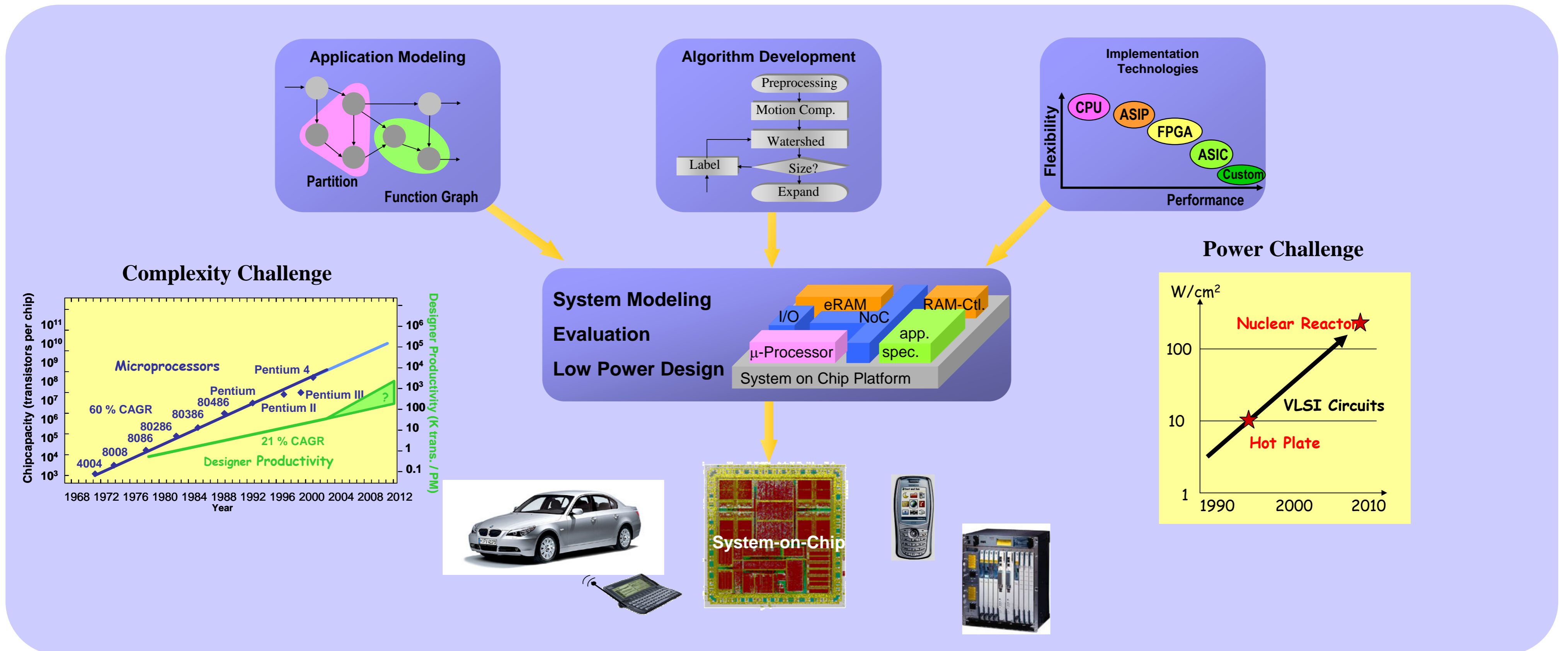
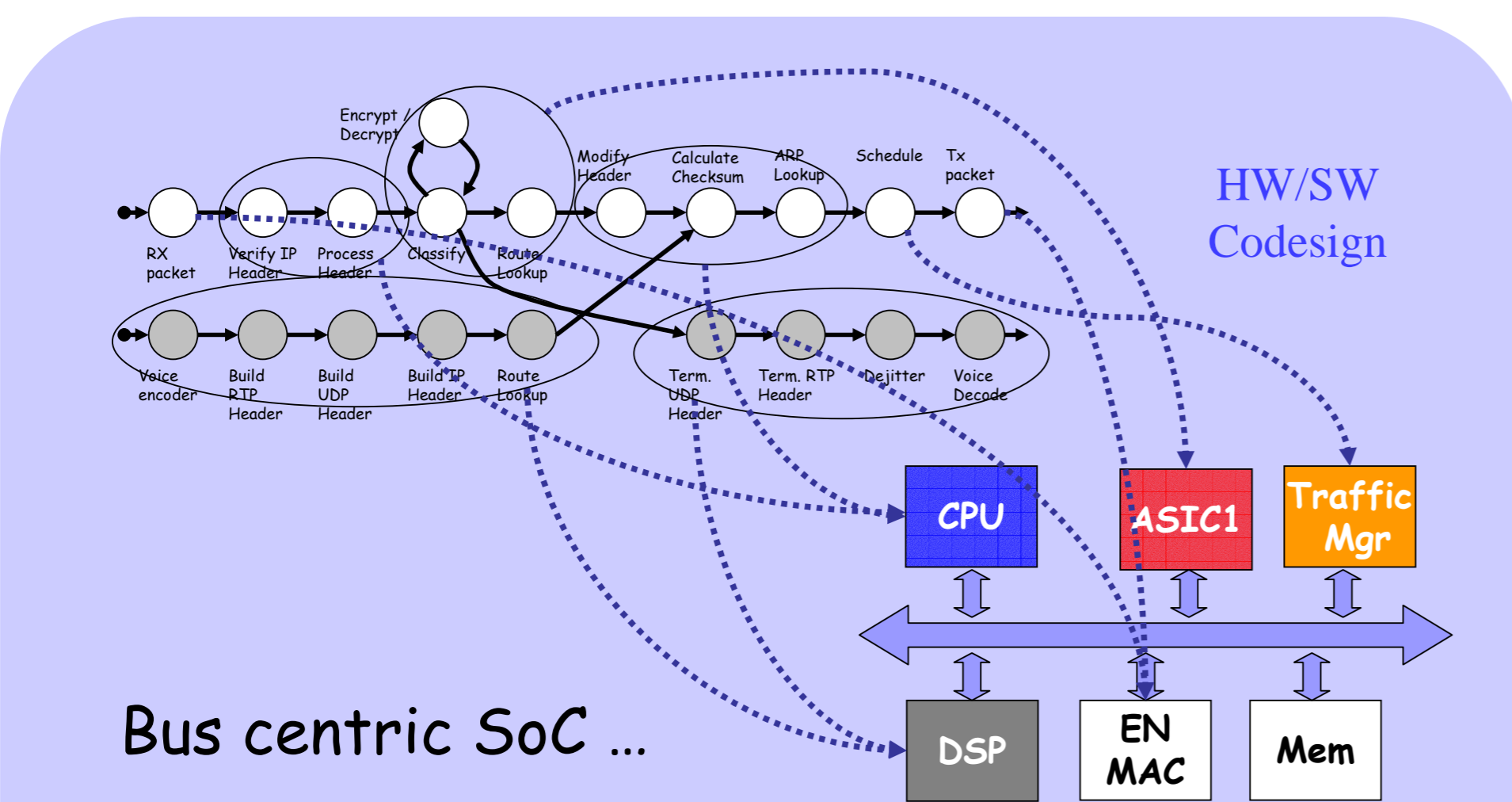


VLSI Architectures and Design of Integrated System Building Blocks for Applications in Communications Systems, Video Signal Processing and Automotive

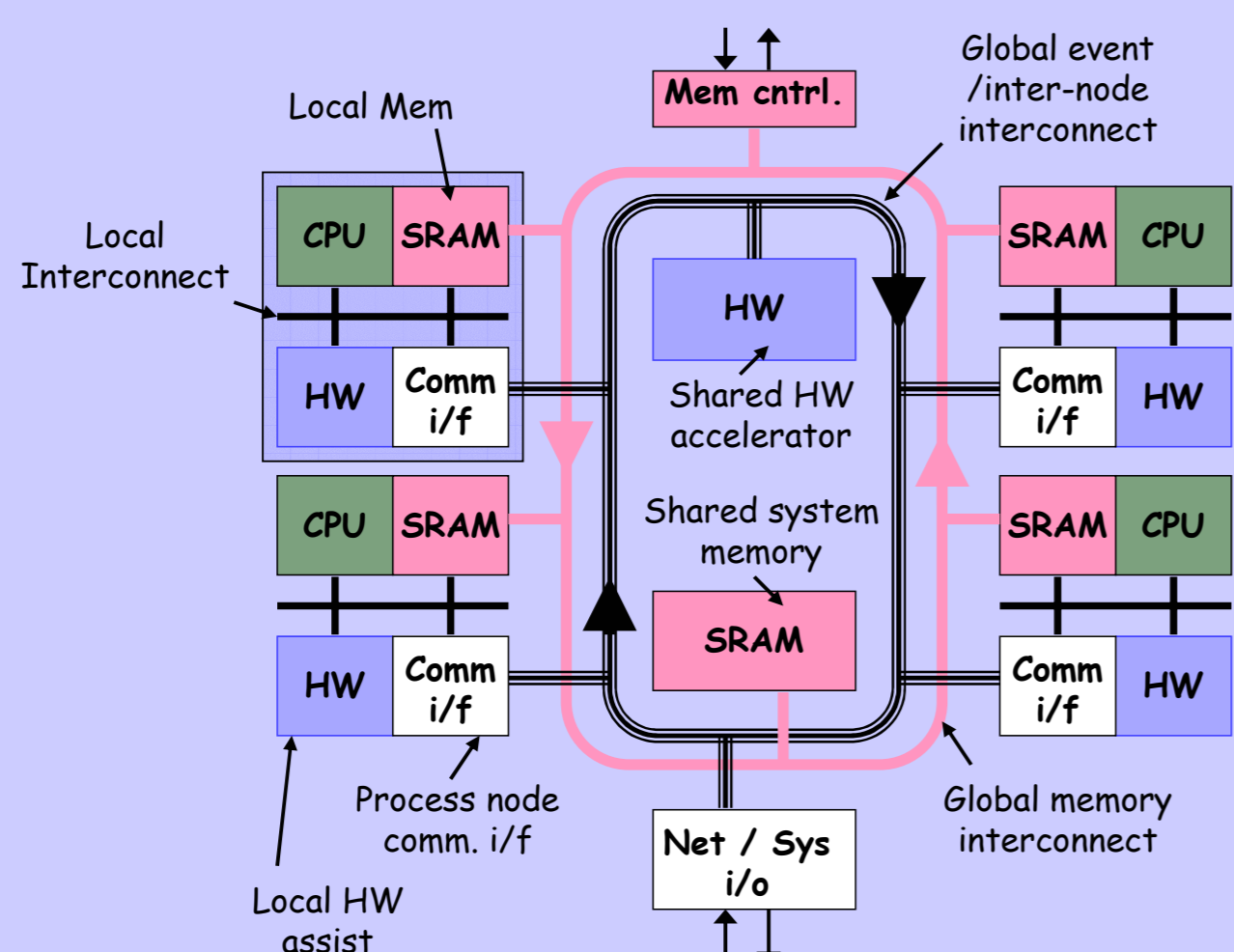
Design Methods and Design Space Exploration for System-on-Chip Solutions



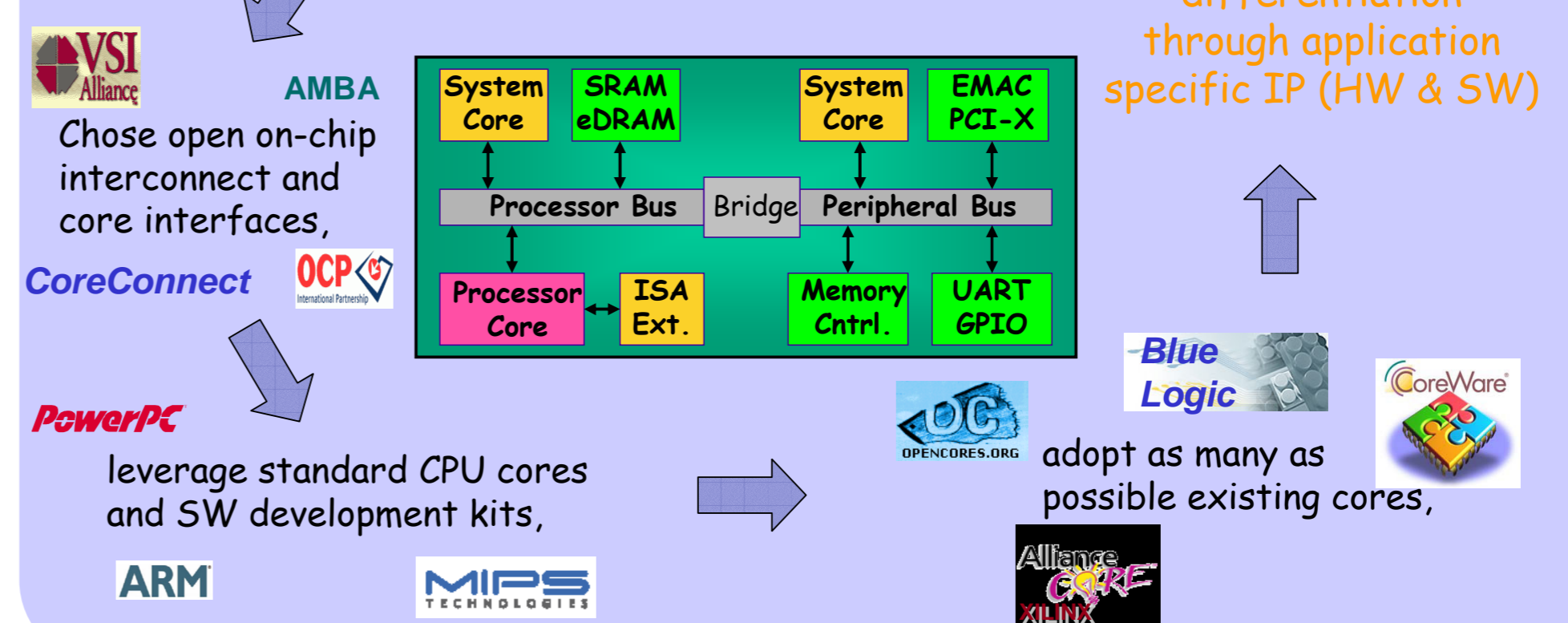
High-level application modelling mapped on structured platform SoC



... or alternative



SoC Design Method to maximize reuse, faster time-to-market, first-time-right and competitive differentiation



SoC Research Challenges

- **CMP (Chip-level multi processor)**
 - Different parallelization strategies (programming models) for embedded CPU cores to scale processor performance
- **Memory access bandwidth and capacities**
 - Hierarchies for data repository and control state information
- **On-chip interconnect (NoC)**
 - High-capacity bus/crossbar/ring structures with QoS guarantees
- **Requires holistic investigation including application characteristics**
 - Integrate system (function/performance) evaluation in HW/SW design flow with SystemC
 - System-level low-power design

