

January 16, 2019



**Deutsche Bank Global Auto Industry Conference**

• **APTIV** •

# Forward Looking Statements

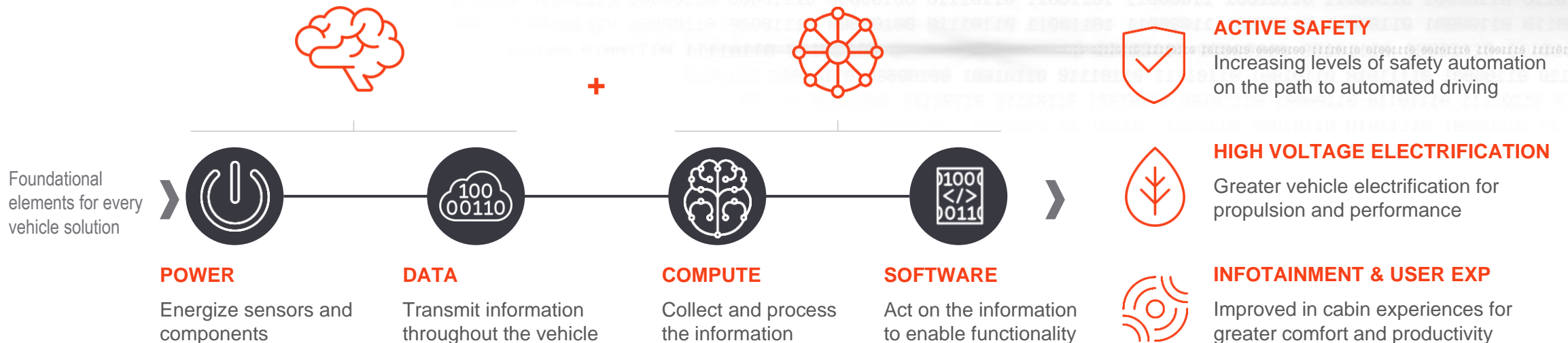
This presentation, as well as other statements made by Aptiv PLC (the “Company”), contain forward-looking statements that reflect, when made, the Company’s current views with respect to current events, certain investments and acquisitions and financial performance. Such forward-looking statements are subject to many risks, uncertainties and factors relating to the Company’s operations and business environment, which may cause the actual results of the Company to be materially different from any future results. All statements that address future operating, financial or business performance or the Company’s strategies or expectations are forward-looking statements. Factors that could cause actual results to differ materially from these forward-looking statements are discussed under the captions “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the Company’s filings with the Securities and Exchange Commission. New risks and uncertainties arise from time to time, and it is impossible for us to predict these events or how they may affect the Company. It should be remembered that the price of the ordinary shares and any income from them can go down as well as up. The Company disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events and/or otherwise, except as may be required by law.

# Aptiv Addressing Mobility's Toughest Challenges

PROVIDING END-TO-END SOLUTIONS THAT ENABLE THE COMMERCIALIZATION OF NEW MOBILITY

Aptiv's **advanced technologies** and **deep systems knowledge** across the brain and nervous system of the vehicle...

...allows us to conceive, specify and deliver solutions for some of our **customers toughest challenges**

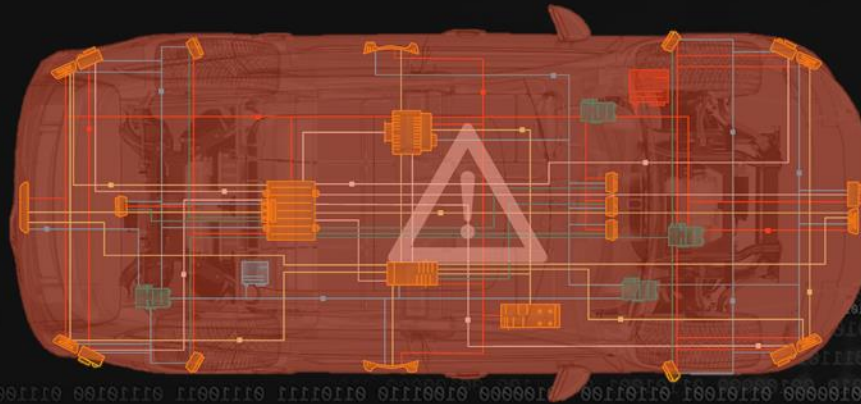


## 100+ PHYSICAL ECUs ON A PREMIUM VEHICLE



# Architecture Complexity Reaching Its Limits

SOFTWARE ENABLED FEATURES TESTING THE LIMITS OF TODAY'S VEHICLE ARCHITECTURES; MUST RE-ARCHITECT THE VEHICLE TO UNLOCK NEXT GENERATION FEATURES



**ADVANCED  
SAFETY**



**IN-CABIN  
EXPERIENCE**



**DATA  
SERVICES**

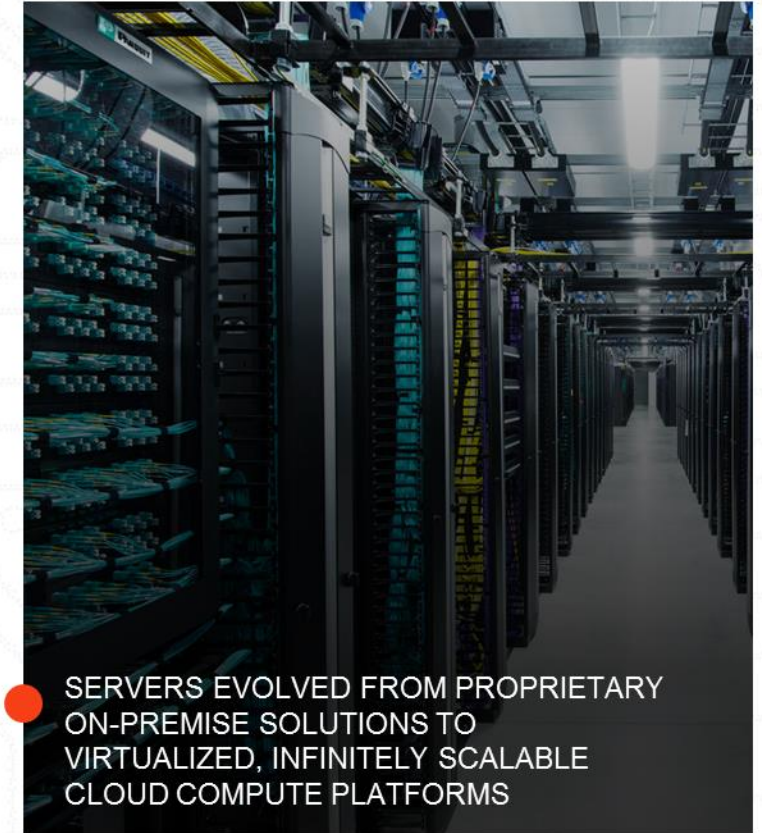
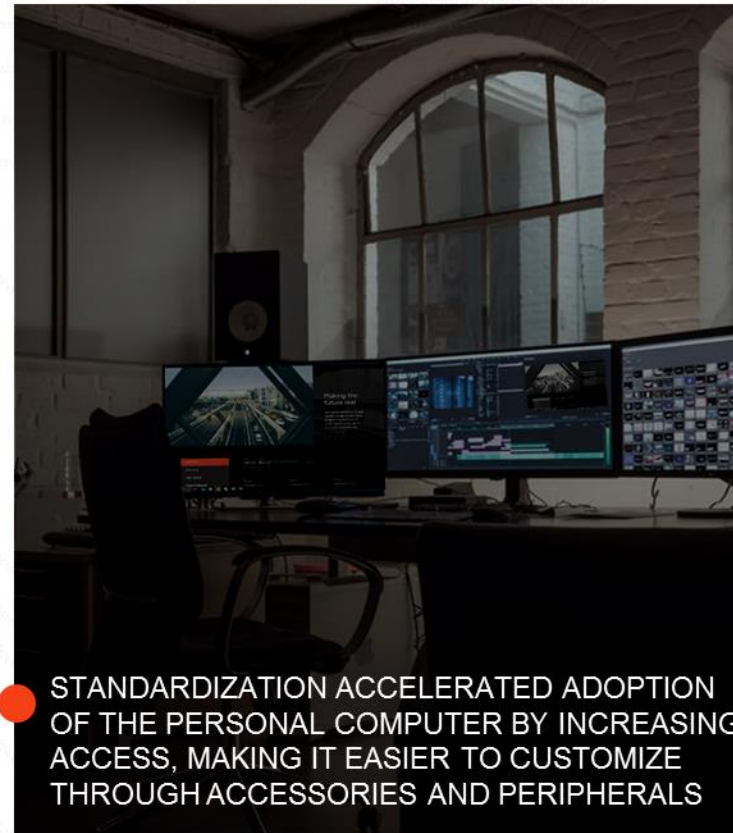
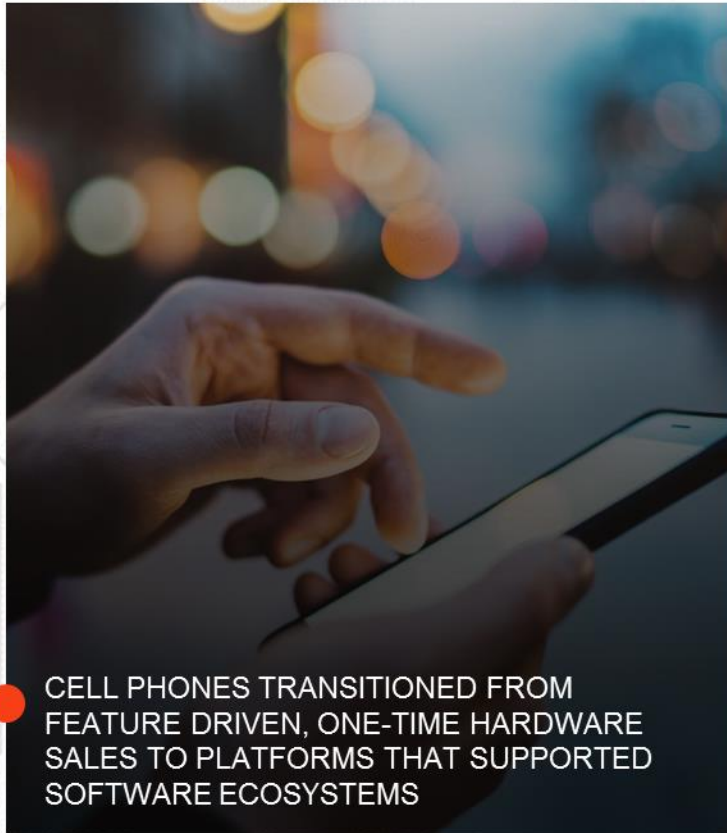


**AUTONOMOUS  
SYSTEMS**



# Transforming To A Software Defined Platform

OTHER INDUSTRIES OFFER INSIGHTS FOR HOW HARDWARE EVOLVES TO KEEP UP WITH SOFTWARE



# Smart Vehicle Architecture (SVA)

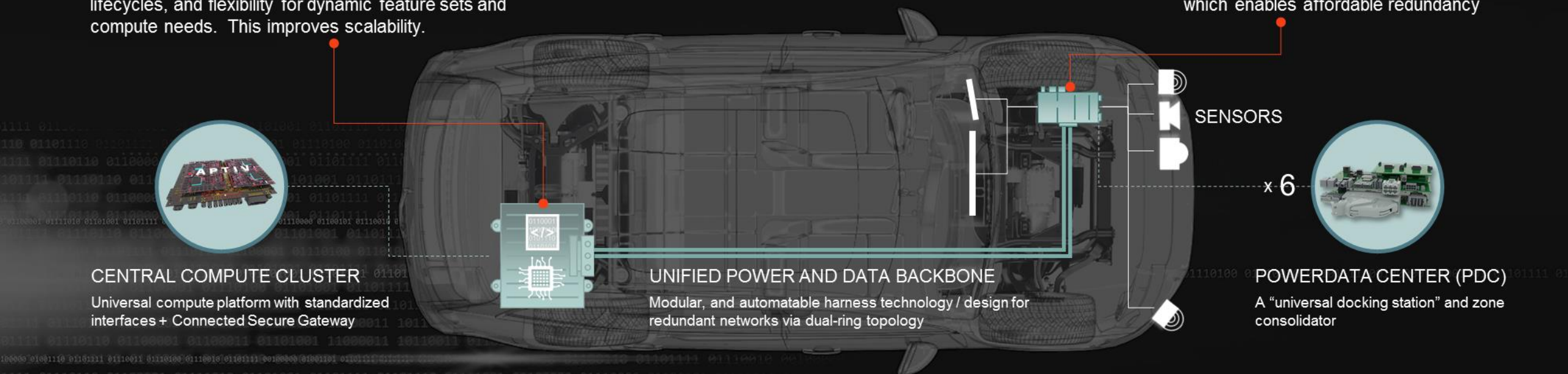
IN 2025 SVA DELIVERS AN OPTIMIZED AND SUSTAINABLE ARCHITECTURE THAT SUPPORTS THE SOFTWARE FUNCTIONALITY REQUIRED FOR FEATURE RICH AND HIGHLY AUTOMATED VEHICLES

## ABSTRACT SOFTWARE FROM HARDWARE

Decoupling software from hardware allows independent lifecycles, and flexibility for dynamic feature sets and compute needs. This improves scalability.

## SEPARATE I/O FROM COMPUTE

PDC performs Input / Output (I/O) concentration, which enables affordable redundancy

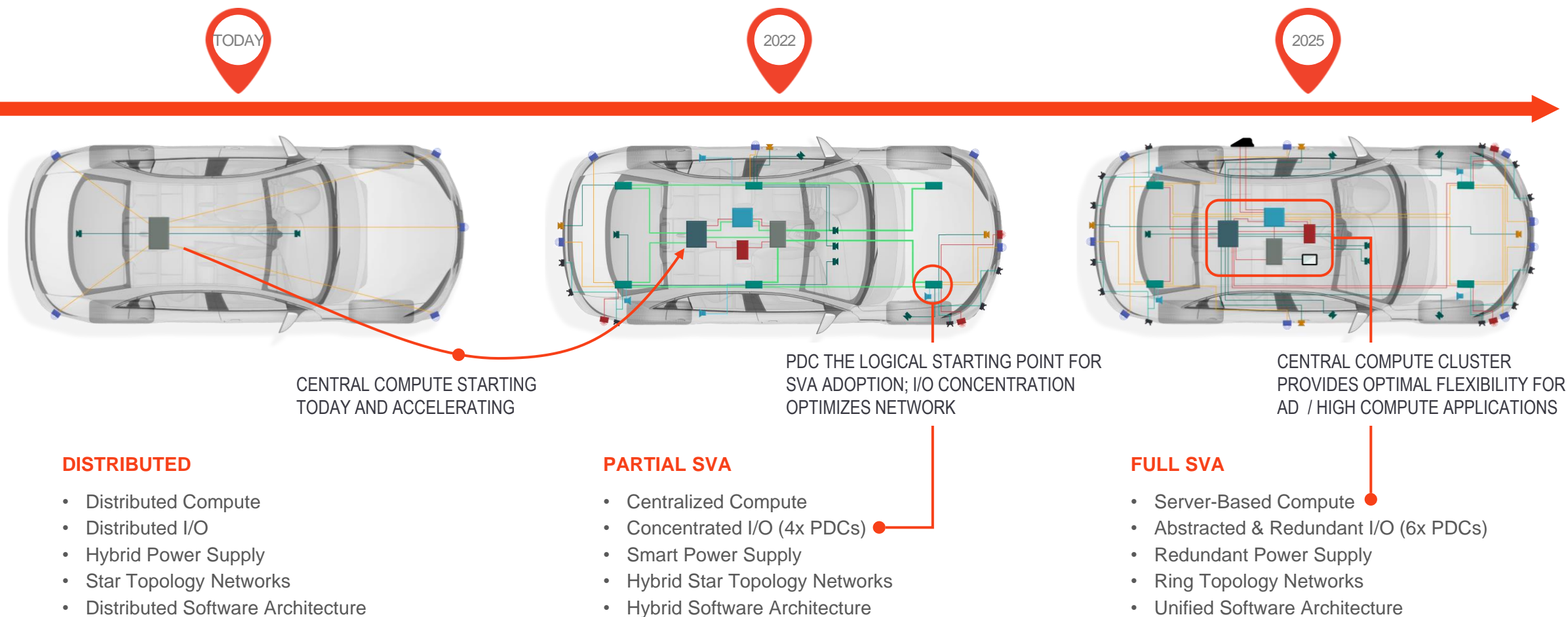


Note: Graphic highly simplified for communication purposes



# SVA Roadmap To Adoption

COMPREHENSIVE SOLUTION THAT ENABLES EVOLUTION TO SOFTWARE DEFINED VEHICLE





# SVA Benefits

BREAKTHROUGH APPROACH TO ARCHITECTURE CREATES  
SIGNIFICANT INCREMENTAL VALUE AND COST SAVINGS



## ENABLES NEW VEHICLE FUNCTIONALITY

Efficient scalability for feature rich vehicles through intelligent abstraction, standardized interfaces and scalable compute; enables affordable redundancy / fail operational design for highly automated vehicles



## SOFTWARE AND HARDWARE DEVELOPMENT DONE IN PARALLEL

Current development and test is a sequential process; separation of I/O from compute and software from hardware enables independent parallel development cycles and software reuse



## MODULAR ARCHITECTURE ENABLES AUTOMATION AND COMMONALITY

Modular zonal architecture leveraging automatable design for manufacturing and vehicle assembly, while common sub-assembly enables SKU consolidation, resulting in a structurally lower cost to install and maintain for the OEM



## UNLOCKS NEW BUSINESS MODELS

Central Compute facilitates Over-The-Air functionality (ex: SOTA / FOTA, profiles, edge compute and data monetization), while modularization provides an open platform / ecosystem for third party development

# Aptiv: Full Stack System Solutions Provider

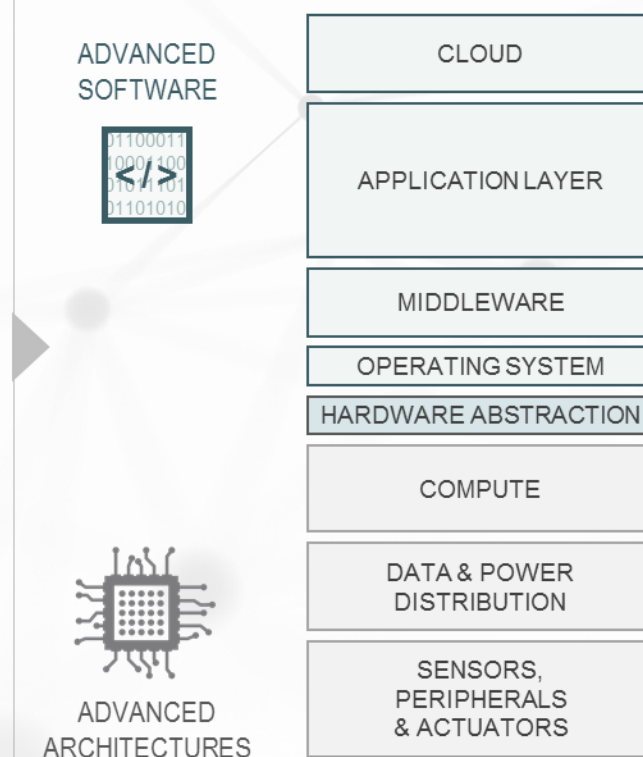
APTIV IS A LEADER IN DATA AND SOFTWARE, ADVANCED VEHICLE ARCHITECTURES, CONNECTIVITY AND COMPLEX SYSTEMS INTEGRATION

## CORE APTIV STRENGTHS

Delivering automotive grade solutions

- **SOFTWARE**  
Over 6,000 engineers focused on software development
- **SENSING**  
Leader in sensing and perception systems, sensor fusion
- **COMPUTE**  
High performance central compute platforms
- **DATA**  
Vehicle networks OTA, and cyber-security
- **POWER**  
Broad vehicle electrification portfolio and capabilities
- **TIER 1 SYSTEMS INTEGRATION**  
Managing vehicle complexity, performance and cost

## VEHICLE SOLUTION STACK



## APTIV VALUE ADD

- Data acquisition, edge processing and analytics
- Vehicle telematics and OTA software
- Sensing algorithms and sensor fusion
- Policy, planning and actuation for ADAS / AVs
- Gesture control, HMI and User Experience software
- Systems integrator for complex software and hardware
- Functional Safety design, testing and certification
- Integrating hardened OS / Hypervisors
- Automotive grade domain controllers
- High performance central compute
- High speed / power and networking; global scale
- Systems capabilities addressing exponential complexity growth
- Perception systems for Active Safety / Automated driving
- User experience hardware and in-cabin sensing
- Distributed ECUs and body controllers

# Summary

- VEHICLE IS BECOMING A **SOFTWARE DEFINED PLATFORM** TO SUPPORT NEW MOBILITY SOLUTIONS
- **ADVANCED VEHICLE ARCHITECTURES** REQUIRED TO ENABLE MOBILITY SOLUTIONS – **INCREASING COMPLEXITY FAVORS FULL STACK PROVIDERS**
- **SVA** DRIVES STRUCTURALLY LOWER COST PROFILE FOR OEMs WHILE UNLOCKING NEW SOLUTIONS AND BUSINESS MODELS
- **APTIV UNIQUELY POSITIONED TO UNLOCK VALUE** AS ONLY PROVIDER OF BRAIN AND NERVOUS SYSTEM





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