



ECSEL Pilot Lines Success Stories & Impact

Yves Gigase, ECSEL JU

Head of Operations

Yves.gigase@ecsel.eu



OPEN WORKSHOPS - 19 NOVEMBER 2019



Strengthen the European supply chain of Electronic Components and Systems





Long term vision is needed for excellent projects to achieve impactful results



Why ECSEL Pilot lines™?

3

- **Mobilising** (large) communities with a mix of companies and public research organizations: Helps to **build up trust** between industrial partners and research partners (time!) but also along value chain,... **Reinforce partnerships**
- **Pipeline** of projects: continuous action with follow up projects: FDSOI; RFSOI; memories for MCUs
- Above **critical mass** to:
 - Working along the **technology/supply chain**: From materials to product
 - Working **along value chain**: a motorway to accelerate the co-innovation and market adoption;
- **Strengthen demand in Europe**, attract manufacturing capabilities, maximize the impact through strategic markets
 - not necessarily in one project but globally across projects in a pipeline
 - RF-SOI for aeronautics, 5G, ...
 - FDXcelerator, RFwave
- **Pushing** new products/technologies in new markets, starting new companies: Lynred
- Exploiting **synergies** across application and technology domains
- Working **across competition**: addressing new markets, sharing risk
- **Benchmarking** technologies, educating engineers in new technologies,
- Including **new technologies** in the pipeline
 - 3nm gates in III-V; embedded memories for new fields; neuromorphic and q-computing
- Mitigate the risk of R&D on high tech products



And more to come ... (2014-2018)

4

IA projects only

1095 participations

32 IA projects

2.1 Billion € cost

972 Million € funding

ADMONT
APPLAUSE
AQUAS
Arrowhead Tools
AutoDrive
CONNECT
CPS4EU
ENABLE-S3
EnSO
iDev40
I-MECH
InForMed
IoSense
MADEin4
MegaMaRt2
OCEAN12

PIN3S
POSITION-II
Power2Power
PowerBase
R2POWER300
REACTION
Semi40
SeNaTe
SILENSE
TAKES
TAPES3
TARANTO
VIZTA
WAKeMeUP
WAYTOGO FAST
WInSiC4AP



Impact of some closed projects Call 2014

Proposal	Short summary of the project/Reason why the project can be considered as a success story
Powerbase (IA)	Set up a GaN-on-Si technology pilot line in an existing Silicon CMOS environment. PowerBase developed next generation of " energy-saving Chips " preparing them for mass industrial use in communication servers, lighting and renewable systems (and many other applications).
Admont (IA)	More-than-Moore pilot line for sensors : the project enabled for the first time in the world a complete process flow of inorganic and organic microelectronic device manufacturing on an industrial production scale. Innovation resulted in 240 prototypes, 5 clinical trials, 74 testing activities . A total of 10 new products, 9 new processes, 4 new methods will be launched on the market.
Senate (IA)	Enable European suppliers to develop tool capabilities for the next generation 7nm IC technology . The projects was successful and 7nm technology is now being introduced in production at some major semiconductor manufacturers.
SWARM (RIA)	This project successfully investigated, extended, integrated and demonstrated a range of novel functionalities for and between Autonomous Underwater Vehicles/ Remotely Operated Vehicles in order to facilitate the creation, planning and execution of maritime and offshore operations, resulting in several important business innovations for the partners .
Mantis (RIA)	This project on Cyber Physical System based Proactive Collaborative Maintenance focusses on all aspects of preventive maintenance The project has realised significant technical achievements and a significant number of exploitable results as demonstrated by a series of very good demonstrators, spanning production asset maintenance, vehicle management, energy production asset management and health equipment maintenance . Examples include pilots in Philip's production plant and health imaging systems, in FAGOR ARRASATE for use of sensors in industrial presses and in STILL for forklift utilisation. It is noted that there are some 77 prioritized exploitable results documented related with the business models.
Robustsense (RIA)	RobustSENSE aimed at improving the environmental perception, decision making and planning capabilities of Advanced Driver Assistance Systems (ADAS) in harsh and adverse environmental conditions and demonstrated various prototyping cars, vehicle in virtual cockpit / power train testbed, new LIDAR sensor, etc.





Thank YOU !

