

# How Smart Vehicle Architecture™ Lowers Total Cost of Ownership

By reducing complexity, Aptiv's Smart Vehicle Architecture™ lowers the total cost of ownership associated with a vehicle's electric and electronic architecture across all phases of the lifecycle: development, manufacturing and post-production.

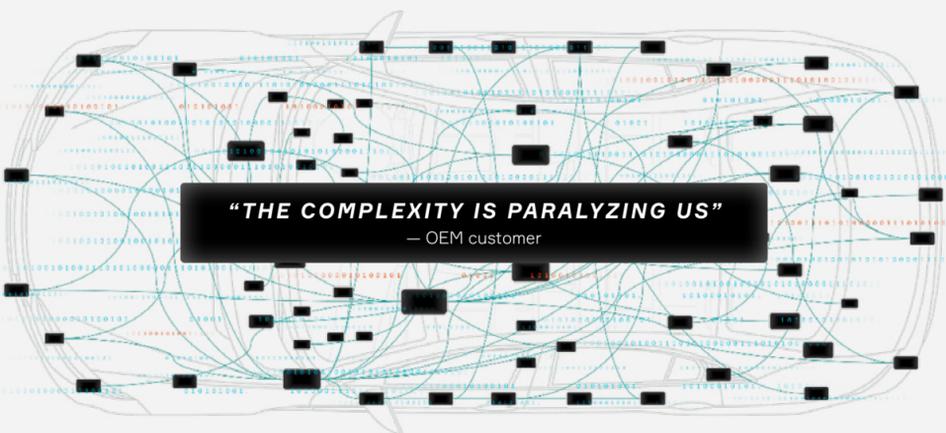
## THE CHALLENGE

The advanced safety, comfort and convenience features of today's vehicles bring tremendous benefits, but they also add substantial complexity.

100+ CONTROLLERS

200 MILLION LINES OF CODE

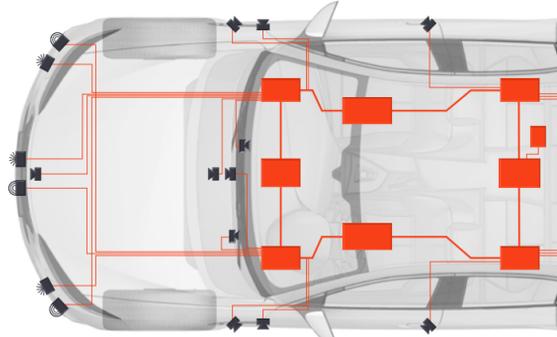
1000+ FUNCTIONS DEPENDENT UPON MULTIPLE CONTROLLERS



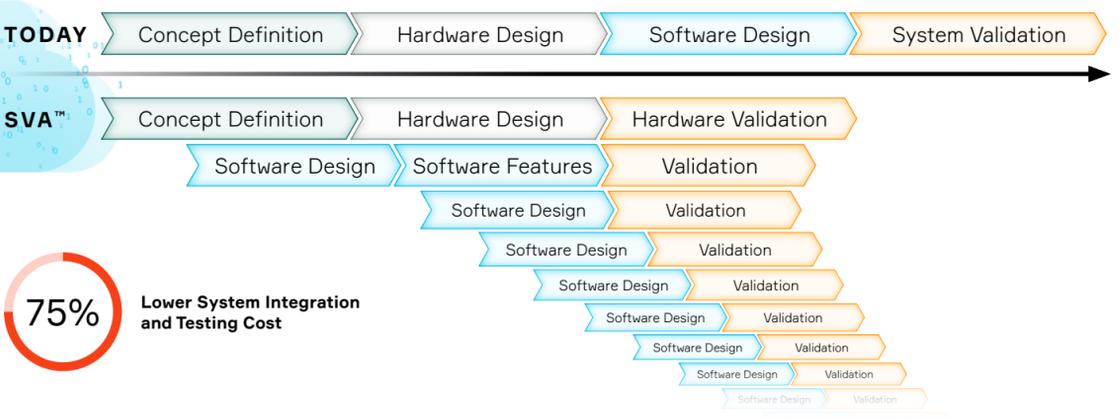
## DEVELOPMENT

SVA™ reduces complexity by enabling developers to create software completely independently of the underlying hardware. This means they can:

- Develop hardware and software in parallel
- Accelerate time to market
- Reduce integration and testing costs
- Add software features more easily, even after launch



### PARALLEL DEVELOPMENTS ACCELERATE TIME TO MARKET

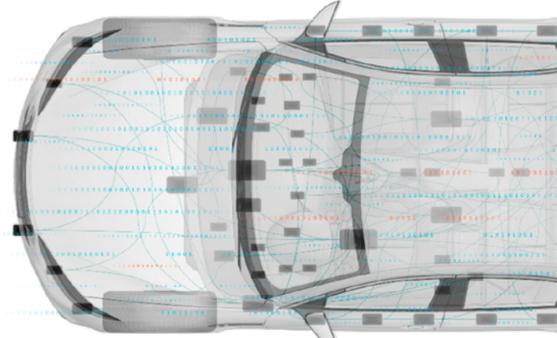


**75%** Lower System Integration and Testing Cost

## MANUFACTURING

SVA™ reduces complexity and costs in manufacturing by:

- Up-integrating ECUs into domain controllers
- Enabling automation of integration and manufacturing
- Breaking apart physical complexity using PowerData Centers (zone controllers)
- Standardizing on common sub-assemblies



**25%** Reduction in Weight and Packaging Space for Compute

**20%** Factory Floor Space Reduction for Electrical Architecture Installation

**20%** Reduction in Wire Harness Weight

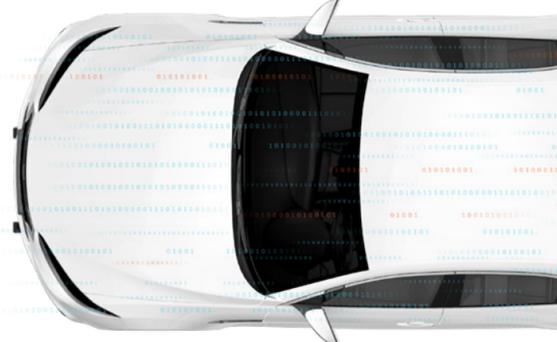
**20%** SKU Reduction

**50%** Labor Savings to Install Electrical Distribution

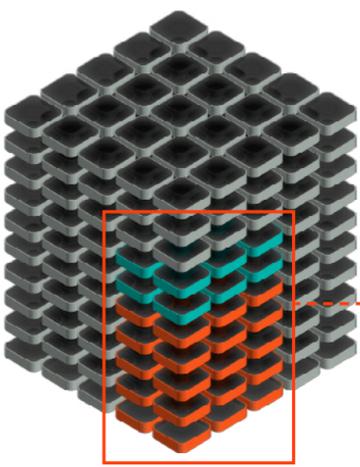
## POST-PRODUCTION

With software abstraction, SVA™ allows vehicle manufacturers to build a library of certified software – an “app store” for the car – which developers can pull from and reuse for each new vehicle. Combined with over-the-air (OTA) updates, they can:

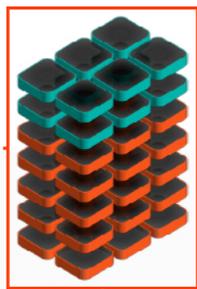
- Reduce warranty costs
- Update software without requiring owners to go to a dealership
- Virtually eliminate software maintenance for model-year updates



### VEHICLE MANUFACTURER SOFTWARE LIBRARY



### VEHICLE-SPECIFIC SOFTWARE BUILD



OTA Updates



**75%** Software Warranty Cost Reduction

**100%** Elimination of Model Year Updates