

Technology Transition Panel





Integrity ★ Service ★ Excellence

Trusted and Assured Microelectronics

Distributed Transition Environment

17 AUG 2016

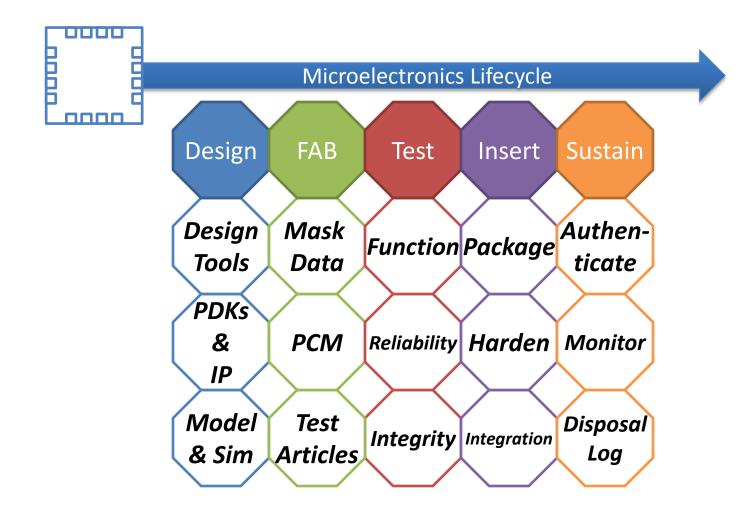
Mr. Matthew Casto
Senior Electronics Engineer
Air Force Research Labs
AF JFAC HwA Technical Lead





Integrated Circuit Supply Chain



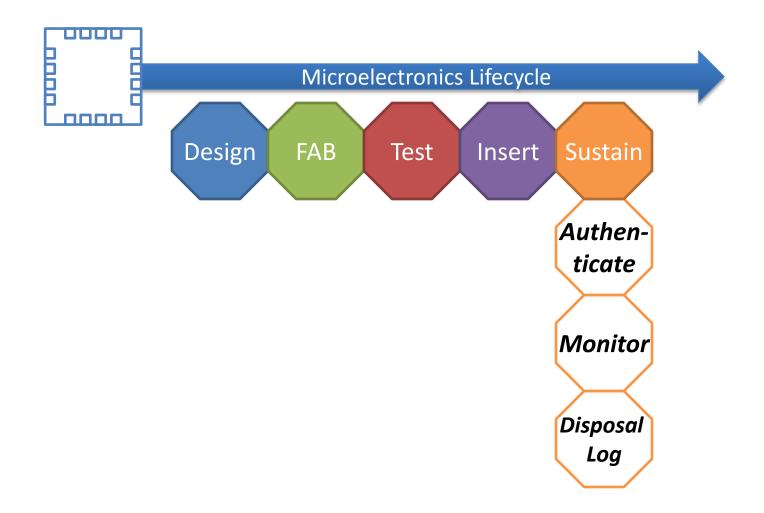






Integrated Circuit Supply Chain



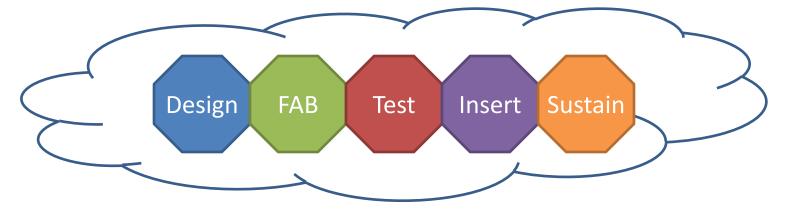






Putting Tools in Users Hands









Multi-Domain Access



Distributed Transition Environment Design **FAB** Insert Test Sustain Confidence **Electrical Spatial Physical** Temporal **Tools Implement Function** Counterfeit **Tracking** Longevity 2nd Order **Supply** IΡ **Vetted IP** Location

Analysis

DISTRIBUTION A. Approved for Public Release. Distribution Unlimited. Case #88ABW-2010-4011

Architecture

Chain

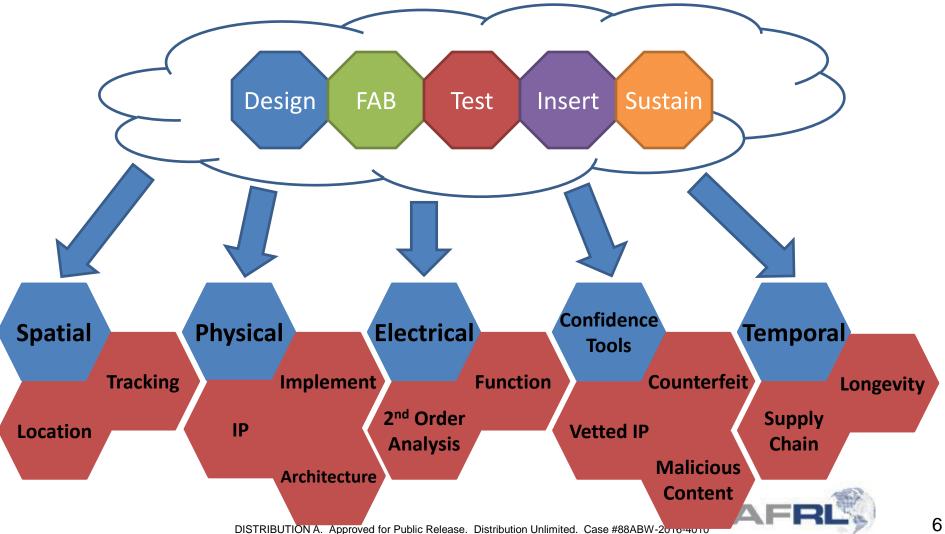
Malicious

Content



Multi-Domain Access

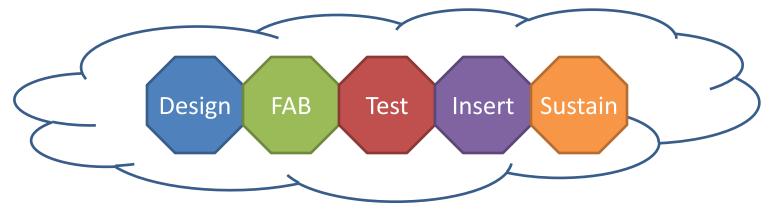






Verification and Validation











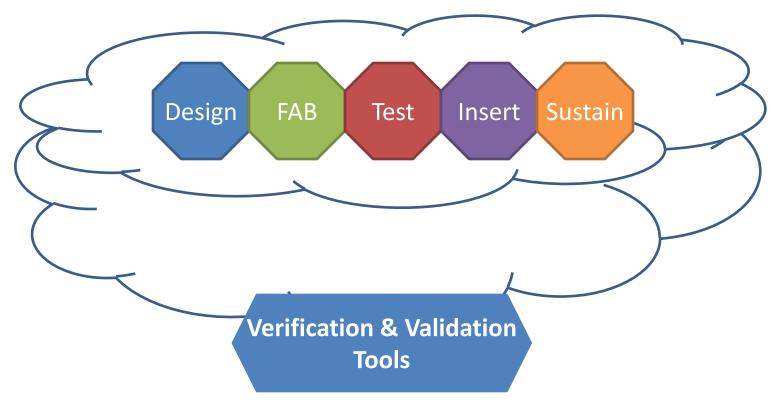






Verification and Validation



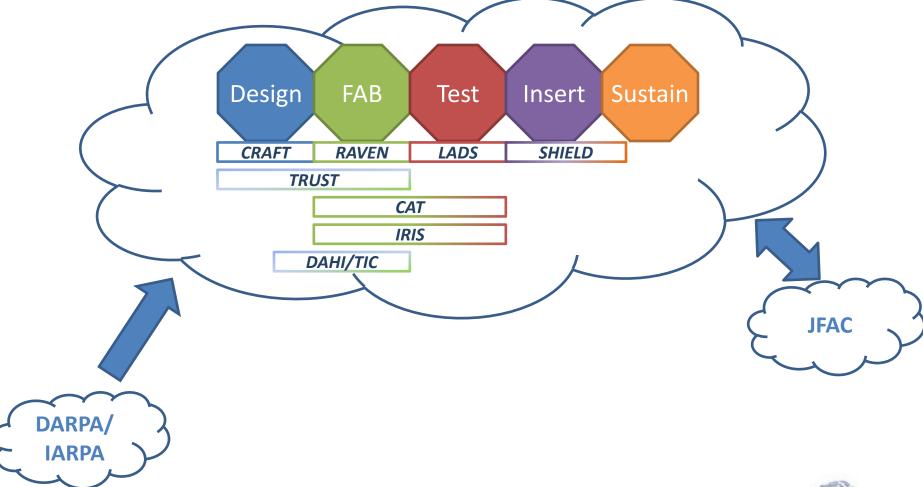






Identify and Transition

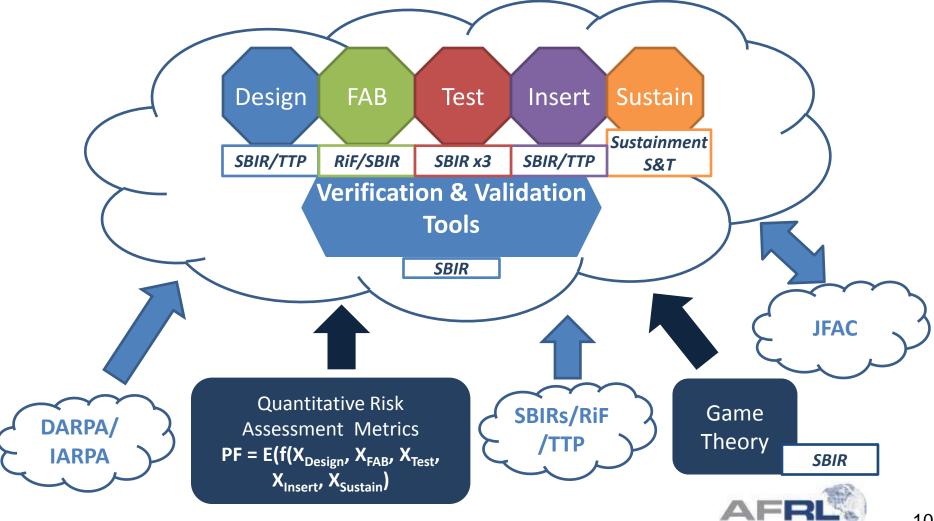






Identify and Transition

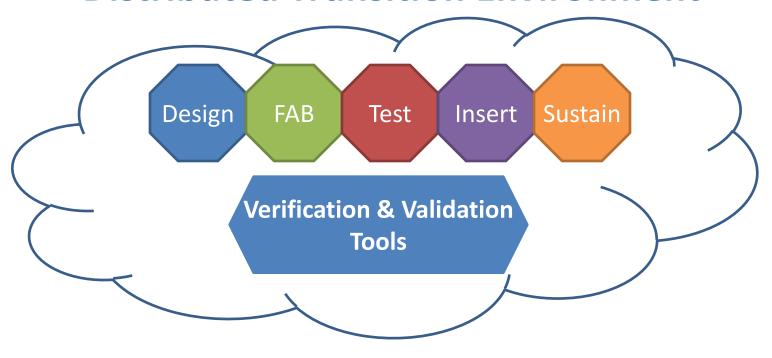






Collaborative and Distributed

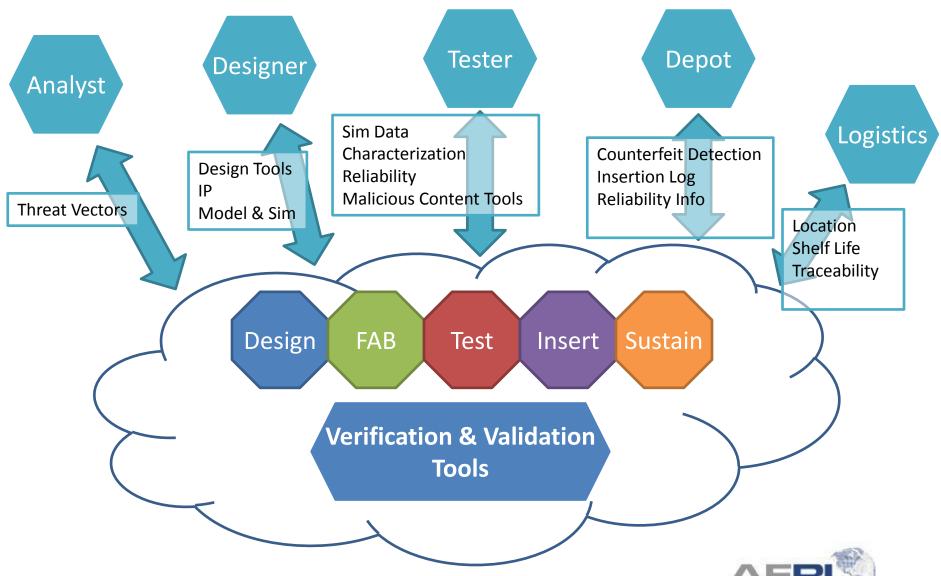






Collaborative and Distributed

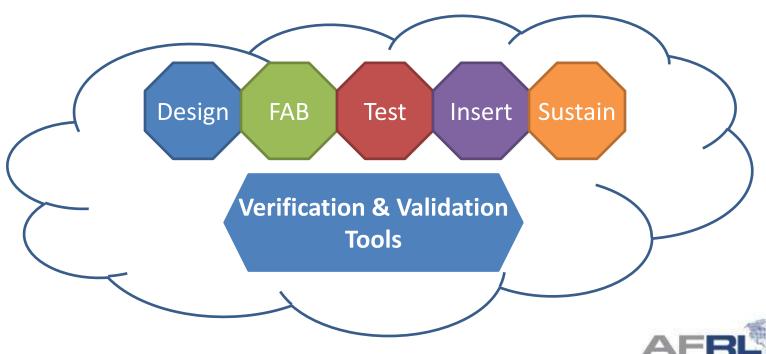






Multi-Dimensional Perceptivity

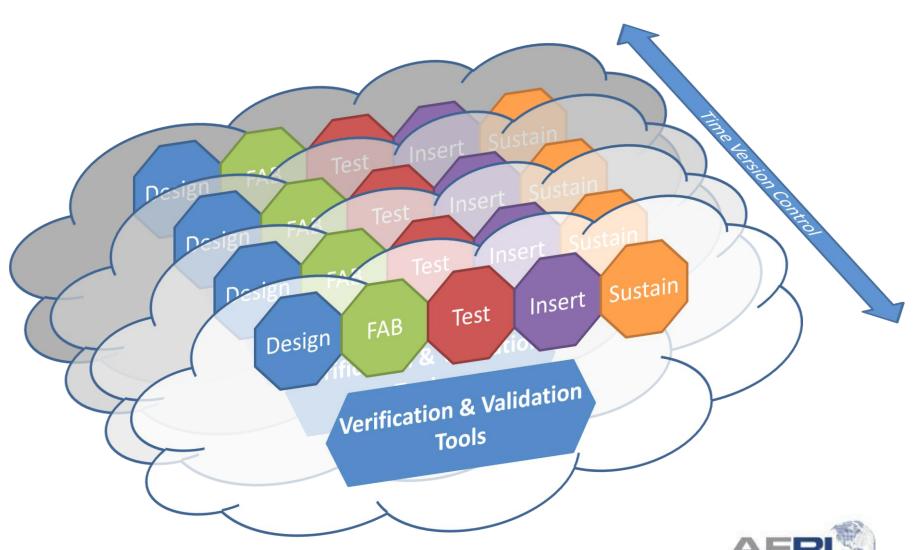






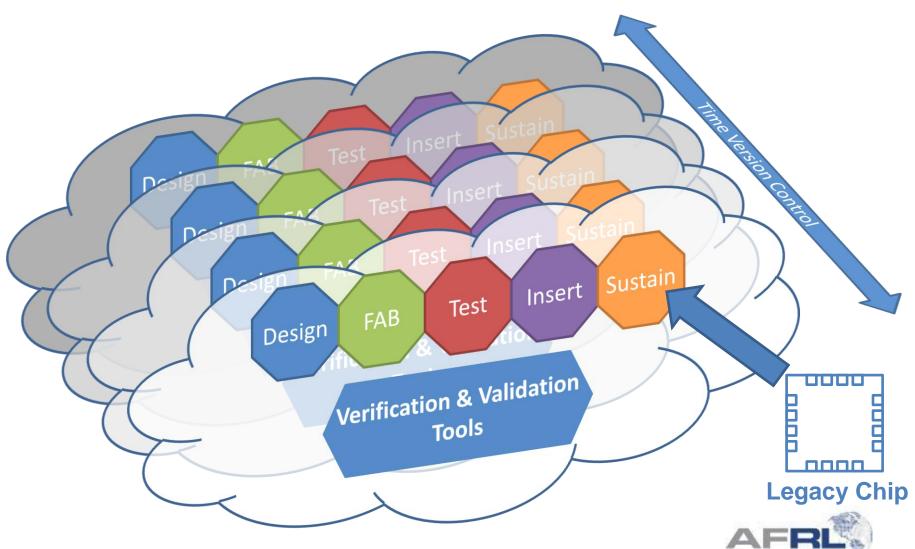
Multi-Dimensional Perceptivity





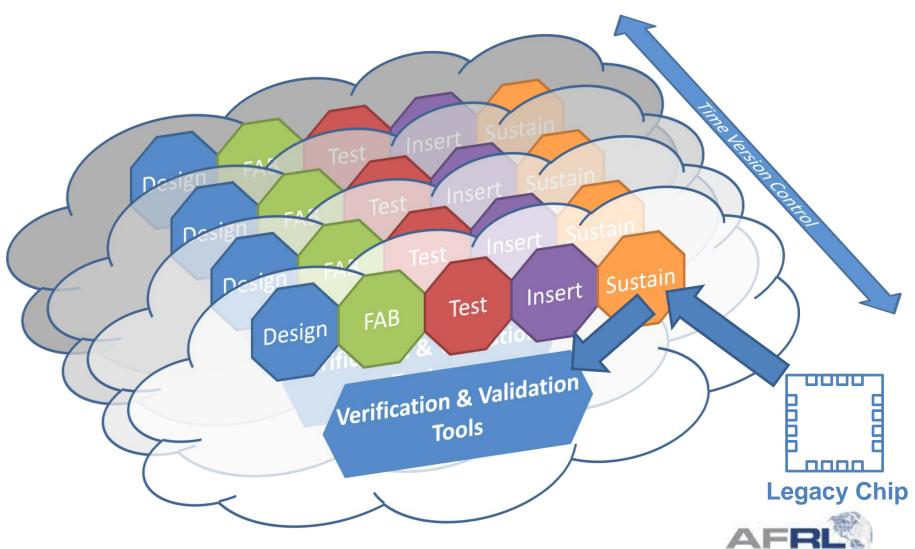






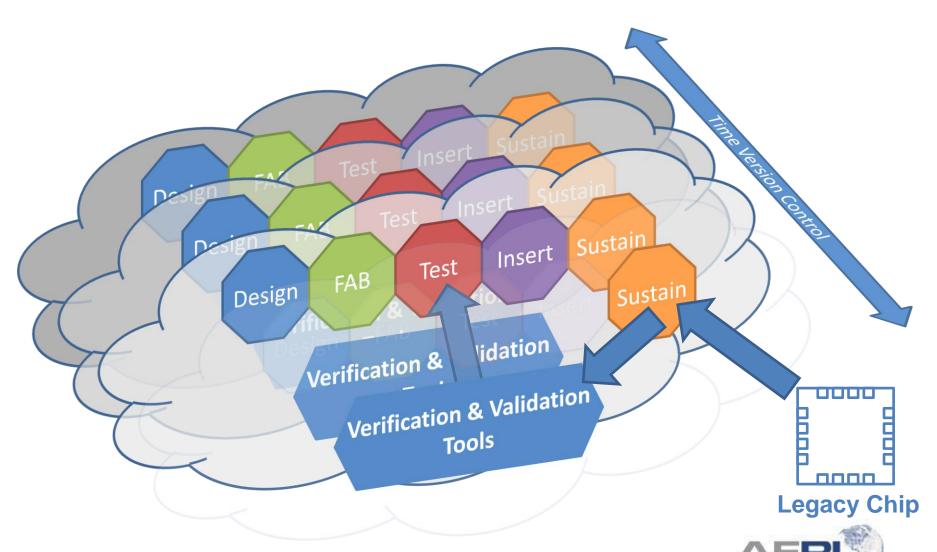






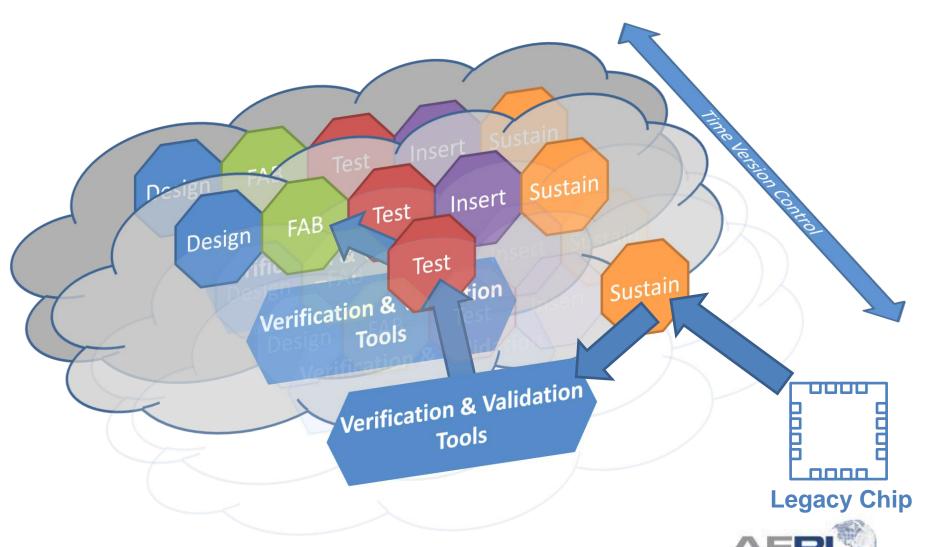






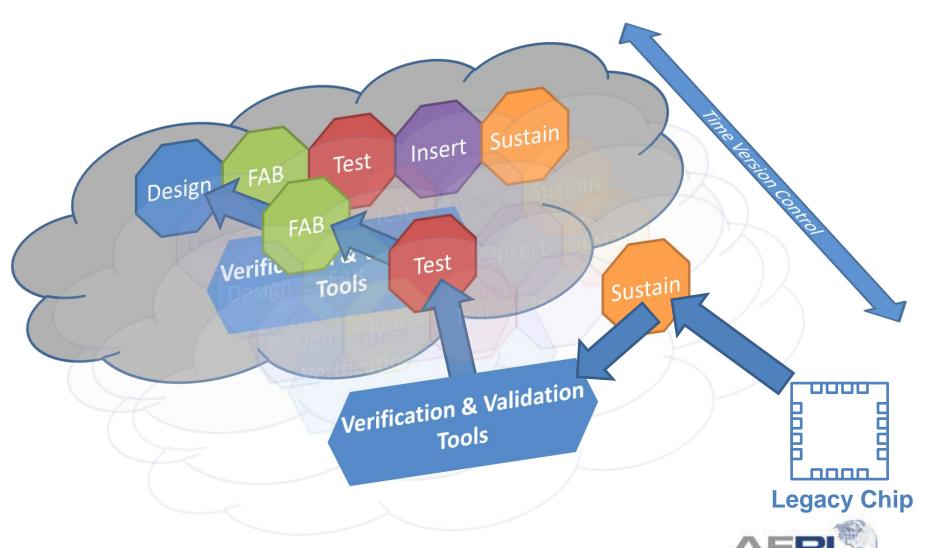














Distributed Transition Environment Key Enablers



- Scalable lifecycle environment
- User access to tools and techniques
- Time and version control
- Address State of the Art, State of Practice, and Legacy and Boutique





Revolutionary-Relevant-Responsive



Questions?



Early Flight Space Age Modern Flight Cyber Domain Future

AFRL