EU-SATSNINGAR SOM KAN VARA AV VÄRDE FÖR SVENSK ELEKTRONIKINDUSTRI

Professor Jerker Delsing
Luleå Tekniska Universitet
Vice president Artremis-IA

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Electronics Components and Systems

- 2013-2020 ECSEL-JU
  - 4.8 Billion €

- Semiconductors
  - New technologies
  - New production capabilities
- Packaging
- System integration - software

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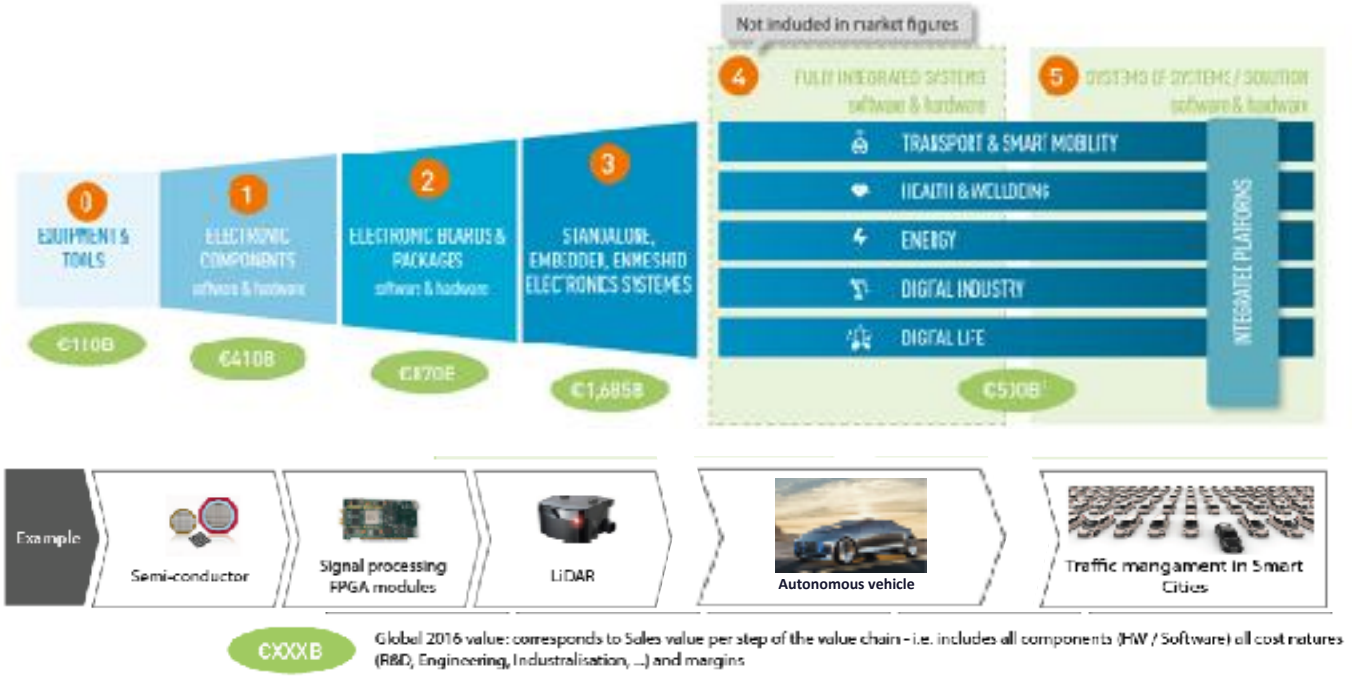
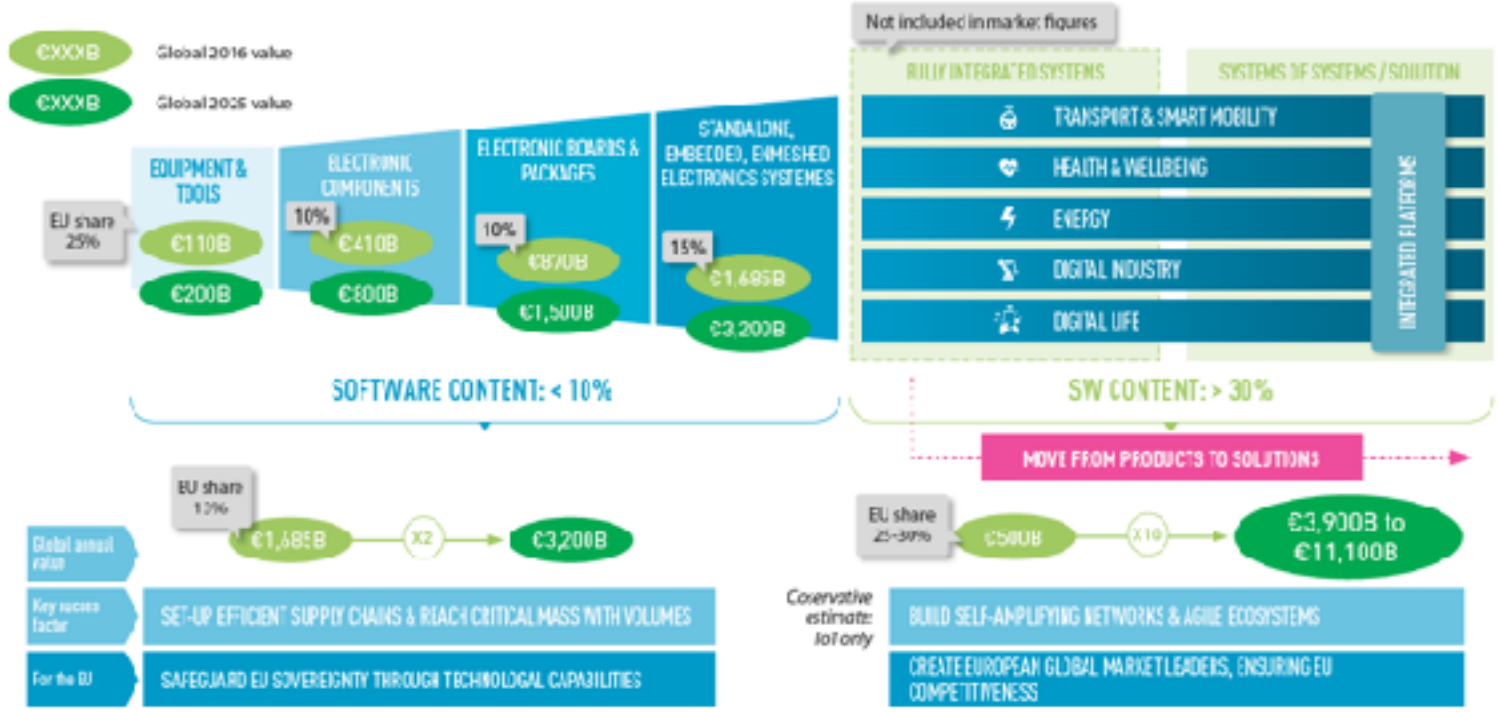
Value is shifting across the CPS value chain (1/2)
Today value is concentrated at 75% upstream



Note: rounded figures. (1): 2025 estimate value potential for the Internet of Things, not the full potential for ECS end-applications.
Source: Decision, IDC, MGI, Advancy analysis

Value is shifting across the CPS value chain (2/2)
By 2025, 2/3rd of the value will be captured downstream



Note: rounded figures. (1): 2025 estimate value potential for the Internet of Things, not the full potential for ECS end-applications.
Source: Decision, IDC, MGI, Advancy research & analysis

Key Digital Technologies

- 2021-2027
- 7.2 Billion €

- Added
  - Software from edge to cloud
  - Photonics on chip
  - Flexible electronics

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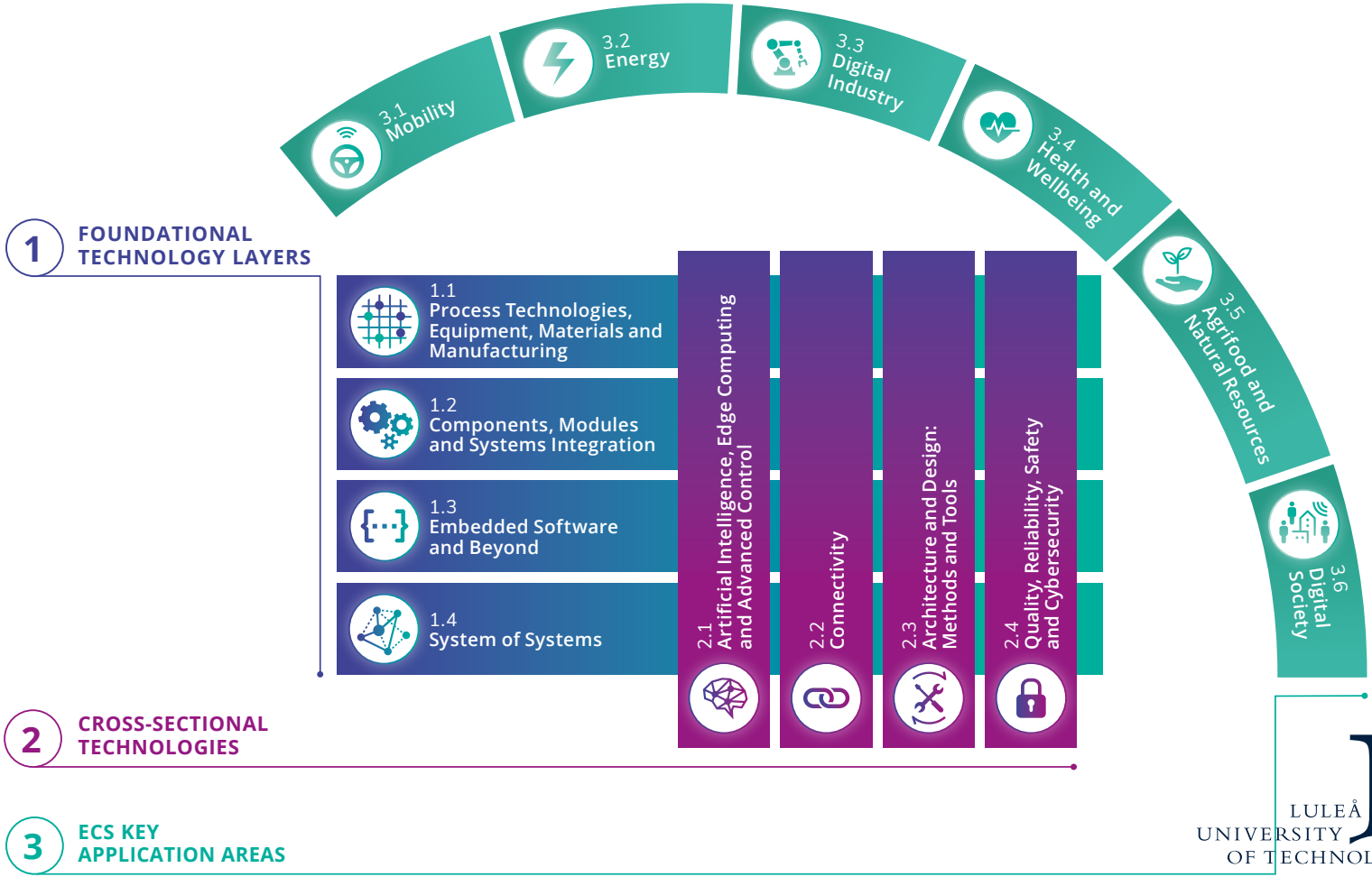

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Common objectives

1. Boost industrial competitiveness through interdisciplinary technology innovations
2. Ensure EU sovereignty through secure, safe and reliable ECS supporting key European application domains
3. Establish and strengthen sustainable and resilient ECS value chains supporting the Green Deal
4. Unleash the full potential of intelligent and autonomous ECS-based systems for the European digital era

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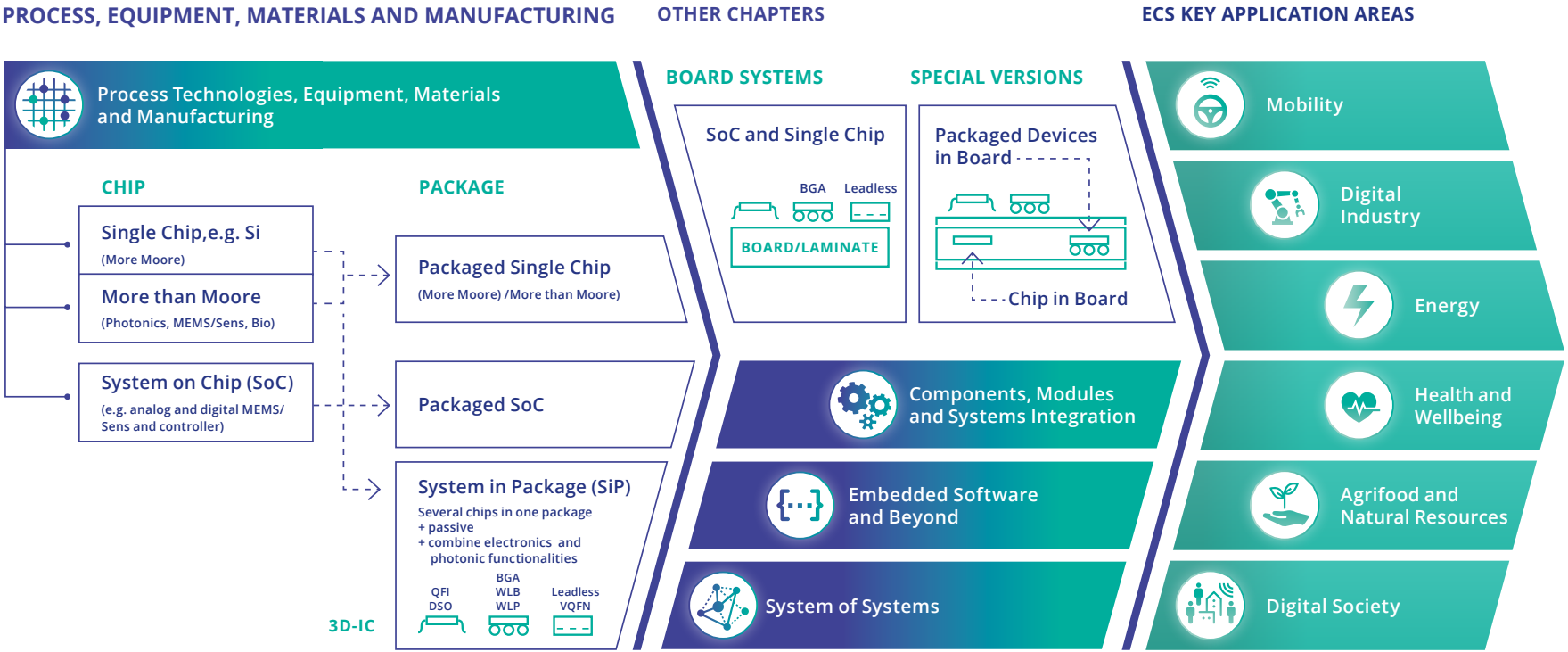
PROCESS TECHNOLOGIES, EQUIPMENT, MATERIALS AND MANUFACTURING



Major challenges

1. Advanced computing, memory and in-memory computing concepts
2. Novel devices and circuits that enable advanced functionality
3. Advanced heterogeneous integration and packaging solutions
4. World-leading and sustainable semiconductor equipment and manufacturing technologies

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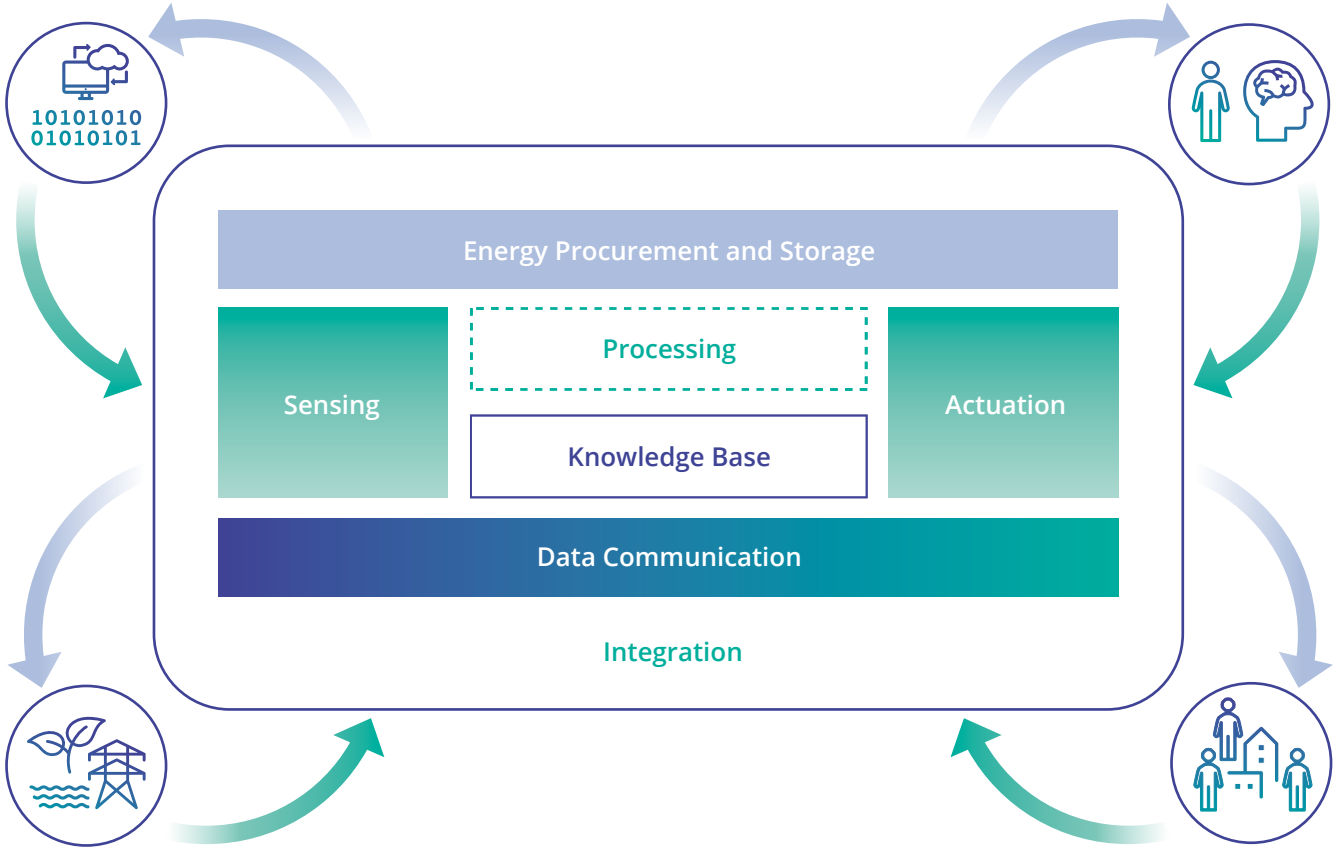
COMPONENTS, MODULES AND SYSTEMS INTEGRATION



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Major challenges

1. Physical and functional integration
2. Materials
3. Technologies, manufacturing and integration processes
4. Decarbonisation and recyclability

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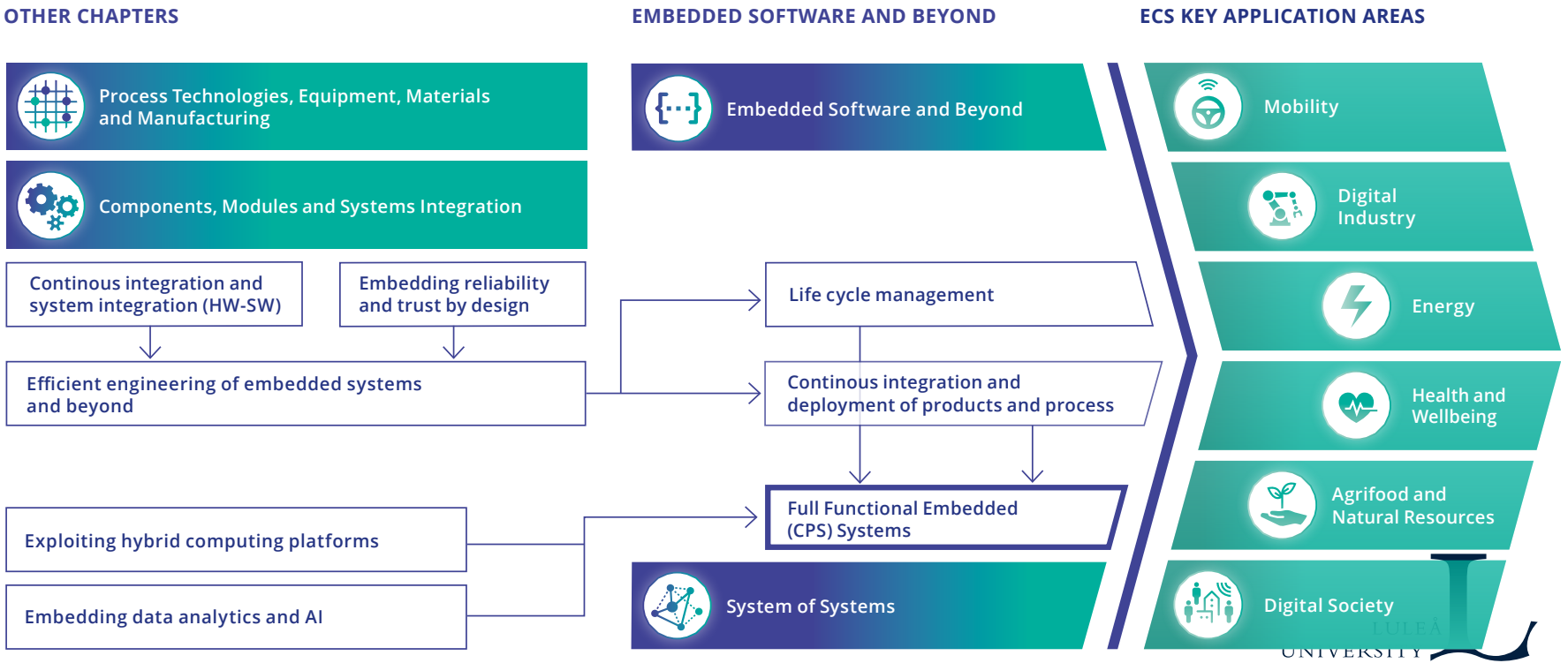
EMBEDDED SOFTWARE AND BEYOND



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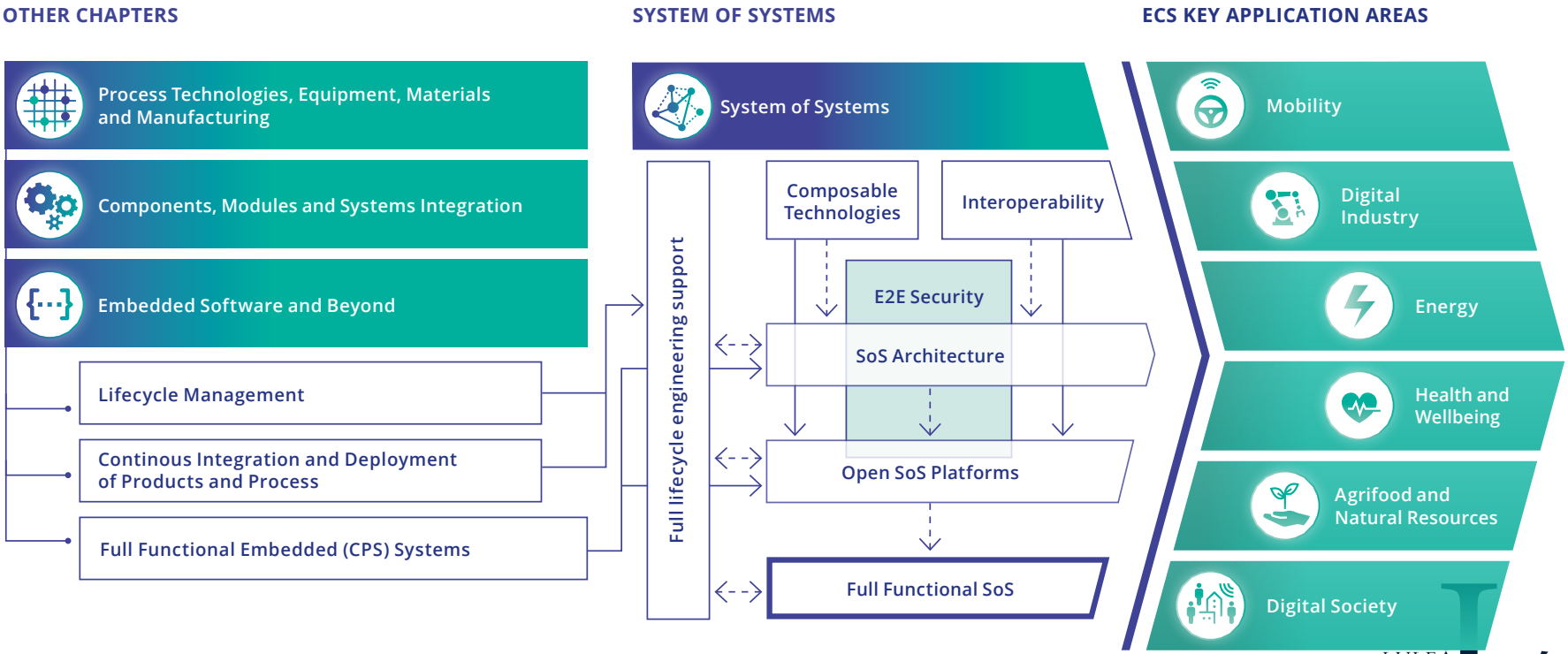
Major challenges

1. Efficient engineering of software.
2. Continuous integration and deployment.
3. Lifecycle management.
4. Green Deal.
5. Embedding data analytics/AI.
6. Software reliability and trust.

System of Systems



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Major challenges

1. SoS architecture
2. SoS Interoperability
3. Composability of embedded and cyber-physical systems in SoS
4. Systems of embedded and cyber-physical systems engineering

ECS-SRIA 2021

- Available here: https://artemis-ia.eu/publication/download/ecs-sria-2021-final.pdf

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Need help understanding?

- Process technology and components: Michael Salter RISE, michael.Salter@rise.se
- Packaging and reliability: Dag Andersson RISE, dag.andersson@rise.se
- Embedded system and System of Systems: Jerker Delsing, LTU jerker.delsing@ltu.se

- Other programs than KDT are available
  - Direction and calls influenced by ECS-SRIA

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In Sweden

- Smartare Elektronik System
  - 40-50 MSEK/år
  - Magnus Svensson, magnus.svensson@smartareelektroniksystem.se
  - Thorbjörn Ebefors thorbjorn.Ebefors@smartareelektroniksystem.se

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Questions

jerker.delsing@ltu.se

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