

HETEROGENEOUS
TECHNOLOGY
ALLIANCE

**A sustainable and successful partnership
leveraging EU technological leadership**

LAURENT HERAULT

HTA CHAIRMAN 2018

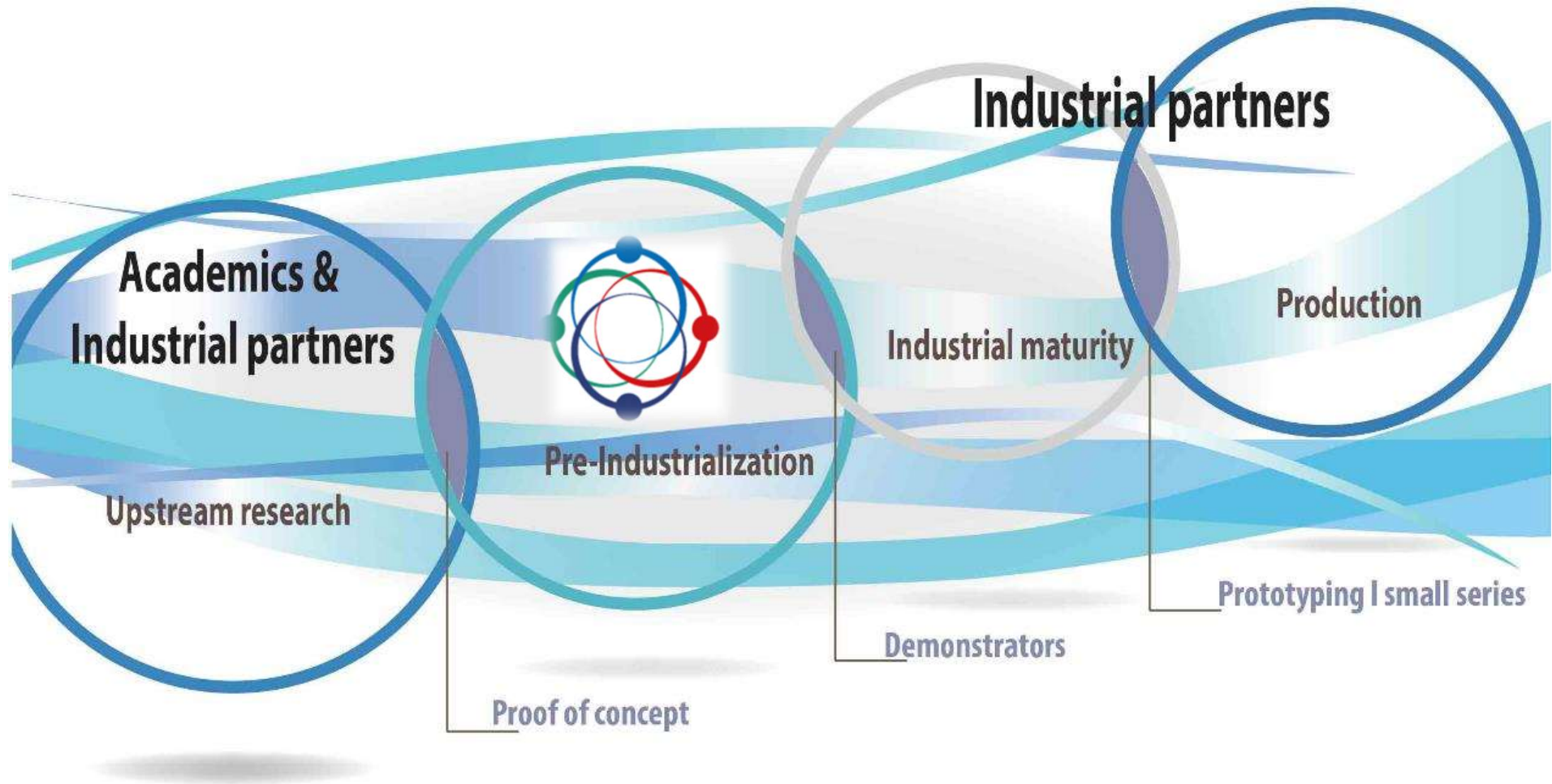
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 **Fraunhofer**
MIKROELEKTRONIK



HTA delivers at pre-industrial stage



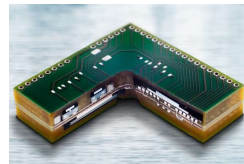
HTA missions

Build shared vision and common roadmaps

Develop innovative solutions and products

- creating and offering common technology platforms for *micro technologies, nanoelectronics and smart systems*
- setting up collaborative infrastructures for *research, piloting and small-scale production*
- developing prototypes

Contribute to the competitiveness of European industry through cutting-edge research and technology transfer services





Main focus

Development of innovative smart systems:

- technological development for new sensors and actuators,
- bringing nanoscale effects to microsystem applications,
- solving the challenges of energy harvesting and energy storage and management,
- new and more efficient system architectures by learning from nature
- miniaturizing technological systems.

Operational organization

- Quarterly F2F Board meetings + regular Board phone calls
- Yearly based presidency
- Common white papers
- Discussions on technical, financial and administrative topics:
 - FP9, Flagship, Cascade funding, DIH, JUs, PPPs,
 - CPS, Computing, Small Data, Hybrid electronics & Heterogeneous integration, autonomous vehicles ...
 - LRI, IPR, ...
- Brokerage events / Several platforms / 60 participants
 - Ideas on joint proposals
- “Young HTA” : brainstorming (“Nanorider”)
- High Level Management cross-visits

Support EU technological sovereignty

Information- and Communications
Technologies

Micro & Nanoelectronics

Microsystems

Photonics Technologies

Manufacturing Technologies

Materials Technologies

Bio Technologies

Innovative Services



Automotive
Computing
Medical Eng.
Mechanical Eng.
Logistics

HTA Platforms & Projects

Some example of common EU PROJECTS / FP and JU

Health	SOI MEMS	Photonics	Design	Process	Computing
PROETEX - FP6 IST	MNT-Eu & MNTEE - FP6	FEMTOBLUE - FET 2007	MINAmI - FP6	CONNECT – ICT 2016	EUROCPS – ICT 2014
MyHeart - IST 2002	SMARTHIES FP7 - ICT	PASTA FP7 – ICT 2009	WearaBAN FP7 SME2008	ION4SET – ICT 2016	EXANODE – FET 2014
HearthCycle - ICT 2007	IRISS FP7 - ICT 2011	LASSIE FP7 – ICT 2013	WiserBan FP7 – ICT 2009	EUROPAT – ECSEL 2016	SUPERAID7 - ICT 2015
NEPHRON+ - ICT 2009	LAB4MEMS II ENIAC 2013	ACTION FP7 – ICT 2013	Go4Time FP7 - ICT 2009	MOSQUITO – ICT 2015	
ARROWS – ICT 2009	CITCOM – FOF 2017	VIAMOS FP7 – ICT 2011	Therminator – ICT 2009		
HEMIBIO –SEURAT 2011		Sunflower FP7 - ICT 2011	Flexnet FP7 – ICT 2009		
SWAN ICARE – ICT 2011	Reliability	LOMID - ICT 2014	Flextiles FP7- ICT 2011		5G
INFORMED - ECSEL2015	WALES	MIRPHAB - ICT 2016	TouchMore FP7-ICT 2011		5G CHAMPION – ICT 2016
ACTIVAGE – IoT 2016	WALES PLUS	REDFINCH - ICT 2017	Blim4SMEFP7- SME 2011		5G MIEDGE – EUJ 2016
DATABIO - ICT 2016	MEMS QUALIFICATION				
SERENE IoT PENTA 2016					
ESTHER working group					
		GATE ONE	DIH	FED4SAE	
		ACTPHAST	Technology Transfer	SMARTEES	Automotive
					TRACE - PENTA 2016



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HTA success stories



Horizon 2020
Programme



Smart Anything Anywhere



EuroCPS
Cyber-Physical Systems



CF



CP



PT



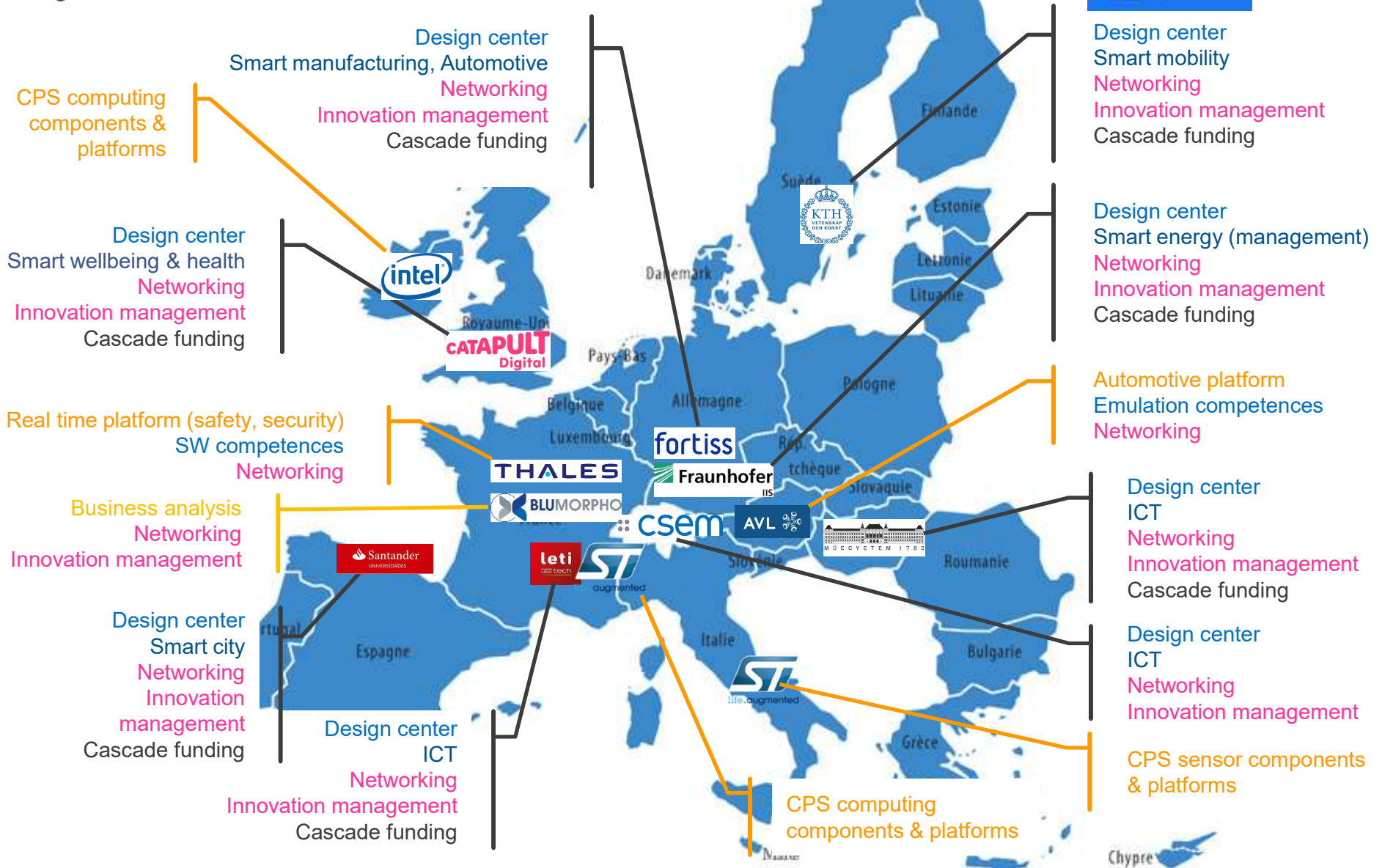
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**Pan European network of CPS
Digital Innovation Hubs**



H
T
A

European network of multidisciplinary centers



Expectations for future collaboration with EC

- Set mid- and long-term strategic goals & enable **low TRL research** (RTO / Academic leadership)
- Keep bridging the “valley of death” through pilot lines projects (closing the gap between academic research and industrial uptake)
- Improve funding rates for RTOs
 - Allow full cost accounting
 - Elaborate EC solutions for CAPEX funding
- Support to facilitate access to HTA platforms for EU SMEs

➤ **To build up a stronger European research platform**



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HTA partners





HTA event agenda

14:30	Welcome message, HTA presentation Laurent HERAULT, CEA-Leti, HTA Chair 2018
14:45	Future of micro- and nanosystems in H2020 and FP9 Colette MALONEY, Head of Competitive Electronics Industry, European Commission DG CONNECT
15:00	European solutions for the global market Hubert LAKNER, Chair Fraunhofer Microelectronics Group
15:15	22FDX - FDSOI-Technology contributions from Europe for Europe Gerd TEEPE, VP GlobalFoundries
15:30	Swiss microtechnologies in the European innovation ecosystem Mario EL-KHOURY, CEO CSEM
15:45	Smart technology use in packaging and the benefits for the food industry Robert WITIK, Senior Specialist, Sustainability & Packaging Material Science, Nestlé Research Center
16:00	Coffee break and Live tech demonstrations.
16:15	From vision to growth: role of research in building world-class excellence in future added value electronics Antti VASARA, CEO VTT
16:30	Global view on European R&D collaboration Anssi KORHONEN, VP Murata Electronics Oy
16:45	European low-power, smart and secure technologies in the age of hyperconnectivity Emmanuel SABONNADIERE, CEO CEA-Leti
17:00	European innovation from substrates to devices integration Ionut RADU, R&D Director SOITEC
17:15	Demonstrators / Pitches
17:45	Outlook & Closing Remarks Laurent HERAULT, CEA-Leti
18:00	Reception & Networking