a sufficient EU added value. They are also used to enhance the synergy between Horizon 2020 and the activities carried out under intergovernmental structures such as EUREKA and COST. Other: Prima
https://ec.europa.eu/programmes/horizon2020/en/h2020-section/article-185

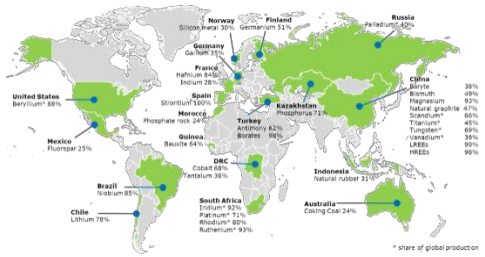
European Commission

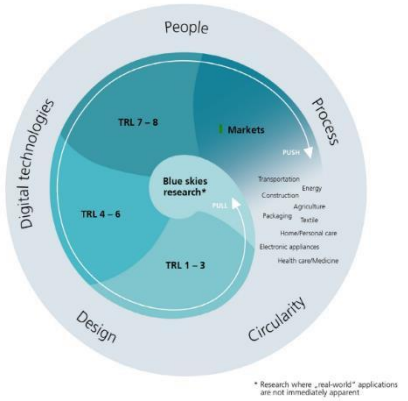
Digital, Industry and Space Cluster
WP: 2021 – 2022 intro

Horizon 2020 Greek Participation (σύμφωνα με το h2020 dashboard)		
Total/ All subprogrammes		
	Number	Percentage of the total
Selected Projects	2.893	8,08%
Participation of Greek Organisations in Projects	5.457	3,09%
	Ammount in euro	Percentage of H2020 total
Net EU contribution	€ 1.690.819.947	2,50%
Total project Budget	€ 1.840.000.000	2,80%
Average EU contribution per project	€ 584.500	
LEIT-ICT		
	Number	Percentage of the total
Selected Projects	477	1,33%
Average Greek company number that are participating in projects	2,02	
	Ammount in euro	Percentage of H2020 total
Net EU contribution	€ 359.500.000	0,53
Total project Budget	€ 399.800.000	0,47%
Average EU contribution per project	€ 750.000	

Cluster 4 ‘Digital, Industry and Space’ – Policies, Strategies, Action Plans







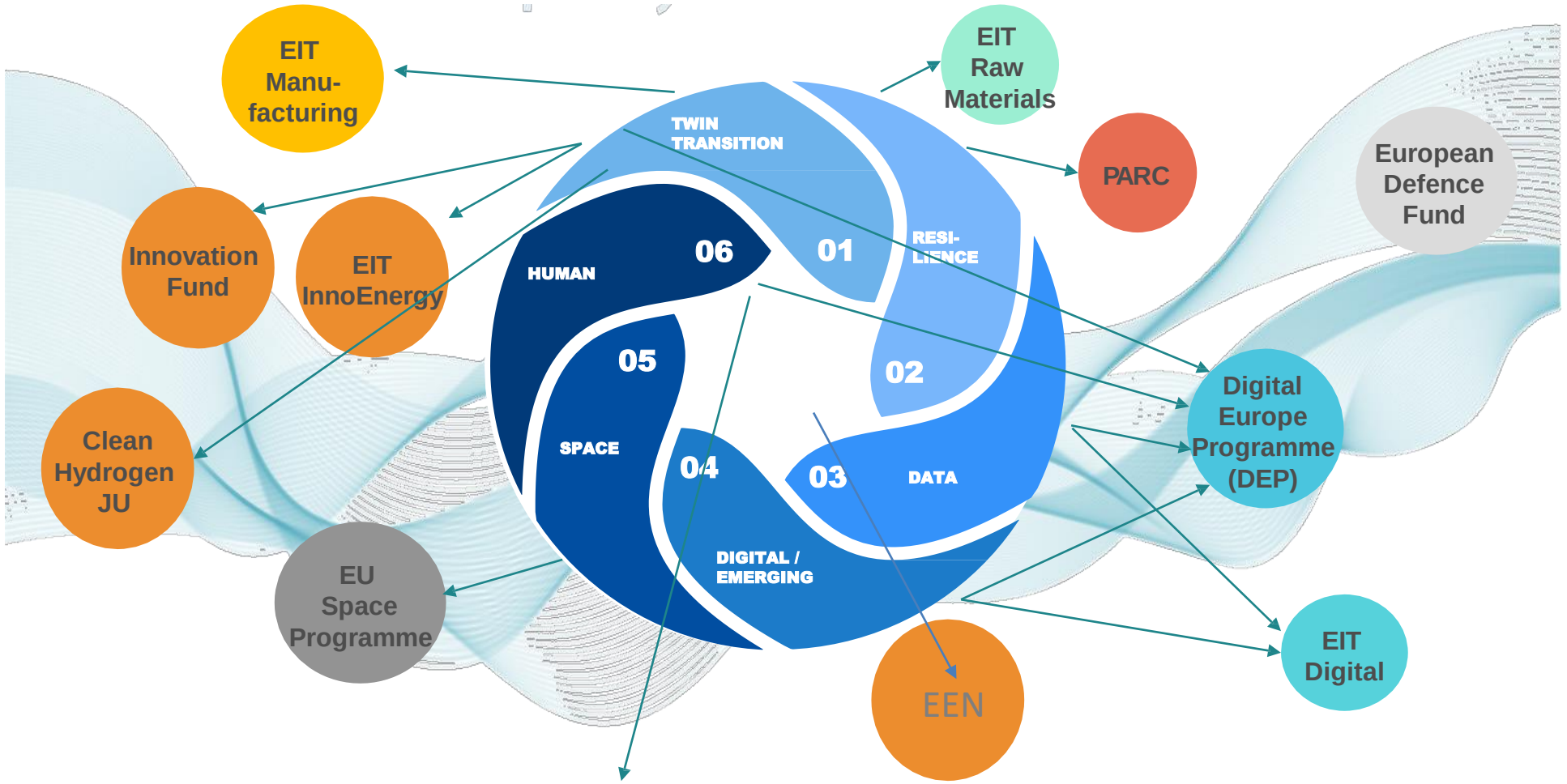
Presentation by Dr. Nicholas Delivannakis E.C. DG Connect

Cluster 4 - Digital, Industry and Space
“Destinations” 2021-22 & 2023-24

Key Strategic Orientation in the Strategic Plan 2021 - 2024	Destination (#)	Strategies
Making Europe the first digitally enabled, circular, climate-neutral and sustainable economy	#1: Climate neutral, circular and digitised production TWIN-TRANSITION	Fit for 55 Digital Decade Industrial Strategy
Promoting an open strategic autonomy by leading the development of key digital, and enabling and emerging technologies, sectors and value chains	#2: A digitised, resource efficient, and resilient industry RESILIENCE	Fit for 55 EU Chemical Strategy Industrial Strategy
	#3: World-leading data and computing technologies DATA	Digital Decade Industrial Strategy
	#4: Digital and emerging technologies for competitiveness and fit for the green deal DIGITAL-EMERGING	
	#5: Open Strategic Autonomy in developing, deploying and using global space-based infrastructures, services, applications and data SPACE	EU Space Strategy
Creating a more resilient, inclusive and democratic European society	#6: A human-centred and ethical development of digital and industrial technologies HUMAN	Digital Decade Industrial Strategy

The Key Strategic Orientation “restoring Europe’s eco-sytems and biodiversity” becomes increasingly important for cluster 4

Cluster 4 Synergies - Overview



Indicative Budget of Cluster 4

2021-27 budget of 15.348 bn€ (including NGEU)

For the WP 2021-2022, the **programmable budget is ~3.5 bn€**, distributed *approximately* as:

DESTINATION	BUDGET 2021-2022
Destination 'Climate neutral, circular and digitised production'	**737.5 M€**
Destination 'Increased autonomy in key strategic value chains for resilient industry'	**776.4 M€**
Destination 'World leading data and computing technologies'	**346.0 M€**
Destination 'Digital and emerging technologies for competitiveness and fit for the green deal'	**750.0 M€**
Destination 'Open Strategic autonomy in developing, deploying and using global space-based infrastructures, services, applications and data' (incl. Other Actions)	**517.6 M€**
Destination 'A Human-centred and ethical development of digital and industrial technologies'	**327.0 M€**
Other Actions (other than Space-related)	**36.0 M€**

Social Sciences and Humanities (SSH)

- Involving **Social Sciences and Humanities** can significantly enhance the outcomes of many projects in Digital, Industry and Space.

Examples include:

- Human-robot collaboration, Human empowerment
- Improving working environments
- Engaging with society to develop and adopt green and digital solutions
- Removing biases in Artificial Intelligence
- Trustworthiness in Next-generation Internet and Artificial Intelligence

- Role of Social Sciences and Humanities explicit in 52 topics of Cluster 4
- Opportunities for **Social Innovation** in 20 topics of Cluster 4

Digital, Industry and Space Cluster

6 Destinations:

DESTINATION 1 – Climate neutral, circular & digitised production TWIN-TRANSITION-2021-2022

DESTINATION 2 – A digitised, resource-efficient and resilient industry

DESTINATION 3 – World leading data and computing technologies

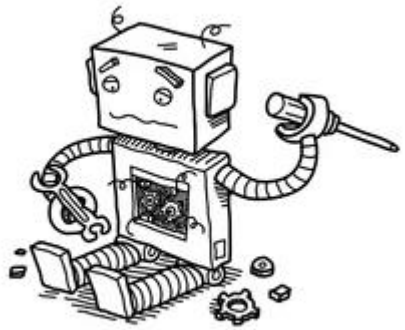
DESTINATION 4 – Digital and emerging technologies for competitiveness and fit for the green deal

DESTINATION 5 – Strategic autonomy in developing, deploying and using global space-based infrastructures, services, applications and data

DESTINATION 6 – A human-centred and ethical development of digital and industrial technologies

DESTINATION 3 – World leading data and computing technologies

No Topics open for submission



Digital, Industry and Space Cluster

DESTINATION 4 – Digital and emerging technologies for competitiveness and fit for the green deal

Call Digital Emerging 2022

16 June - 16 November 2022

Pushing the limit of physical intelligence and performance (RIA)
HORIZON-CL4-2022-DIGITAL-EMERGING-02-06

2D materials-based devices and systems for energy storage and/or harvesting (RIA)
HORIZON-CL4-2022-DIGITAL-EMERGING-02-18

Supporting the coordination of the Graphene Flagship projects (CSA)
HORIZON-CL4-2022-DIGITAL-EMERGING-02-22

AI, Data and Robotics for Industry optimisation (including production and services) (AI, Data and Robotics Partnership) (IA)
HORIZON-CL4-2022-DIGITAL-EMERGING-02-05

New generation of advanced electronic and photonic 2D materials-based devices, systems and sensors (RIA)
HORIZON-CL4-2022-DIGITAL-EMERGING-02-17

Increased robotics capabilities demonstrated in key sectors (AI, Data and Robotics Partnership) (IA)
HORIZON-CL4-2022-DIGITAL-EMERGING-02-07

2D-material-based composites, coatings and foams (IA)
HORIZON-CL4-2022-DIGITAL-EMERGING-02-20

DESTINATION 6 – A human-centred and ethical development of digital and industrial technologies

Call Human2022 16 June - 16 November 2022

AI for human empowerment (AI, Data and Robotics Partnership) (RIA)
HORIZON-CL4-2022-HUMAN-02-01

European Network of AI Excellence Centres: Expanding the European AI lighthouse (RIA)
HORIZON-CL4-2022-HUMAN-02-02

Digital, Industry and Space Cluster

KDT - soon to be reshaped to Chips JU

KDT-JU 2022 Key Digital Technologies Joint Undertaking

03 May – 21 September 2022

[Industrial supply chain for silicon photonics (IA)]
HORIZON-KDT-JU-2022-1-IA-Focus-Topic-2

National budget for 2022: 2 million

[Design of Customisable and Domain Specific Open-source RISC-V Processors (IA)]
HORIZON-KDT-JU-2022-1-IA-Focus-Topic-3

[General according to ECS-SRIA 2022 (IA)]
HORIZON-KDT-JU-2022-1-IA-Topic-1

[Ecodesigned smart electronic systems supporting the Green Deal objectives (RIA)]
HORIZON-KDT-JU-2022-2-RIA-Focus-Topic-2

[General according to ECS-SRIA 2022 (RIA)]
HORIZON-KDT-JU-2022-2-RIA-Topic-1

ECS: AENEAS, ARTEMIS-IA and EPOSS
micro- and nanoelectronics, Smart Systems Integration and embedded systems of systems

AI, Data and Robotics for Industry optimization (production and services)

Expected outcomes (at least one):

1. Advancing **AI, data and robotics**, and automation for the **optimisation of production and services value-chains**
   - ➔ for products, services, processes
   - ➔ competitiveness, working conditions, and envir. sustainability

2. **AI for adapting production or services workflows** to
   - ➔changing environments,
   - ➔ dynamic and unpredictable resource constraints
   - ➔ capabilities and restrictions of humans
   - ➔transferring results from one domain to another.

SPECIFY FOCUS : Production or Services !!

Will be used for funding selection

➔ if not explicit in proposal ➔ will be assessed @ evaluation stage

Presentation by Ms. Evangelia Markidou
DG Connect, E.C.

SCOPE: INTEGRATE AND OPTIMISE AI, DATA AND ROBOTICS SOLUTIONS | TO DEMONSTRATE HOW THEY CAN OPTIMISE PRODUCTION AND SERVICE USE CASES

INDUSTRY-EMPOWERING AI, DATA AND ROBOTICS (WHAT ARE WE LOOKING TO SEE?)

- USE-CASES DRIVEN (MAJOR INDUSTRIAL SECTORS COVERED BY THE SMES..)
- DEMONSTRATE:
  - TECHNOLOGY PERFORMANCE
  - TRUSTWORTHY SOLUTIONS
  - SHOW THE SUBSTANTIAL BENEFIT TO MAJOR EUROPEAN INDUSTRIES/SMES
- DEEP INVOLVEMENT OF STAKEHOLDERS *(EC WANTS EVERYONE RELATED TO BE INVOLVED)*
- ADDRESS ALSO NON-TECHNICAL ISSUES:
  - ETHICAL, TRUST, BUSINESS SUPPORT, DATA ACCESS AND RE-USE

TWO TYPES OF PROPOSALS:

FOCUSED PROJECTS

Small

- user industries
- technology providers
- Approx. 3 million euros

LARGER PROJECTS

Challenges from User companies

Must include FSTP:

- >40% of the budget
- up to 200K€/TP
- TP = SMEs (70% funding) and start-ups (100% funding)

European Commission

Other requirements:

Build on existing results / Resources

+

Share Results

Connect with stakeholders, DIH

+ PPP

(ADRA)

User industries:

- requirements
- validation

Support to SMEs and Start-ups

&

Awareness Raising

European Commission

1. **What EC is looking for?**

- Maximise impact (Major industrial sector + demonstrate clear benefits)
- Integrate and optimise AI, data and robotics solutions to demonstrate how they can contribute to the Use-Case
- Test in actual / highly realistic operating environments in order to➔ boost deployment
- Right mix of expertise *(interdisciplinarity and intersectoriality)*
- BOTH Robotics and non-Robotics AI encouraged – ideal: combination AI-Data-Robotics
- BOTH Small (focused) and Large (FSTP) projects ➔ encourage GOOD FSTP as well

2. **What EC does NOT want?**

- Major Research component ➔ BUT build on latest developments
- Tech push / Invented problems
- Niche sectors with limited impact
- Anything artificial ➔ BUT everything optimized towards the project objectives

https://www.ekt.gr/el/events/27111

The AI, Data and Robotics partnership (2021-2030) fields of action

Presentation by
D.G. Connect E.C.

The AI, Data and Robotics partnership (2021-2030)

Co-programmed partnerships in Horizon Europe

European Commission
Public Side

Public
Private
Partnership

ADR
Association
Private Side

- In the MOU signed between Adra and the European Commission, it was agreed to design a number of programs for European companies and raise 2.6 billion euros to fund these:
  - Up to 1.3 billion euros of public investment by the European Commission (through Horizon Europe)
  - Up to 1.3 billion euros of private investment through Adra for the period 2021 – 2030

Overview Adra - The AI, Data, and Robotics Association

What?

- Adra (AI, Data and Robotics Association, asbl) is a membership association that establishes the private side of the AI, Data and Robotics Partnership in Horizon Europe.
- Adra and the partnership pursue a common and shared vision to **boost European competitiveness, societal wellbeing and environmental aspects** to lead the world in researching, developing and deploying **value-driven trustworthy AI, Data and Robotics** based on fundamental European rights, principles and values.

Who?

- Founding members: BDVA, CLAIRE, ELLIS, EurAI and euRobotics
- Elected president: Marina Bill (ABB)

CLAIRE Confederation of Laboratories for Artificial Intelligence Research in Europe

ellis European Laboratory for Learning and Intelligent Systems

EurAi

eu ROBOTICS

BDV BIG DATA VALUE ASSOCIATION

When?

- May 21, 2021 Foundation
- June 23, 2021 Memorandum of Understanding with the EC
- November 25, 2021 Launch Event (https://youtu.be/faO9DIzCTOw)

Adra asbl: Types of Membership

The AI Data Robotics Association

Members with voting rights

- **Industry Members**
  - Large companies
  - Mid-Caps
  - Small and Medium Enterprises (“SME”) and Start-ups
- **Research Members**
  - Research and Technology Organisations (RTO)
  - Universities, university colleges and university departments and laboratories or research groups of universities engaging in research, innovation and education (HES)
- **Strategic Members**
  - not-for-profit organisations having their own members and whose main objectives are of essential value for the Purpose of the Association

Members without voting rights

- **Associate Members:** trade unions, non-governmental organisations, regional clusters, etc and other stakeholders not falling in the Member categories above


Introducing the
DIGITAL Europe
Programme

2 Digital Europe Open Calls

- Security (law enforcement): AI-based pilot DIGITAL-2022-DEPLOY-02-LAW-SECURITY-AI

17 August 2022 5.000.000 €

24 months.

- Support to cybersecurity in the health sector DIGITAL-2022-CYBER-02-SUPPORTHEALTH

31 May 2022 10.000.000 €

Consult you CL4 (Digital) NCP and the Ideal-ist Digital NCP network

Commission's comments regarding the proposals that were evaluated for the 2021 H Digital call, along with some gathered wisdom

Overall

- On tied proposals **gender balance** will be taken into account in the ranking, where the target is a balance of 50:50 (f/m) and the data source is the "**researchers table**" in Section A. Additionally, the problem that "**innovators**" are often not included in the table by the applicants.

- Integration of **Third Country** partners (with/without funding) needs to be well justified showing a clear benefit for Europe (e.g. *the third country partner is owner of a specific, unique, and needed data set or tool)*

- Other…

Commission's comments regarding the proposals that were evaluated for the 2021 Digital call, along with some wisdom garnered through our own perusal of ESRs, panel reports

EXCELLENCE

- **Open Science and research data management** aspects need to be implemented on a practical manner and tuned to the project idea

  (*"Open science practices are insufficiently demonstrated" or "… methodology is only minimally and in little depth"; "Data will only be available upon request at the end of the project this is a shortcoming"*)

- **State-of-the-art** needs to be presented as well as a clear description of how the project links to previous projects & initiatives and how this knowledge will be used. ("*It is not always clear how these interactions with other policies/initiatives will be made")*
- Other..

European Commission

Commission's comments regarding the proposals that were evaluated for the 2021 Digital call, along with some wisdom garnered through our own perusal of ESRs, panel reports

IMPACT

- The "**Project's pathways towards impact**"

  It is important to differentiate between referring to the "**Expected outcomes**" of the topic text, and to the "**Expected impacts**" of the Destination introduction. Both count, and should be addressed separately, and in a realistic way.

  (e.g. "*one expected outcome only partially addressed*", "*unclear how broader impact will be achieved*", "*distinction between expected outcomes and wider long-term impacts not clearly specified*", "*some claims are exaggerated*", "*likely an overstatement*", "*missing wider impact*")

- The summary table 2.3 is an important overview tool for the evaluators, and may be looked at first to get a first impression

Commission's comments regarding the proposals that were evaluated for the 2021 Digital call, along with some wisdom garnered through our own perusal of ESRs, panel reports

QUALITY AND EFFICIENCY OF THE IMPLEMENTATION

- Work plan is thoroughly checked for consistency (e.g. "*work plan has inconsistencies within and across work packages*", *"work plan is presented in a complex way, which is not very effective"*, *"linkages between the different work packages are also not convincingly presented. This is a significant weakness."*

- positive: "sufficient number of 29 deliverables, of which 21 are for public access. This is excellent.").

https://drive.google.com/file/d/1bU2tBTgBeEgNH0I_MtkUBLcTRFnirQdi/view?usp=sharing

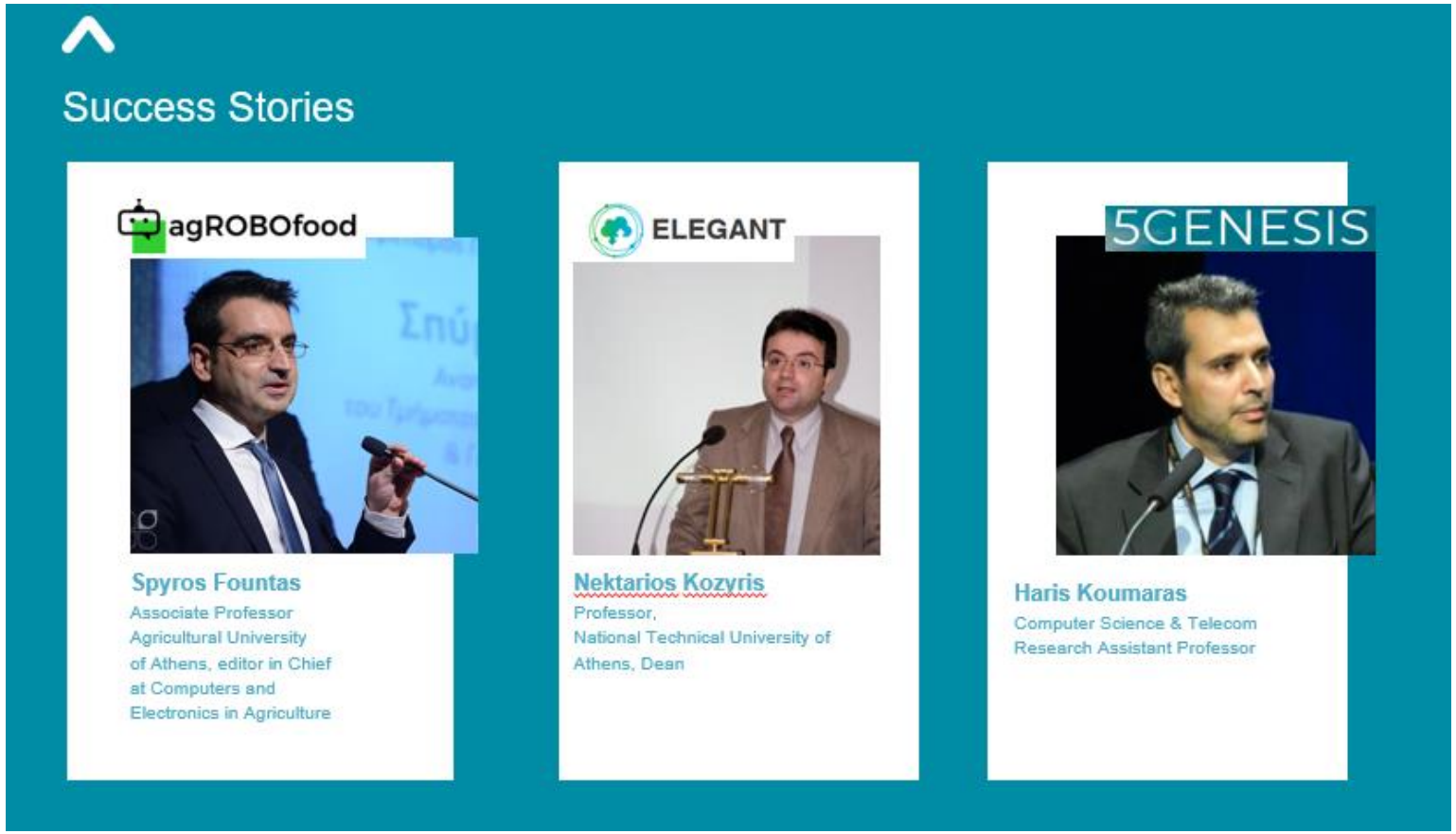
European Institute of Innovation & Technology – Knowledge Innovation Communities EIT KICs & HUBs

EIT Health

Funded by the European Union

Highest score among 100 proposals: (90/100) EightBells' **ApniWave** funded by EIT Health RIS Innovation Call

Ευχαριστούμε!
Thank you !



ΕΘΝΙΚΟ ΚΕΝΤΡΟ ΤΕΚΜΗΡΙΩΣΗΣ & ΗΛΕΚΤΡΟΝΙΚΟΥ ΠΕΡΙΕΧΟΜΕΝΟΥ

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