



HORIZON 2020

**The European Union's
programme for Research
and Innovation**

Open to the world!

Space Forum
8 October 2014
Tokyo

*Dr. Leonidas Karapiperis
Minister-Counsellor
Head of S&T Section
Delegation of the EU to Japan*

HORIZON 2020

WHAT IS HORIZON 2020?

- A €80 billion research and innovation funding program (2014 -2020)
- A response to economic crisis by investing in future jobs and growth
- It addresses people's concerns about their livelihoods, safety and environment





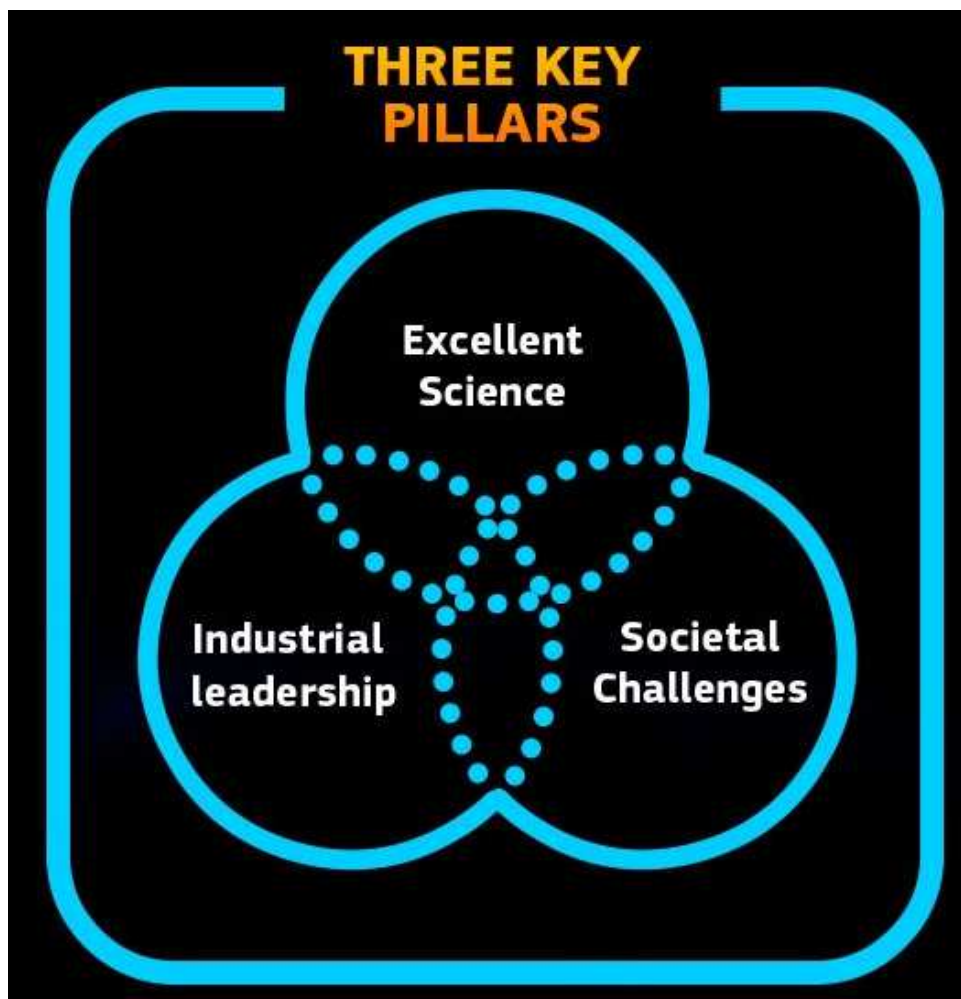
Horizon 2020

A single programme

- **Coupling research with innovation:** 'from lab to market'
- **Focus on societal challenges:** health, clean energy, transport, etc.
- **Open to participation:** companies, universities, institutes in EU and beyond

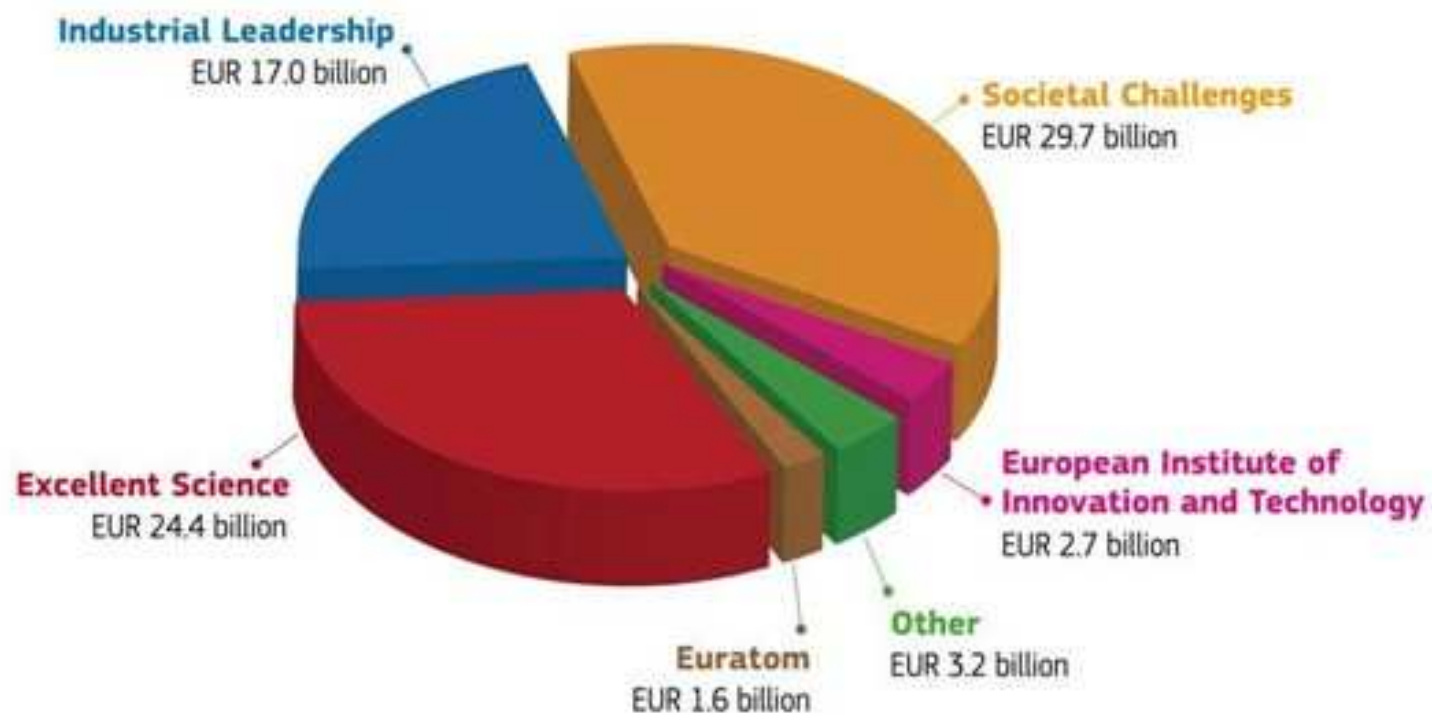


European
Commission



Research and
Innovation

HORIZON 2020 BUDGET (EUR 78.6 billion, current prices)





Excellent science

- ***European Research Council***

Supporting top researchers from anywhere in the world to work in Europe

- ***Future and Emerging Technologies***

Supporting visionary thinking through collaborations between science and engineering

- ***Marie Skłodowska-Curie actions***

Providing opportunities for training and career development of individual researchers

- ***Research infrastructures- including e-infrastructure***

Ensuring access to world-class facilities



Industrial leadership

- ***Leadership in enabling and industrial technologies***
Emphasising key technologies in areas such as advanced manufacturing, microelectronics, nanotechnology, biotechnology, ICT and space





Societal challenges

- **Health, demographic change and wellbeing**
- **Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy**
- **Secure, clean and efficient energy**
- **Smart, green and integrated transport**
- **Climate action, environment, resource efficiency and raw materials**
- **Inclusive, innovative and reflective societies**
- **Secure societies**

HORIZON 2020: Open to the world

GENERAL OPENNESS



Horizon 2020 is open to participation of researchers from anywhere in the **world**, to:

- ✓ Extend the frontiers of scientific knowledge
- ✓ Tackle challenges that affect us all
- ✓ Make industries more competitive



HORIZON 2020: Open to the world

1. Projects can include international partners

2. Targeted opening

- In certain topics in calls for proposals, inclusion of international partners may be:

- a) encouraged
- or
- b) required

3. Coordinated calls

- Used for specific actions (e.g. identified through joint steering committees). Paired calls, linked evaluations, two contracts, e.g.:

- a) EU-Japan R&D Cooperation in Net Futures
- b) Partnering with Brazil on advanced biofuels

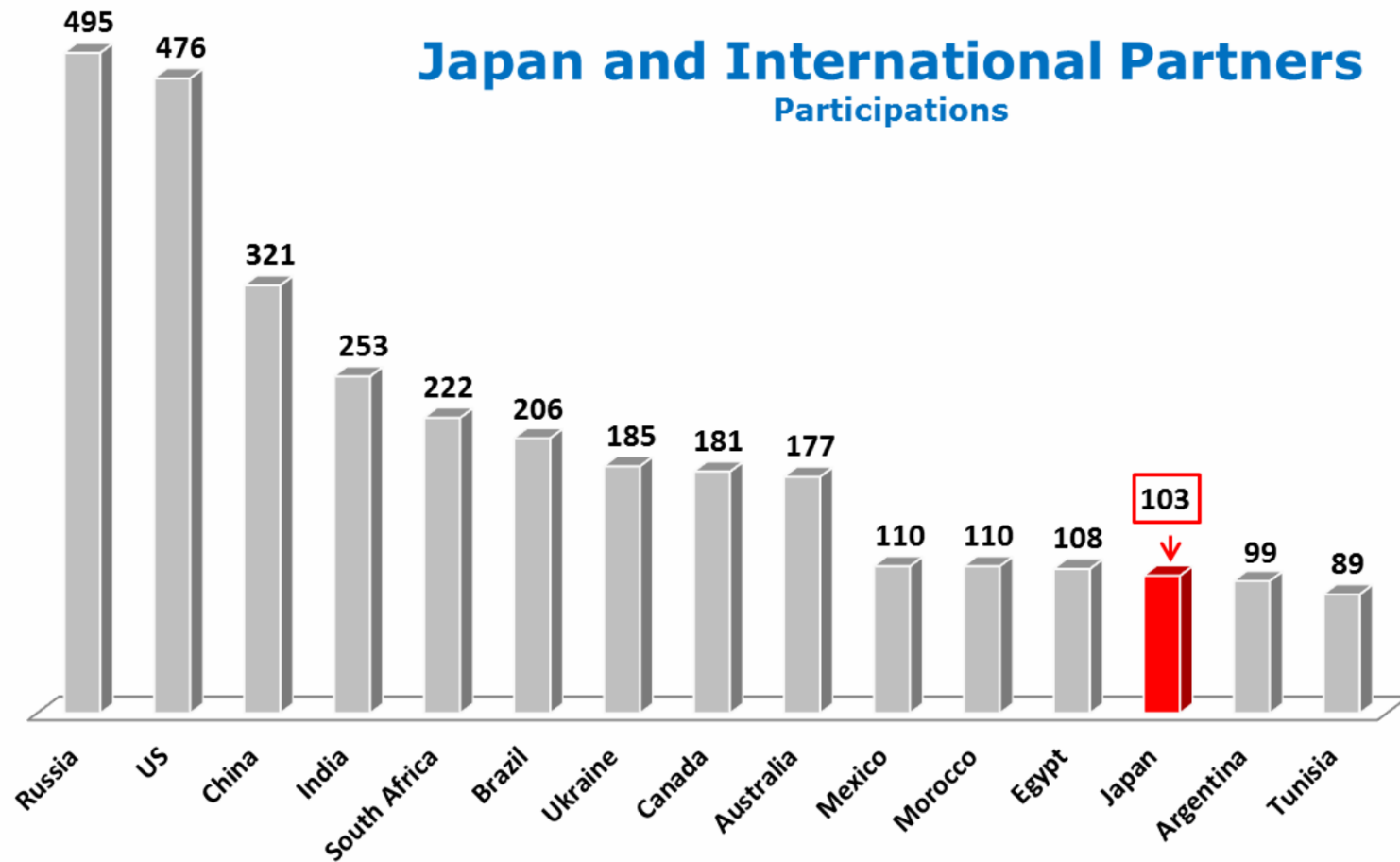


Japan's Participation



in FP7

Japan and International Partners Participations



*Excluding People and Ideas Specific Programmes

Japan –EU Summit 2013



19 November

...towards a research and innovation partnership



Research and
Innovation

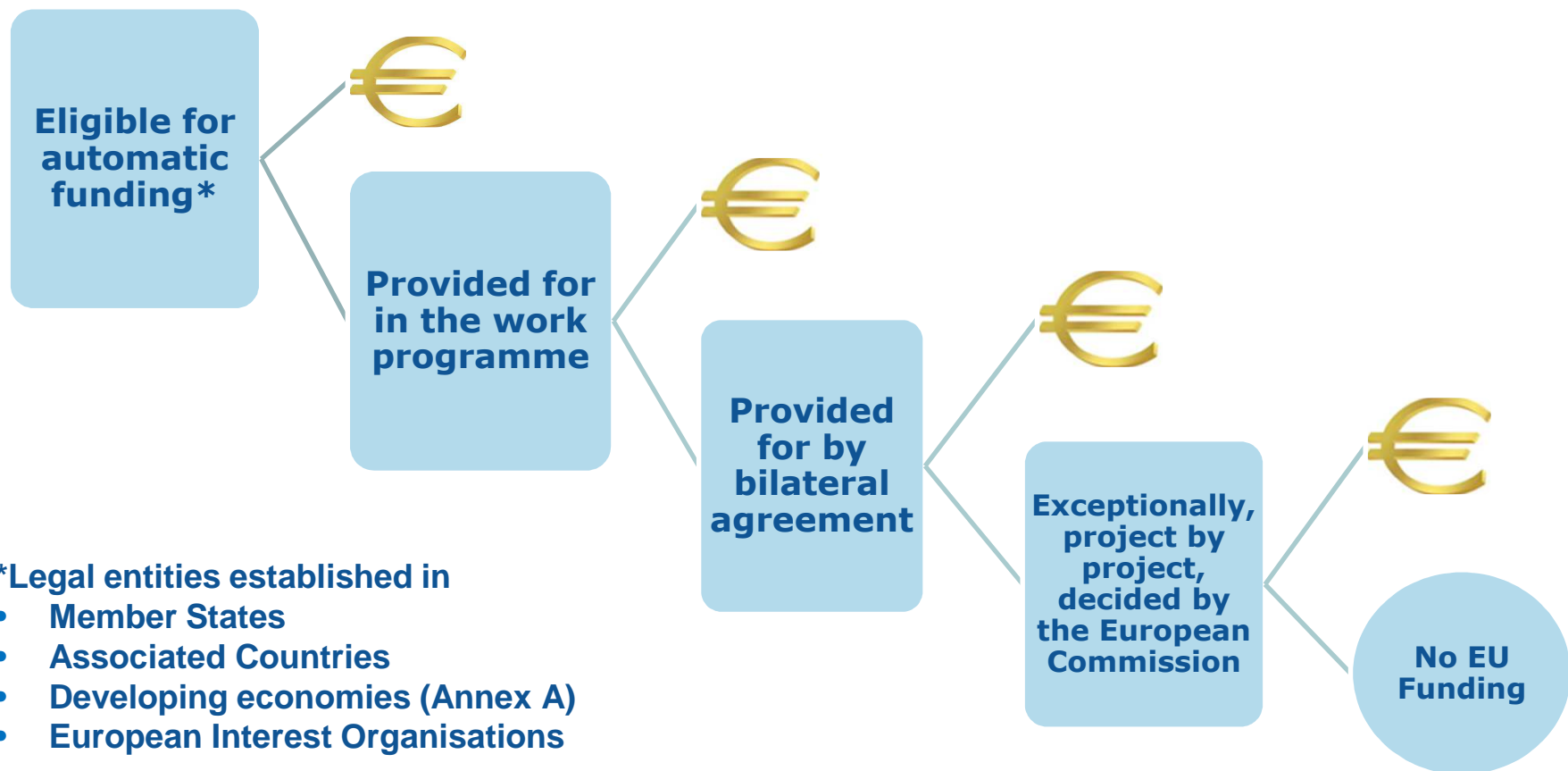
Rules of participation



Minimum Conditions:

- For standard (cooperative) research projects:
 - 3 participants from different Member States or associated countries
- In addition, participants from any other country in the world can also be included**
- For actions aimed at individuals, like European Research Council or Marie Skłodowska-Curie:
 - 1 researcher
 - 1 host institution
 - 1 project

Eligibility for funding



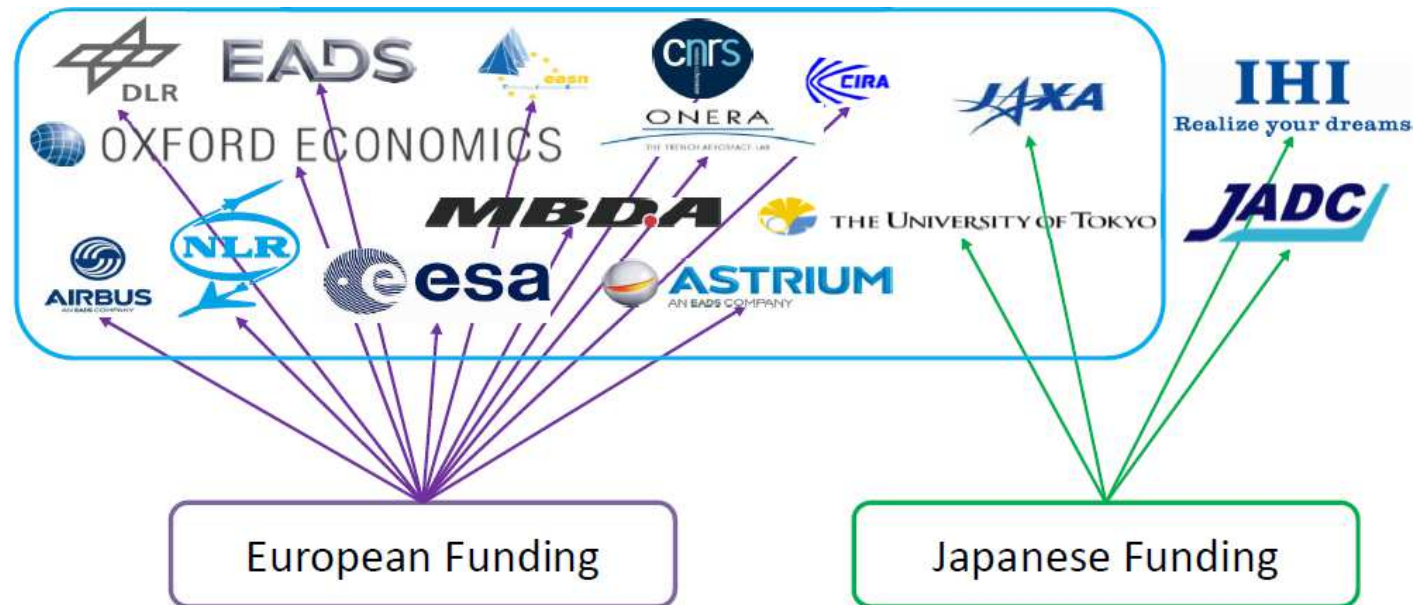
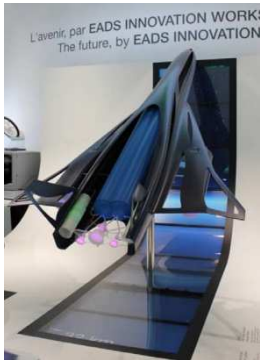
Ongoing EU – Japan



FP7 HIKARI

光
HIKARI

- High speed Key technologies for future Air transport - Research & Innovation cooperation. www.hikari-project.eu
"Fly Brussels – Tokyo in just 3 hours".
- Roadmaps:
 - Economic & market impact
 - Environment, Fuel (H2), Propulsion
 - Thermal and Energy management



- 2 years
- 2 M€ costs
- 2013-2014

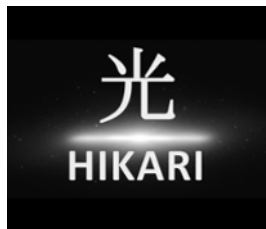
Opportunity for Japan



From HIKARI to HEXAFLY-INT

- + **Innovation:** step-change in global aviation + spin-offs in space and energy (hydrogen).
- + **Inspiration:** new generations of engineers.
- + **Cooperation:** share risks, costs & benefits.

EU + Japan



Economy &
Environment
Roadmaps
2013-2014.

www.hikari-project.eu

Multinational: EU + RU + AU + BR(tbc)



Japan welcome
to join!



Materials, Aerodynamics, Control, Vehicle
Development, ground & scaled **Flight Test.**
2014-2019. 30 M€ Total Effort.

<http://www.esa.int/hexafly-int>

Japan and the EC exerts joint leadership through the GEO Governance



- EC is one of the 4 GEO co-chairs
- Japan is one of the 12 members of the GEO Executive Committee
- Japan and the EC provides support to the GEO Secretariat which is established at WMO in Geneva
- Japan and the EC are working together in the GEO implementation boards that are overseeing the implementation of the GEO tasks.
- Japan and the EC are also participating to the GEO Data Sharing Working Groups.



Looking into the future – GEO post 2015

Developing GEO's Implementation Plan 2016-2025:

Japan and the European Commission are actively participating in the formulation of GEO's Implementation Plan 2016 – 2025.

Both Japan and the EC have designated experts that are members of the Implementation Plan Working Group (IPWG) which is set up to formulate the directions and concretise the strategic vision GEO set by the Ministerial Summit in early 2014.

The work of the IPWG will be presented at the GEO Plenary in Gabon on 13-14 November



Possible future Collaboration

- Development the GEOSS information system
- Incubating new services and products for the citizens integrating Earth Observation
- Integrated Polar Observing System
- Novel in-situ observation systems
- Provide disease emergence/break out monitoring platforms
- Stimulating operational Global Monitoring of Agriculture in the GEOGLAM context

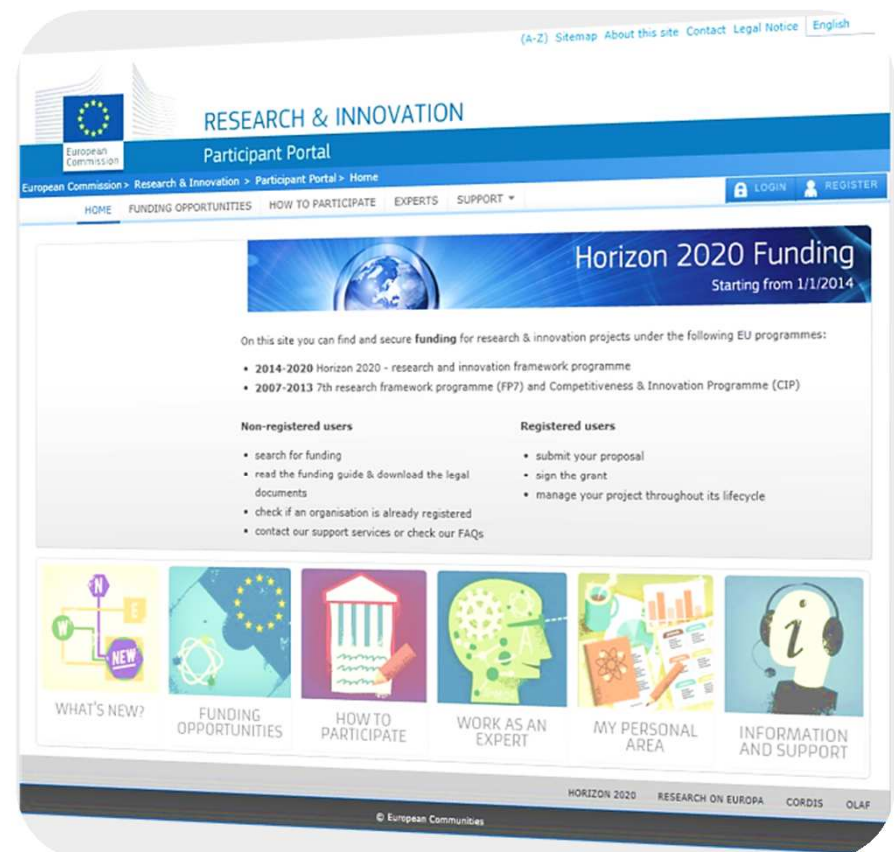
H2020 WP 2014/15 – EO activities



	SC5 + focus area BG	SPACE
2014	<ul style="list-style-type: none"> • SC5-8a-2014: Coordinating and supporting EO research: EU EO networks • SC5-16-2014: EO for Ecosystem • BG-08-2014: Atlantic Observing System (Blue Growth focus area) • GEO apps (Joint Research Centre) <p>~36 M€</p>	<ul style="list-style-type: none"> • EO 1 – 2014: new ideas for Earth-relevant space applications • EO 2 – 2014: Climate change-relevant space data reprocessing and calibration • EO 3 – 2014: Observation capacity mapping for Atmosphere and Climate Change monitoring • Plus continuity MACC (atmosphere) & MyOcean (marine): 11M€ <p>~21 Mio€</p>
2015: Opens: 10/12/14 Closes: 21/04/15 08/09/15	<ul style="list-style-type: none"> • <u>SC5-18b-2015: Integrating North African, Middle East and Balkan Earth Observation-Coordination and Supporting Action</u> • <u>SC5-15-2015: ERA-NET Cofund (~11Mio)</u> • <u>SC5-17-2015: Demonstrating 'Citizens' Observatories'</u> <p>~33 M€</p>	<ul style="list-style-type: none"> • EO 1 - 2015: Bringing EO applications to the market - <i>Innovation Actions</i> • EO 2 – 2015: Stimulating wider research use of Copernicus Sentinel data • EO 3 -2015: Imaging technologies from space <p>~26 M€</p> <p style="text-align: right;">2 3</p>

Where to find more information and where to apply?

- **Horizon 2020 Participant Portal**
Research and Innovation
European Commission
<http://ec.europa.eu/research/participants/portal/desktop/en/home.html>
- **Horizon 2020**
European Commission
<http://ec.europa.eu/programmes/horizon2020/>
- **NCP Japan**
toshiyasu.ichioka@eu-japan.gr.jp





HORIZON 2020

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Thank You!

Find out more:
www.ec.europa.eu/horizon2020

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