EUREKA CLUSTERS

Driving industry-led innovation and collaboration

EUREKA Σ!

innovation across borders

EUREKA Σ!
innovation across borders

The EUREKA network

● Full members 41 full members
(40 countries + European Commission)

● National information points
(Albania, Bosnia, Herzegovina)

● Associated countries
(Canada, Chile, South Africa)

● Partner countries
(South Korea)

● International cooperation
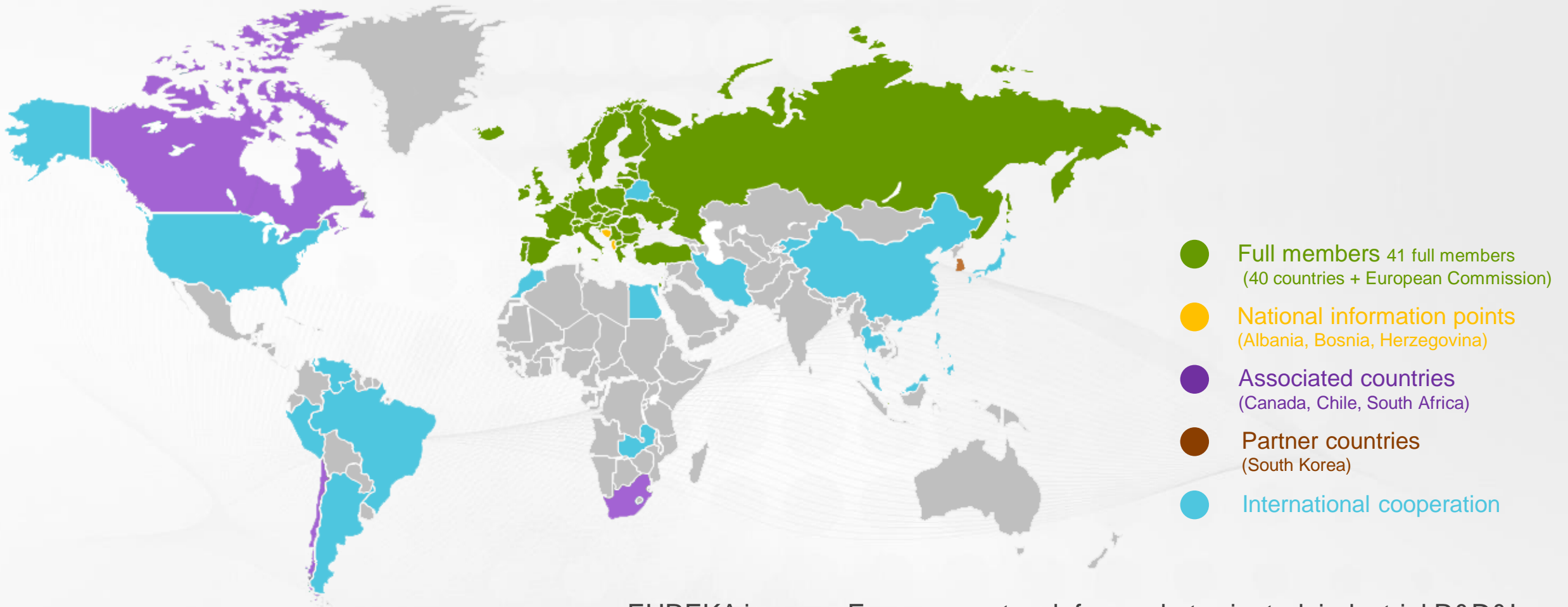
EUREKA is a pan-European network for market-oriented, industrial R&D&I
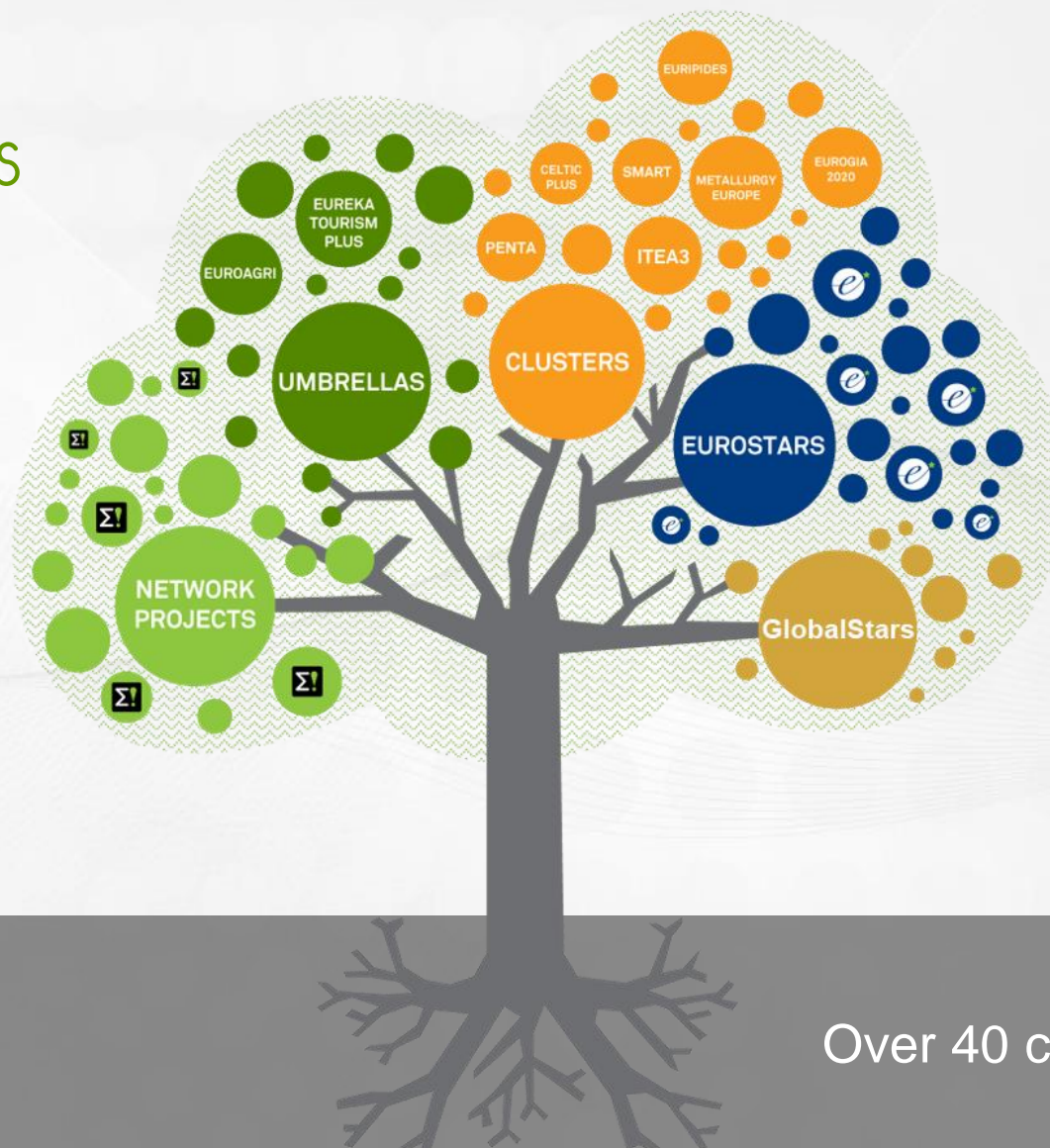EUREKA Clusters are active in 38 countries

European innovation landscape

EUREKA
innovation across borders

European

Innovation Programmes following **European Strategy**

National

Develop & Maintain **Critical Mass** & **Differentiation**

EUREKA

Trans-National Programmes following **National Priorities**

EUREKA — innovation across borders

Clusters

CATRENE
Micro and nano electronics
(Last Call in 2015 but projects will continue until 2018)

Celtic-Plus — Smart Connected World
ICT and telecommunications

EURIPIDES² — Smart Electronic Systems
Smart electronic systems

eurogia 2020
Low carbon energy technologies

ITEA 3
Software innovation

metallurgy europe
Advanced materials and manufacturing

Penta
Micro & nanoelectronics enabled systems and applications

SMART advanced manufacturing
Advanced manufacturing

Cluster projects are...

Industry-driven supported by Public Authorities

Covering the full value chain to create innovative solutions

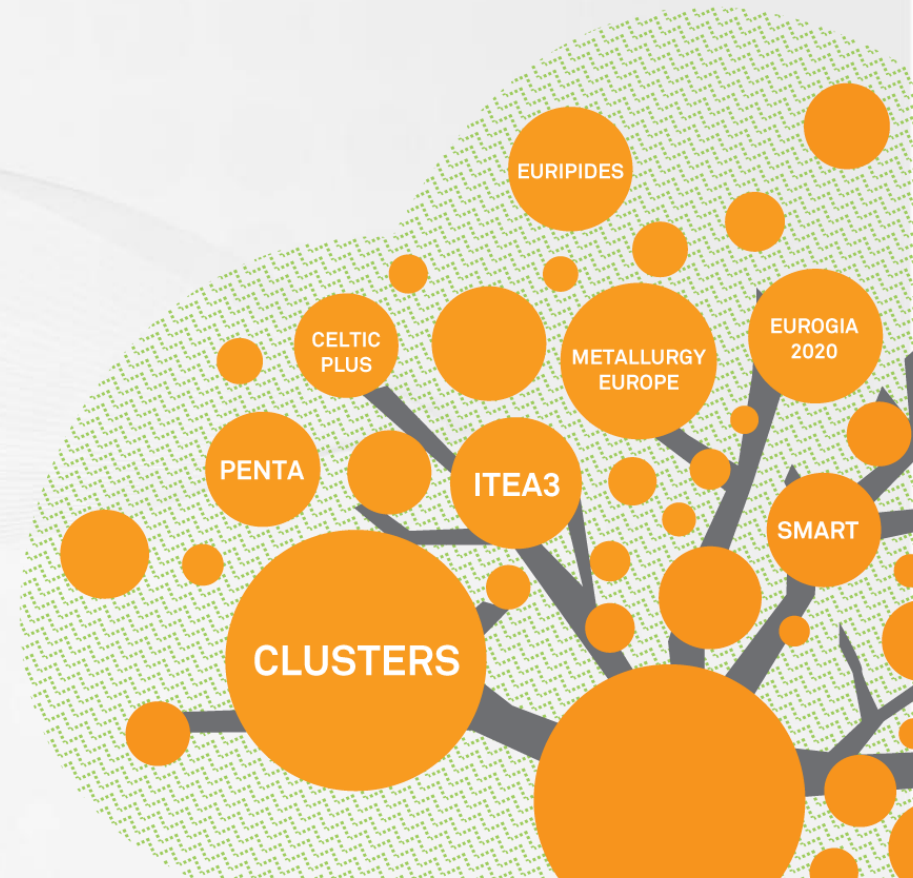Helping SMEs to scale up in consortia with large industry

Open to global cooperation
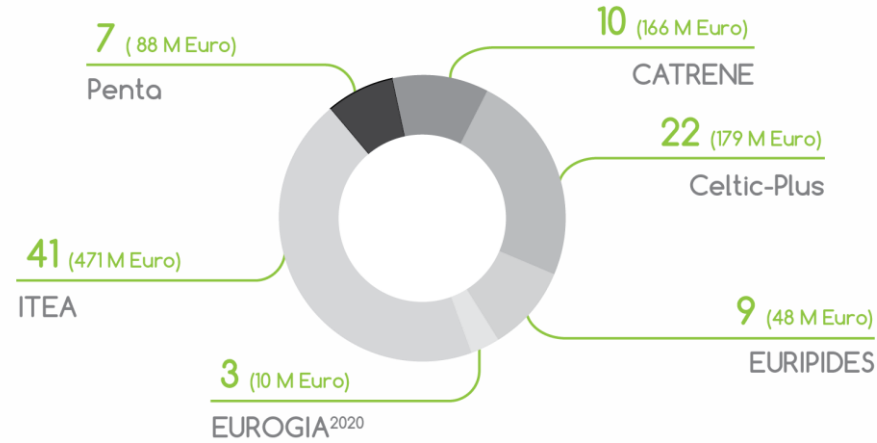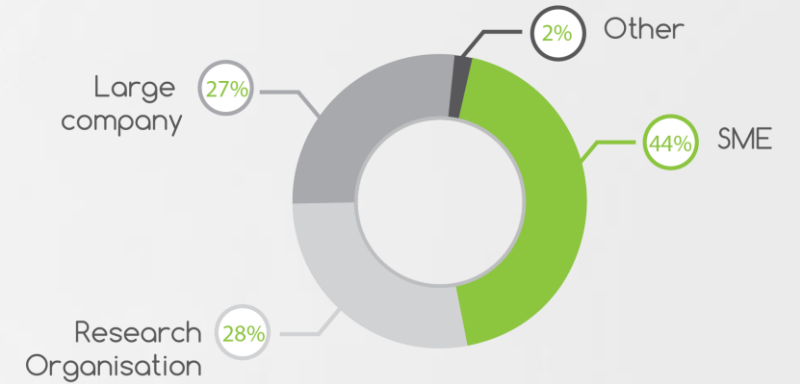
Bottom-up

Market-oriented

EURIPIDES

CELTIC PLUS

METALLURGY EUROPE

EUROGIA 2020

PENTA

ITEA3

SMART

CLUSTERS

Cluster figures

Running projects (end 2017)

7 (88 M Euro)
Penta

10 (166 M Euro)
CATRENE

22 (179 M Euro)
Celtic-Plus

41 (471 M Euro)
ITEA

9 (48 M Euro)
EURIPIDES

3 (10 M Euro)
EUROGIA^{2020}

Participants

Other 2%

SME 44%

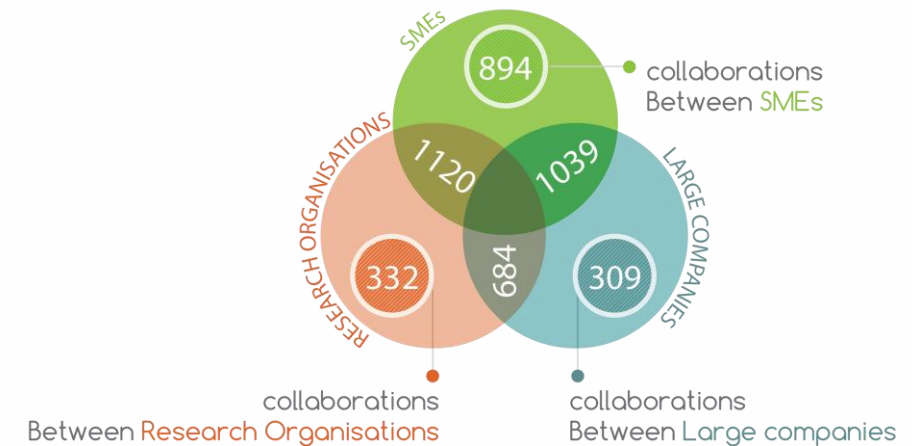Large company 27%

Research Organisation 28%

By the end of 2017:

- 92 running projects

  with a total project cost of 962 M Euro

In 2017:

- 46 labelled projects

  with a total project cost of 416 M Euro
- 240.8 M Euro in public-private investment

Collaboration in funded projects

SMEs

894 · collaborations Between SMEs

RESEARCH ORGANISATIONS

1120

1039

LARGE COMPANIES

332

684

309

collaborations Between Research Organisations

collaborations Between Large companies

Cluster board members

EUREKA Σ!
innovation across borders

Example
Medical center
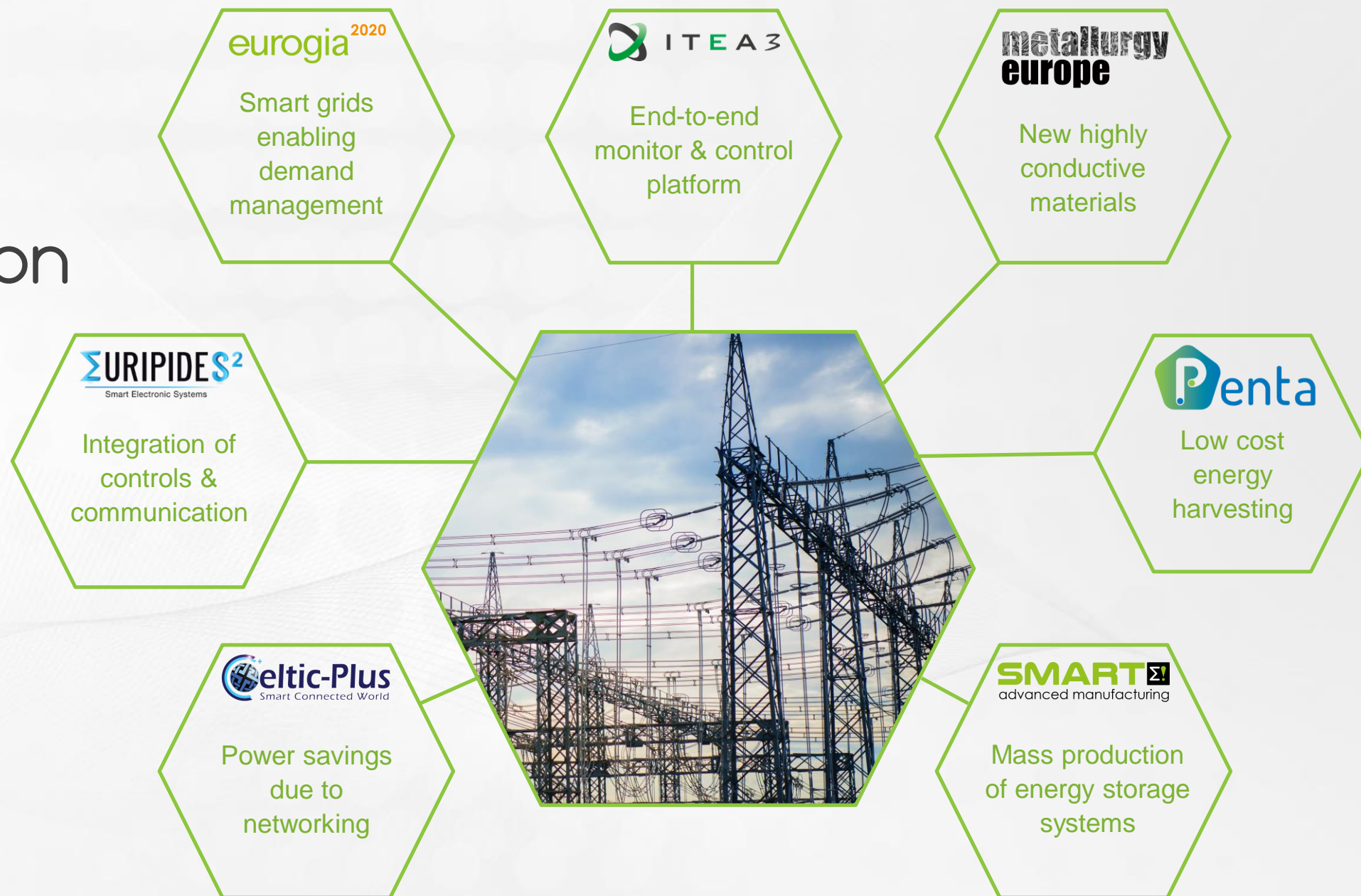
eurogia 2020
Smart energy use between idle & active modes

ITEA3
Networked & digital operating room

metallurgy europe
Smart materials in the operating room

ΣURIPIDES²
Smart Electronic Systems
Cost efficient medical imaging solutions

Penta
MRI for patients with implants

Celtic-Plus
Smart Connected World
Remote diagnosis by enhanced imaging

SMART Σ!
advanced manufacturing
3D printing of customised prothesis
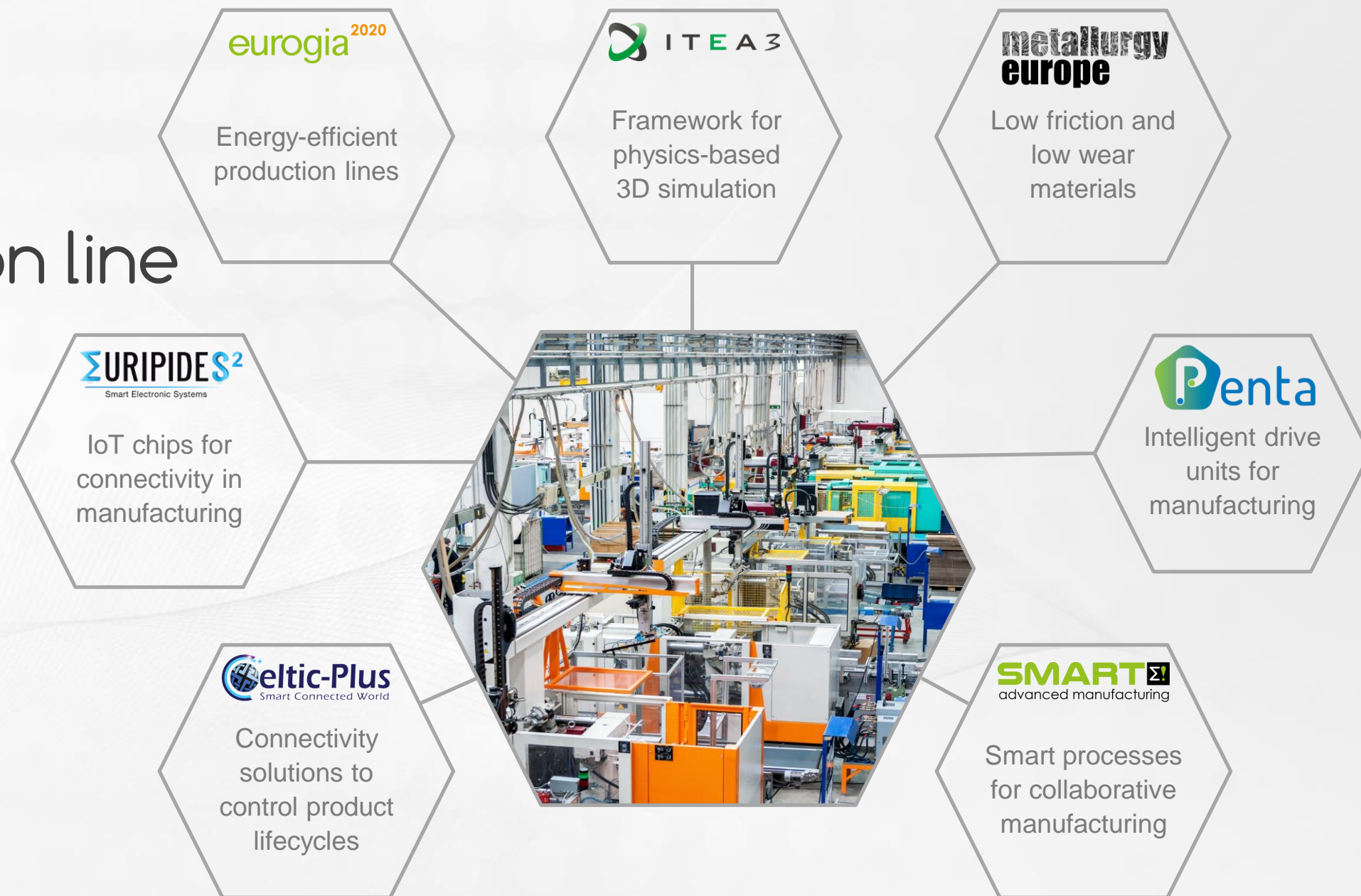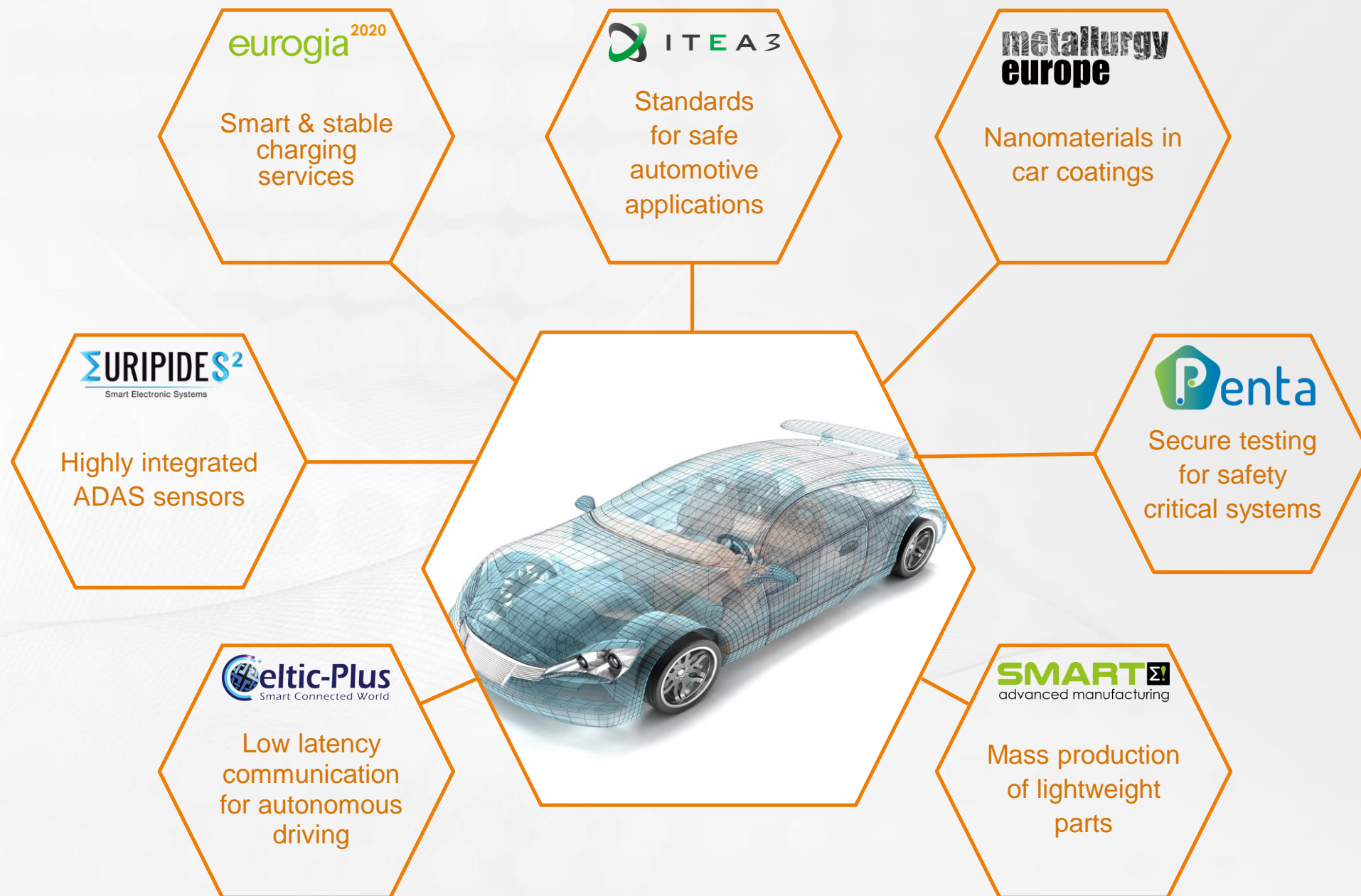
EUREKA Clusters offer

Opportunities for funding **trans-national** R&D&I consortia
   In a **fast and efficient** way within a global network

Projects **initiated by industry in line with national priorities**
   Agile and flexible project support

A **community** of the **best companies and knowledge institutes**
   Aiming at economic impact via research and innovation

Options to integrate along the **whole value chain**
   Involving **end-users, labs, startups, SMEs and large companies**

Support of **experts with an industrial viewpoint**
   To ensure project **relevance** and **quality**
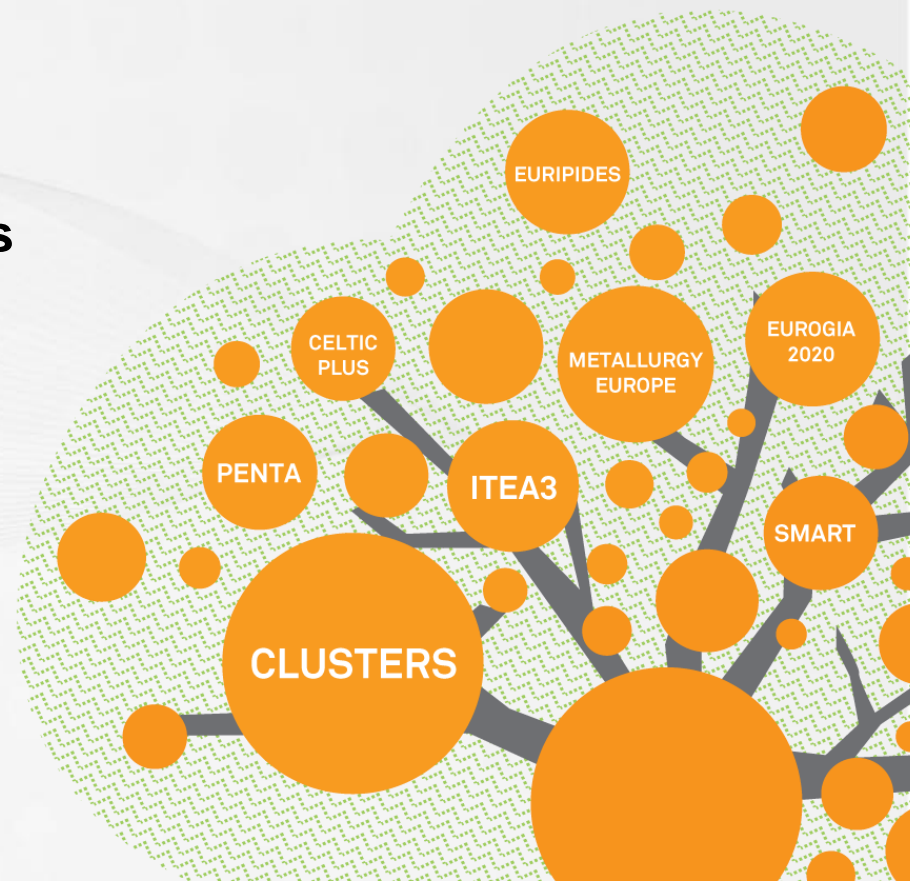
Clusters create impact

Societal impact

Through employment, education and addressing societal challenges

Economic impact

Through creating new products, new processes, new materials and new services in Global markets

Innovation impact

Through new IP, standards and pushing the State-of-the-Art

Ecosystem impact

Through the development of new partnerships, supply chains and opportunities for growth
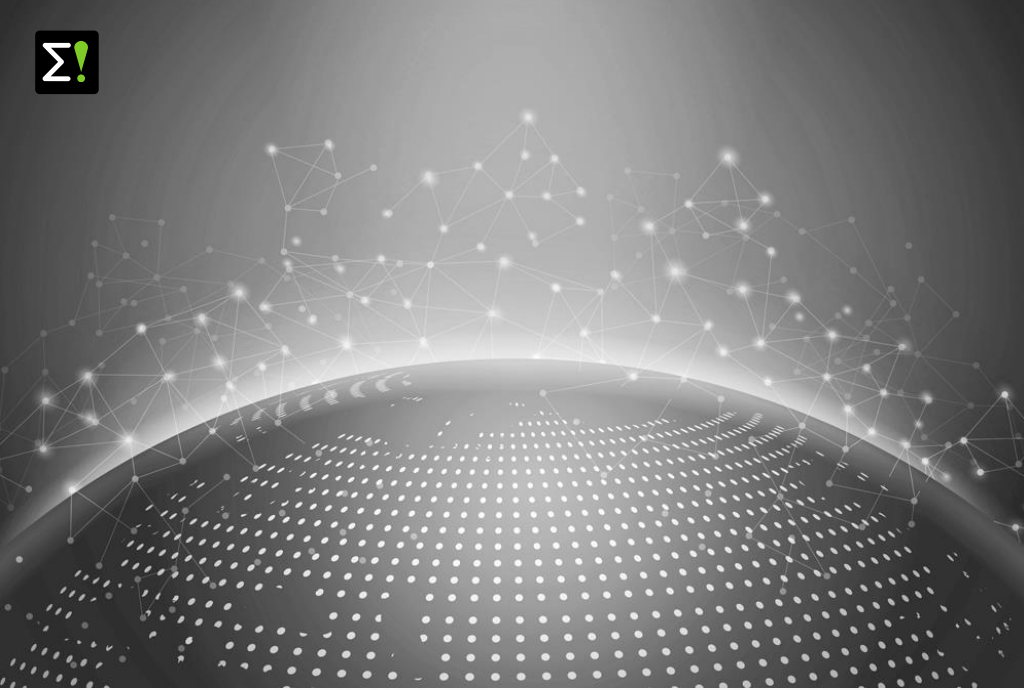
Increase speed and **decrease risk**

On innovation and new products

CLUSTERS

Basic info

Focus area

Celtic-Plus focuses on an end-to-end system approach in the development of future communications-related solutions. It continues its bottom-up, industry-driven approach; includes flagship projects with significant impacts; and intensifies the promotion of activities for the new societal challenges.

EUREKA Cluster
CELTIC-PLUS

www.celticplus.eu

Purpose

Strengthen the competitiveness of the European industry and the well-being of the society by stimulating and facilitating innovative, industry-driven, pre-competitive R&D projects in the area of telecommunications, new media, future Internet, and related flexible applications and services.

Scope and Research Areas   Mission and Vision

Total number of projects
145

Total project costs

€ 1092 M

EUREKA Cluster
CELTIC-PLUS

Board members 👥

ATOS Research, British Telecom, Deutsche Telekom, Ericsson, Eurescom, Orange-Labs, Gemalto, INDRA, imec, Italtel, NETAS, Nokia, RAD Data Communications, Siemens Convergence Creators, Telefónica I+D, Telenor, Thales, Turkcell, Türk Telekom

Examples of Cluster projects

SIGMONA: First SDN (Software Defined Network) solutions for 4 and 5G mobile networks

SASER: Secure Communications for Europe

CoMoSeF: Co-operative Mobility Services of the Future

4GBB-Gold-G.fast: by the end of 2020, 10 million premises will be connected

Project Call process 📋

Two Calls per year

One-stage Call process

Call information

Call calendar

Focus area

Smart electronic systems and smart systems integration; industrialisation and manufacturability of systems in application areas like vehicle of the future, transport & mobility; health & well-being; manufacturing; smart interconnection system; energy; aerospace; IoT; integration of hardware and software; safety & security.

ΣURIPIDES²
Smart Electronic Systems

EUREKA Cluster
EURIPIDES²

www.euripides-eureka.eu

Purpose

Improve technological expertise and European sovereignty in electronics components and systems for the implementation of Industry 4.0, the industrial Internet of Things and Mobility of the future in the new Smart World.

Total number of projects
80

Total project costs

€ 471 M

EUREKA Cluster
EURIPIDES²

Board members

ACAMP, RISE-ACREO, AIRBUS Defense and Space, AT&S, BIC Ostrava, C2MI, CEA-LETI, CSEM, EOLANE, EPoSS, ETRI, Fraunhofer IZM, IMEC, INFINEON, KENTKART, MURATA Oy, NOVAPACK, RADIALL, SAFRAN Electrical & Power, SAVRONIK, SOMFY, STMicroelectronics, THALES Airborne Systems, VERMON, VOLVO AB, VTT

Example of Cluster projects

- **ADORAS**: Advanced Onboard Data Recording and Analysis System
- **ADVANTEX**: ADVANced functional blocks & technologies for smart TEXtile products
- **EDDEMA**: Embedded Die Design Environment & Methodology for Automotive Applications
- **SAM3**: Smart Analysis Methods for 3D Integration in Advanced Microsystems and Corresponding Materials (Colabel CATRENE-EURIPIDES²)

Project Call process

Two Calls per year

Two-stage Call process with PO and FPP

Call information

Call calendar

Focus area

EUROGIA2020 is the EUREKA Cluster for low carbon energy technologies. It supports and promotes innovative energy technology projects with the aim of mitigating climate change.

eurogia²⁰²⁰

EUREKA Cluster
EUROGIA²⁰²⁰

www.eurogia.com

Purpose

Reduce the carbon footprint of energy production and use. Develop new technologies for energy such as solar, wind, biomass, geothermal, energy efficiency, etc.

Total number of projects
24

Total project costs

€ 98 M

EUREKA Cluster
EUROGIA²⁰²⁰

Board members

Acciona Energy, Air Liquide, Bureau Veritas,

Cardtek (2017-2018 Chair), DCNS, ENGIE,

ENERJISA, GE Oil and Gas, Green Power Labs,

Leading Enterprise, MERIC, SAFT

Example of Cluster projects

- **Windfarm vessels**: Offshore installation of wind turbines with attractive costs
- **RENERSTA**: Electricity at isolated places
- **CO2FieldLab**: Increasing carbon capture and storage safety
- **ILIS**: Innovative energy storage and management system
- **HYWINDESS**: Incorporation of energy storage systems for wind farms

Project Call process

Four project cut-off dates per year

Two-stage Call process with PO and FPP

Call calendar

Focus area

- Software innovation
- Digital transformation

ITEA 3

EUREKA Cluster
ITEA 3

www.itea3.org

Purpose

ITEA stimulates transnational and industry-driven R&D&I in the domain of software innovation. ITEA enables a global and knowledgeable community to collaborate in funded projects that turn innovative ideas into new businesses, jobs, economic growth and benefits for society.

Total number of projects
254

Total project costs
€ 3332 M

EUREKA Cluster
ITEA 3

Board members

Airbus, ATOS/Bull, Barco, Bosch, Ericsson, Indra, KocSistem, Nokia, Philips, Siemens, Technicolor, Telefonica, Thales, Turkcell

Example of Cluster projects

- **SEAS**: Smart Energy Aware Systems
- **AVANTI**: Test methodology for virtual commissioning of production systems
- **ADAX**: Cyber Attack Detection And Countermeasures Simulation
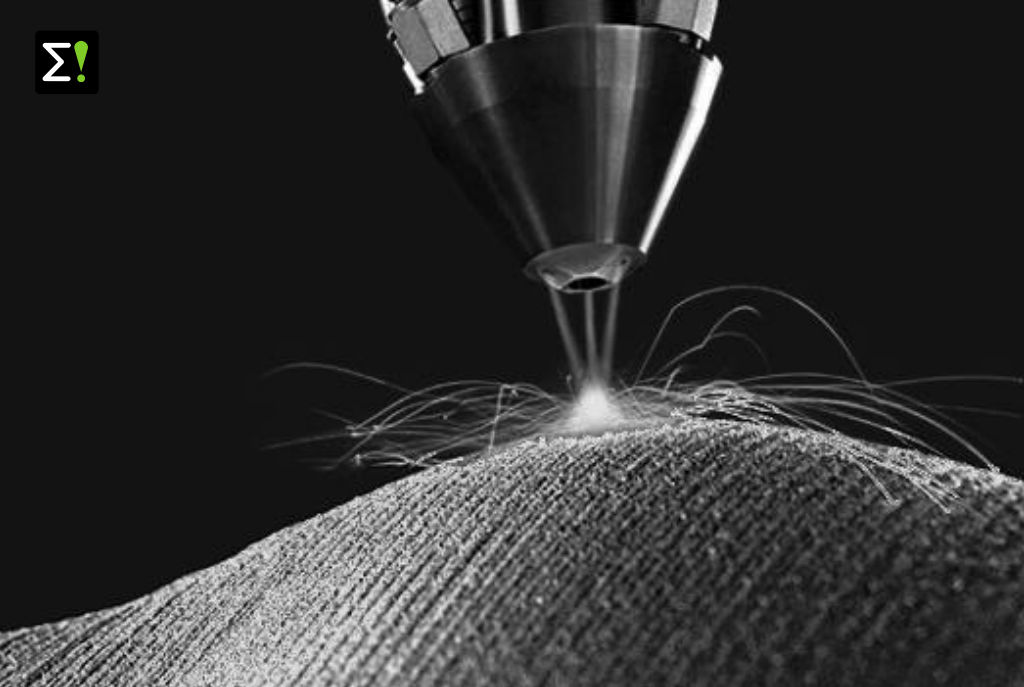- **SORTS**: Productivity and effectiveness in cancer treatment

Project Call process

One Call per year

Two-stage Call process with PO and FPP

Call information

Call calendar

Focus area

New innovative applications with an industrial focus in the area of Advanced Materials and Manufacturing.

EUREKA Cluster
METALLURGY EUROPE

www.metallurgy-europe.eu

Purpose

METALLURGY EUROPE undertakes initiatives to modernise the European Metallic Materials Technologies and industries through the innovation of new materials and technologies to stimulate a new forerunner position in the world economy for the European Metals Industry. METALLURGY EUROPE covers the spectrum from fundamental research, applied research and industrial innovation with focus on new smart-intelligent high quality structural and functional metals and composites.

Total number of projects
2

Total project costs
€ 9.6 M

EUREKA Cluster
METALLURGY EUROPE

Board members

ArcelorMittal, COMTES FHT, Coşkunöz Holding,

Culham Centre for Fusion Energy, ESI Group,

European Powder Metallurgy Association, Tata Steel

Examples of Cluster projects

17 project proposals in Call 1 worth ca. 200 Mio. Euro in October 2015. Currently two projects:

Andromeda: Additive manufacturing of very large AM metallic structures (1-5 m range)

Phoenix: Multi-component alloys - Focus on metallic high entropy alloys (MHEA) for extreme industrial applications to generate knowledge on manufacturing, microstructure and properties (**Orion**: Search for funding in Germany)
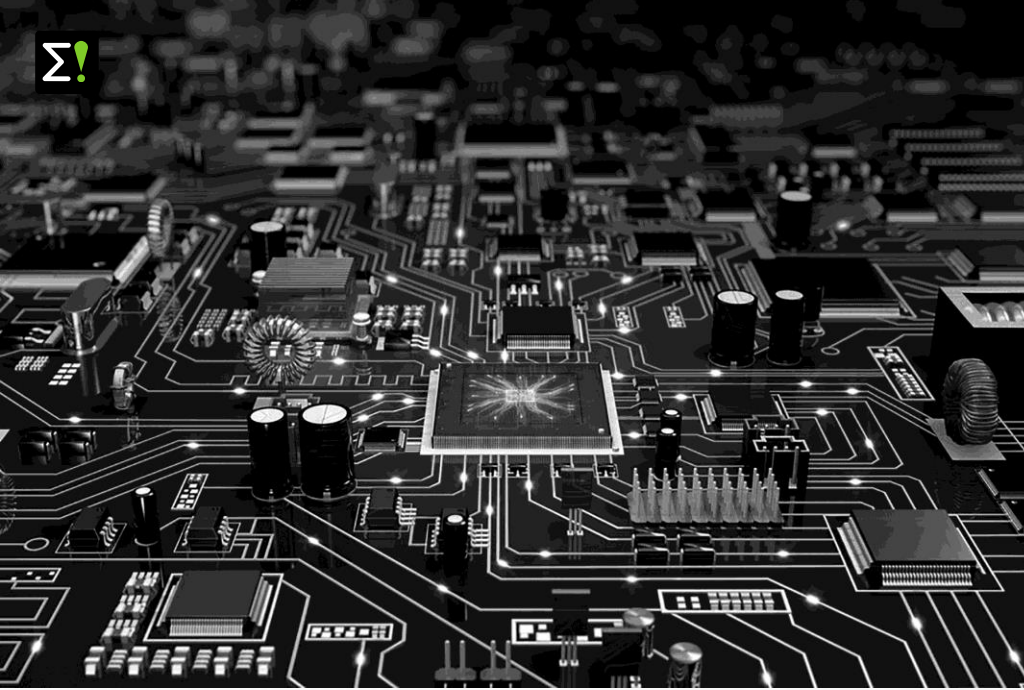
Project Call process

One Call per year

Two-stage Call process with PO and FPP

Call information

Call calendar

Focus area

Micro and nanoelectronics enabled systems and applications along the Electronic Components & Systems (ECS) value chain.

EUREKA Cluster PENTA

www.penta-eureka.eu

Purpose

PENTA is designed to encourage, enable and support collaborative RD&I in micro and nanoelectronics enabled systems and applications. In many, but not all, cases projects are integrated along the whole value chain, from core technology to applications.

Total number of projects
10

Total project costs
€ 145 M

EUREKA Cluster
PENTA

Board members 👥

(AENEAS Supervisory Board)

ASML, Airbus, AlphaSiP, Audi, Bosch, CEA-LETI,

Fraunhofer Institute, Gemalto, IBS, IMEC, Infineon,

IU.NET, NXP, Philips, RECIF, Soitec,

STMicroelectronics, LPE, Thales, Zeiss

Project Call process 📋

One Call per year

Two-stage Call process with PO and FPP

Call information

Call calendar

Examples of Cluster projects 🎯

- **CosmoDU**: Direct integration of latest SiC power and IT electronics to produce unprecedented performance gains in smart drives

- **DISPERSE**: Electronic solutions for MRI scanning of patients with multiple implants

- **HADES**: Advanced test and monitoring infrastructure for dependability, security and performance enhancement of systems

- **Hyb-Man**: Integrating design and production into a single end-to-end process creating flexible manufacturing and a quicker response to market demands

- **MIRS**: Infrared-sensing platform will grow detection markets and drive smart applications in medical, lighting and automotive

- **SERENE_IoT**: High quality connected care services and diagnosis tools based on advanced Smart Health-Care IoT devices

Focus area

SMART is focused on 6 Research and Innovation Domains: Advanced manufacturing processes, Intelligent and adaptive manufacturing systems, Digital, virtual and efficient industries, Person-machine collaboration, Sustainable manufacturing and Customer based production (value chain).

SMART
advanced manufacturing

EUREKA Cluster
SMART

www.smarteureka.com

Purpose

Boost the leadership and growth of European discrete manufacturing industries through the development and implementation of Advanced Manufacturing Technologies.

EUREKA Cluster SMART

Board members

Airbus Operations, GKN Aerospace, Grupo Antolín,

IK4 Research Alliance, Irish Manufacturing Research (IMR),

MONDRAGON Corporation, S.V.U.M,

Royo Group, SWEREA

Examples of Cluster projects

- **NOVCOMP**: Advanced Production of Aerospace Composite
- **CAMBER**: Efficient Press-Tooling-Part system for controlled cambering in automotive stamping
- **AFMAC**: Advanced Framework for Distortion-Free Manufacturing of Aerospace Components
- **HANDLE-IT**: Robotic intralogistics for agile manufacturing
- **I-GRIND**: Grinding Operations for Dental Prosthesis through Modelling

Project Call process

One Call per year

Two-stage Call process with PO and FPP

Call information

Call calendar

EUREKA Σ!
innovation across borders

Thank you for listening

www.eurekanetwork.org