

2025 ECS SRIA Motivation and overview

Patrick Coge, AENEAS Technical Director,
2025 ECS SRIA Chair

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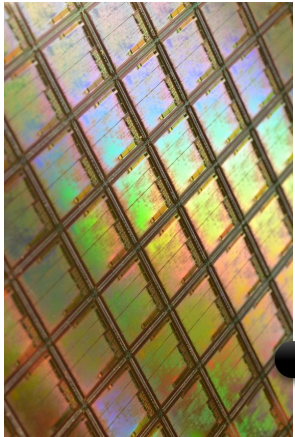
The 2025 ECS SRIA 2025 - Why ?

Align and coordinate research policies across Europe

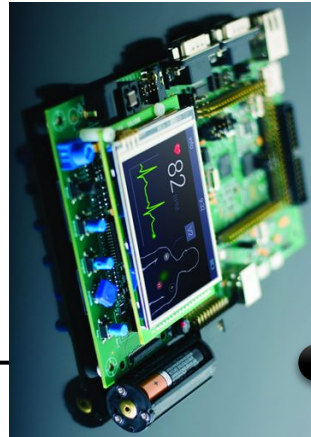


The 2025 ECS SRIA – What ?

- Presenting **research topics** to be investigated over next 15 years
- To foster and accelerate our European **digital transformation** reflecting European values
- Covering the **whole value chain of Electronic Components & Systems (ECS)**



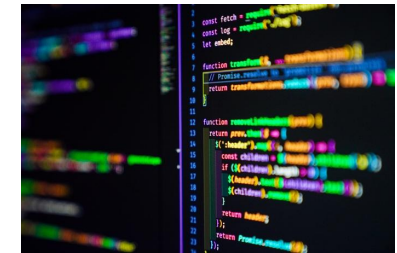
Materials, processes, semiconductors, micro & nano electronic components, ...



Smart sensors, integrated devices, edge AI, embedded SW, ...



Systems and applications, value creation, societal goals, ...



ECS engineering tools



Patrick Cogez
AENEAS
Chairman



Paolo Azzoni
INSIDE IA
Co-chairman



Matthias Küntzel
EPoSS
Co-chairman

The 2025 ECS SRIA – Who ?

Core Team

- Arco Krijgsman - ASML
- Christophe Wyon - CEA
- Jerker Delsing - Lulea University of Technology
- Jürgen Niehaus - SafeTRANS
- Patrick Pype - NXP
- Sven Rzepka - Fraunhofer
- Wolfgang Dettmann - Infineon Technologies AG

More than 280 European experts

- Interdisciplinary
- Across the whole ECS value chain
- Representing industry, RTO and academia
- 24 countries

Complemented by an open consultation

- Written procedure, Oct 11th – 24th, 2024
- Advisory Stakeholder Forum, Oct 17th - 217 attendees

ECS-SRIA structure

0 INTRODUCTION AND OVERVIEW

Why ? What ?
How ?

1 FOUNDATIONAL TECHNOLOGY LAYERS

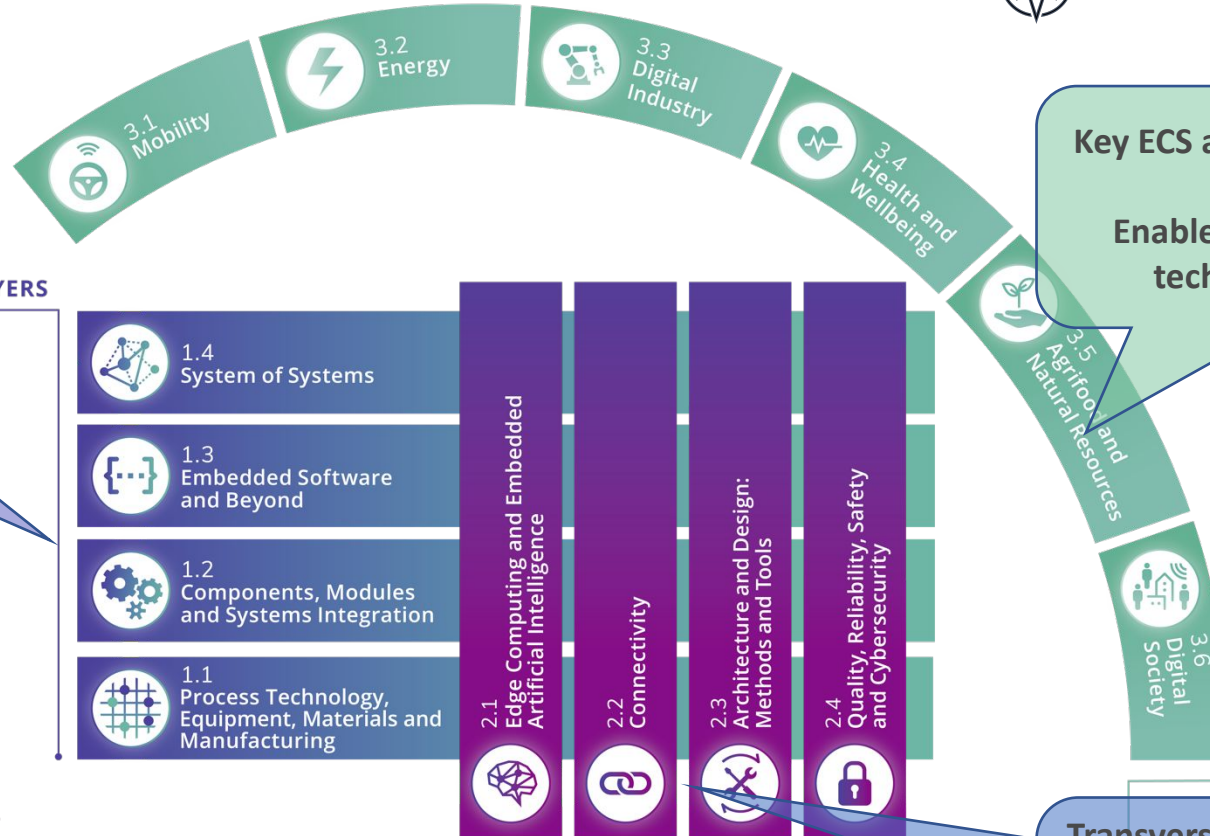
Basic technology stack of a
typical digitalization
solution & hierarchical
dependencies

What needs to be
addressed now at low TRL
level to feed the
innovation pipeline

2 CROSS-SECTIONAL TECHNOLOGIES

3 ECS KEY APPLICATION AREAS

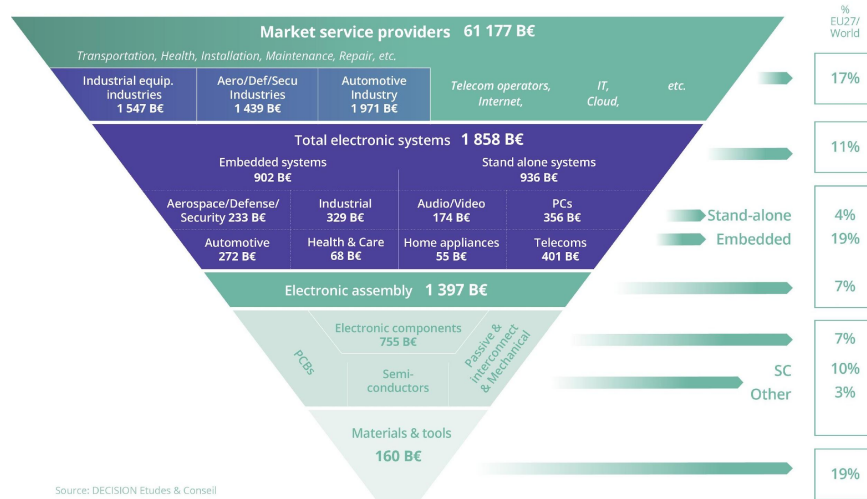
4 LONG TERM VISION



Introductory Chapter- Restructured in Why / What / How

- Why ECS matter

THE ELECTRONICS VALUE CHAIN IN 2023

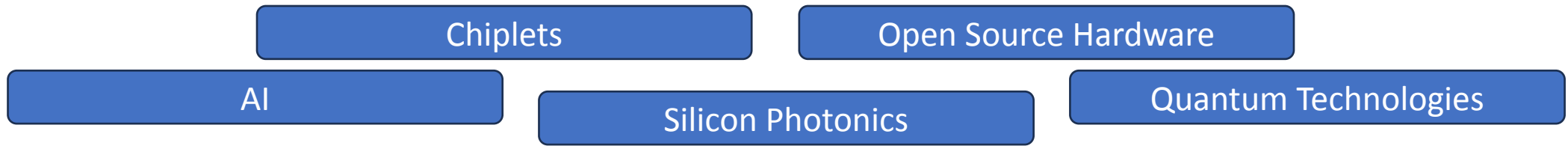


Strategic importance for the EU



Addressing societal challenges

- What? SRIA content, including new and/or expanded cross-cutting themes



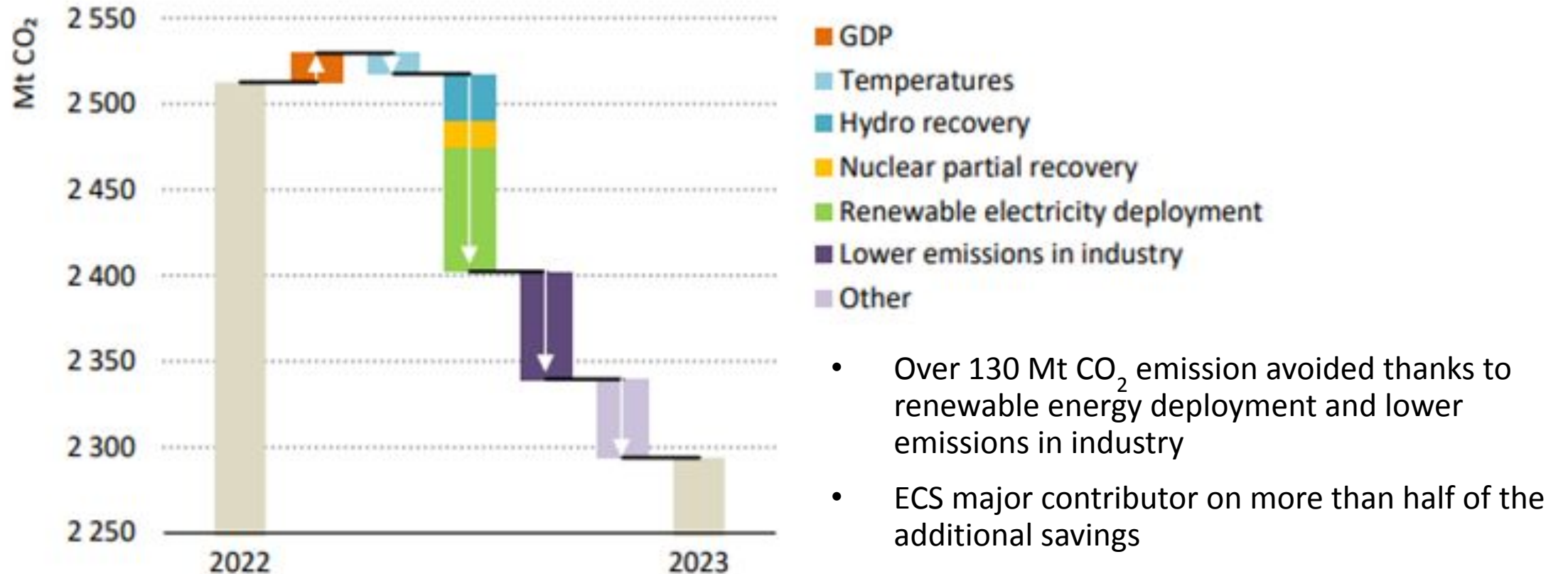
- How to make it happen

- Link with new funding instruments of Chips Act Pillar 1 : Pilot Lines and the Design Platform

Societal Impact of ECS

Illustration from Energy Chapter

Figure 9: Change in total CO₂ emissions from combustion in the European Union by driver, 2022-2023



IEA. CC BY 4.0.

IEA (2024), CO₂ Emissions in 2023, IEA, Paris <https://www.iea.org/reports/co2-emissions-in-2023>, Licence: CC BY 4.0

2005 ECS SRIA Edition available online

The screenshot shows the ECS SRIA 2025 website. The header includes the ECS logo and the text 'Strategic Research and Innovation Agenda'. Below the header is a navigation bar with links for Home, ECS SRIA 2025, ECS SRIA 2024, ECS SRIA 2023, Change History, and Contributors, along with a search box. The main content area is titled '1 Foundational Technology Layers' and features four chapter icons: Chapter 1.1 (Process Technology, Equipment, Materials And Manufacturing), Chapter 1.2, Chapter 1.3, and Chapter 1.4. The selected chapter, 1.1, is highlighted with a blue and green background. Below the chapter title, there is a sub-section '1.1 Process Technology, Equipment, Materials And Manufacturing' with a brief description: 'Semiconductor process technology, equipment, materials and manufacturing form the foundation of the ECS value chain producing the chip and packaged chip-level building blocks for all digital applications.' A small chart titled 'Users by Country in the last 12...' is visible in the background of the chapter content.

- Native indexing and analytics
- More advanced functionalities for:
 - Topics search
 - Selective reading
- Increased visibility and accessibility
 - Attract new talents and experts

- <https://ecssria.eu/>
- Pdf version downloadable at that address
 - Navigation via bookmarks

Visits by Country in 2024

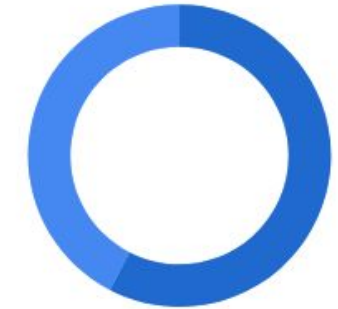


1 8,113

	Country	Views
1	Germany	8113
	The	
2	Netherlands	6551
3	France	5476
4	Spain	4023
5	Finland	3875
6	Italy	3714
7	United States	3680
8	Austria	3601
9	Belgium	3026
10	Sweden	2291
11	Türkiye	2008
	United	
12	Kingdom	1812
13	Ireland	1789
14	Portugal	1247
15	Japan	1244
16	Greece	1214
17	Poland	992
18	Switzerland	780
19	Taiwan	721
20	Norway	554
21	India	498
22	Hungary	461
23	Latvia	444

Accesses and user number in 2024

Page	Visits	
Website Home	8307	
ECS-SRIHome	12003	
Introduction	5974	
Outline	2392	
1.1 Process Technology, Equipment, Materials and Manufacturing	3505	Foundational Technology Layers
1.2 Components, Modules and Systems Integration	2724	
1.3 Embedded Software and Beyond	1523	
1.4 System of Systems	1268	
2.1 Edge Computing and Embedded Artificial Intelligence	3141	Cross-Sectional Technologies
2.2 Connectivity	874	
2.3 Architecture and Design: Methods and Tools	1384	
2.4 Quality, Reliability, Safety and Cybersecurity	1374	
3.1 Mobility	1214	ECS Key Application Areas
3.2 Energy	988	
3.3 Digital Industry	937	
3.4 Health and Wellbeing	1098	
3.5 Agrifood and Natural Resources	845	
3.6 Digital Society	649	
4. Long-Term Vision	909	



● MALE 57.6% ● FEMALE 42.4%

Main interests of users according to Google Analytics:

1. Technology (51% of the users)
2. Finance (38% of the users)
3. Politics (32% of the users)
4. Lifestyle (31%)
5. Sport (28%)

Total number of visits to the entire website: 58843
(up 22% vs. 2023)

Key takeaways

- The ECS SRIA covers the R&I needs identified by the ECS industry
- It plays a major role in aligning R&I priorities within the ECS community with funding instruments
- It is a coordination and knowledge exchange instrument with other communities
- Moving to the Chips Act increases its relevance
- You can (and should) be part of it !

ECS
BROKERAGE
EVENT 2025

Thank you !