

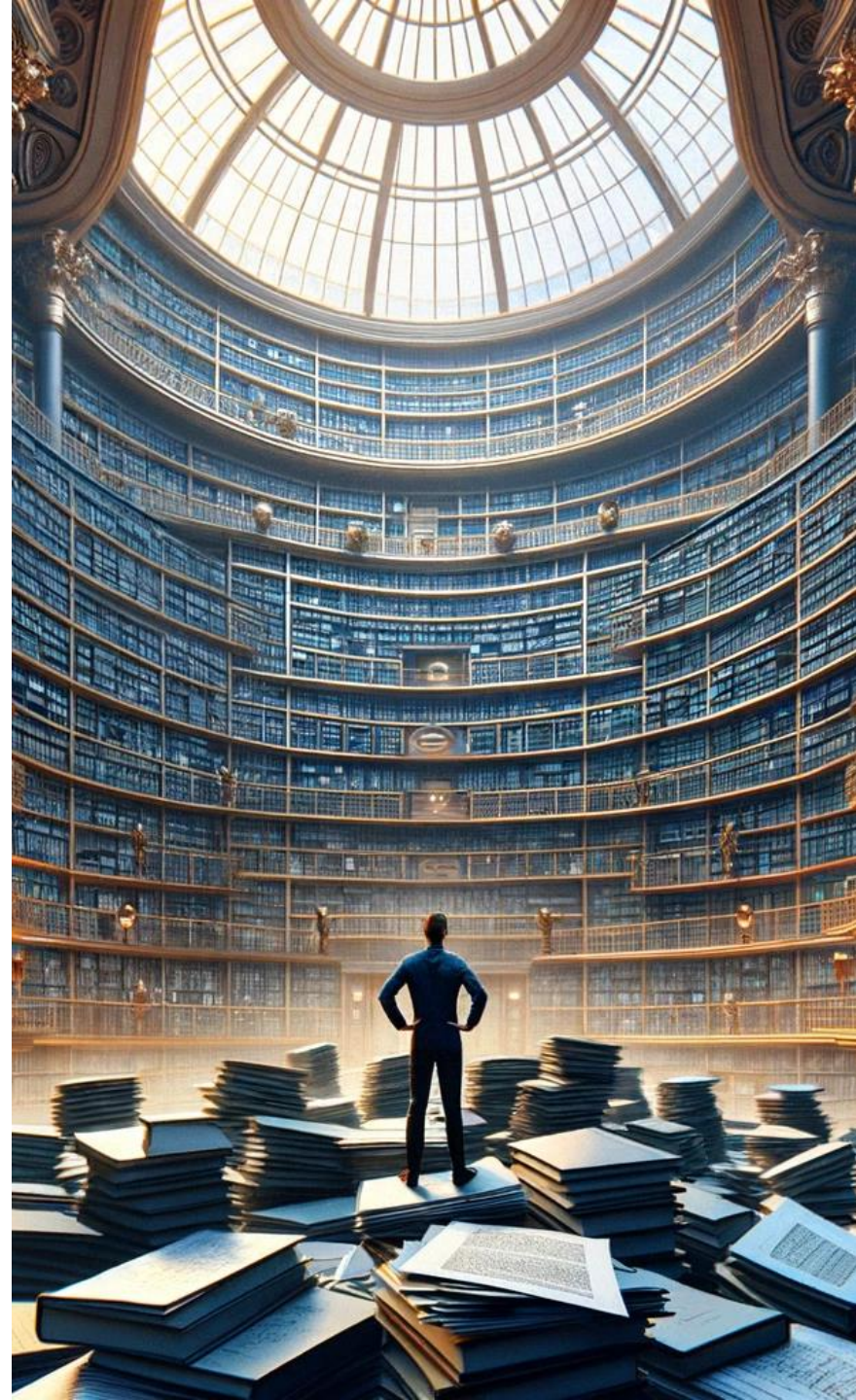
Transforming Chaos Into Clarity With Keysight Design Data and IP Management

Karim Khalfan

Director of Application Engineering, Process and Data Management
Keysight Technologies

Unlocking Your Library of Innovation

Navigating and reusing the vast knowledge
of your silicon designs with
Keysight Design Data and IP Management



The Need to Reduce Search, Reuse, and Correlation Time of Data for Engineers



30-40%

time spent looking for
information



Frequently

find and use the wrong
version of data



20%

time spent fixing data
integrity & correlation issues

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

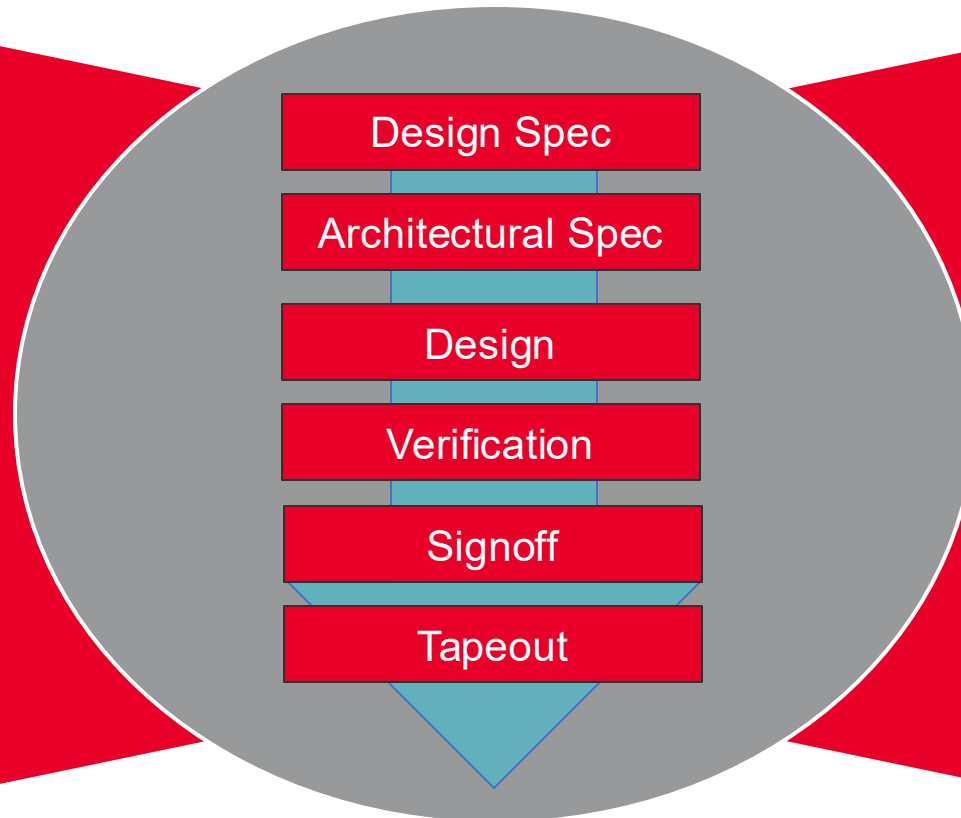
$$\begin{array}{ccccccc} \mathbf{10} & & \mathbf{\$286,000} & & \mathbf{38\%} & & \mathbf{25\%} \\ \text{Median \# of} & & \text{Estimated total cost} & & \text{Avg. time} & & \text{Avg. time spent} \\ \text{engineers per} & \times & \text{of one computer} & \times (& \text{spent on} & + & \text{on design \& test} \\ \text{design project} & & \text{hardware engineer.} & & \text{manual tasks} & & \text{data correlation} \\ & & & & & & \text{) = } \mathbf{\$1.8M} \text{ per year} \end{array}$$

Keysight Design Data and IP Management Software

Engineering Lifecycle Management (ELM)
For IC Design From Concept to Tapeout

Design Data Management (SOS)

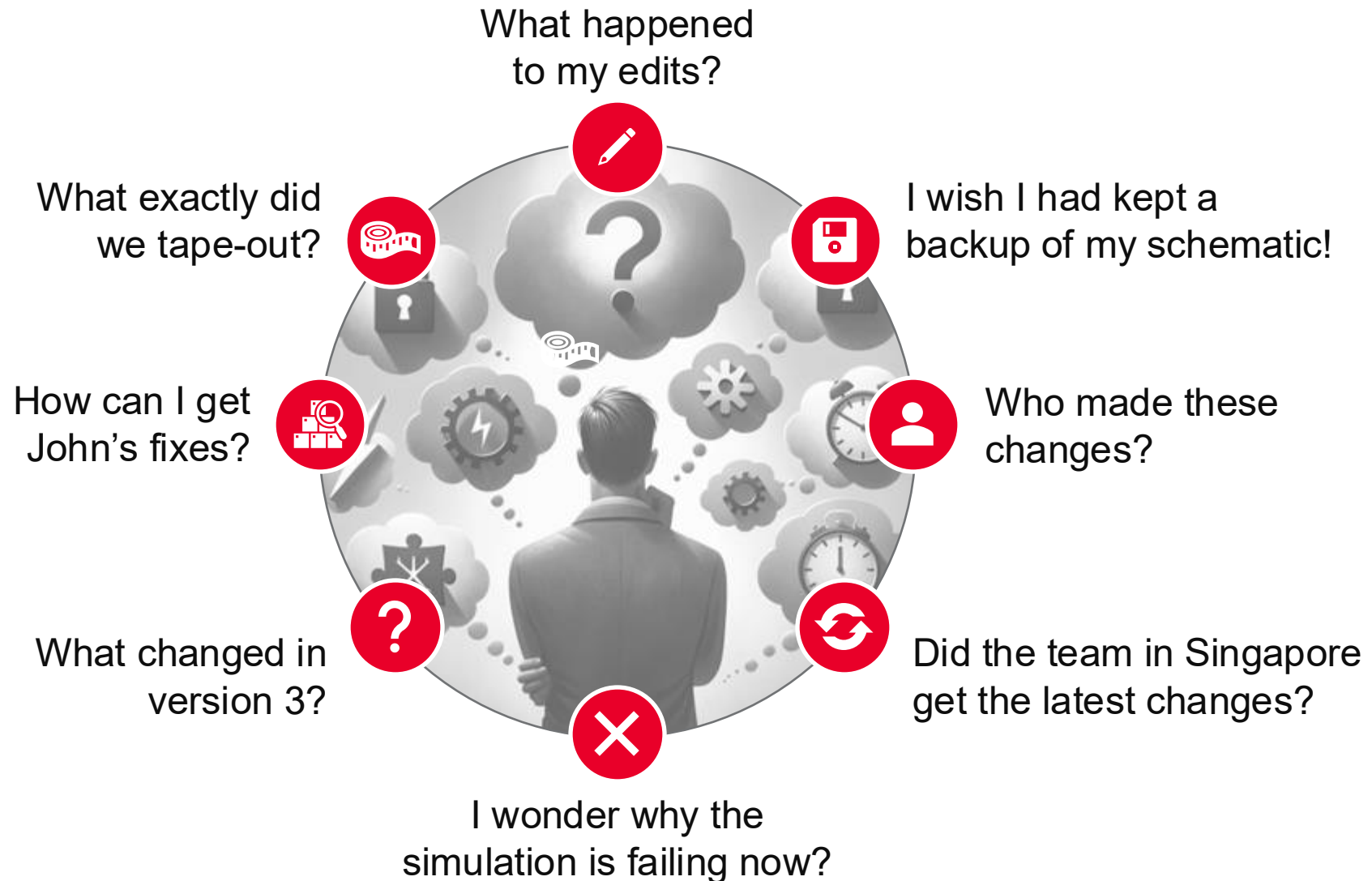
Advanced design data management for IC designs



IP Management (HUB)

Single source of truth for IP and engineering lifecycle knowledge

Have You Ever Thought?



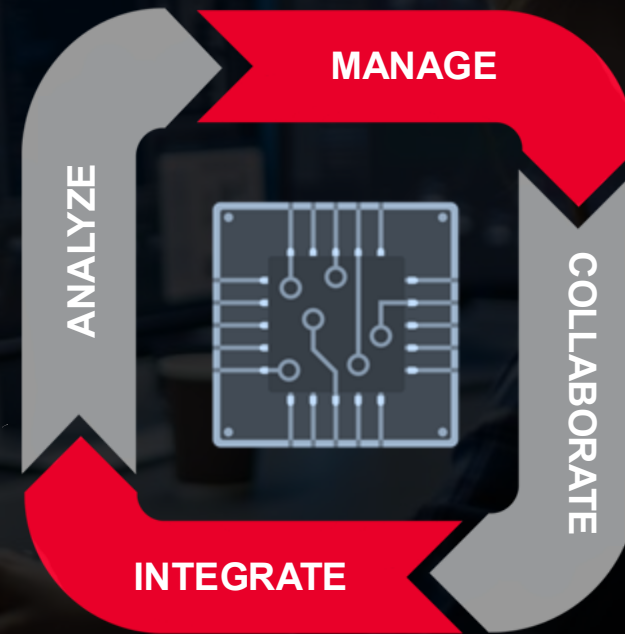
Keysight Design Data Management (SOS)

Analyze

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

Manage Data

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



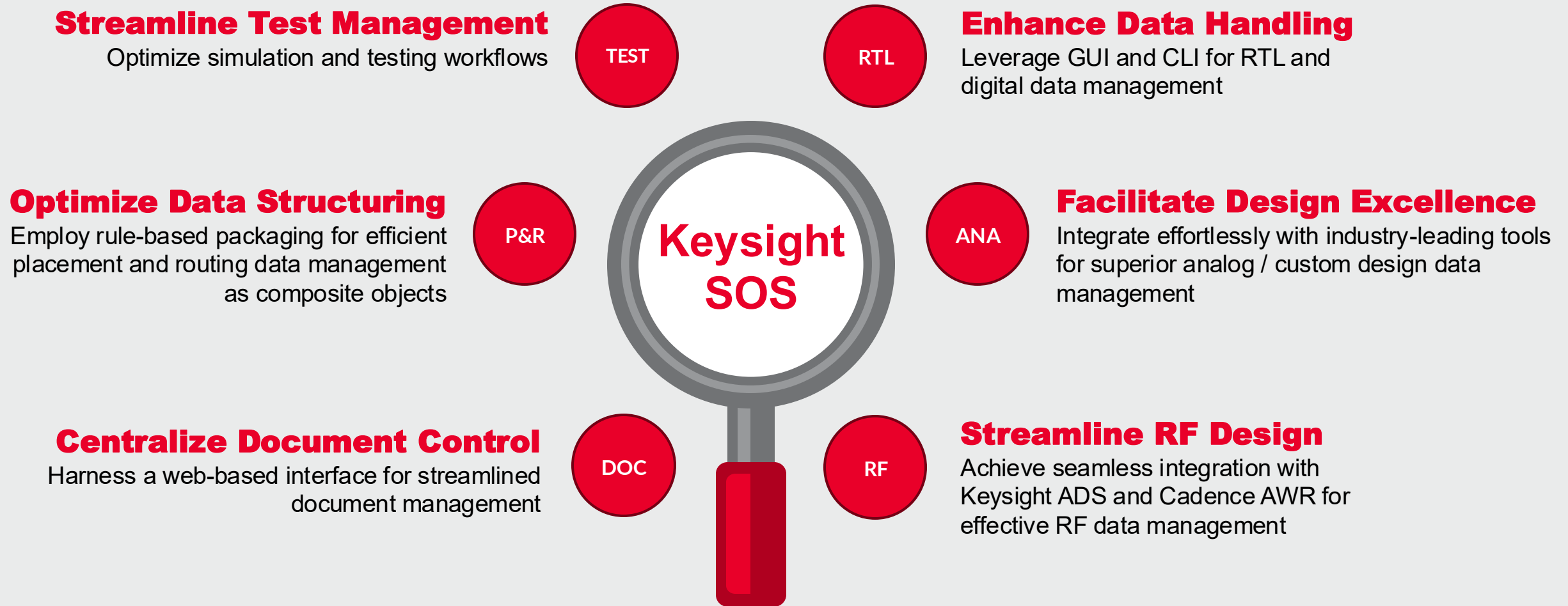
Collaborate

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

Integrate Tools

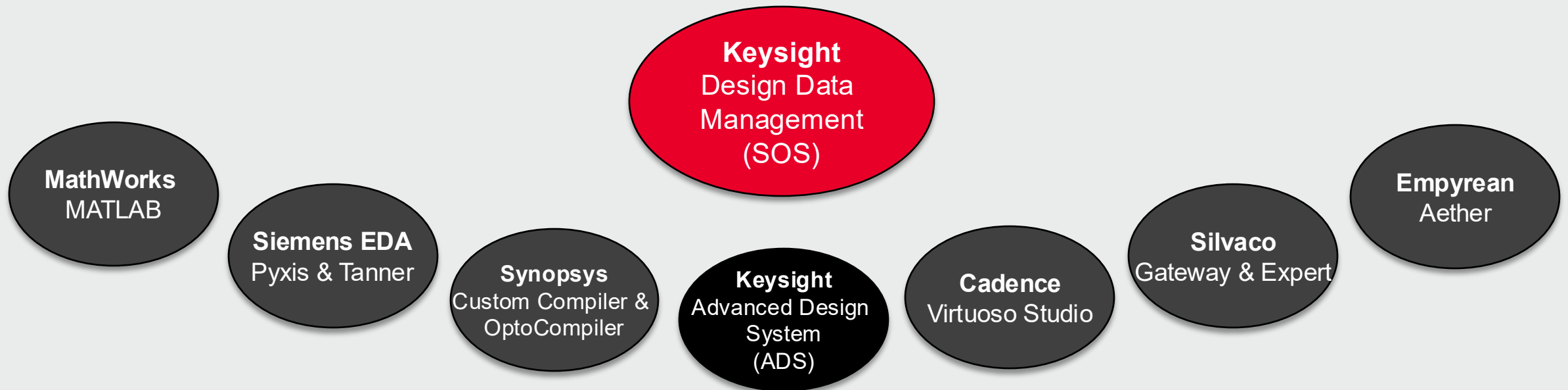
- EDA tools integration
- API

Unified System to Access All Data

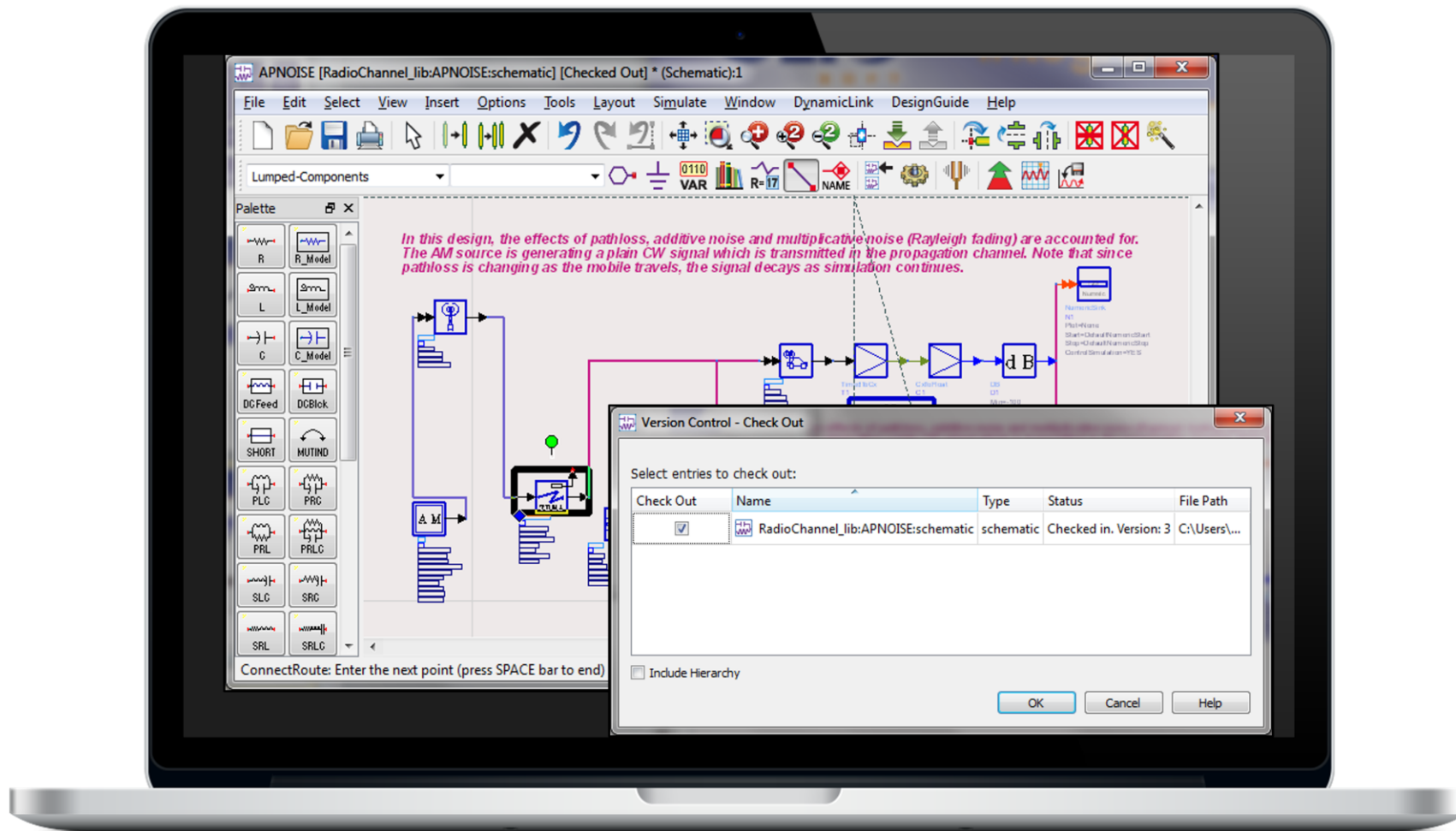


Boost Productivity and User Experience With Integrated Tools

Partnered With All Major EDA Vendors

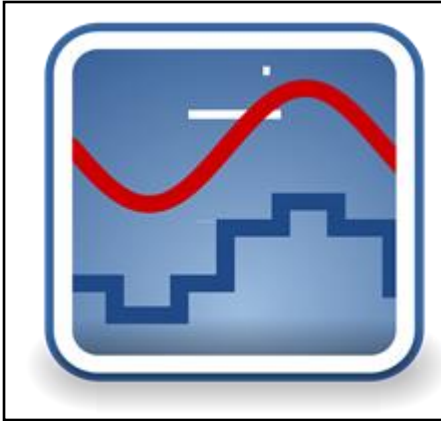


Manage Your Data Natively Within Keysight Advanced Design System (ADS)



Design Sizes

12 Bit ADC



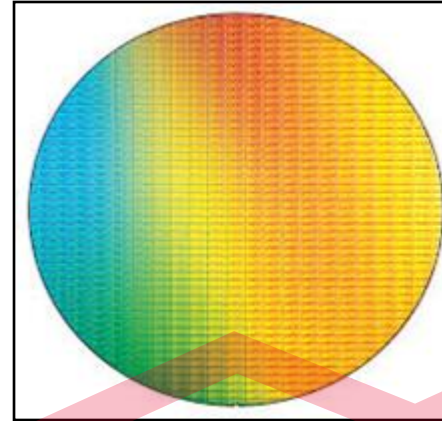
25K Files
150GB

Mixed Signal Optical
Sensor IC



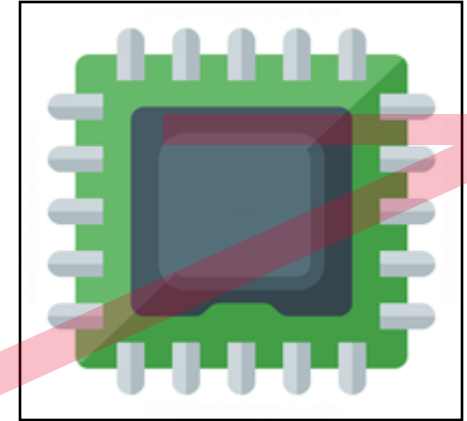
100K Files
250GB

PDK



300K Files
800GB

Processor



500K File
1.5TB

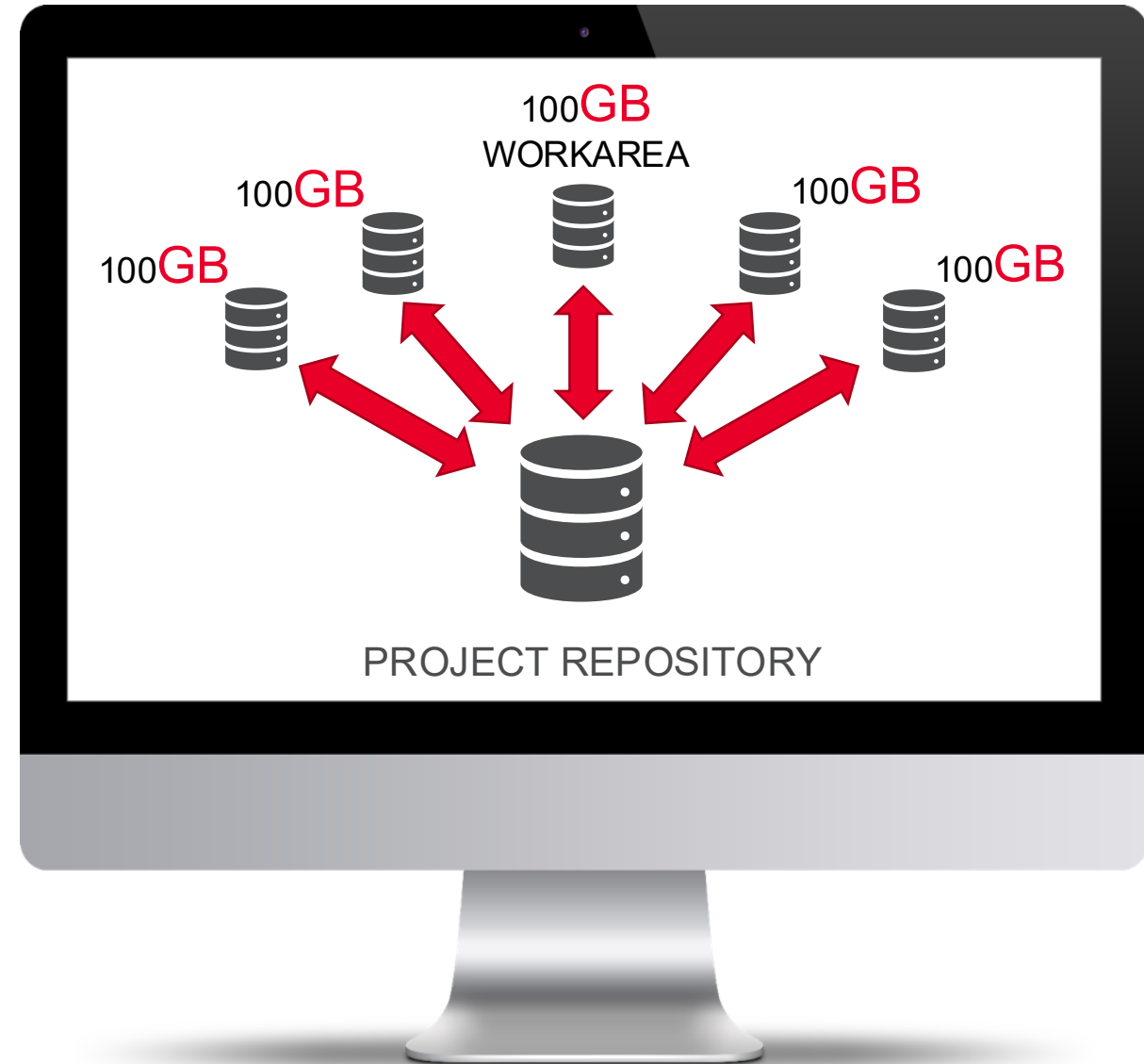
Traditional Storage Approach



Design files in user workarea are full physical copies



Network storage multiplies with each workarea



Links to Cache

Using Keysight Design Data Management (SOS)



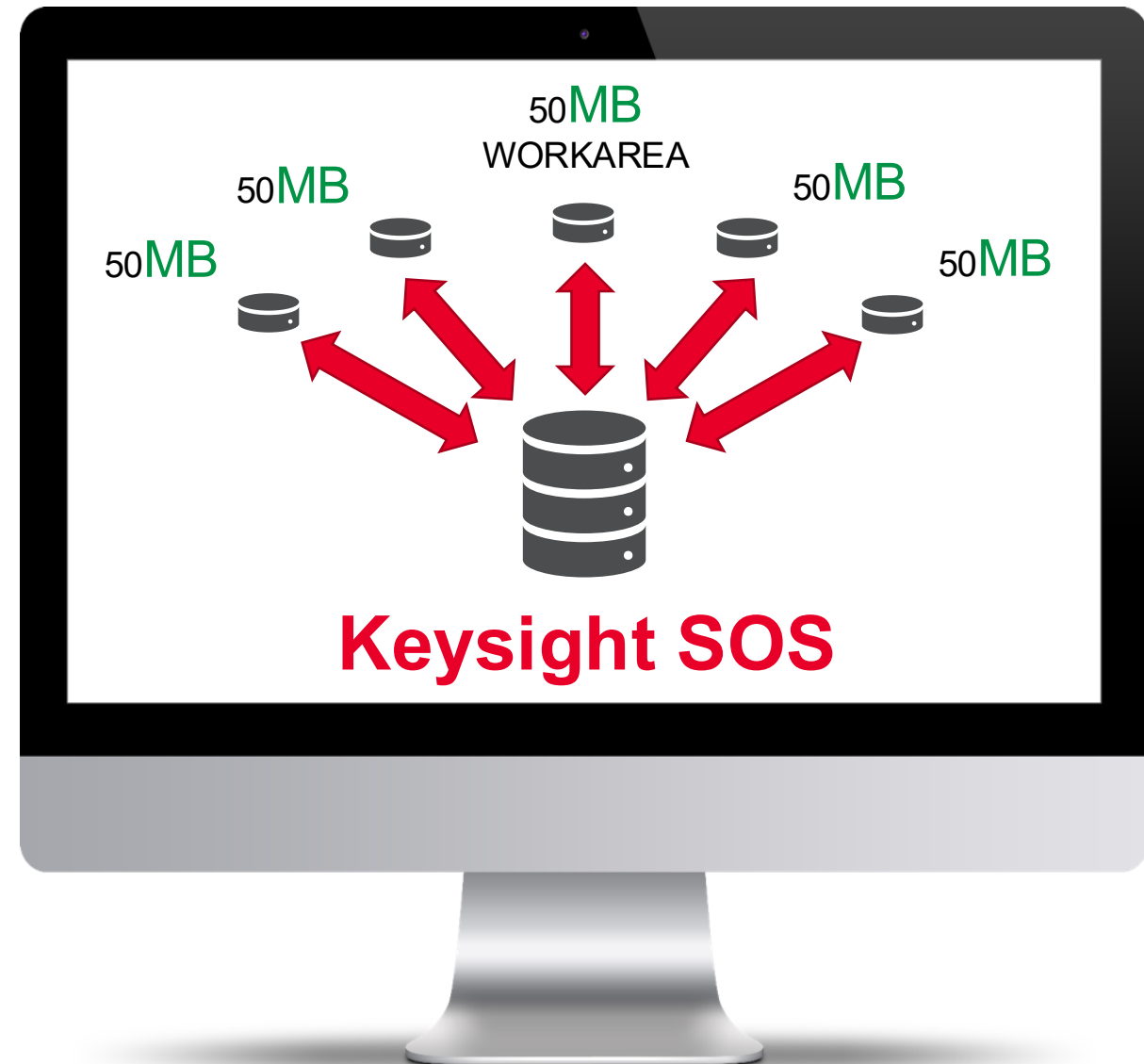
Functions exactly same as a local copy workarea



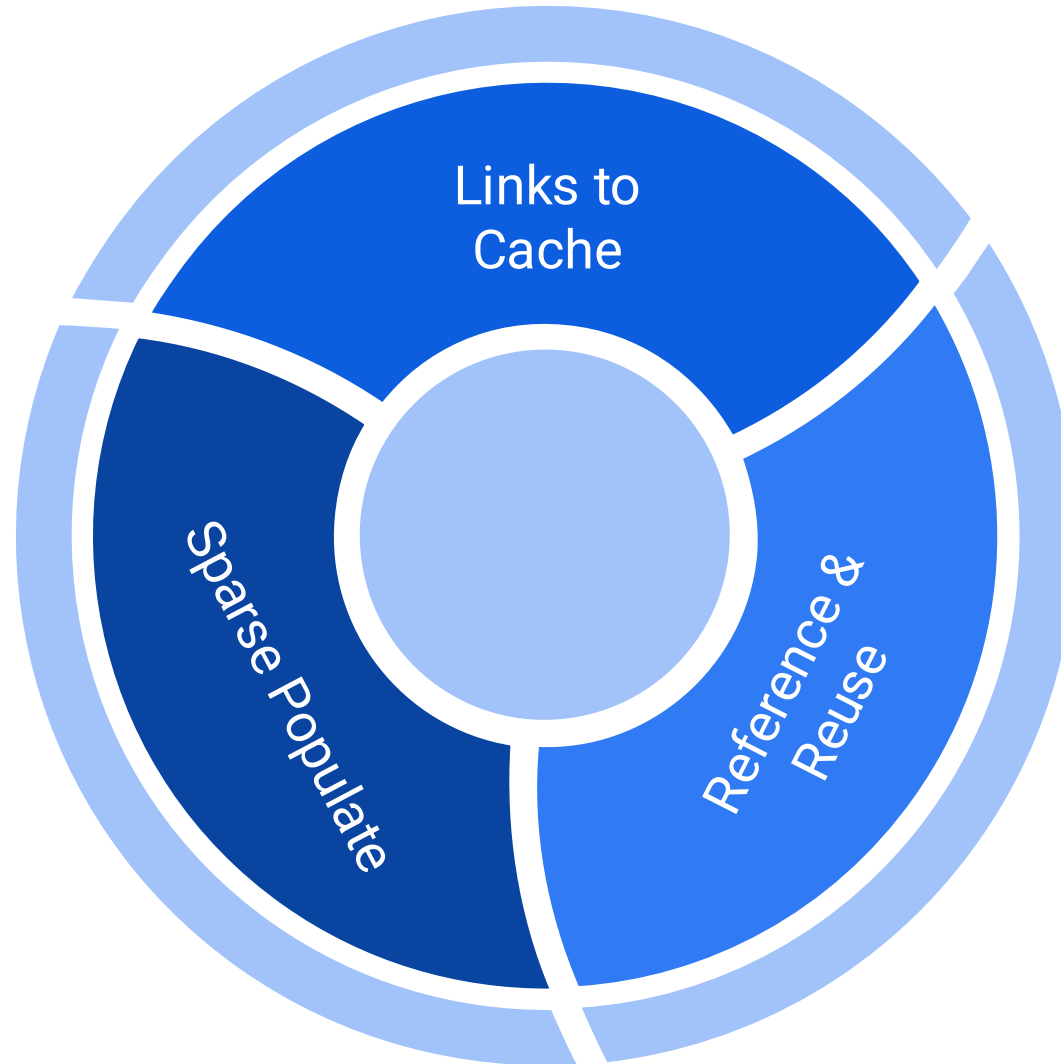
Design files in user workarea are symlinks to cache except files to be edited



Optimized use of network storage

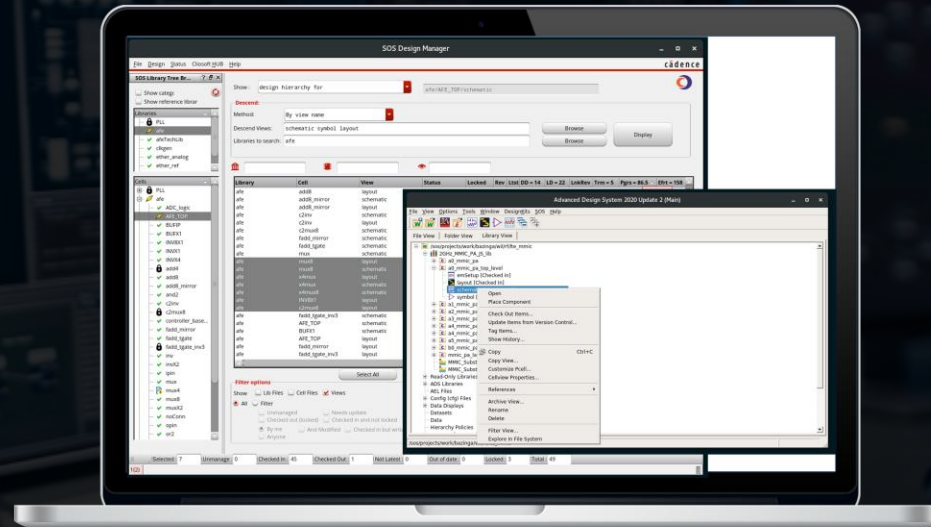


Three-Pronged Approach



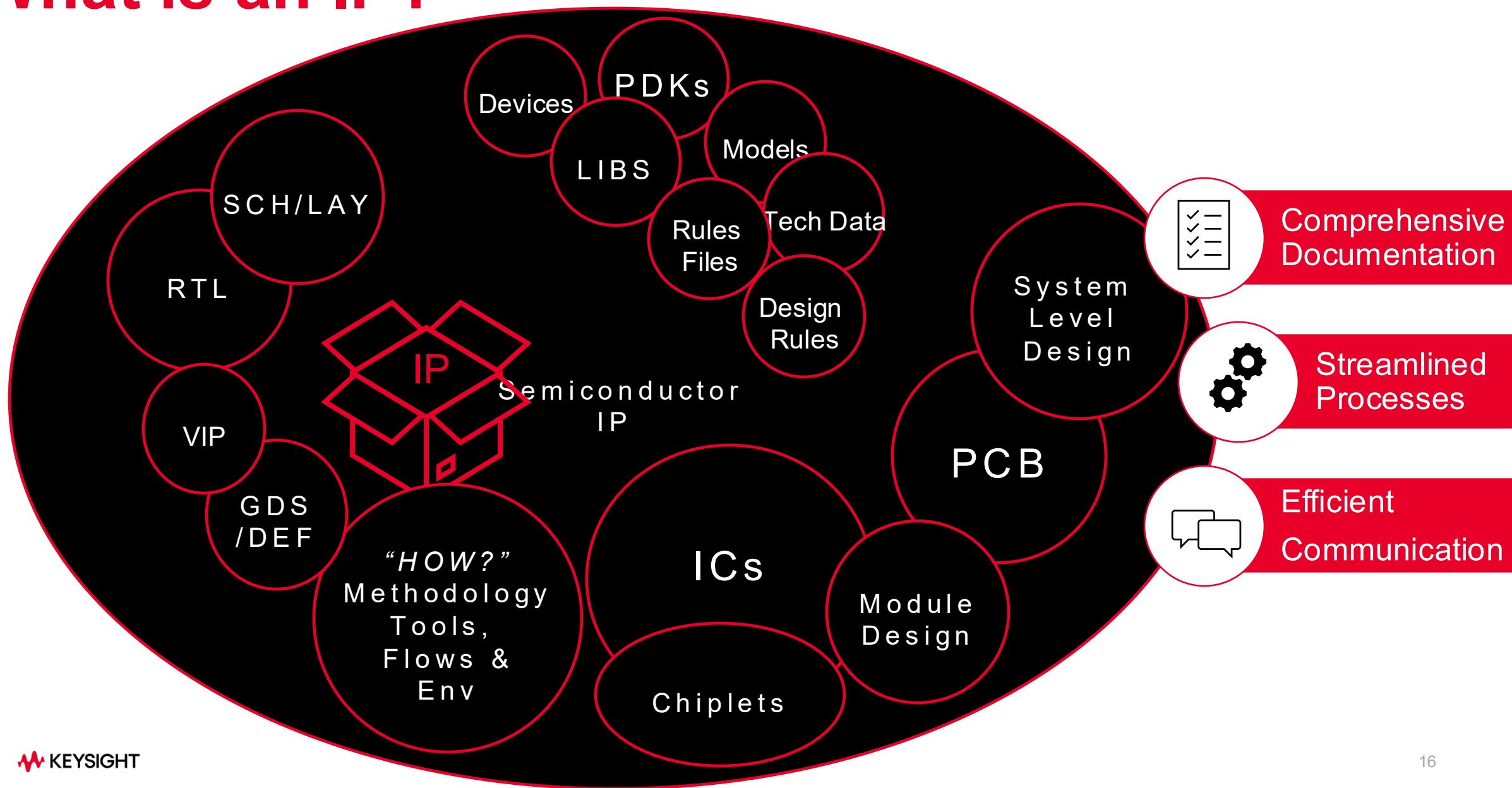
Keysight Design Data Management (SOS)

Design data management for IC designs



“ Bring hardware designs to life with unmatched efficiency, collaboration, and reuse. ”

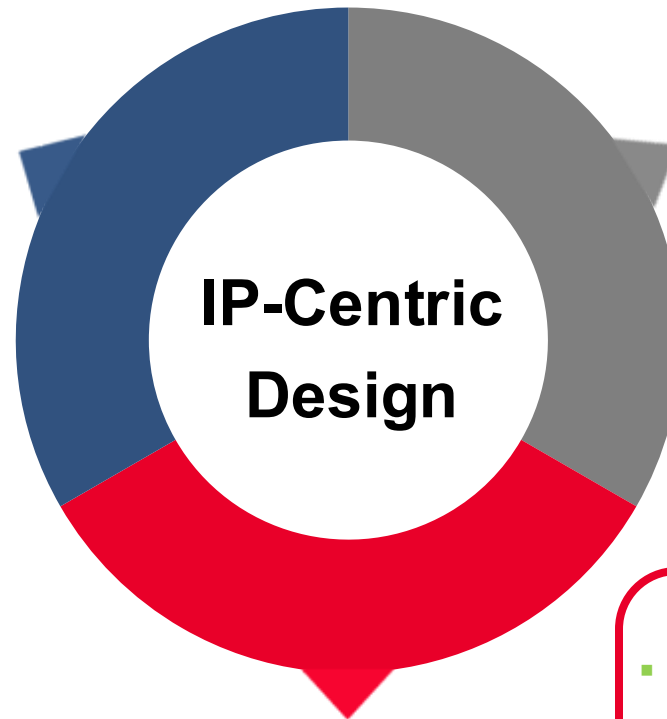
What is an IP?



IP-Centric Design

3rd Party IPs

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



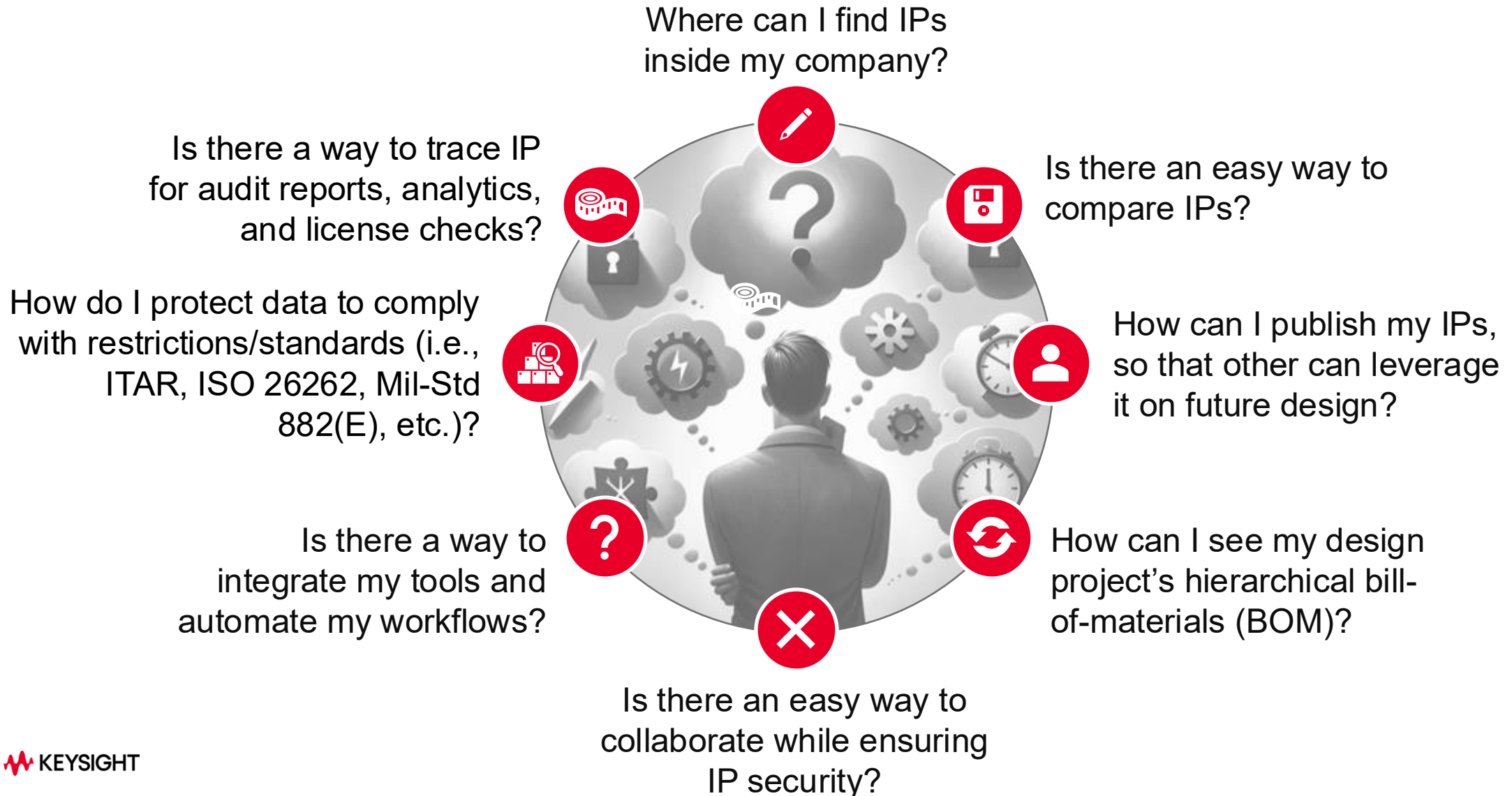
Corporate IPs

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

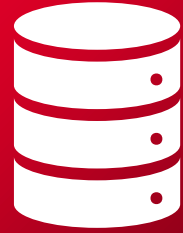
Community IPs

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

Have You Also Ever Thought?



Keysight IP Management (HUB)



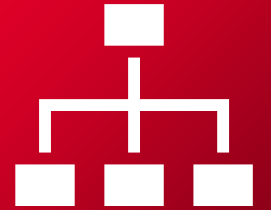
IP Management

Find, compare,
and reuse IP



Project Collaboration

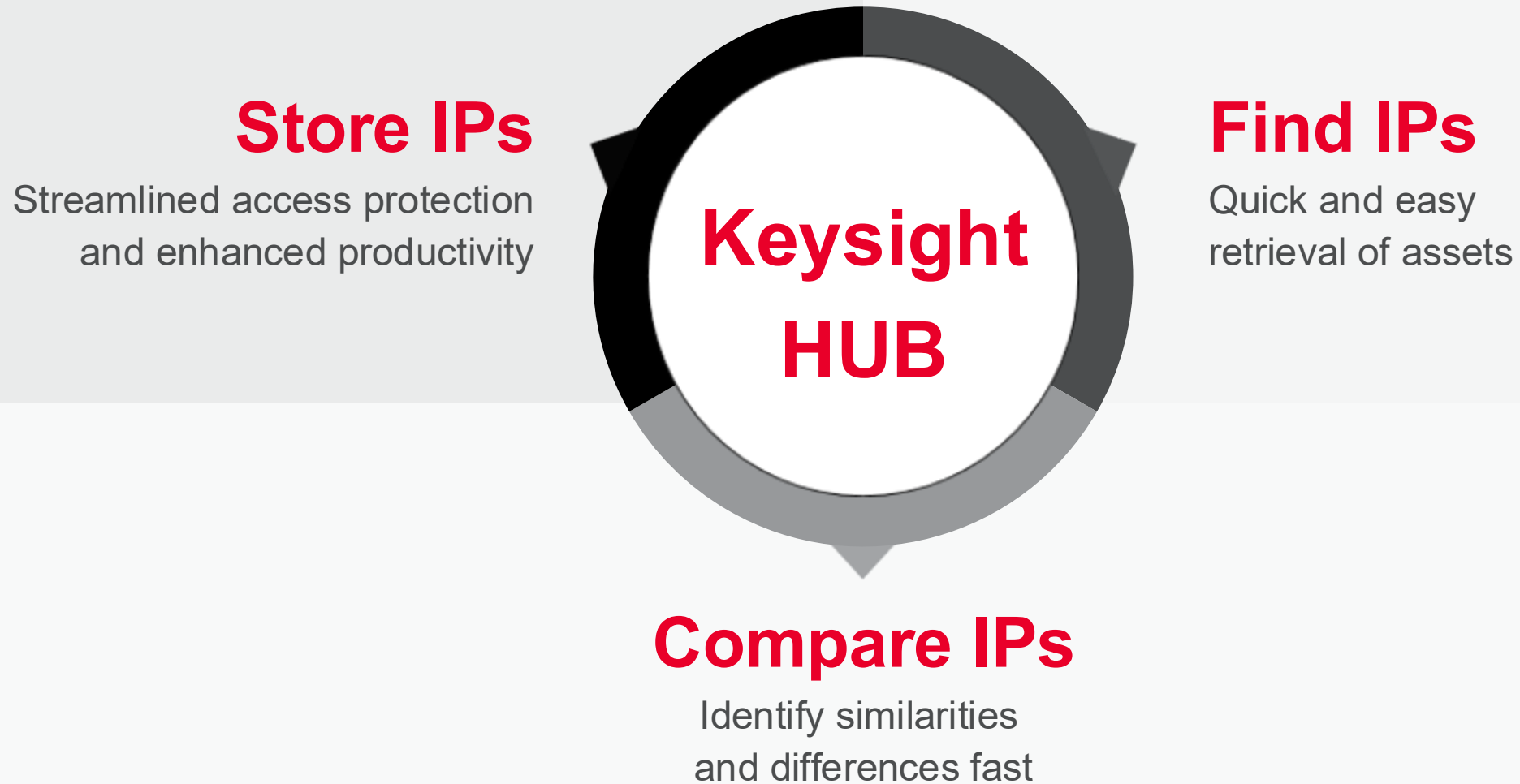
Secure collaboration
and data sharing



IP Traceability

Hierarchical BOM
management

Single Source of Truth: Streamlining Your IP Lifecycle



Enhancing Collaboration While Increasing IP Security



Secure Data Sharing

One platform for secure data sharing of IP and design data



Project Workareas

Custom dashboard with project-based workareas



Real-time Monitoring

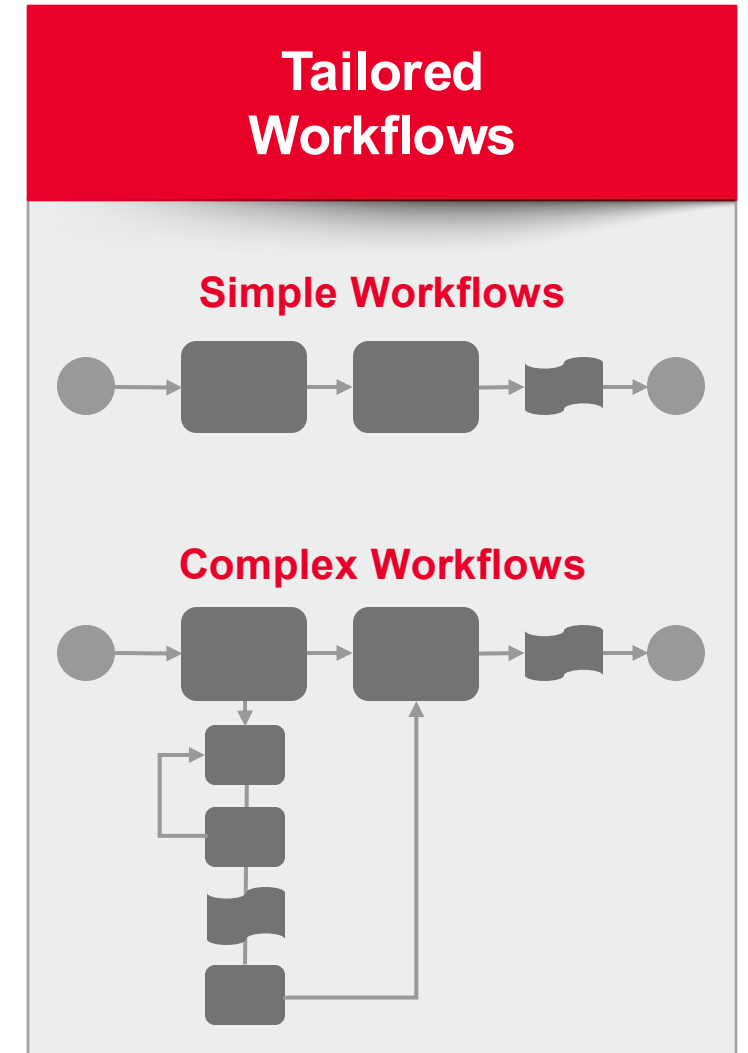
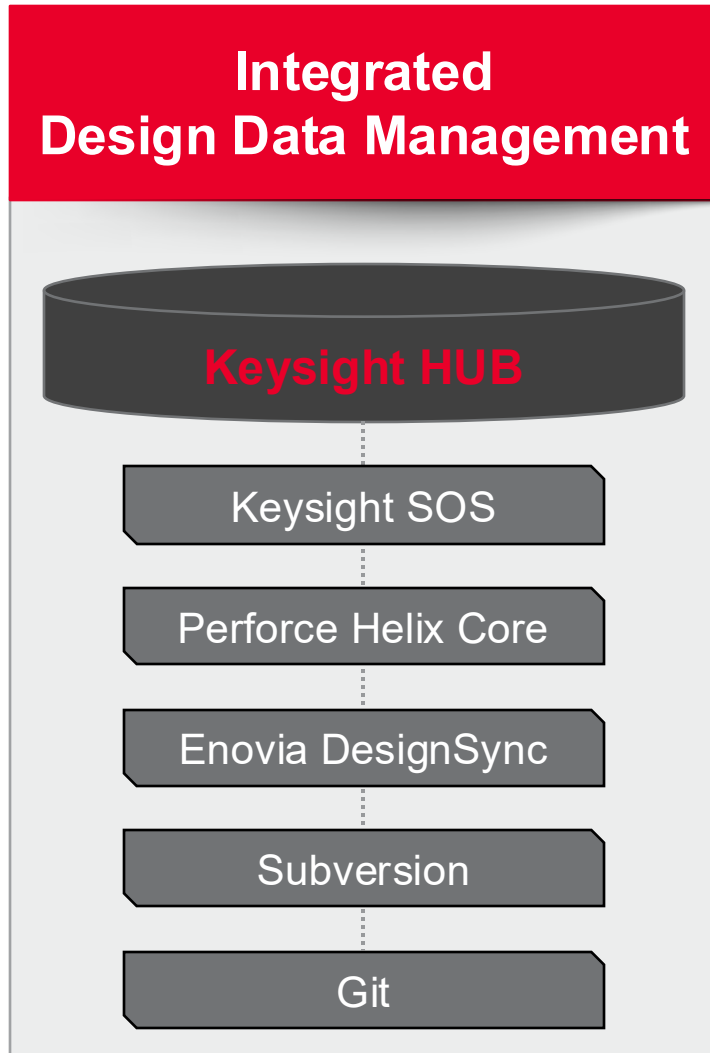
Manage progress using real-time data



Geofencing

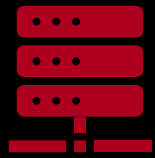
Management access controls for who can view and modify IPs

Optimizing Workflows With Integrated Tools



Blueprints of Brilliance

Revolutionizing IC design with data mastery
using Keysight Design Data and IP Management software



Advanced Design
Data and IP
Management



Streamline Your
Silicon Success



From Concept to
Tapeout: A
seamless journey

“

Transforming Chaos into Clarity –
The Art of Engineering Lifecycle Management

”

Thank you

