

Keysight Press Breakfast

electronica 2024
12 November
9 AM CET

Agenda

09:00 - 09:05am	Introduction and welcome	Andrea Dodini
09:05 - 09:20am	A decade of accelerating Innovation	Frank Berthaux
09:20 - 09:35am	Evolving into software-defined vehicles, not just AVs	Thomas Goetzl
09:35 - 09:40am	Final questions and media Q&A	Frank Berthaux, Thomas Goetzl
09:40 - 10:00am	Networking	Frank Berthaux, Thomas Goetzl, Kari Fauber, Carrie Browen

Introduction and Welcome

Executives and experts

- Frank Berthaux (EMEA Sales Director)
- Thomas Goetzl (VP and GM of Automotive and Energy Solutions)
- Kari Fauber (VP of Global Partner Sales & eCommerce)
- Carrie Browen (SDV Business Line Product Manager)

A Decade of Accelerating Innovation

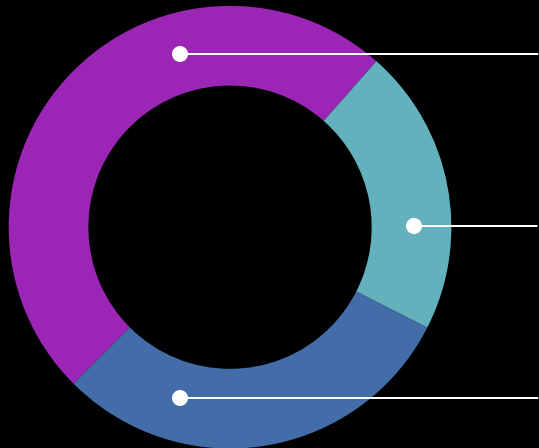
Frank Berthaux
Sales Manager, Germany

Keysight at a Glance (NYSE: KEYS)

Our Purpose:

Accelerate innovation to connect and secure the world

FY23 Revenue



44% / \$2.4B

Commercial Communications

23% / \$1.3B

Aerospace, Defense, Government

33% / \$1.8B

Electronic

40%
AMERICAS

18%
EUROPE

42%
ASIA
PACIFIC

#1 Market Position¹

FY23 Company Highlights

30K+

Total customers²

~15K

Employees⁴

100+

Countries served

23%

Recurring

30%

Operating margin³

9%

EPS growth³

~\$1.2B

Free cash flow^{3,5}

\$22B

Market capitalization⁴

Solutions Designed for Key Markets

**COMMERCIAL
COMMUNICATIONS**

**AEROSPACE
& DEFENSE**

**AUTOMOTIVE
& ENERGY**

**SEMICONDUCTORS &
MANUFACTURING**

**GENERAL
ELECTRONICS**

Our Innovation Focus Is Aligned to Megatrends You're Facing



WIRELESS

\$13T 5G mobile value chain by 2035¹



AUTOMOTIVE

\$300-\$400B in revenue from autonomous driving by 2035²



QUANTUM

\$700B in value for quantum computing by 2035³



NETWORKING / CLOUD

\$1T in value for Fortune 500 companies adopting cloud by 2030⁴



IOT

\$500-\$750B in value globally by 2030⁵

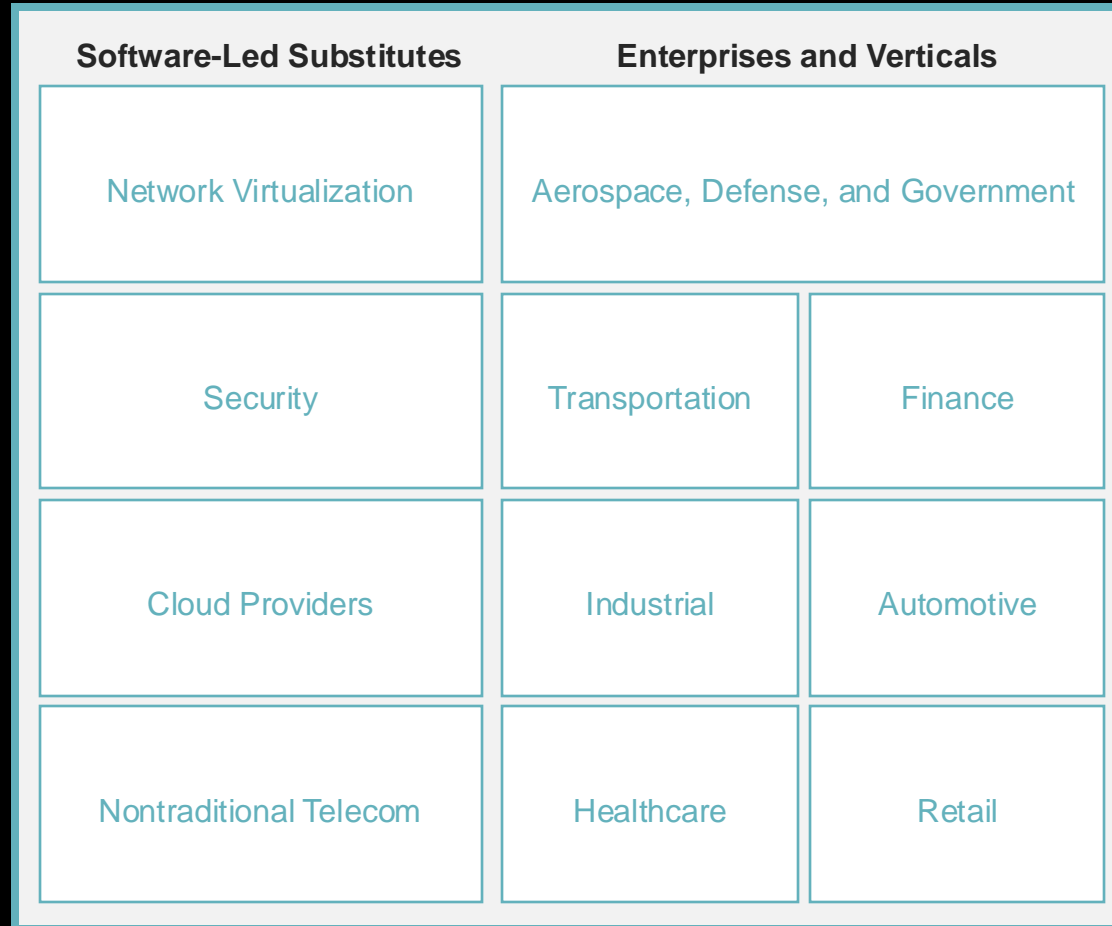
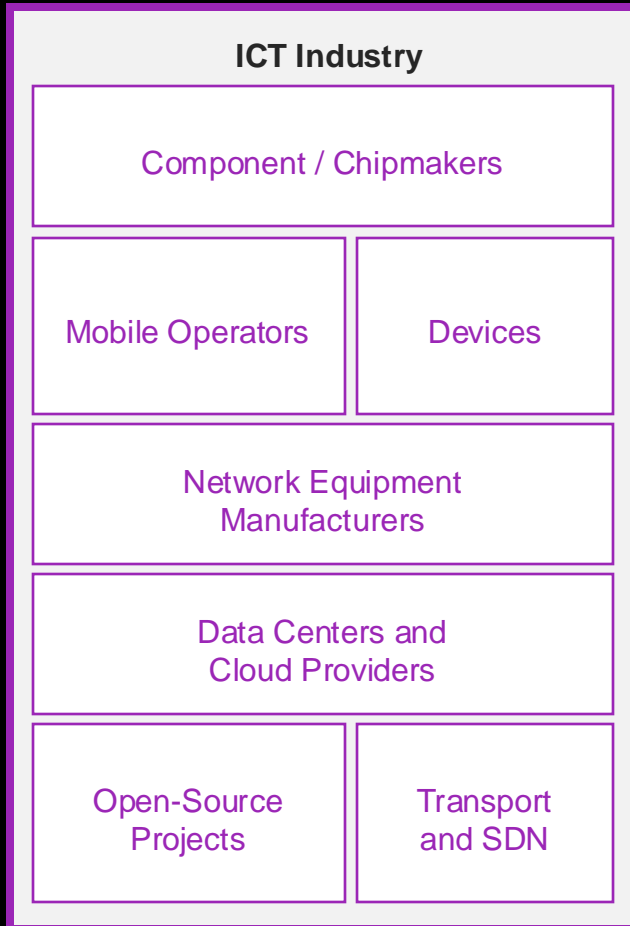


AI

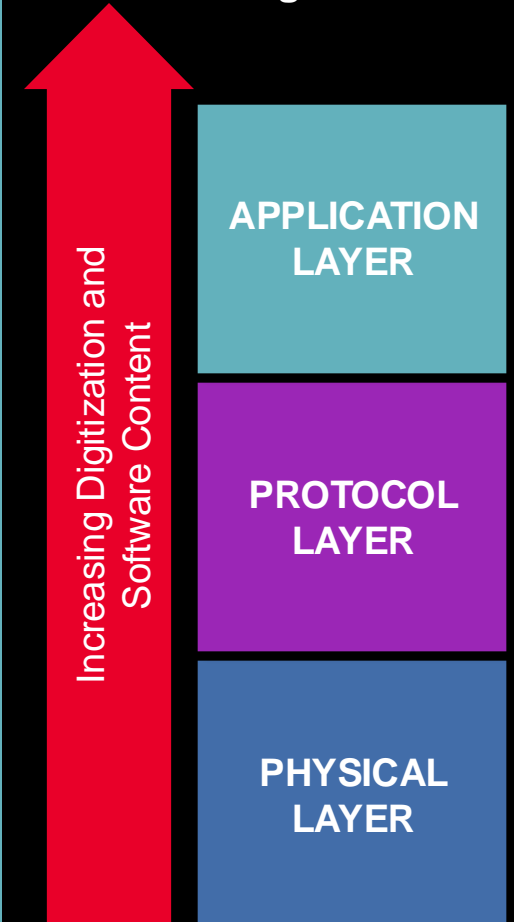
\$13T in global economic output by 2030⁶

Ecosystems Are Expanding; Keysight Is Well Positioned

New Customers Are Emerging as Ecosystems Develop



Our Portfolio Expansion Addresses Customers' Evolving Needs



Acquisitions to Enhance Capabilities and Expertise

5G, Networking, and Computing Solutions



Quantum Solutions



Software for Electronic Design and Test



Automotive and Energy Solutions



Services

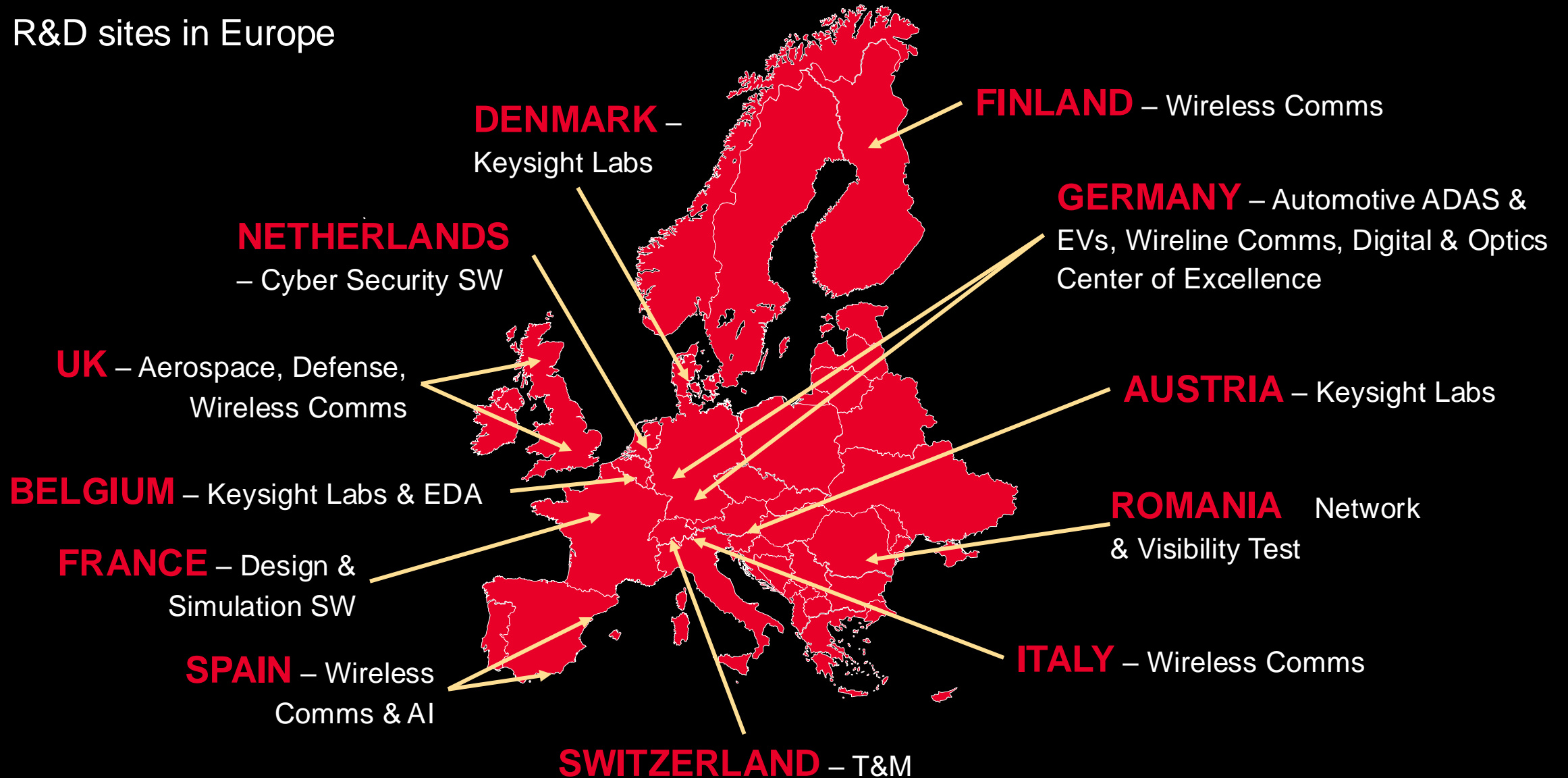


Others



Strong Presence in Key Markets

R&D sites in Europe

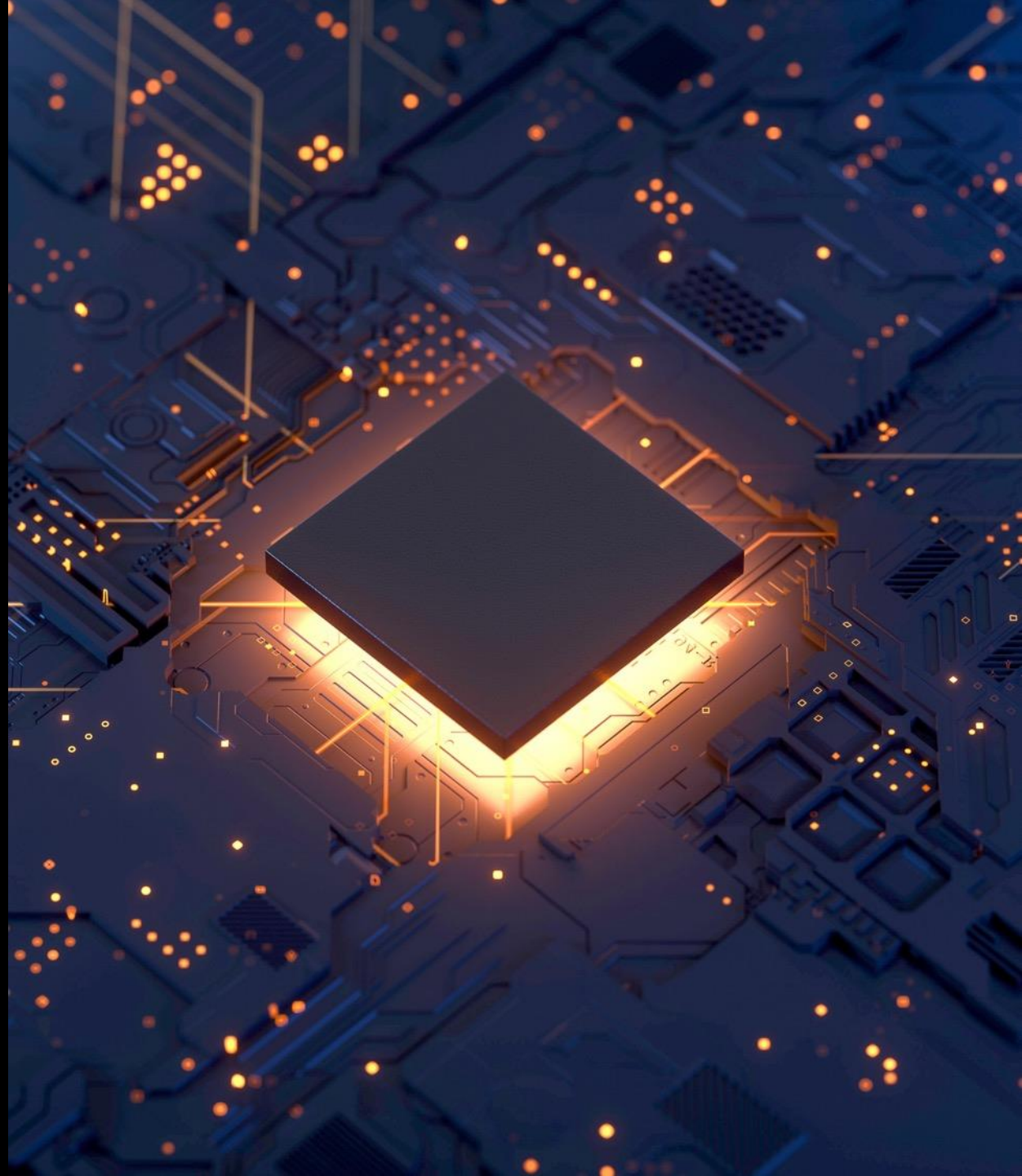


Investing in Custom Design and Fab for Keysight Semiconductors

Keysight powers our performance products with custom MMICs, designed in-house

- We manufacture them in our proprietary indium phosphide (InP) and gallium arsenide (GaAs) fab with custom ASIC signal processing
- Our process ensures the industry's fastest, most reliable measurements

Count on Keysight to accelerate your next innovation.



In the Next Ten Years, We'll See:

Expanded space and connectivity applications



Improved reliability with reduced latency



Identify cybersecurity vulnerabilities early



Increased emulation and automation





Reimagine Transportation

Go Further, Safer...Sooner

Evolving into Software Defined Vehicles (SDV), not just AVs

Thomas Goetzl
Vice President and General Manager
Automotive and Energy Solutions

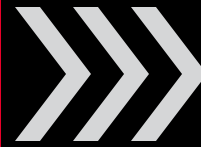
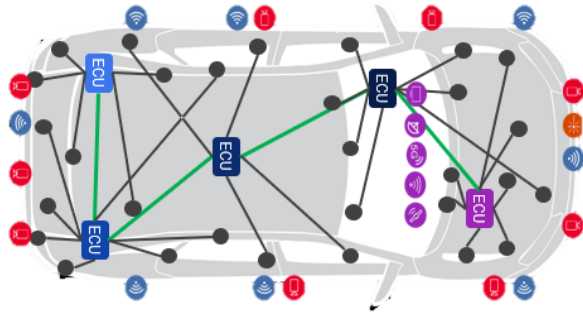


The Automotive Digital Transformation

Software defined vehicle architecture

Traditional Vehicle

Software inside distributed hardware architecture is heavy, costly and static

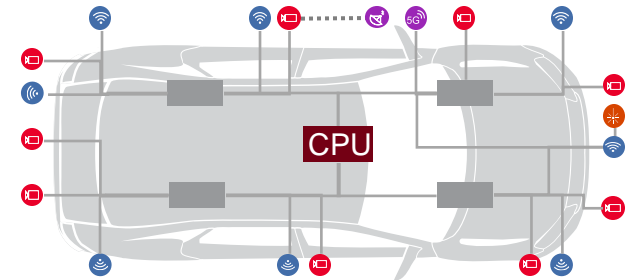


Software & Hardware Decoupling

Software Defined Vehicle (SDV)

Centralized Computing

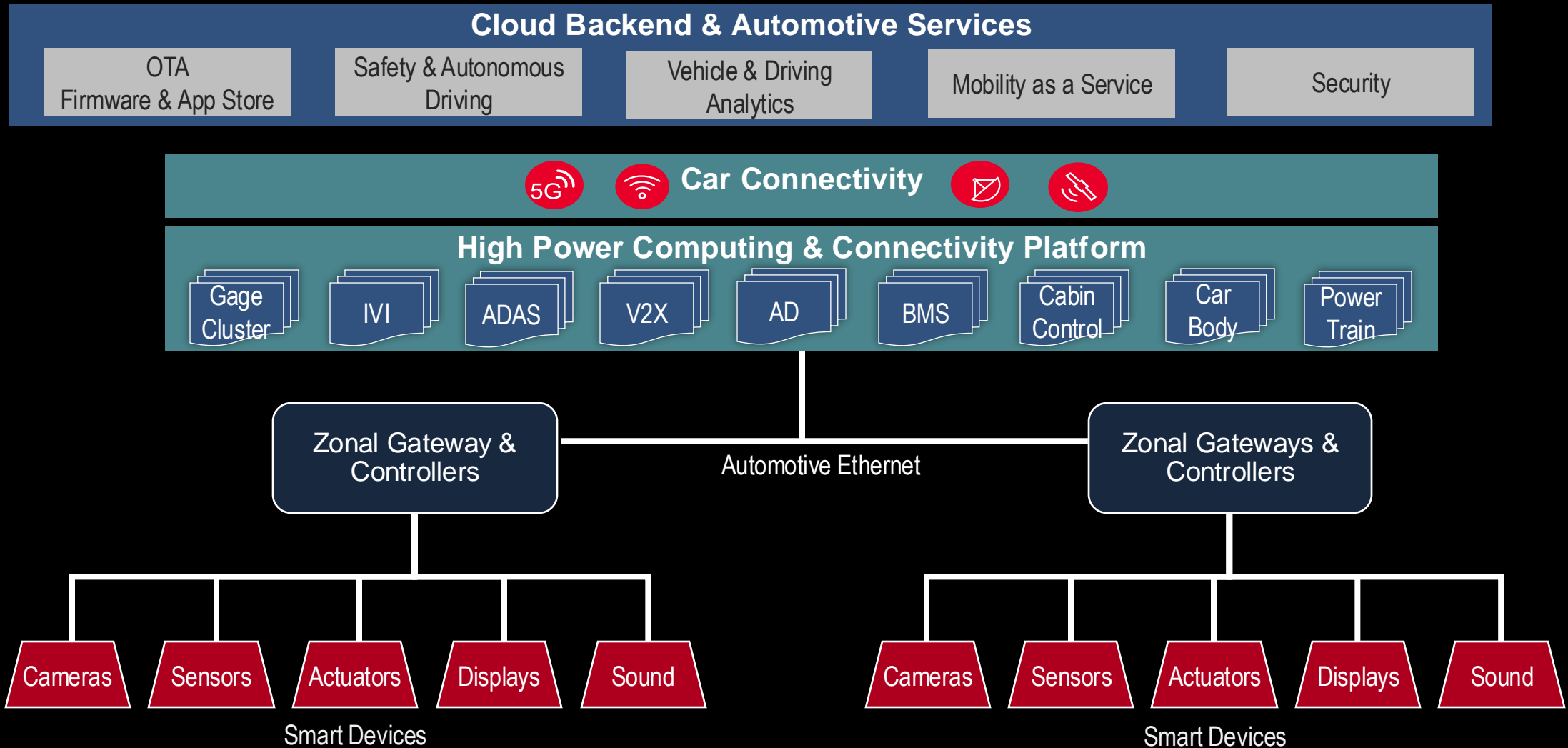
Connected – to Cloud service platform



- Safer, more intelligent & Connected vehicles
- Field Upgradeable / Extendable Capabilities
- New Business Models & Ecosystems

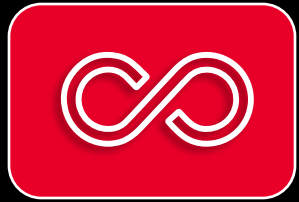
The SDV Platform Overview

Software architecture transformation

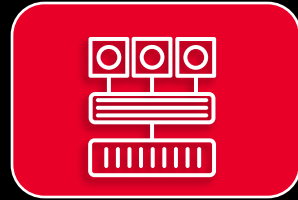


SDV Paradigm Changes and Impacts

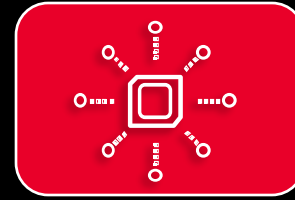
Technologies and supply chain evolutions



Supply chain



R&D process



Integration



Test

E/E Development Process

Specialized tiers

~>50 ECUs
5 to 7 years to SoP

Final integration
done at OEM level

Multi-supplier
Siloed

SDV Software Factory

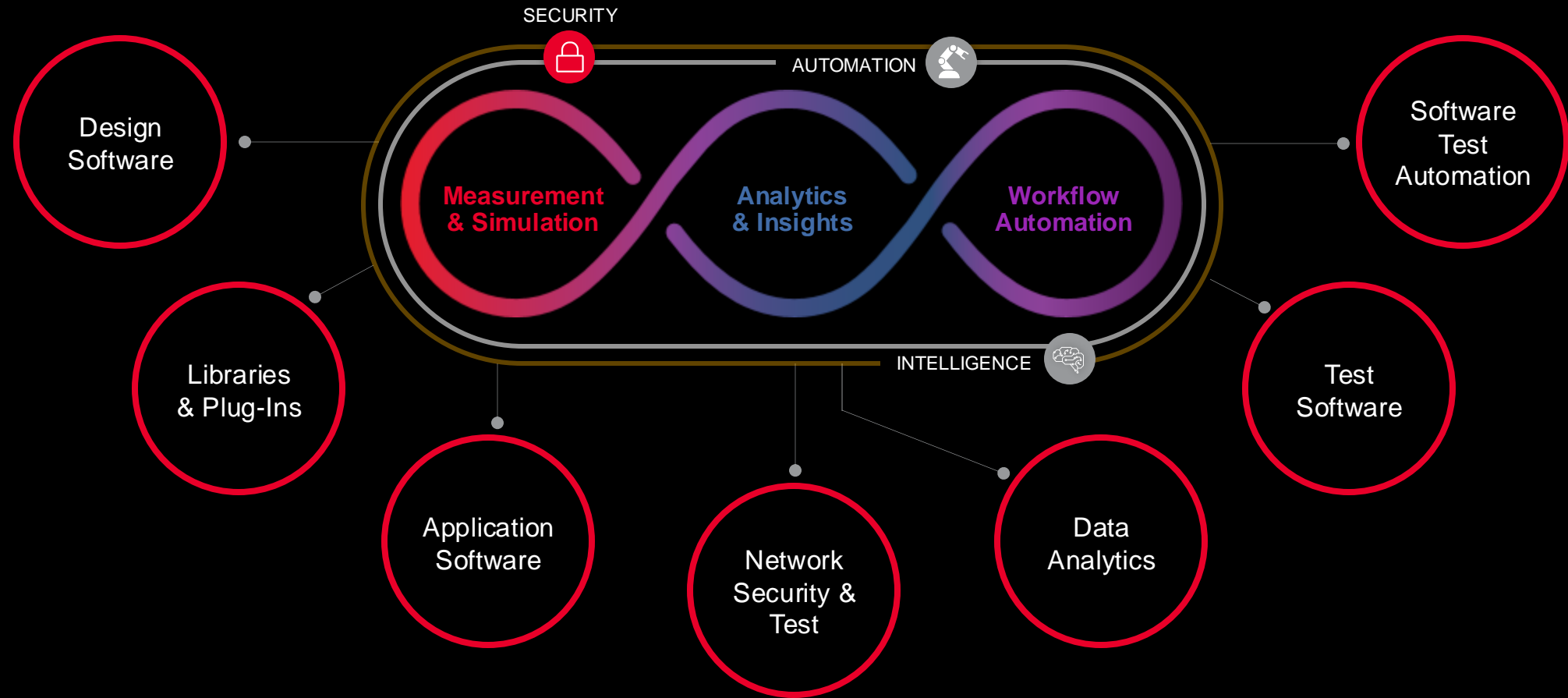
Hardware
commoditization

~< 10 ECUs
1 to 3 years to SoP

Continuous
CI/CD/CT

Collaborative,
Automated, CT

We Automate Intelligence Across Your Workflow



Keysight's open, scalable, and integrated model delivers insights across the workflow that your team can leverage in real time.

Demo Solution for Automotive Networks

Ensure flawless data relay between onboard sensors, displays, and ECUs

Challenges for in-vehicle networks

- Modern connected vehicles demand faster data communications for ADAS, infotainment, and SDV implementation.
- As data rates increase, testing becomes more essential, complex, and expensive.
- Verify low- and high-speed signals with automated and standardized test methods

Demo shown at Keysight booth:

Hall A3, Stand 506



Design Software

Test Software

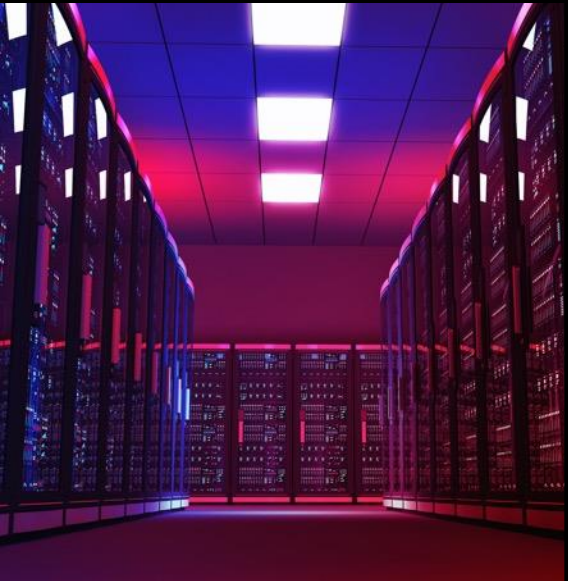
Data Analytics

Application Software

Conformance software with pass/fail limit lines for various standards: Automotive Ethernet, SerDes including MIPI A-PHY, ASA and GMSL



Accelerate Innovation to Connect and Secure the World



Thank you

Join us for a demo

New product demos include:

- HD3 Series oscilloscope
- The PNA-X Vector network analyzer
- RF analog and microwave signal generator
- Automotive conformance test
- Fieldfox handheld analyzers offering 170 GHz through VDI collaboration



Visit our booth:
Hall A3.506

