

The Panorama project boosts design efficiency for heterogeneous automotive and aerospace systems. Based in open source, it provides an environment for collaboration amongst diverse hardware and software technologies and teams, especially at the early stages of design. It supports efficient design decisions by defining evolving standards, tools and best practises for exchange of non-functional, formal models.

Open Ecosystem to support Heterogenous Mobility Systems

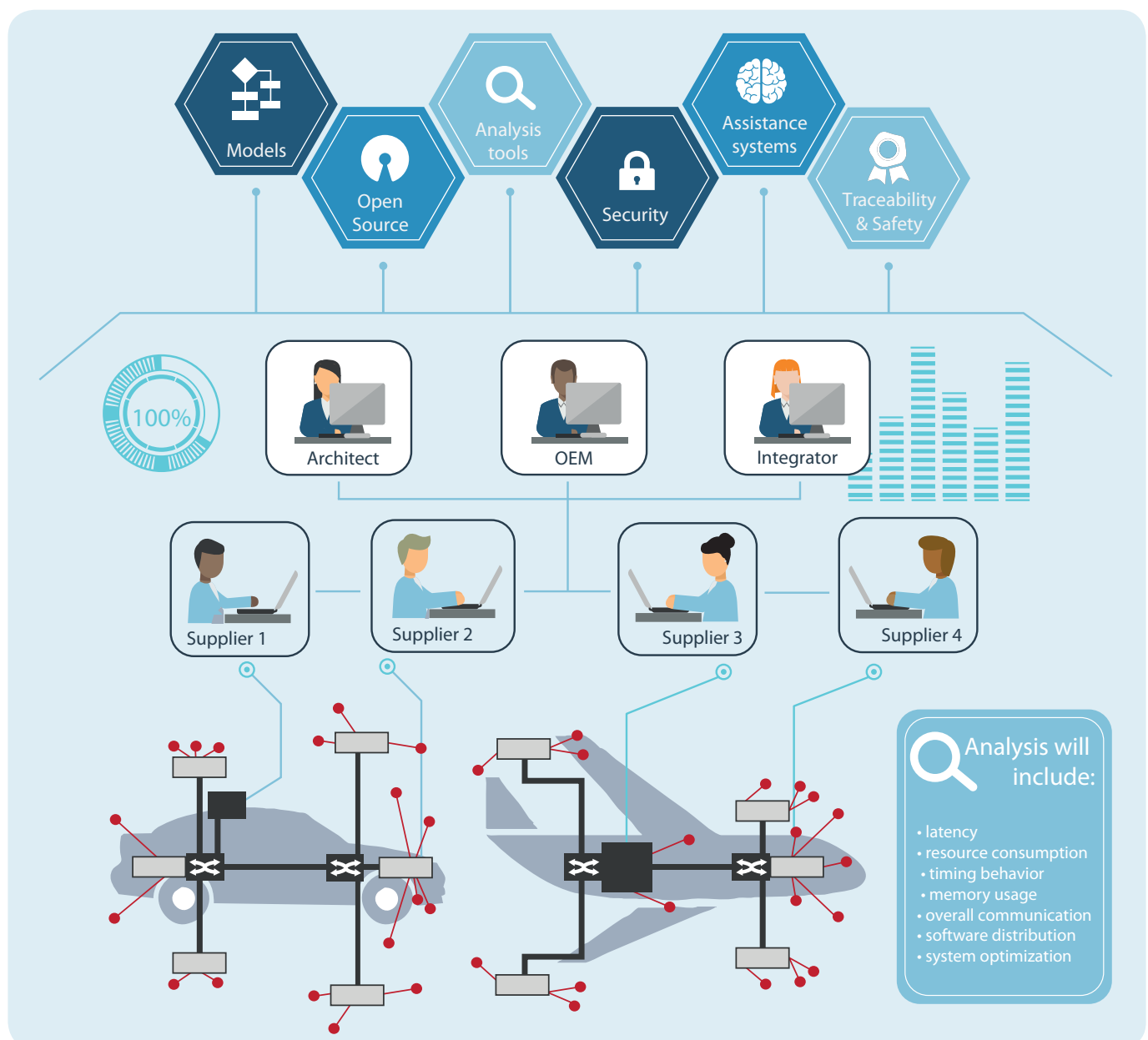
Software developers in the automotive and aircraft industries will face major challenges in the future. Future mobility will be electrified, automated and highly networked. As a result, mobility systems will be subject to radical changes in the way electrical/electronic (E/E) architectures are designed, software and hardware are integrated, and development processes are shaped. Three central, heterogeneous fields of tension are emerging:

- Previously separated functional areas (for example, drive, comfort, multimedia, etc. are integrated within central hardware platforms.

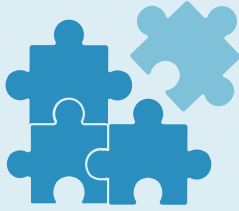
- Future development processes will be designed collaboratively by several heterogeneous partners (OEM, Tier 1, and Tier 2 suppliers) along the value chain. In particular, Software providers, domain experts, and service providers will become more involved in future development processes.

- The application of heterogeneous, that is, specialized and networked hardware (for example, AI -Accelerator for the realization of Deep Learning), will become necessary.

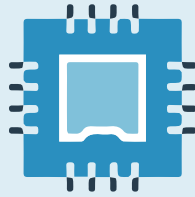
Panorama addresses these issues through an open ecosystem for efficient collaborative design.



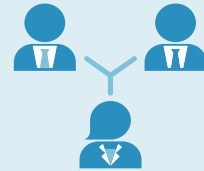
Research Focus



Integration of heterogeneous functional domains



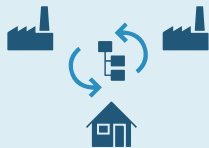
Use of heterogeneous specialized hardware



Involvement of heterogeneous, collaborating parties for design and development

Use Cases

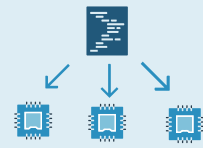
The project results will be explored and demonstrated via the following use cases.



Exchange of system models in cross-company, collaborative development projects



Assessment of different hardware architectures for a given software



Assessment of deployment alternatives for a given software onto a given hardware architecture



Informed guidance for optimization of system level design decisions



Traceability and Safety throughout the development process



Secure model exchange in collaborative development projects

Project Facts

Duration 04/2019 - 03/2022
Volume ~ EUR 17 million

Involved Countries

- Finland
- Sweden
- Germany
- Turkey
- Portugal

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