



EF ECS 2017

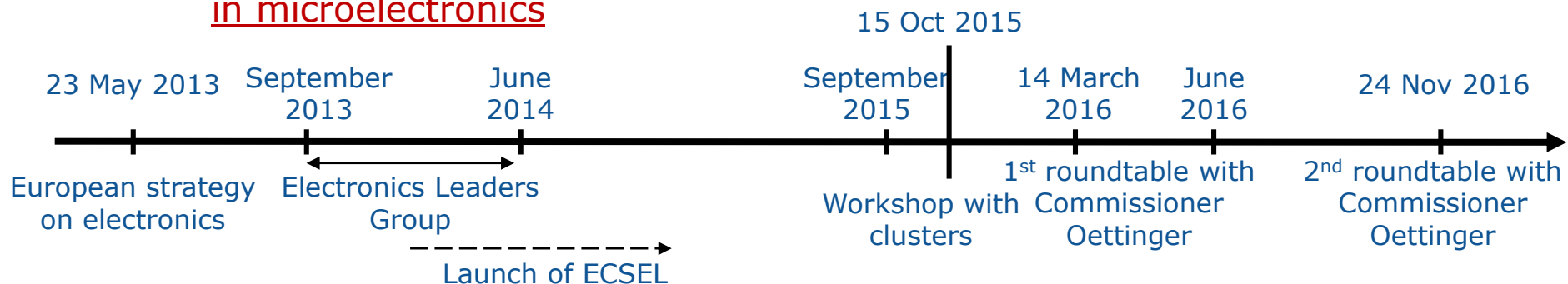
Impact of Funding Tools

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Competitive Electronics Industry
European Commission - DG CONNECT

- Strategy for electronics components and systems
 - Objective: Reverse the decline of EU's share of world's supply
 - Focus on Europe's strengths, build on and reinforce Europe's leading clusters
 - Seize opportunities arising in non-conventional fields and support SMEs growth
- Actions
 - Towards a European Strategic Roadmap for investment in the field -> [Electronics Leaders Group roadmap & implementation plan](#)
 - The Joint Technology Initiative: A tri-partite model for large scale projects -> [ECSEL Joint Undertaking](#)
 - Building on, and supporting horizontal competitiveness measures -> [Communication on IPCEI and stimulating the building up of the IPCEI in microelectronics](#)

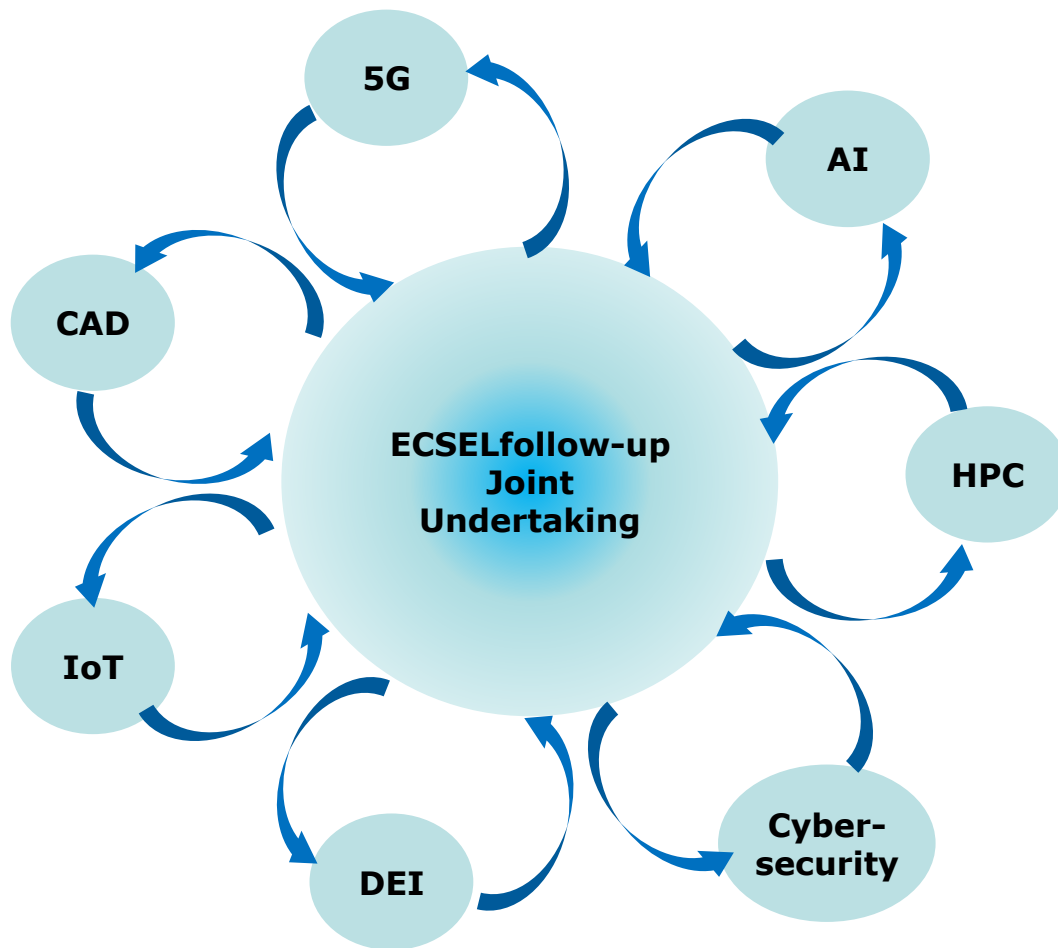


- Tripartite PPP – Commission, Member States and industry
- Boost the **maturing and uptake** of highly innovative technologies for electronic components and systems
- High **leverage effect** on EU contribution
 - The European Union (1.17B€, via EC/H2020)
 - The ECSEL Participating States (>1.17B€)
 - The Private Members (~ 5B€ minus grants)
 - Build upon ARTEMIS/ENIAC JU experience and achievements
- So far, 39 projects funded 2.25 B€ total costs and 540 M€ EU funding

Follow-up of ECSEL under FP9 – general elements

- ECSEL well positioned in the Lamy report
 - Open, transparent
 - Focused (non-redundant instrument)
- General objectives for a follow-up ECSEL (interim evaluation)
 - Keep its **tripartite structure** with an objective to improve it through
 - Harmonisation of the funding rates and of the eligibility criteria;
 - Improved transparency in funding and unified reporting mechanisms;
 - Multiannual financial commitments by the Participating States;
 - Better focus on the **strategic ambitions** of the JU to become a central instrument supporting European policies not just on ECS, but also HPC, cybersecurity, AI, etc.
- Consultations with Member States and Industry Associations involved in ECSEL

ECSEL linking to digital initiatives (for e.g.)





IPCEI in microelectronics

- Important Project of Common European Interest = State-Aid instrument to enable strategic investments
- IPCEI in microelectronics under preparation by Germany, France, Italy and UK
- 5 technology areas
- Highly innovative electronic components for Internet of Things, automotive and 5G networks

- Lessons learned so far
 - The Communication on IPCEI could be better used as a basis for building the project
 - The R&D&I of the research to enable the first industrial deployment need to be part of the project and the related costs should be substantial
 - Spill-over effects are an important component of the project: these should go beyond IP protection and the involved Member States and related industry
 - IPCEI is not a "business as usual" R&D project; state-aid issues need to be well understood and addressed by the industry

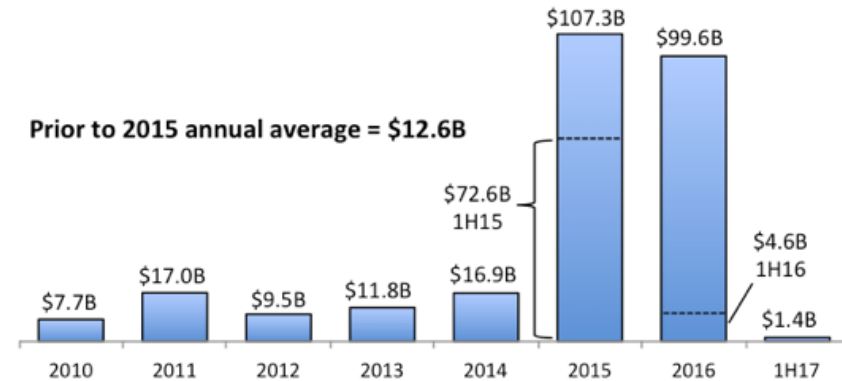
Preparing for the future

- Updating strategic roadmaps
 - preparing a follow-up of the strategy on electronics with a long term planning extending beyond 2020
 - role of the Electronics Industry in the digitisation of industry in particular for SMEs, ensuring Europe's technology independence
 - extend the eco-system building and the significant role of RTOs

Other Challenges

- 2015 and 2016 have witnessed the largest wave of mergers and acquisitions so far in the semiconductor sector

Value of Semiconductor M&A Agreements



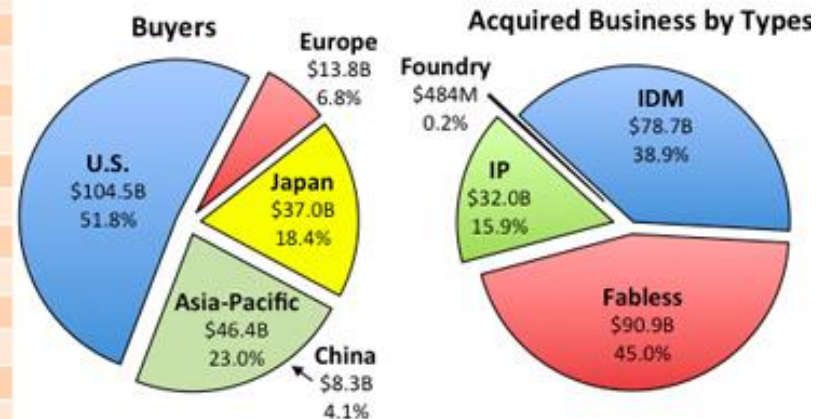
Source: IC Insights

Biggest Semiconductor Acquisition Agreements

Ranking	Acquisition-Buyer (Year Announced)	Price Tag (\$B)
1	NXP by Qualcomm (2016)	\$39.0
2	Broadcom by Avago (2015)	\$37.0
3	ARM by SoftBank (2016)	\$32.0
4	SanDisk by Western Digital (2015)	\$19.0
5	Freescale by U.S Investment Companies (2006)	\$17.6
6	Altera by Intel (2015)	\$16.7
7	Linear Technology by Analog Devices (2016)	\$14.8
8	Freescale by NXP (2015)	\$11.8
9	Burr Brown by TI (2000)	\$7.6
10	LSI by Avago (2013)	\$6.6
11	National Semiconductor by TI (2011)	\$6.5
12	ATI by AMD (2006)	\$5.4
13	Spansion by Cypress (2014)	\$5.0
14	Agere by LSI (2006)	\$4.0
15	Chartered by GlobalFoundries (2009)	\$3.9

Source: Companies, IC Insights (2017 McClean Report)

Breakdown of 2015-2016 M&A Wave



Source: IC Insights

