

EU-Japan Joint ICT R&D

December 3, 2018

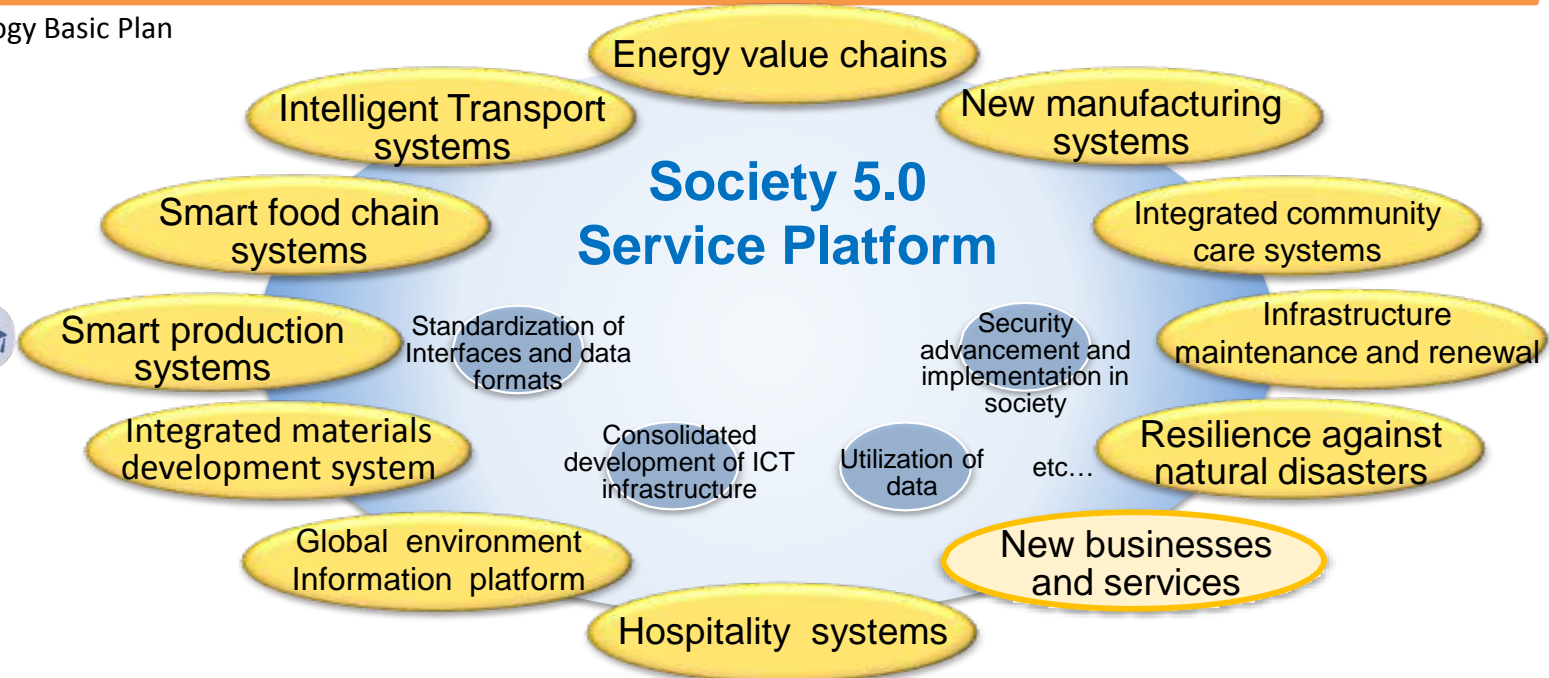
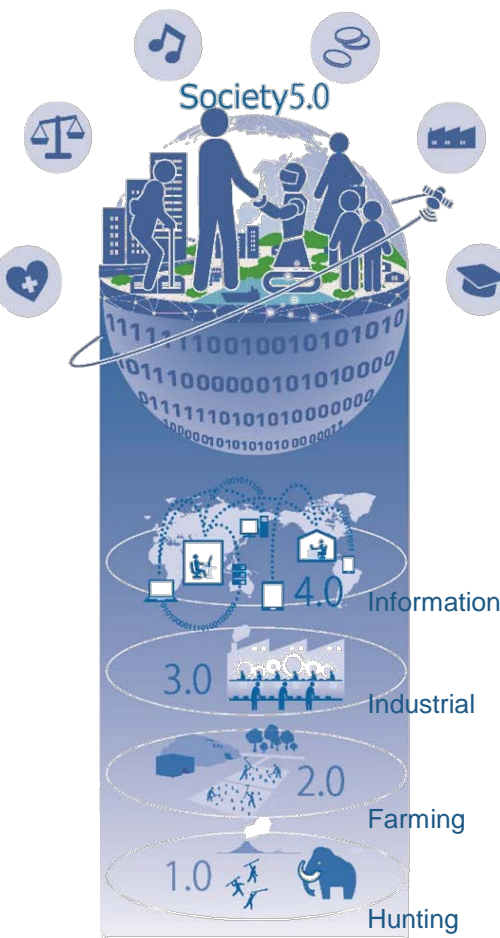
ICT Standardization Division

Ministry of Internal Affairs and Communications (MIC)

Society 5.0 ~Realizing “Super Smart Society”~

- Japan presents “Society 5.0” as a future vision which brings prosperity to people through the integration of cyberspace with physical space.
- As a fundamental effort, Japan will develop “Service Platform” where IoT technologies can be utilized efficiently.

Source: The 5th Science and Technology Basic Plan



- Technologies for Service Platform
⇒ cybersecurity, IoT system development, “big data” analysis, AI, devices, and network etc.
- Japan’s Competitive Technologies
⇒ robots, sensors, biotechnology, materials and nanotechnology, and photonic/quantum technology etc.

International Standardization

■ **Growth Strategy 2018** (June 15, 2018, Cabinet Decision)

II. [3] (3) i) (ii) International Standardization of Society 5.0

- Summary: The public and private sectors will [jointly discuss the international standardization strategy to disseminate Society 5.0](#) as Japan's initiative to the international community.

■ **Basic Policy on Economic and Fiscal Management and Reform 2018**

(June 15, 2018, Cabinet Decision)

Chapter 2 5. (2) 1) Promotion of science and technology and innovation

- Summary: From the perspective of [strengthening Japan's international competitiveness](#), the government will make joint efforts by the public and private sectors to consider cyber security measures and [international standardization of cutting-edge technologies](#).

=> Japan considers that international standardization is important.

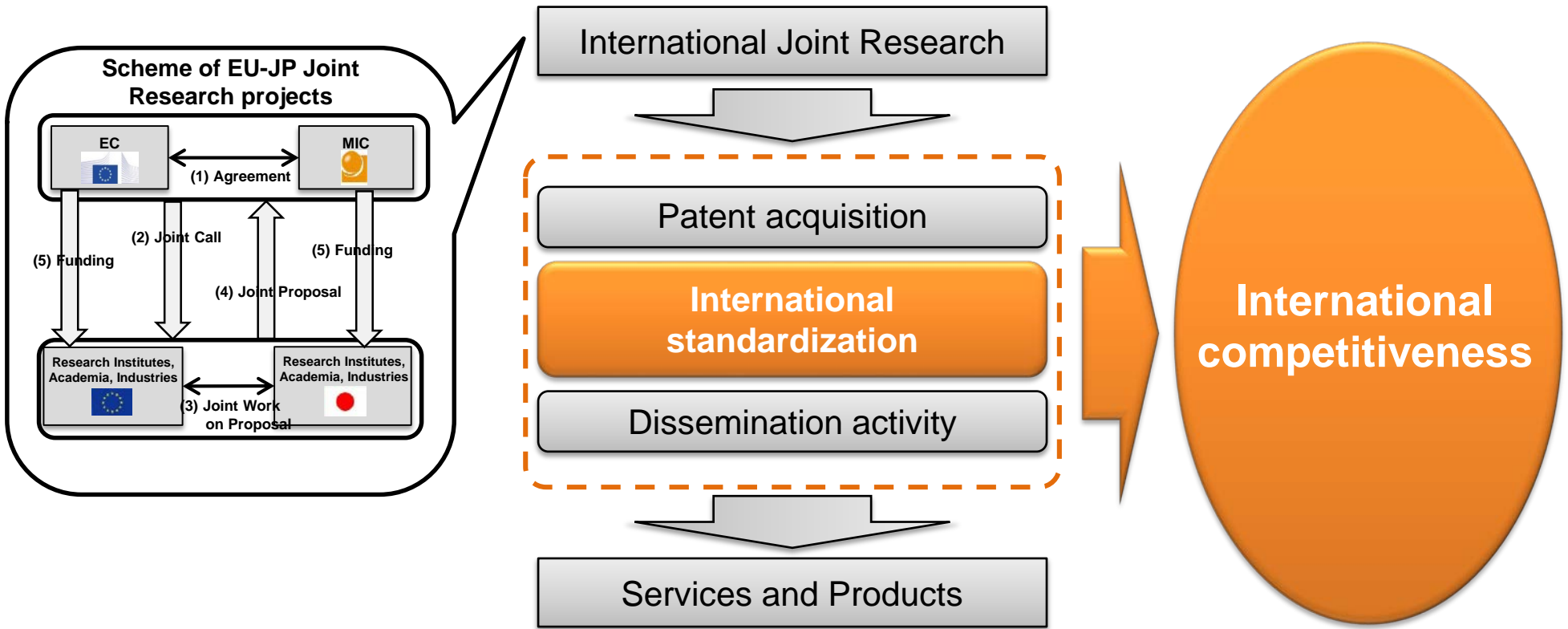
International Joint Research

- MIC and the European Commission Directorate General for Communications Networks, Content and Technology (EC) [agreed on the promotion of EU-JP Joint ICT Research](#) at the "18th EU-Japan ICT Policy Dialogue" on June 17, 2011

- Since then, MIC and EC periodically confirm the importance of the Joint Research at the Policy Dialogues and [agreed on further promotion of EU-JP Joint ICT Research](#) at the "23rd EU-Japan ICT Policy Dialogue" on October 4, 2017.

■ In order to create innovation and strengthen international competitiveness together with EU, MIC funds joint R&D projects proposed by EU-JP joint teams.

- 4 Joint Calls for 10 projects, in total, have been conducted.
 - NICT* is also funding joint projects with EU in the similar scheme.
- *National Institute of Information and Communications Technology



1) Software vs. Hardware

- Both the improvement of performance driven by hardware and the enhancement of functions realized by software achieve new communication services.
- Improvements in hardware performance also bring about a change in the form of providing functions from “specific-purpose hardware” to “software and general-purpose hardware”.
- Software makes the use of open technologies easier, and consequently approaches to develop technologies are changing.

2) Distributed vs. Concentration

- Where to process data and control equipment (edge, cloud, etc.) depends on several factors such as technical trends, service requirements, and cost constraints.
- New technical approaches are studied to realize new services and applications based on the expanding availability of networks with improved performance and function.

3) Progress of AI

- AI utilization is advancing rapidly due to the evolution of deep learning technology.
- In addition to full/semi automation of judgment and work, detection of things invisible to human eyes and value creation cooperated with human beings are expected as the core of future development.
- The spread of AI has potential for a paradigm shift.

Integrated promotion of technology development and human resource development

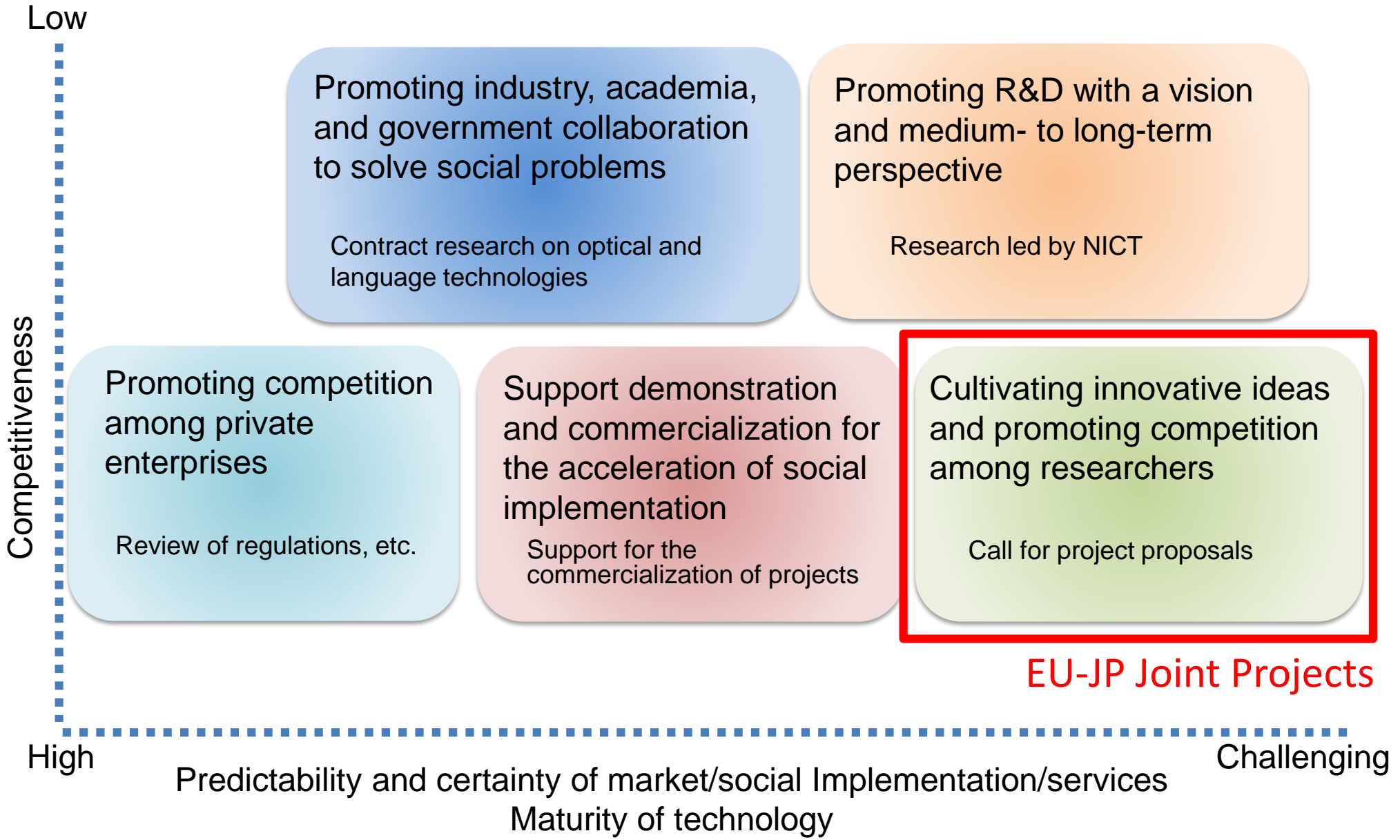
- Promoting people-to-people exchange through R&D projects and training the architectural quality of people to see the entire project.
- Developing global talents through their international team experience. (International joint researches)

Environments that develop diverse ideas

- Cultivating a wide range of technical seeds by utilizing competitive funding and calling for project proposals, expecting diversified approaches to problem solving.
- Finding original and creative technical themes that will become future innovation seeds, and supporting ambitious, challenging projects.
- Promoting international R&D collaboration as a source of various ideas. (International joint researches)
- Environmental improvements to test innovative ideas and technologies. (Testbeds)

Accelerating social implementation

- Encouraging start-ups to put into practice and commercializing seed technologies without being afraid of failures.
- Accelerating the implementation of technology development into society by curving out utilization technologies in parallel with basic technologies.



EU-JP Cooperation on ICT Research

■ Promoting ICT joint research through the holding of a symposium since 2008

2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018



Symposium



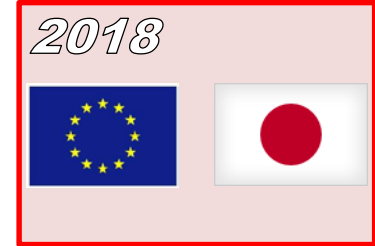
1st EU-Japan Symposium
Jun. 8 - 10, 2008 @ Brussels



3rd EU-Japan Symposium
Oct. 20-21, 2010 @ Tampele



6th EU-Japan Symposium
Oct. 6-7, 2016 @Japan



7th EU-Japan Symposium
Dec. 3, 2018 @ Vienna

ICT Policy Dialogue



18th EU-JP ICT Policy Dialogue
Jun. 17, 2011 @ Brussels



19th EU-JP ICT Policy Dialogue
Nov. 14, 2012 @ Tokyo



21st EU-JP ICT Policy Dialogue
Mar. 24, 2015 @ Tokyo



23rd EU-JP ICT Policy Dialogue
Oct. 4, 2017 @ Tokyo

Ministerial dialogue

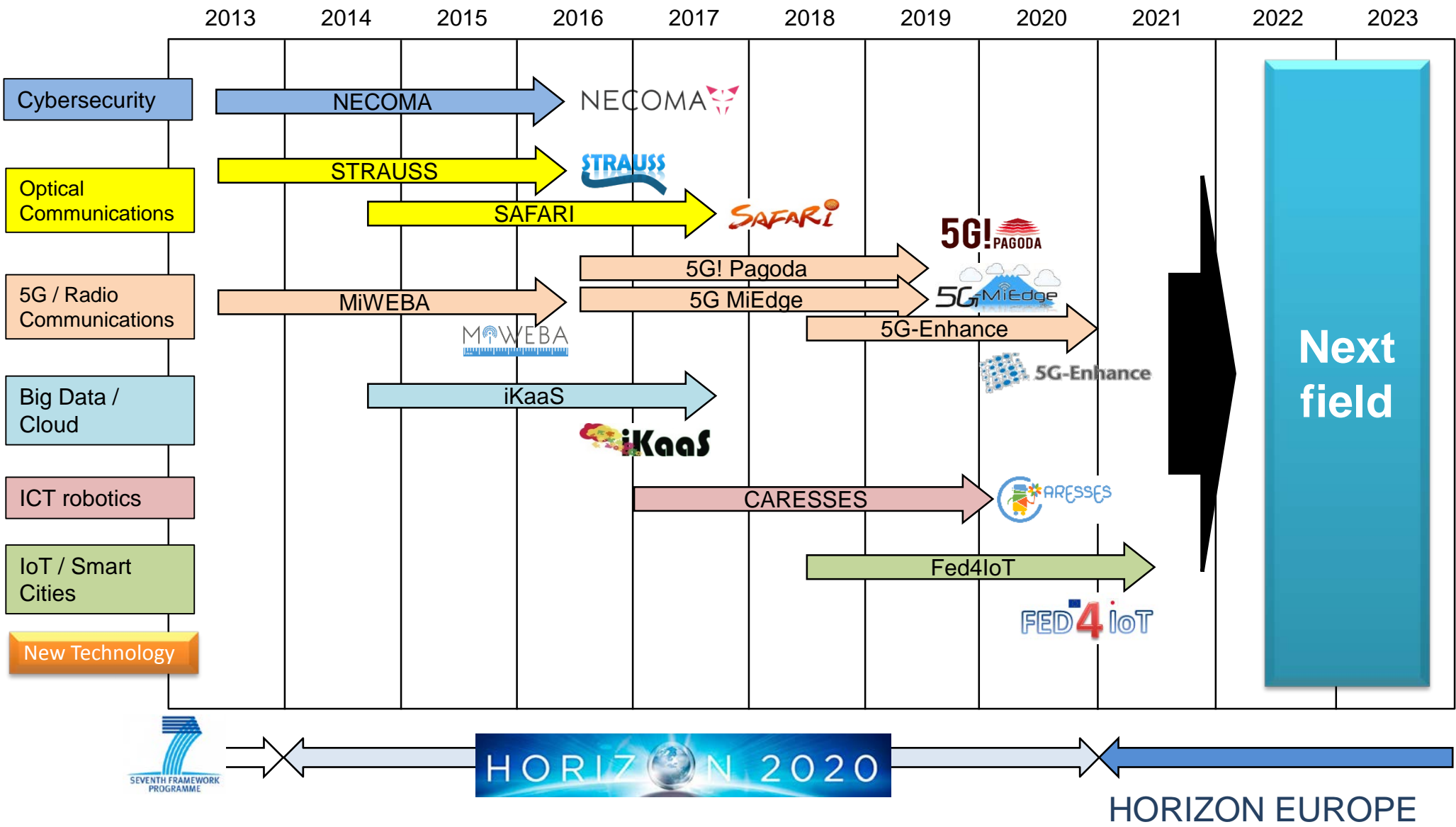


Ministerial dialogue
May. 3, 2012 @ Brussels



Ministerial dialogue
April. 29, 2016 @ Japan

Joint Research Projects (Funded by MIC)



- EU-JP joint research has been conducted as a framework which produces high synergy effect brought about by the EU-JP consortia organized under joint calls.
- Under this framework, creating innovations is expected through challenging themes in order to strengthen international competitiveness of Japan and EU.

Examples of important themes in the ICT field:

IoT/Cloud/Big Data

- ❑ Developing massive scale wireless IoT platform combined with communication infrastructure, network, and cloud
- ❑ Solving the social problems such as environment and energy by analyzing big data collected in real world

e-Health

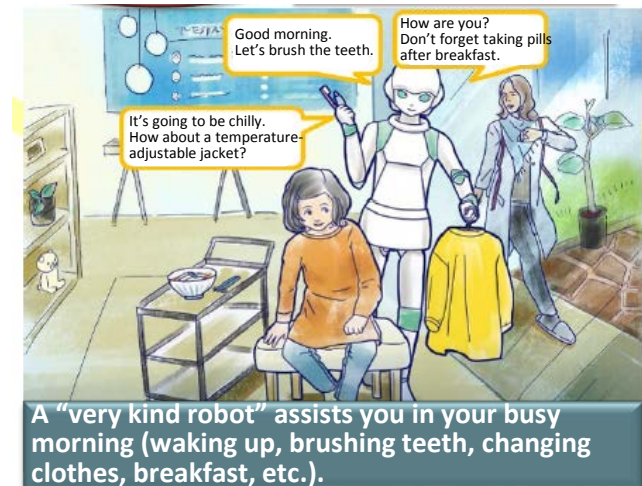
- ❑ Developing assisting equipment and services utilizing ICTs such as IoT and AI for individual needs
- ❑ Developing technologies to bring out individual potential by utilizing IoT and AI

5G and Network

- ❑ Developing bilateral eMBB, URLLC and mMTC network technologies
- ❑ Developing wireless technologies realizing remote control of high-speed vehicles and fully autonomous robots

other areas...

“Osekkai” Robot (Very Kind Robot) which manages health and assists daily activities



A “very kind robot” assists you in your busy morning (waking up, brushing teeth, changing clothes, breakfast, etc.).

TECH Strategy to Grab the Future (MIC 2018)

Thank you for your attention!