**PAST: CHIP**

**Design**
- Architecture exploration
- Early analysis

**Code**
- Early firmware development
- Fast deployment

**Make**
- Strategic foundry / OSAT partnership
- Chiplet Store (1k+ chiplets)

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**PRESENT: EDA**

**Design**
- Exploration & co-optimization of technologies, architectures, and algorithms
- Variation, imperfection, reliability, resilience
- Analytics-driven full-lifecycle management

**Verification**
- Domain-specific accelerators & sensors
- Interconnects, design partitions, configurability, & black boxes
- Mixed-signal multi-material systems

**Security**
- New attack opportunities through interconnects
- Compromised “common” chiplets
- Hardware trojans & counterfeits via untrusted supply chain

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**FUTURE: (ECO)SYSTEM**

**Simplification**
- Design methodology with a focus on innovation instead of perfection
  - Easier, faster, & more design starts

**Standardization**
- Manufacturing options & interfaces
  - Faster and cheaper implementation with fewer surprises

**Systems**
- System thinking for architecture exploration, sw/hw co-design, multi-physics / multi-domain analysis, lifecycle management
  - Better products

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