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Technical Assistance for Turkey in Horizon 2020 Phase-II
EuropeAid/139098/IH/SER/TR

Horizon Europe: Importance of Cross Cutting Issues

Horizon Europe General and Introductory Training

Odysseas Spyroglou, KE2

Online, 16 Dec 2021

Photo by Christian Lue on Unsplash

Meet the instructor

Odysseas Spyroglou
Key Expert 2. Legal, Financial & IPR

- **Innovation consultant** with **engineering**, **ICT** and **financial** background.
- Over **20 years of working experience** in EU funded projects: preparing proposals, building consortia and managing projects under FP7, CIP, COSME, INTERREG, MED, H2020 and more.
- Specialise in **Project Management** & **Quality**, **Intellectual Property** and reengineering **business processes**.
- Designed and delivered more than **300 training sessions on Innovation** Management, IPR, Entrepreneurship, Proposal Writing, Project Management, financial administration.

20+
Years

60+
Projects

90m+
Funds

linkedin.com/in/ospyroglou

Horizon Europe

A reminder of the programme

The ambitious EU research and innovation framework programme (2021-2027)

to strengthen the EU's scientific and technological bases and the European Research Area (ERA)

to boost Europe's innovation capacity, competitiveness and jobs

to deliver on citizens' priorities and sustain our socio-economic model and values

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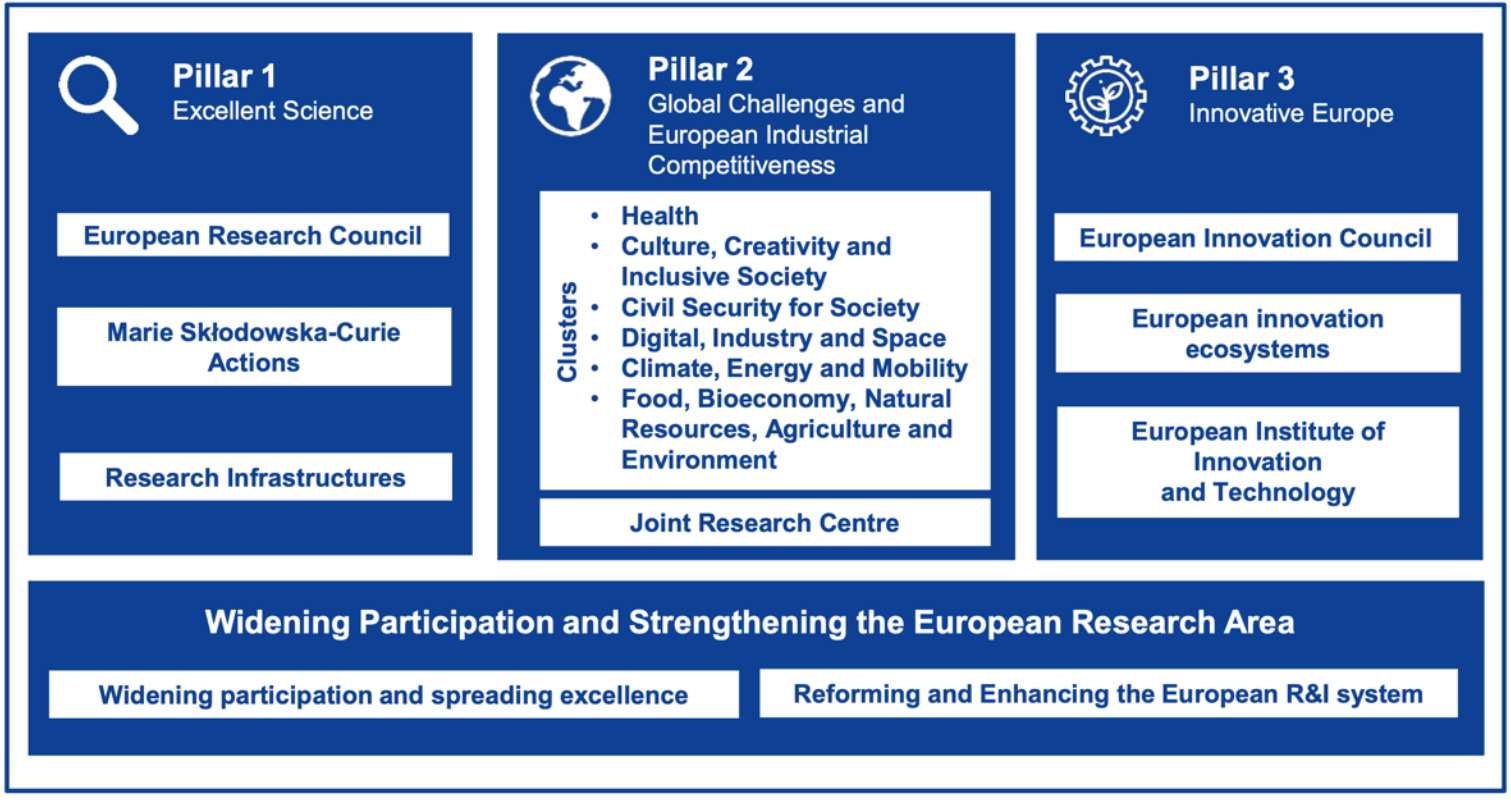
Structure of Horizon Europe

How Horizon Europe is organised



Commission Priorities

Where EC is going to focus the next 4 years.

- **European Green Deal**
  First Climate-neutral continent, resource efficient economy
- **Europe fit for Digital Age**
  Empower people with new generation of Technology

Economy that works for People
Attractive investment environment, quality jobs

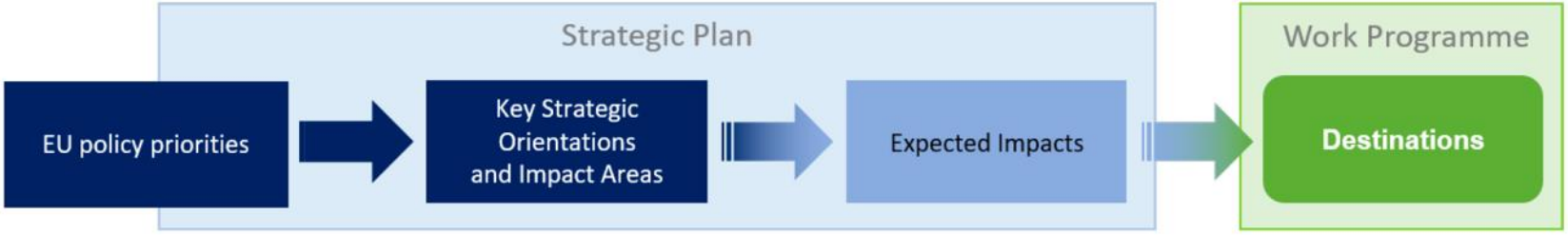
Stronger Europe in the World
Champion multilateralism and rules-based order

- **Promoting European way of Life**
  Protection of rule of law, justice, core values
- **New push for European Democracy**
  Bigger say to European citizens, protect democracy

Recovery Plan for EuropeL: Next Gen EU

Horizon Priorities for 2021-24

From EU priorities to Work Programme Destinations



6	4	32	3	6	34
Priorities of EU	Key Strategic Orientations	Expected Impacts	Pillars	Clusters	Destinations

H2020 vs. Horizon Europe

What are the main changes in structure?

Horizon 2020

Excellent Science	Industrial Leadership	Societal Challenges

European Research Council
Future Emerging Tech
MCSA
Research Infrastructures
	ICT //
	Nano, New-materials //
	Biotechnology // Space
	// Access to Risk // SME
	Innovation
		Health // Food // Energy
		// Transport // Climate
		// Inclusive Societies
		// Security

Horizon Europe

Excellent Science	Global Challenges & European Industrial Competitiveness	Innovative Europe
European Research Council MCSA Research Infrastructures	Health // Cluture, Creativity // Civil Security // Digital Insustry & Space // Climate, Energy // Food, Agri	European Innovation Council European Innovation Ecosystems European Inst. Of Innovation & Tech

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HE Key Strategic Orientations

Mirroring political priorities of the EU

A // Digital Transformation

Promoting an open strategic autonomy by leading the development of key digital, enabling and emerging technologies, sectors and value chains to accelerate and steer the digital and green transitions through human-centred technologies and innovations

B // Environmental Protection

Restoring Europe's ecosystems and biodiversity, and managing sustainably natural resources to ensure food security and a clean and healthy environment

C // Sustainable Development

Making Europe the first digitally enabled circular, climate-neutral and sustainable economy through the transformation of its mobility, energy, construction and production systems

D // Resilience & Inclusivness

Creating a more resilient, inclusive and democratic European society, prepared and responsive to threats and disasters, addressing inequalities and providing high-quality health care, and empowering all citizens to act in the green and digital transitions

Titles outside the boxes are arbitrary, perception of the speaker.

Orientation A

Open Strategic Autonomy with Key Digital, Enabling & Emerging Tech, Sectors & Value Chain

Open Strategic Autonomy (OSA): EU's desire to chart own course in global stage. Leadership. Openness, global engagement. Defending interests. Taking initiative.

IMPACT AREAS

- A competitive and secure data-economy
- Industrial leadership in key and emerging technologies that work for people
- Secure and cybersecure digital technology
- High quality digital services for all

1/ Health	2/ Culture	3/ Security	4/ Digital	5/ Climate
Health	Culture, Creativity and Inclusive Society	Civil security for society	Digital, Industry and Space	Climate, Energy and Mobility
Personalised health, disease prevention, diagnosis, treatment, well-being.	Cultural Heritage, arts, creative sectors & Industries, museaums, inclusive tourism	Cyber-security, privacy, protection of personal data, fundamental rights	Digital Transformation, Supply chain, Telecoms, 5G, AI, manufacture, Space, EO	Cleaner energy, mobility, green transition of value chains

Orientation B

Restoring Europe's Ecosystems and Biodiversity, Managing Sustainably Natural Resources

IMPACT AREAS

- Enhancing ecosystems and biodiversity on land and in waters
- Clean and healthy air, water and soil
- Sustainable food systems from farm to fork on land and sea

1/ Health	4/ Digital	5/ Climate	6/ Food
Health	Digital, Industry and Space	Climate, Energy and Mobility	Food, Bioeconomy, Natural Resources, Agriculture and Environment
Impacts of environmental degradation, occupational, lifestyle risk, malnutrition, diets	Applications for agriculture, fisheries, forestry, environmental monitoring, navigation, Earth Observation	Cleaner, healthier environment, better mobility, energy generation, air quality	Restoring degraded ecosystems, biodiversity, disaster risks, sustainable agriculture, seafood production

Orientation C

Making Europe first Digitally enabled circular, climate-neutral, sustainable economy

IMPACT AREAS

- Climate change mitigation and adaptation
- Affordable and clean energy
- Smart and sustainable transport
- Circular and clean economy

1/ Health	4/ Digital	5/ Climate	6/ Food
Health	Digital, Industry and Space	Climate, Energy and Mobility	Food, Bioeconomy, Natural Resources, Agriculture and Environment
Cleaner, greener, more circular, sustainable health. Prepare health system for climate change threats.	Climate neutral, zero pulluting, energy efficient industries by 2050. Secure, sustainable supply of raw materials. Smart mobility, atmospheric monitoring, EO.	Climate neutrality, zero pollution for energy, transport. Energy storage, smart industry, safer mobility.	Protection of primary production systems. Circular, zero-carbon industry. Eco footpring, blue economy, non-toxic materials.

Orientation D

Resilient, Inclusive and Democratic European society

IMPACT AREAS

- A resilient EU prepared for emerging threats
- A secure, open and democratic EU society
- Good health and high-quality accessible healthcare
- Inclusive growth and new job opportunities

1/ Health	2/ Culture	3/ Security	4/ Digital	5/ Climate	6/ Food
Health	Culture, Creativity and Inclusive Society	Civil security for society	Digital, Industry and Space	Climate, Energy and Mobility	Food, Bioeconomy, Natural Resources, Agriculture and Environment
Comminicable & non-communicable diseases. Fair access to high quality health care. Early threat detection, public emergencies.	Social, economic, gender, cultural inequalities. Inclusion, non-discrimination social protection, empowerment. Migrants, cultural heritage protection.	Free movement, integrity of Schengen Area. Civil Security. Border management, Disaster Risk, Maritime Security, Migration-Asylum.	Access to technologies and skills. Copernicus, Galileo/EGNOS emergency, security.	New way to involve & engage citizens in low-carbon transition. Sustainable economy.	Innovative governance models. Sustainability and resilience Enhanced, shared view of knoeledge.

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New approaches for impact

Best Target R&I investments to maximize impact

- **European Partnerships:** initiatives of EU – Private and/or Public for joint R&I activities. Co-Funder or Co-Programmed. *Examples:*
  - EP for AI, Data and Robotics
  - EP for Water4all: water security for the planet
  - EP for European Open Science Cloud
- **Missions: new concept.** Address global challenges, ambitious, inspirational, achievable goals.
  - Cancer
  - Adaptation to Climate Change
  - Ocean Seas and Waters
  - Climate Neutral and Smart Cities
  - Soil Health and Food

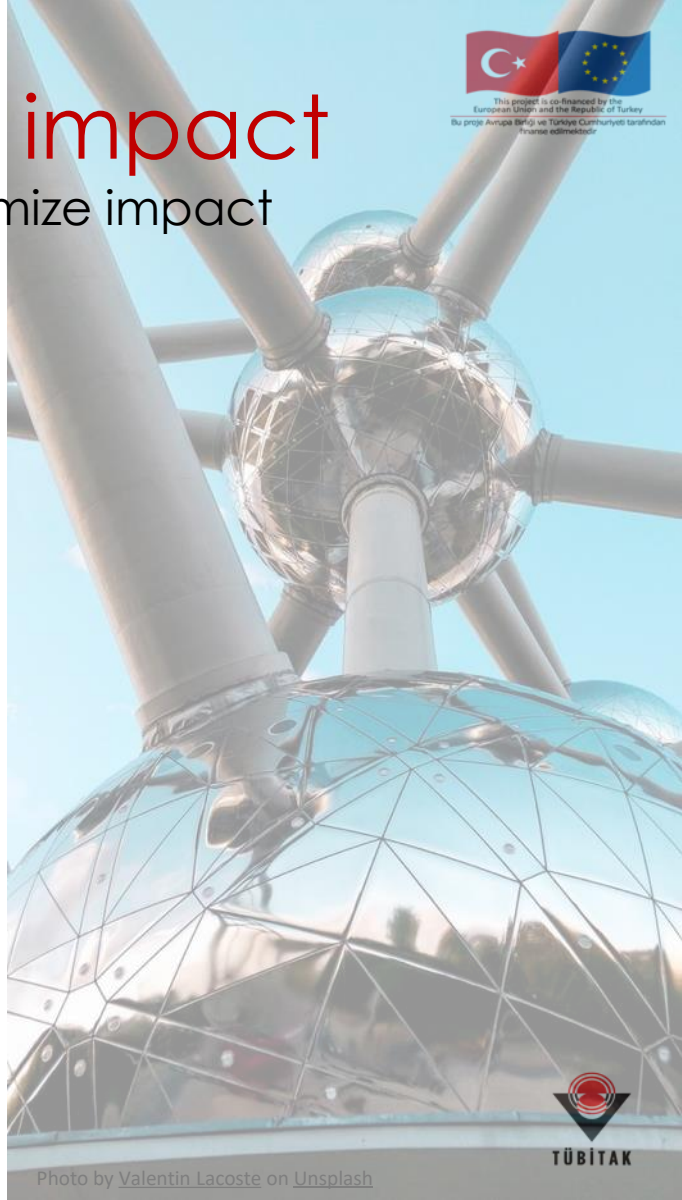

Photo by Valentin Lacoste on Unsplash

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International Cooperation

EU Funding Management Modes

Aligning global efforts and investments, science diplomacy, synergies with EU external policy.

- **Collaborative Research & Innovation Initiatives:** projects w/ 3rd party countries, regions
- **International Mobility & Cooperation in Frontier Research:** support to brain circulation, internationalisation of EU companies (Pillar I, III)
- **EU in Multilateral Alliances:** climate change, sustainable food, biodiversity.
- **Policy Dialogues w/ 3rd countries, regions:** reinforcing strategic level of cooperation R&I, Open Science, ethics, safety & quality.

8 Horizontal Topics

EU Funding Management Modes

- Relevant to all programme components
- Identified in Strategic Plan
- Should be addressed appropriately

[2] Regulation (EU) 2020/852 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088

An integrated approach

Cross Cutting key specific Issues

Social Science & Humanities (SSH)	• Integration of SSH in all clusters • Key component of R&I • Specific topics flagged • Assessment of Societal Impact (when necessary)

Dissemination & Exploitation (D&E)	• Enhance R&I results dissemination, use, value increase • Integrate results into EU higher education & training • **New tools:** Results Platform, IP Booster, Synergies • Design of project to "**beyond its end**" • Uptake of assets, private investment, IP management

Key Enabling Technologies (KET)	• Advanced Manufacturing // Advanced Materials // Life-science tech // micro-nano electronics & photonics // AI // Security & connectivity • Across Clusters & Pillars

Social Innovation (SI)	• Advances in science & Tech / creative use of existing tech • Combine new tech capabilities w/ organisational, social practices • HE supports SI across all 4 strategic Orientatations

Social Sciences and Humanities

Cross Cutting key specific Issues

- **What is SSH Integration ?**

  the process of specifically including research and researchers from Social Sciences and Humanities disciplines in projects contributing **solutions to pressing societal challenges**.

Democracy - Strengthen European democratic values and address issues of trust.

Cultural Heritage - Safeguard and promote our **cultural heritage**.

Social and economic transformations

Take advantage of socio-economic transformations and promote **inclusive growth** while responding to globalization, and technological advancements.

Dissemination and Exploitation

Cross Cutting key specific Issues

Dissemination and Exploitation (D&E)

Communication: promote the project throughout the full lifespan. **Inform and reach out to society and show the activities performed, and the use and the benefits the project** will have for citizens.

Dissemination: public disclosure of results by appropriate means, e.g. scientific publications in any medium.

Exploitation: **use of results** in further research and innovation activities e.g. commercial exploitation, developing, creating, manufacturing and marketing a product or process, creating and providing a service, or in standardisation activities.

Key Enabling Technologies

Cross Cutting key specific Issues

Europe prioritises research and Innovation support for these

6 broad Key Enabling Technologies (KETs)

- advanced manufacturing
- advanced materials
- life-science technologies
- micro/nano-electronics and photonics
- artificial intelligence
- security and connectivity

non-sectoral, strategic, and integrated approach to the development and deployment of new technologies to promote industrial modernisation.

Social Innovation

Cross Cutting key specific Issues

The European Commission's objective is to encourage market uptake of innovative solutions and stimulate employment.

Social innovations are **new ideas** that:

- meet social needs,
- create social relationships and
- form new collaborations.

These innovations can be:

- products,
- services or
- models addressing unmet needs more effectively.

Gender Equality & Inclusiveness

Cross Cutting key specific Issues

- Eliminate gender inequality
- Addressing unconscious bias, systemic barriers
- Integration of gender dimension
- Part of EC's Gender Equality Strategy 2020-25

Ethics and Integrity

Cross Cutting key specific Issues

Photo by Vlad Tchompalov on Unsplash

Ethics and integrity

- European Code of Conduct for Research Integrity
- Ethics Principles & legislation
- Ethical dimension of new technologies (AI, Environment)
- HE to develop training, educational material, Operating procedures
- Ethics & Privacy by design

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Open Science

A scientific process based on open cooperative work & knowledge diffusing tools

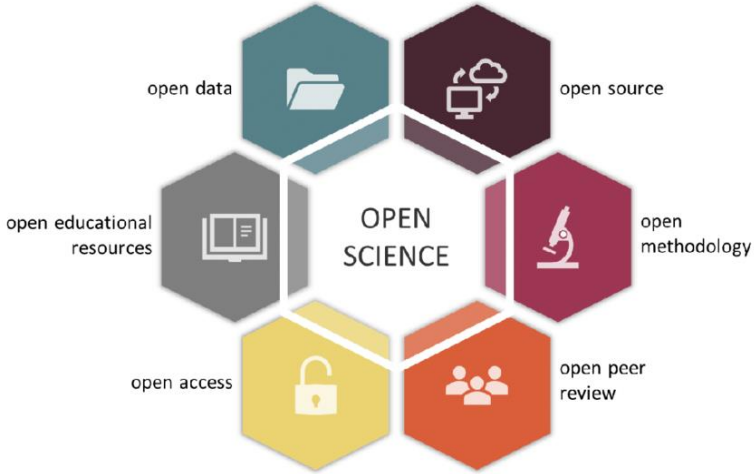

Image by Caterina Penone,
The Open Traits Network: Using Open Science principles to accelerate trait-based science across the Tree of Life, DOI:10.32942/osf.io/kac45

Open science practices

- Freely accessible scientific publications
- Early sharing of research results
- FAIR: Findable, Accessible, Interoperable and Re-usable data
- Reproducible results
- Societal engagement & responsibility
- European Open Science Cloud (EOSC)
- Rewards & Incentives for researchers
- Research Management Plan

- Classification system, list of environmentally sustainable economic activities
- Enabler to scale up investment, implement Green Deal

Photo by CHUTTERSNAP on Unsplash

EU Taxonomy

Cross Cutting key specific Issues

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EU Taxonomy

1. Climate change mitigation
2. Climate change adaptation
3. The sustainable use and protection of water and marine resources
4. The transition to a circular economy
5. Pollution prevention and control
6. The protection and restoration of biodiversity and ecosystems

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Horizon Europe Work Programmes

How an HE Work Programme is structured

Work Programme 2021-22

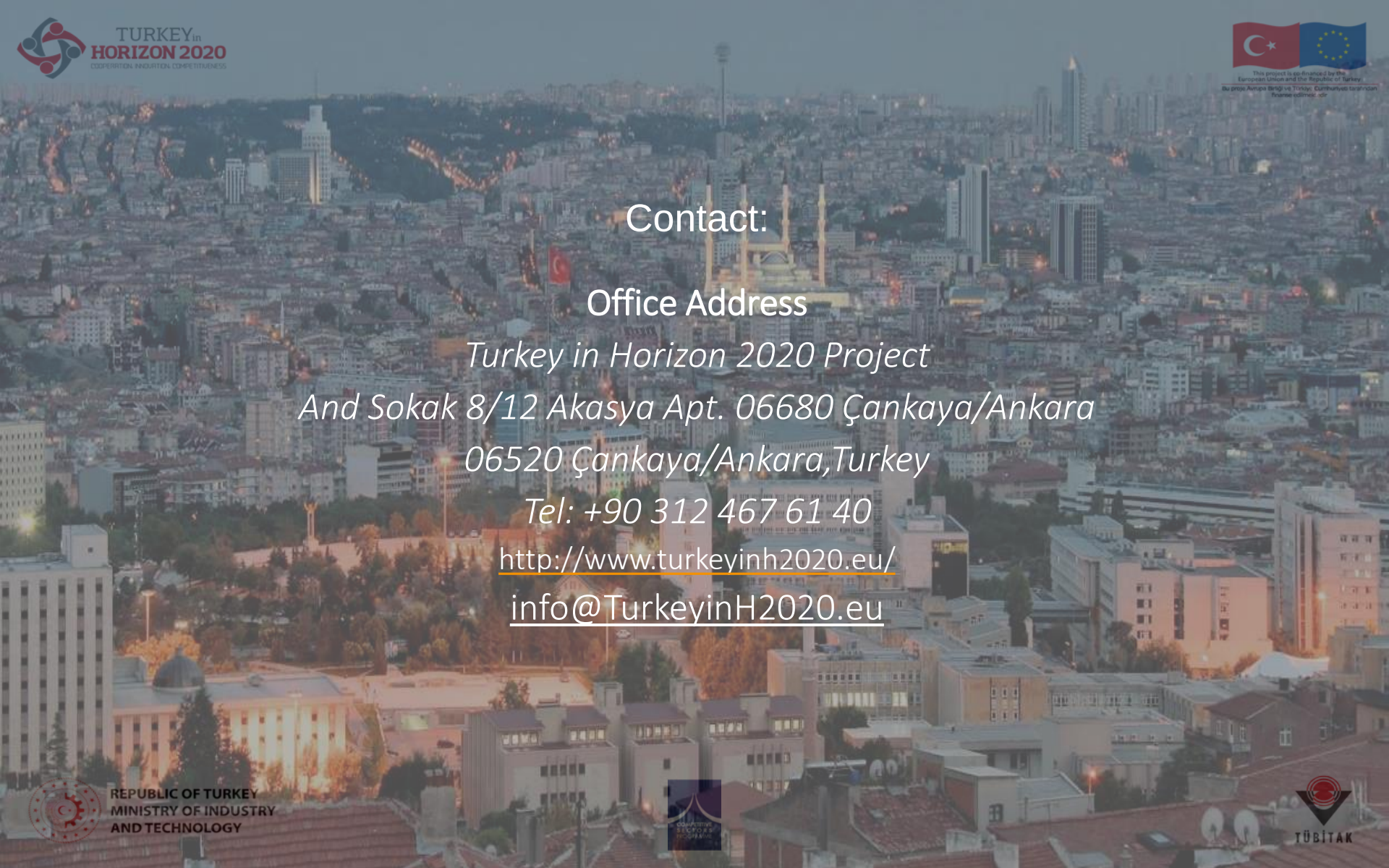
- General Intro
- MSCA
- RI
- 6 Clusters
- EIC
- WIDENING

Documents :

- Strategic Plan 2021-24
- Work Programme 21-22
- Proposal Template
- Model Grant Agreement (MGA)

Q&A

Time to ask your questions!



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