

# Transforming Chaos Into Clarity With Keysight Design Data and IP Management Software

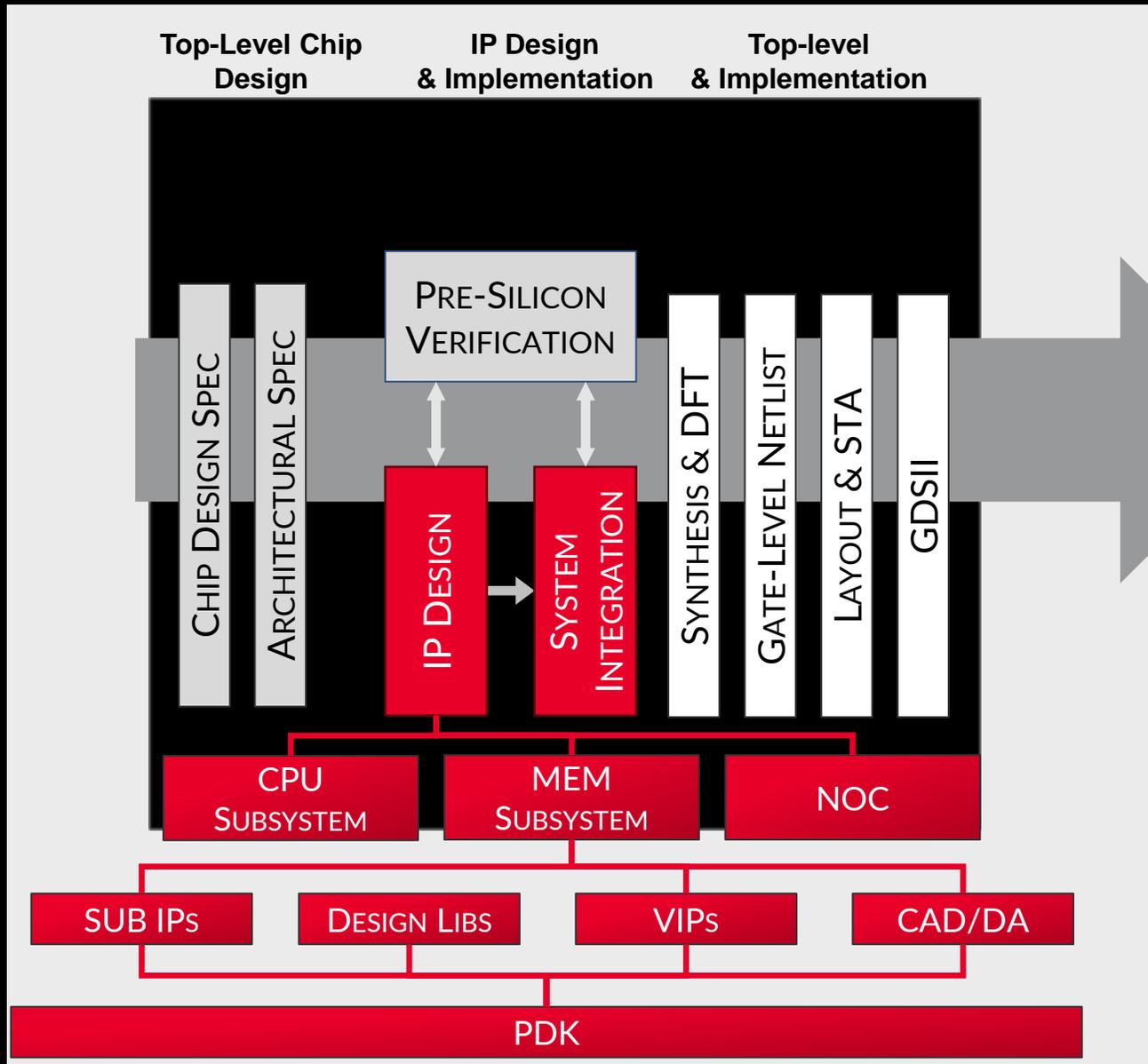
A stylized world map composed of glowing purple and blue dots and lines, set against a dark background with a circuit board pattern. The map is illuminated with bright light effects, particularly over the Americas and Europe.

# Headshot & Bio

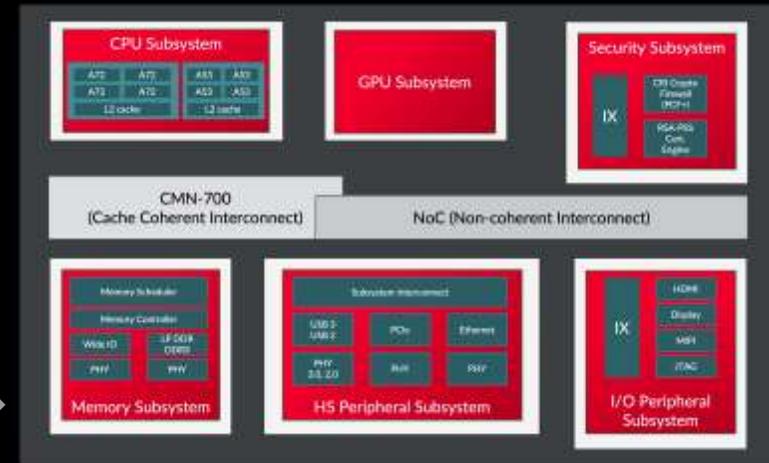


**Amit Varde** currently serves as the **Director of Strategy & Solutions** at **Keysight Technologies**, specializing in helping clients navigate complex Design and IP management challenges. Amit is a seasoned technology leader with over two decades of experience in semiconductor product design, cloud computing, and IP management. Before Keysight Technologies, Amit's career included stints at Amazon (AWS and Project Kuiper), Microchip Technology, SoftMachines (acquired by Intel), and Intersil Corp. (acquired by Renesas) in diverse technical and business roles. Amit holds a Master of Science in Computer Engineering from Syracuse University and a Certification in Business Analytics from the Harvard Business Analytics Program.

# From SOC to Chiplets



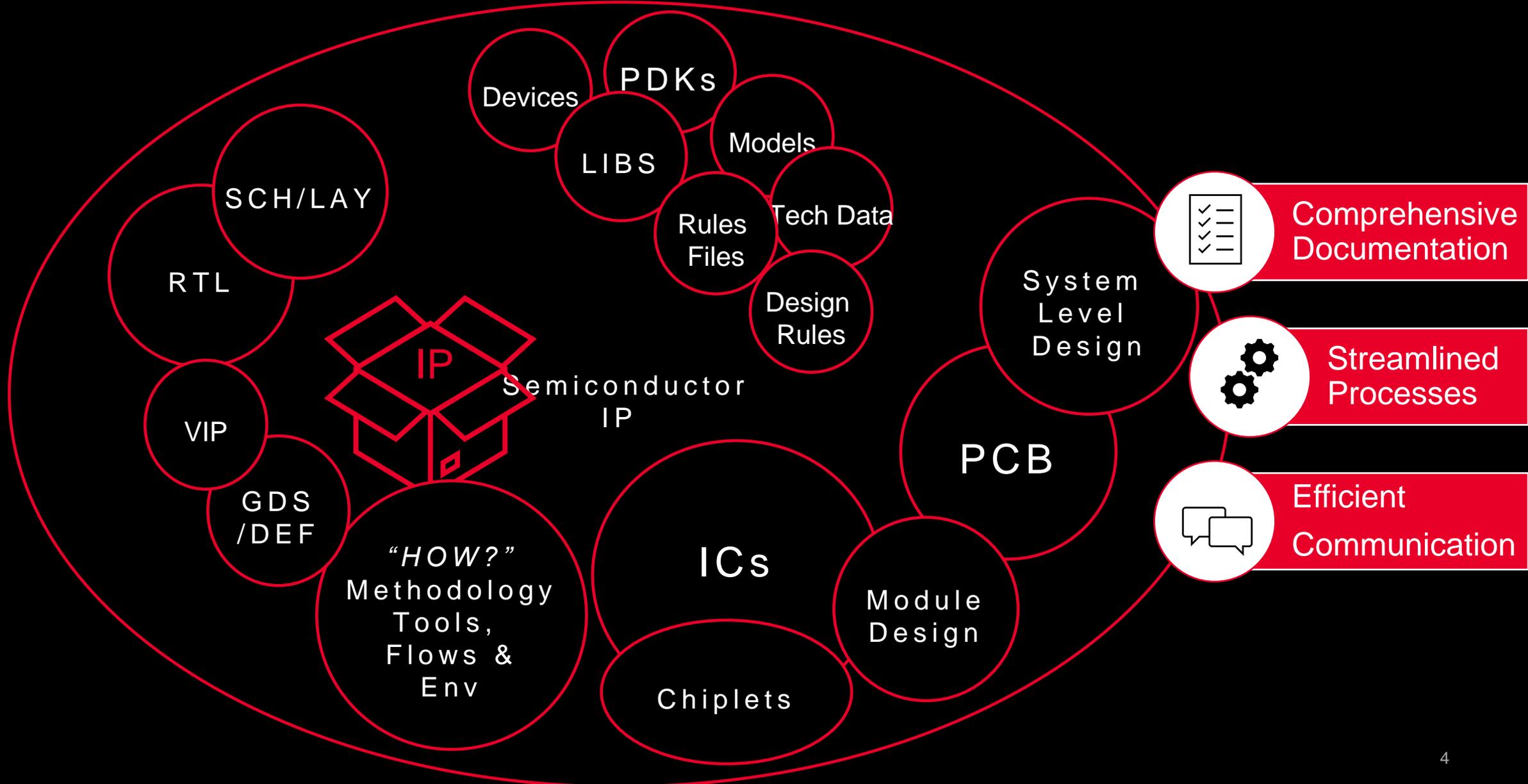
SoC



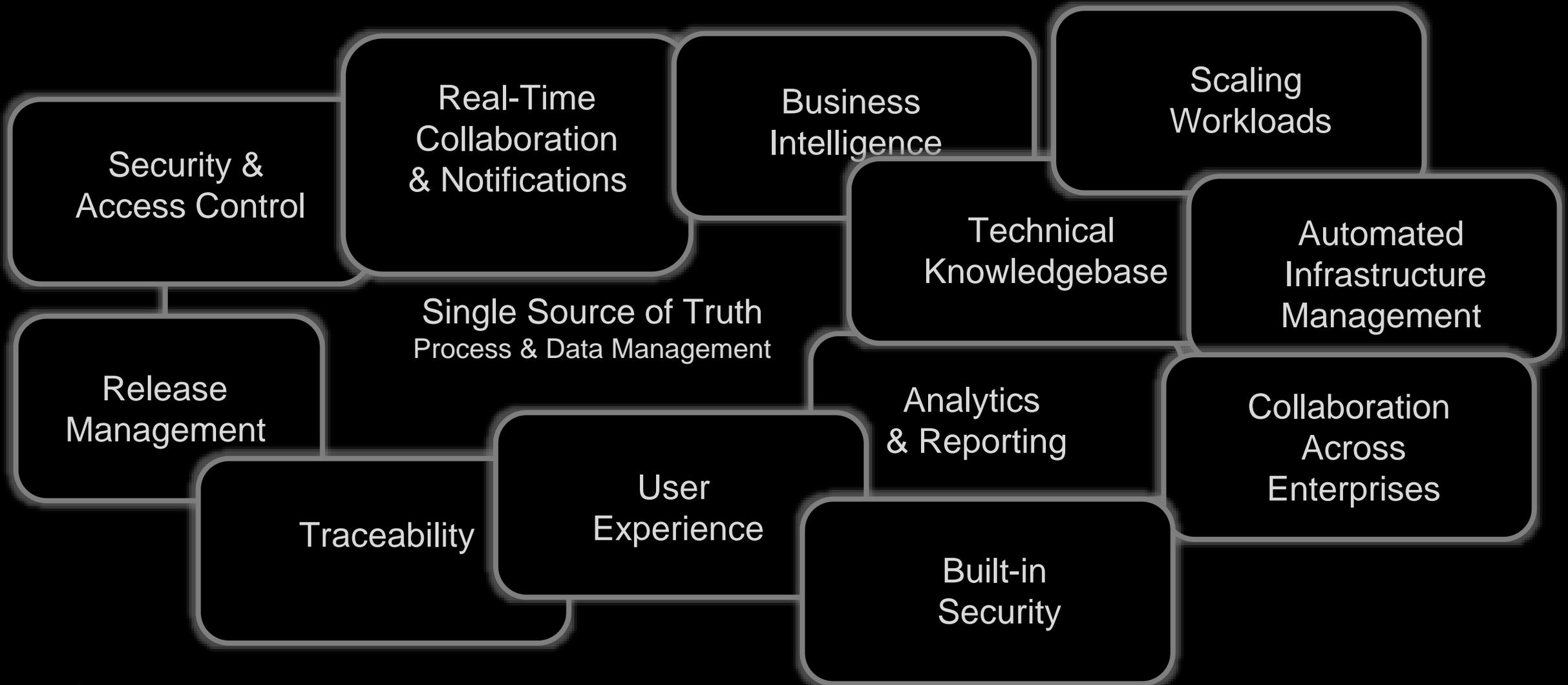
Chiplets ...



# What is an IP?



# Engineering Lifecycle Challenges



# Quantifying *Some* Challenges



Source: Dimensional Research, 2023; PCI-SIG, 2022;

Global Change Data Lab, 2022; IEEE Open Journal of Communications Society, 2020. Dimensional Research, 2023; ASPENCORE, 2022; Service Performance Insight, 2020.

Companies Face **63% Productivity Loss** From Manual & Siloed Workflows

**30-40%** Time spent on looking for information

**20%** time spent fixing data integrity & correlation issues

Outdated **Design Data Management** Causes Critical Security Gaps:

**65%** Information Loss

**62%** Data Breaches

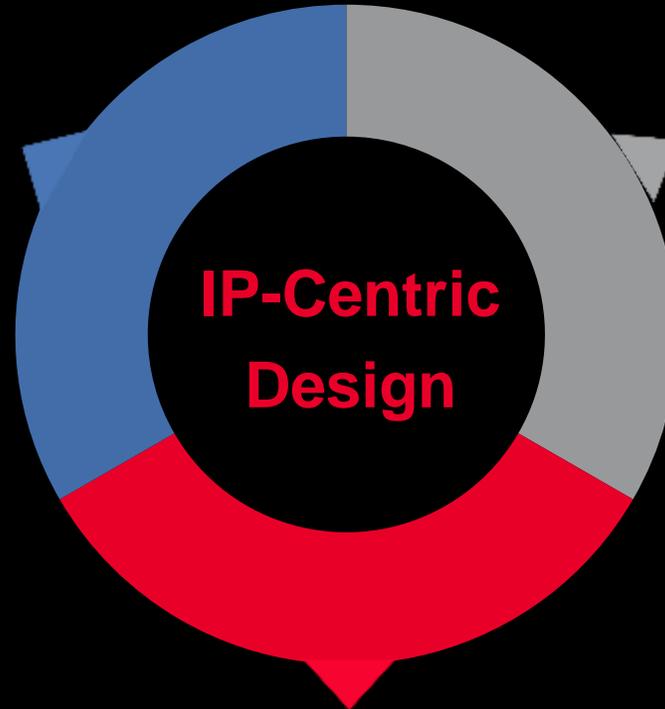
**56%** IP Theft

**91 % Of Design Leaders** Foresee Simulation Time Surging Within 2yrs

**94%** Agree Simulation Cycle Would Benefit From Offloading Execution To HPC Resources

## 3rd Party IPs

- ❑ Read-Only IPs
- ❑ Track Licenses & Royalty
- ❑ Controlled Access to Projects
- ❑ Eg: CPU, VIPs, Mems



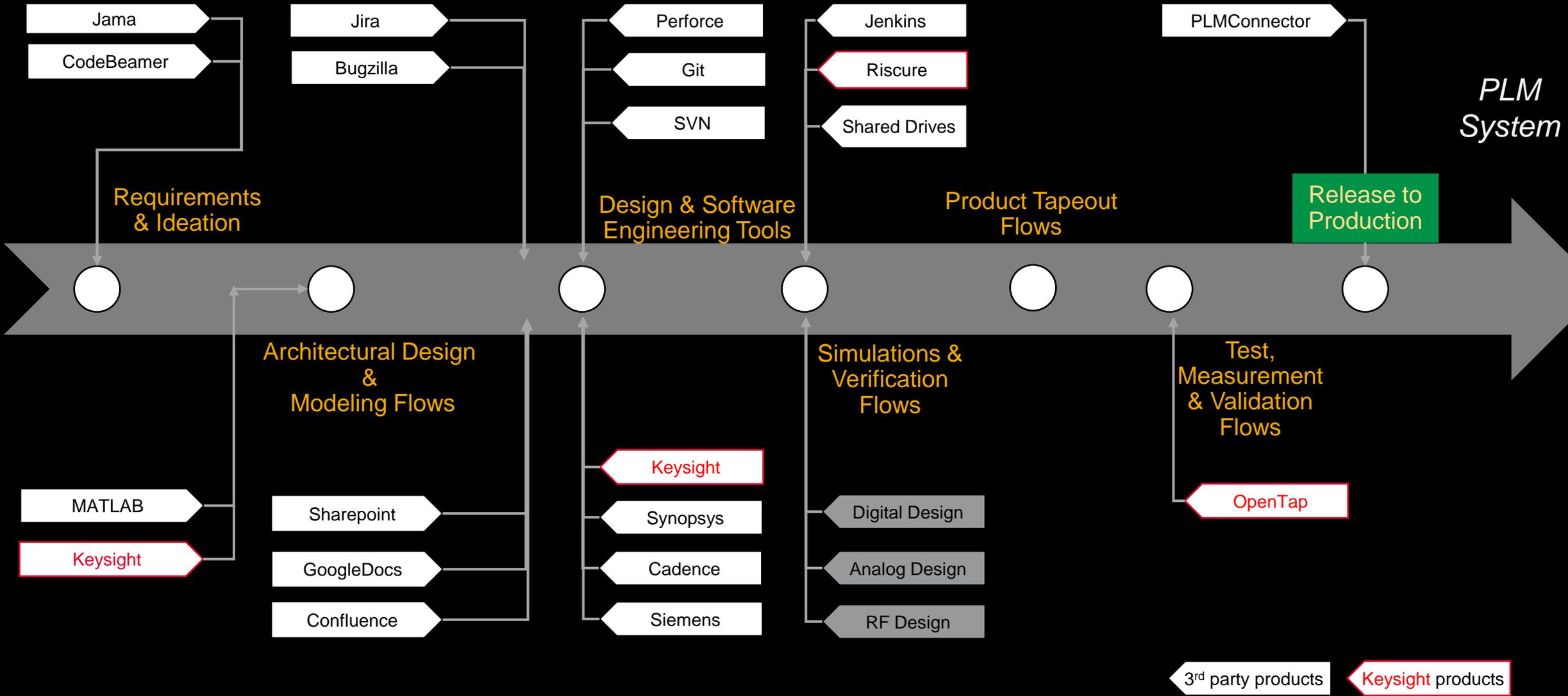
## Corporate IPs

- ❑ Read-Only IPs
- ❑ Track IP-Lifecycles
- ❑ Controlled Releases within Orgs
- ❑ Eg: SerDes, ADCs/DACs, PDKs

## Community IPs

- ❑ Template/Seed IPs to
- ❑ Clone, Modify, and Reuse
- ❑ Contributed from Designers
- ❑ Eg: GPLL, I2C, Firmware

# Engineering Lifecycle Phases (simplified)



# Products

Other Enterprise Software  
(PLM, ERP, LDAP, CRM, etc.)



## Enterprise Collaboration

- Ready access
- IP Reuse
- Standards compliance
- Traceability & Analytics
- Organizational memory

Keysight IP  
Management (HUB)

## Team Collaboration

- Revision Control
- Flow Management
- Release & Variants
- Multi-site & cloud enablement

EDA Tools  
&  
Flows

Design Data  
Management  
(SOS)

Publish

Reuse

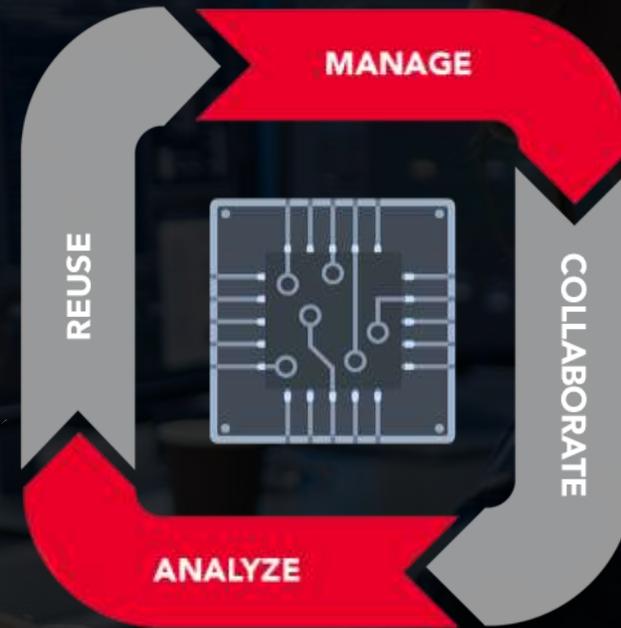
# Keysight Design Data Management (SOS)

## REUSE

- Reference & reuse
- IP catalog
- Propagate fixes & releases
- Increase productivity

## MANAGE DESIGN DATA

- Revision control
- Release & variant management
- Access controls & data security
- Optimized network disk usage



## COLLABORATE

- Remote cache servers
- Auto synchronization
- Secure & efficient data transfer
- Design change handoff

## ANALYZE

- Design audit reports
- Hierarchical schematic/layout differences
- Changes between releases/time

# Keysight IP Management (HUB)

## Engineering Lifecycle Management

### Single Source of Truth

Design Data Management

Engineering Reviews

Real-time Collaboration

Design Knowledge & Intelligence

IP Security

Release Management

Analytics & Reporting

Legal & Export Controls

## Seamless Tools Integration

Requirements Management

EDA Tools

Enterprise Software

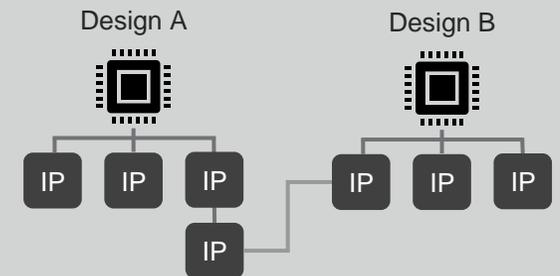
Issue Tracking

## Workflows & Traceability

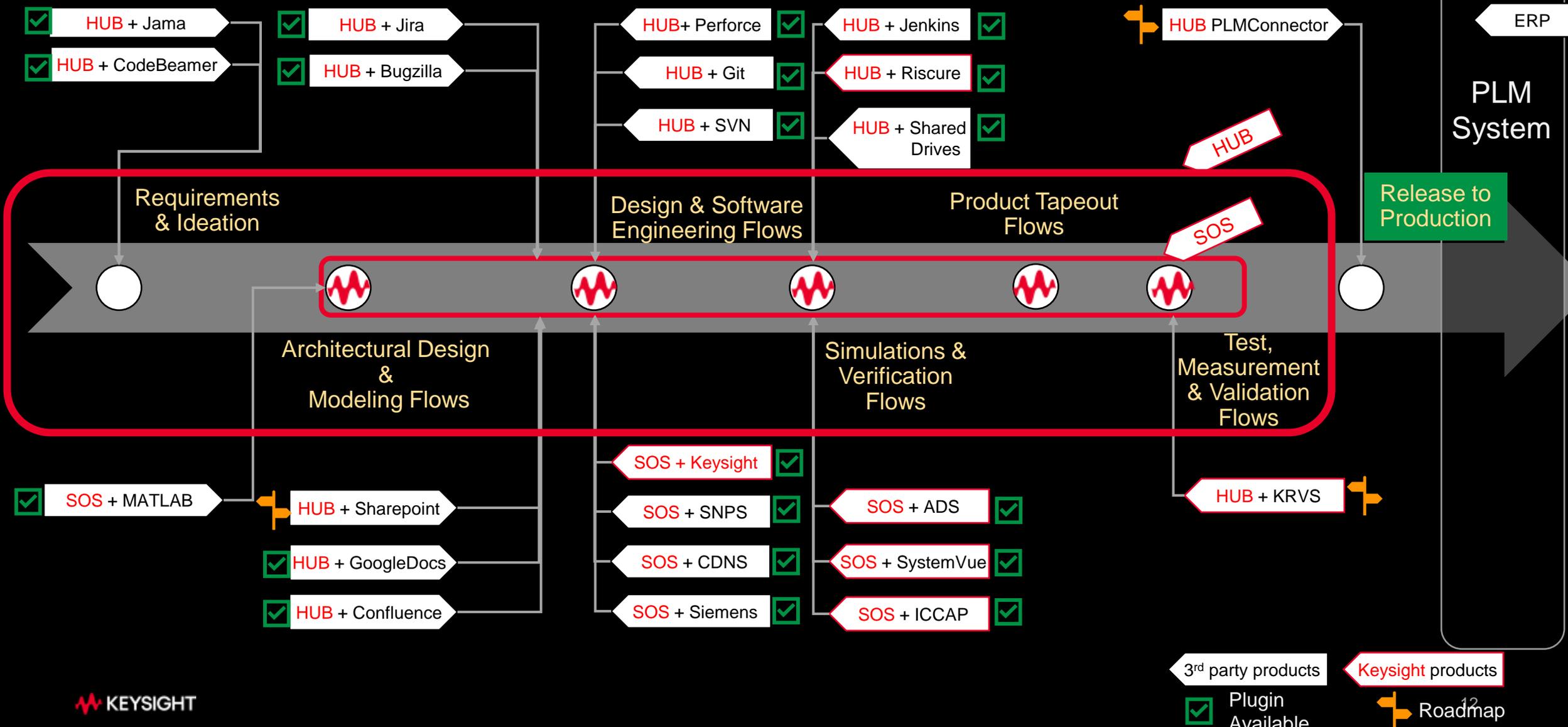
### Workflows



### Traceability & Bill of Materials (BOM)



# Keysight HUB



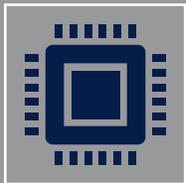
# Case Study: Allegro Microsystems

## 50% savings in design time!



“Streamlined IP management with IP traceability and reporting capabilities helped us save an estimated 45-50% of the design time over the last five years, simplifying Allegro’s efforts to meet ISO 262622 functional safety requirements. We anticipate further engineering life cycle reductions and faster market time as we continue integrating more business units and IPs into Keysight HUB.”

+ Jim McClay, Director of Design Enablement @ Allegro Microsystems



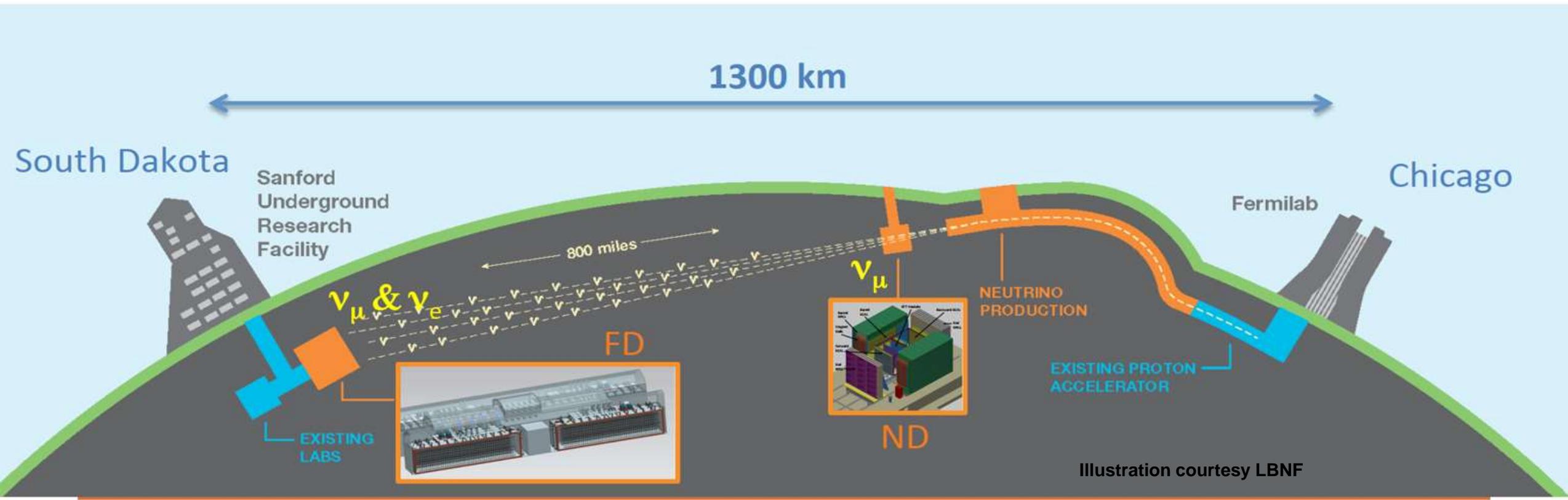
“Our engineers actively search for IP developed by peers across different business units. Thanks to Keysight HUB, we have boosted IP reuse to save significant design time,”

+ Ravi Shankar Gaddam, EDA Design Methodology Manager @ Allegro Microsystems

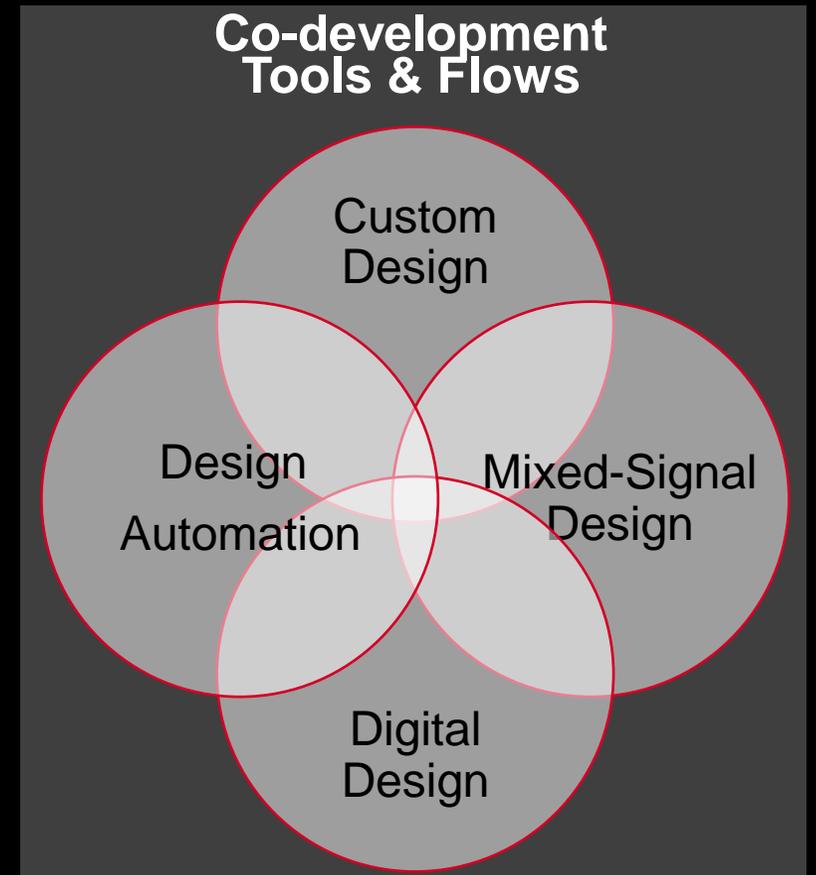
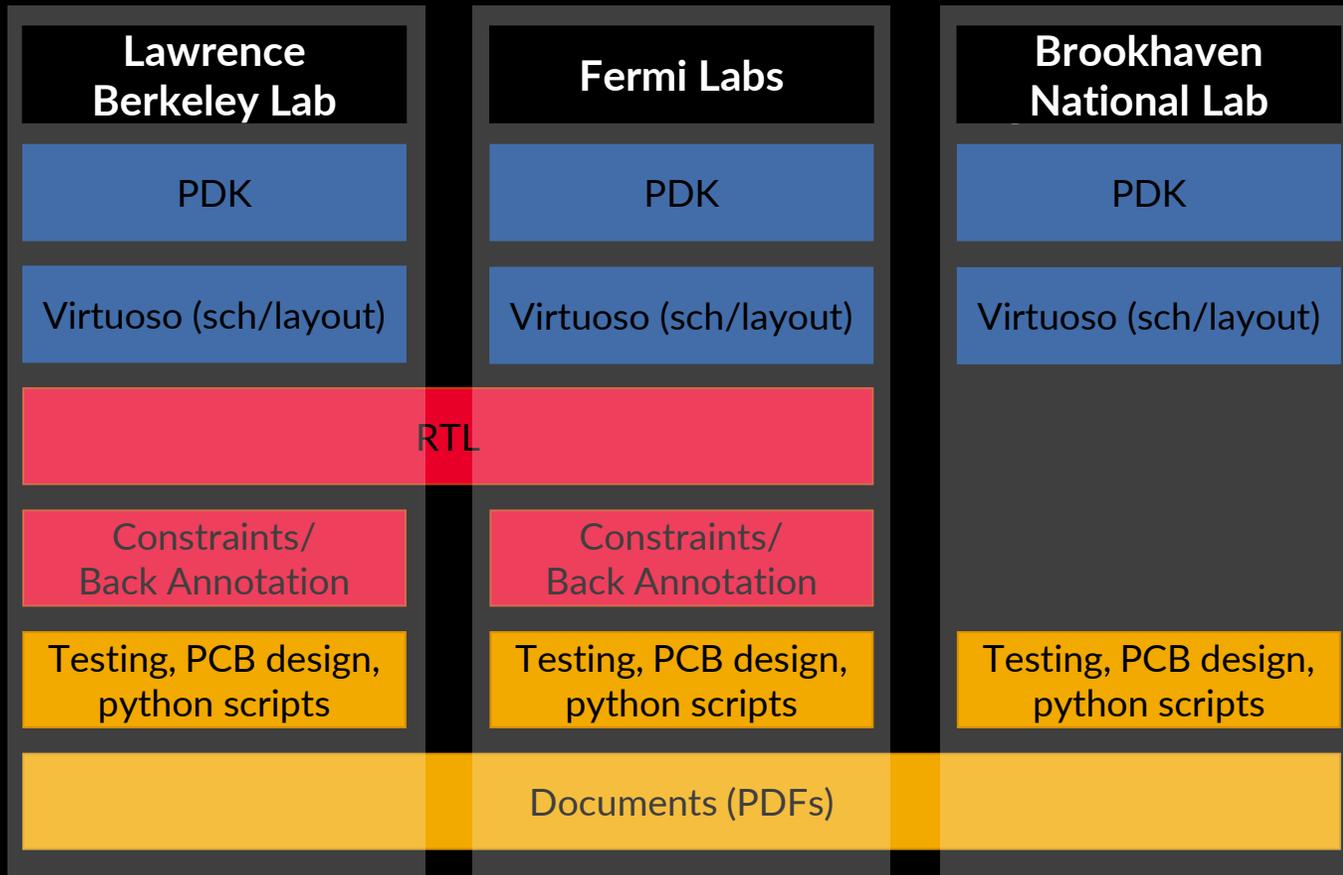
# The DUNE Experiment

The Deep Underground Neutrino Experiment (DUNE) is an international science collaboration focused on unraveling the mysteries of the neutrino.

An intense neutrino beam is generated at Fermilab (near Chicago) and detected by an enormous detector 800 miles away. The detector sits about a mile underground in an old mine.

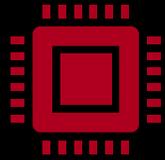


# Co-developing Intellectual Property



Custom IC / Technology
  Digital Design Files
  Text Documents

# Blueprints of Brilliance



Engineering Lifecycle  
Management



Streamline Your  
Success



From Lab to Fab

Revolutionizing semiconductor technology development  
With  
Keysight Design Data & IP Management Solutions

