

# PUBLIC HEARING ON “HORIZON EUROPE, EU’S RESEARCH AND INNOVATION EXCELLENCE” ITRE COMMITTEE 8 OCT 2018

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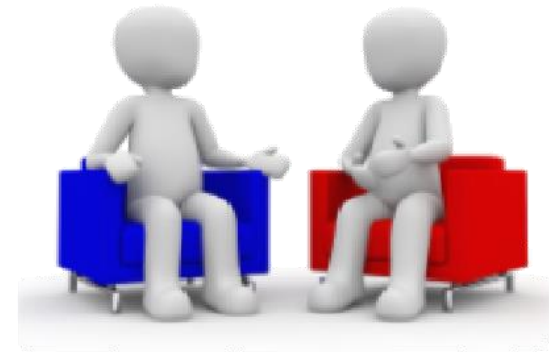
## ECSEL Joint Undertaking

Electronic Components and System for European Leadership

# LET'S TALK ABOUT...



- Global and political challenges
- PPPs - The added value and impact, in particular JUs
- The case for ECSEL JU
- Advocacy for the future
  - What JUs would need in Horizon Europe



# GLOBAL MEGATRENDS



## Demographic & social change



**2050:** > 9bn people on earth

## Urbanization



**2030:** > 6bn people in cities\*

## Climate change & resource scarcity



**Today:** fossil fuels account for ~ 80% of energy supply

## Digital transformation



**2020:** > 30bn internet connectable devices

# STRATEGIC AND FOCUSED GROWTH “MADE IN CHINA...”

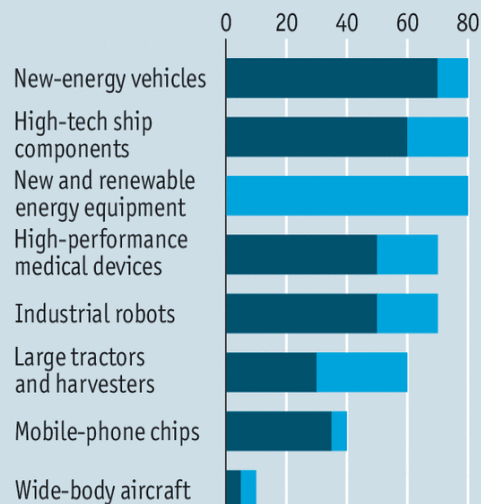


## “Made in China 2025”



### Dominant ambitions

Chinese companies' domestic market-share target, %



Source: Mercator Institute for China Studies

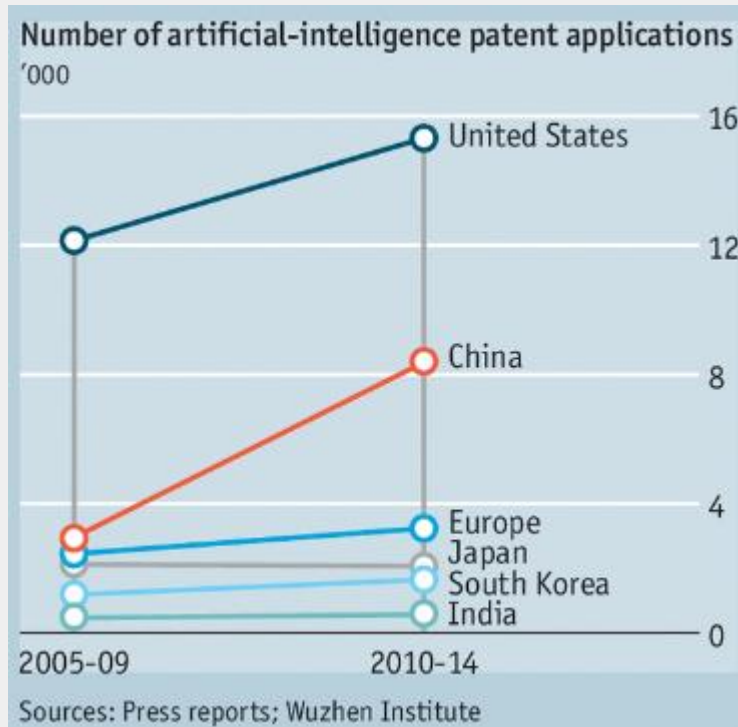
Economist.com

### Combination of:

- › Technology from outside\*
- › Own capabilities
- › Market demand
- › Public money

**...may give the strategy  
“Made in China 2025”  
significant effects ...**

# CHINA & U.S. ARE ON THE FAST TRACK: EXAMPLE ARTIFICIAL INTELLIGENCE





# CHINA & U.S. ARE ON THE FAST TRACK: EXAMPLE ARTIFICIAL INTELLIGENCE



## AI'S TRANSFORMATIVE POTENTIAL

Projected Global Economic Effects  
of AI by 2030



### CHINA'S AI ASPIRATIONS

China aims to lead the world in AI technologies by 2030.

The Chinese government aims to build a US\$15 billion AI market by 2018.

However, by 2030, AI will provide an expected 26% boost to GDP.

(Source: CNBC, Technode, PwC)

# TECHNOLOGY IS LINKED WITH VALUES



USA's Way



China's Way



## Europe's Way?

e.g. Europe 2020:  
Smart, Sustainable and Inclusive Growth and Jobs

# CURRENT R&I PARTNERSHIPS / INITIATIVES



Partnership approaches	Public-public partnerships (P2P)	Public-private partnerships (PPP)	EIT-KICs*	FET Flagships**
Implementation modes	ERA-NET-Cofund, EJP Cofund, Article 185, Joint Programming Initiative (JPI)	Contractual Arrangement (cPPP) Article 187	H2020 Grant agreements for different types of actions Framework Partnership Agreements (FPA)	
Currently active R&I Partnerships (Horizon 2020)	a) ERA-NETs: ~70 b) EJP Cofund: 5 c) Article 185: 6 d) JPIs***: 10	a) JUs: 7 (+HPC) b) cPPPs: 10	a) KICs: 6 (+ 2 until 2020)	a) FET-Flagships: 2 (+Quantum)
Financial contribution from H2020, estimated)	<b>2.500 MC</b> (3,1% of H2020 budget)	<b>13.450 MC</b> (17,5% of H2020 budget)	<b>2.400 MC</b> (3,1% of H2020 budget)	<b>1.000 MC</b> (1,3% of H2020 budget)

\*EIT-KICs: Knowledge and Innovation Communities (KICs) of the European Institute for Innovation and Technology (EIT)

\*\*FET-Flagships: Flagships of the Future and Emerging Technologies programme (FET)

\*\*\* JPIs: Joint Programming Initiatives are no EU level instruments but included here as they receive EU support via ERA-NETs and/or CSAs



# ADDED VALUE AND IMPACT OF PPPs IN PARTICULAR THE JUs



- Thinking, Working and Investing together
- Significant critical mass
- Multi Annual and focussed Technology Strategy
- Long term commitment and engagement of all partners
- Development of an European Ecosystem
- Reliable, Affordable and Credible platforms

=> JUs are “Building Europe”



# ECSEL JU – ENABLING DIGITALISATION



## KEY APPLICATION AREAS



**ECSEL  
So Far**

**8**  
Calls

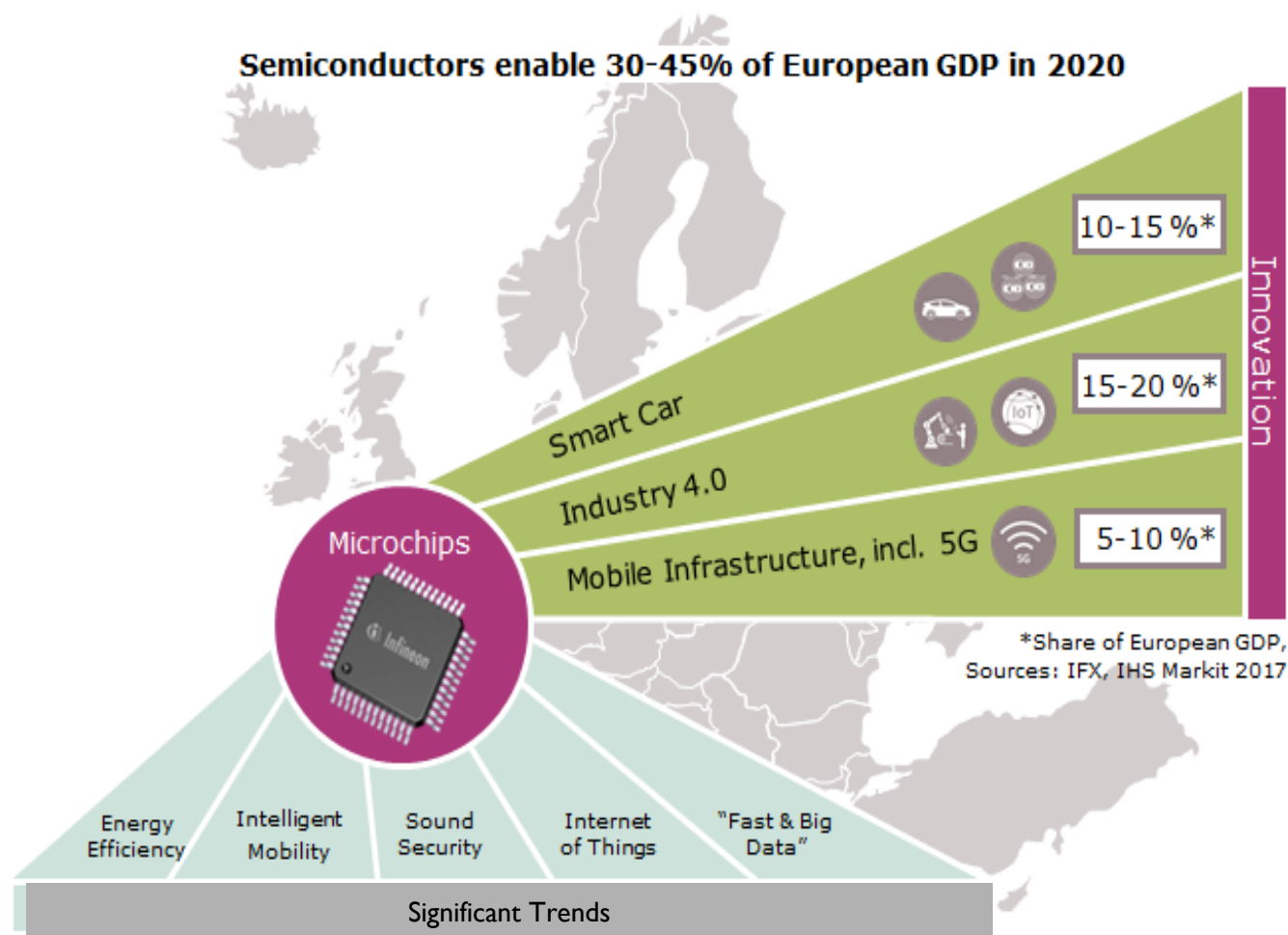
**51**  
Projects

More than  
**1600**  
participations

**2.6 bn€**  
RDI cost

**1.2 bn€**  
EU and National funding  
**1.4 bn€**  
industries own financing

# ECSEL JU – ENABLING DIGITALISATION



# SOME FACTS AND FIGURES

## Joint Undertakings

**Mission-oriented**: focus effort onto strategically significant industrial/societal domains

**Financial leverage** of the EU public funding with private investment (~7b€ generate >17 b€)

**Affordable**: efficient administration of complex programs for <5% of their operational budget)

## The ECSEL JU “tripartite” model

- **Engages participating Member States** by aligning and coordinating industrial / National / European priorities and resources in the ERA
- Contributes to the **security and technological independence** in the ECS sector as **key enabling technology** for Europe
- Assures **full openness** (open participation & no membership requirements)
- Clear, auditable evaluation of in-kind contribution by participants
- Proven effectiveness in creating **vital eco-systems** for research, exploitation, societal valorisation

# WHAT DO JUs NEED?

- Awareness of strategic role and political importance played by the JUs;
- Political commitment to European Industry's strategic visions and massive investments in Europe;
- Strategic alignment of EU and National investments increases impact of JUs (e.g. ECSEL tripartite structure)...
- ...because only bold measures can fit global competition: larger scope and higher budget to be coherent with the set EU priorities
- The right framework conditions, incl.
  - legal basis allowing for combining funding streams including ESIF, EIB, joint calls,...
  - aligned (simplified) reporting by participants to keep the programme industrially attractive and administration effective



# CONCLUSIONS

- **The new “geopolitical currency” is technological competence:** it is system-relevant for competitive strength, economic autonomy, societal sovereignty and security.
- **Sense of urgency for Europe:** bold measures in terms of strategy and investments, speed has become competitive factor in the global setting.
- **A Joint Undertaking** is an appropriate and effective instrument to tackle these global challenges and contribute to European competitiveness as they have tangible and real added value and impact; they are reliable & functioning well.
- Thank you to make them **stronger, faster, sharper** under **Horizon Europe**.

THANK YOU FOR YOUR KIND ATTENTION

Questions?