

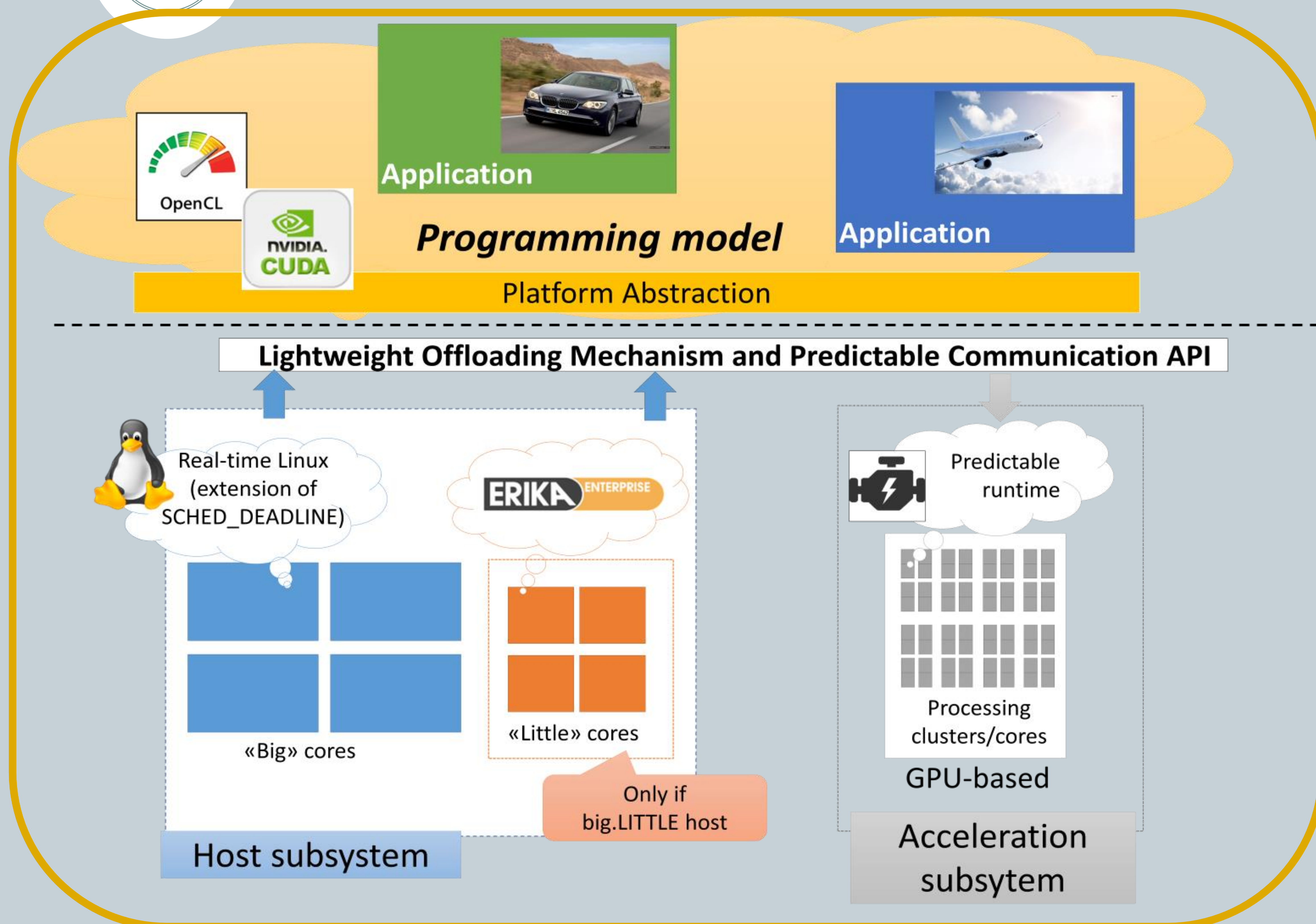
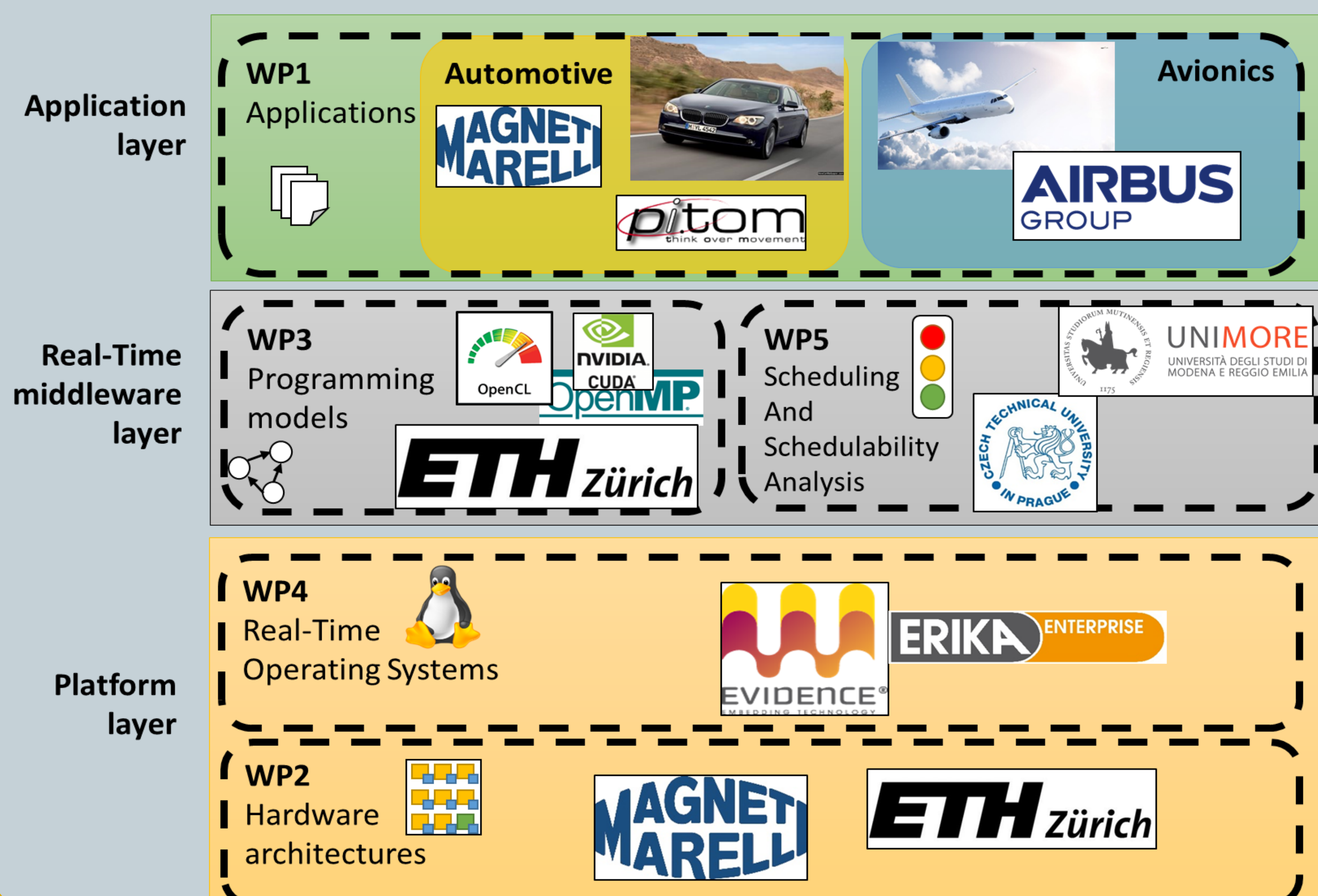
# High-Performance Real-time Architectures for Low-Power Embedded Systems

HERCULES academic and industrial consortium aims to establish reference architectures and platforms for customized low-power heterogeneous computing systems delivering high performance functionality under real-time constraints across two main application domains (Automotive & Avionics).

## HERCULES Main Goals:

- G1.** Demonstrate and implement the first industrial-grade framework to provide real-time guarantees on top of cutting-edge heterogeneous COTS platforms for the embedded domain.
- G2.** Obtain an order-of-magnitude improvement in the energy efficiency and cost of next generation real-time systems.
- G3.** Provide a homogeneous programming interface to simplify the development of future real-time application on top of heterogeneous COTS platforms.

## Partners roles – operational layer



HERCULES will contribute to solve many present constraints of Advanced driving assistant systems (ADAS)

- Low-power budgets
- Space constrained
  - Move to embedded platforms
- Tight interaction w/environment
- Hard Real-time constraints
  - Still, poor research in this field

