

# ALM Trends and Drivers: Where do we go from here?

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# THE SOFTWARE ENGINEERING EVOLUTION

70%

Of enterprises are expecting regulations to increase and impact requirements

- Cost of Compliance Survey, Thomson Reuters 2015

85%

Increase in Test Automation in the last two-years across all industries

- State of Quality 2016, Wipro

40%

Of SQA and testing executives cite difficulty to re-use and repeat tests as a major challenge faced with testing in an Agile development process

- World Quality Report, Capgemini & HPE 2016

\$1.89B

Is the projected market size for Agile ALM by 2020

- IDC

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# Digitalization Changes Everything



The next trillion dollars will be earned with data – for our customers and for our industries. ”

*Michael Dell, founder of Dell Inc.*

Digital is the main reason just over half of the companies on the Fortune 500 have disappeared since the year 2000. ”

*Pierre Nanterme, CEO Accenture*

## Automotive Data Monetization to Reach \$33 Billion for OEMs by 2025

*Frost & Sullivan*

Nowhere is that more apparent than the Automotive Industry

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**10 fold increase**  
in the number of lines of  
in-vehicle software in 5  
years



Source: McKinsey

**21 million by**  
**2035**  
annual sales of  
autonomous vehicles



Source: IHS

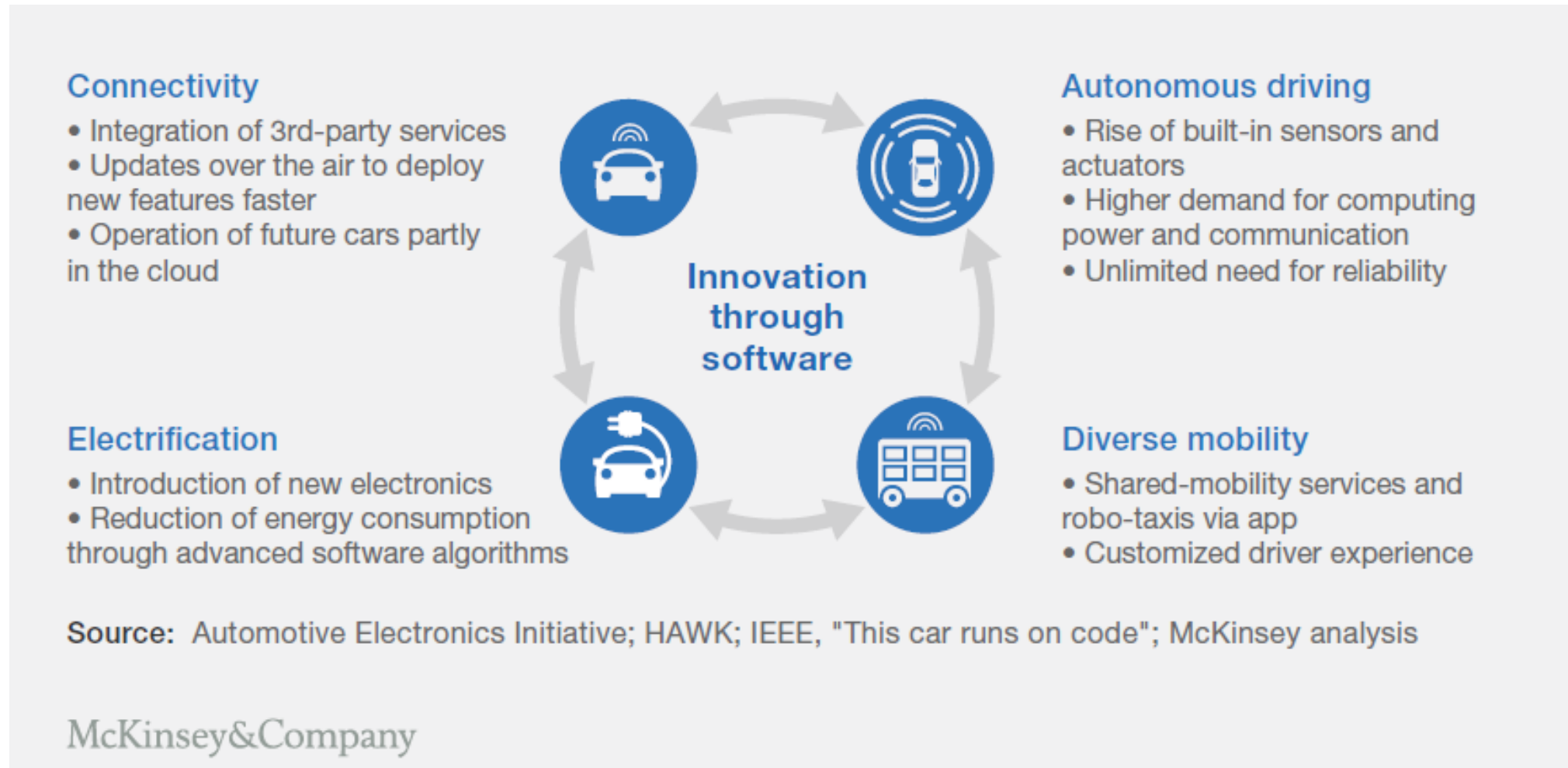
**6 billion by 2030**  
forecasted ride share  
passenger miles – at 1/3  
the cost



Source: ReThinkX

**Companies need to innovate more than ever creating new business models and services throughout the eco system**

# The Vehicle continues to evolve from a hardware driven machine to a software-driven services platform



The question is...  
What does the industry  
need to focus on to  
become successful and  
stay relevant?

TRACEABILITY

Not Ambiguity

AGILITY

Rigidity is Death

REUSE

Not Rework

SECURITY

Loss of Data is Costly

COMPLIANCE

Not Breach of Regulations

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# TO OBTAIN A COMPETITIVE ADVANTAGE TODAY A UNIFIED ALM PROCESS IS VITAL

## WHAT DOES UNIFIED MEAN?



Secure  
Collaboration



Reuse  
Artifacts



Deep Granular  
End-to-End  
Traceability



Increased  
Interoperability



Automate  
Compliance

# Industry Strategy Drivers

## Address the Software Delivery Business Transformation

### CURRENT STATE

- **Descriptive** system decomposition and structure models
- Embedded SW architecture, **limited scalability**
- Mostly **predefined** system behaviors
- Design, development, manufacturing in **silos**
- **Descriptive** system decomposition and structure models

### DESIRED & FUTURE STATE

- Simulate **behavior** system models **to predict** a large number of complex scenarios to handle
- Multiple sensors, multiple functions **complex architecture**, also providing redundancy
- **Adaptive & predictive** system behaviors
- Industrialize with **DEVOPS and Agile** practices
- Simulate **behavior** system models **to predict** a large number of complex scenarios to handle

# What is the missing piece?

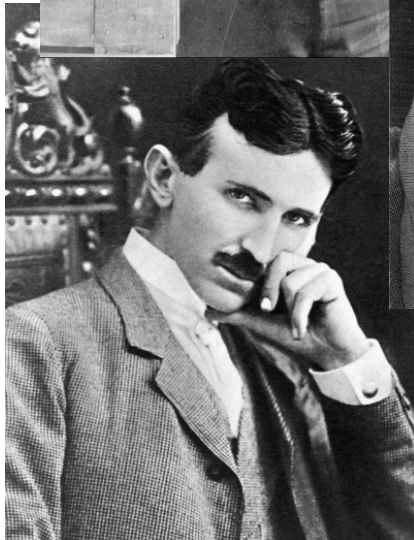
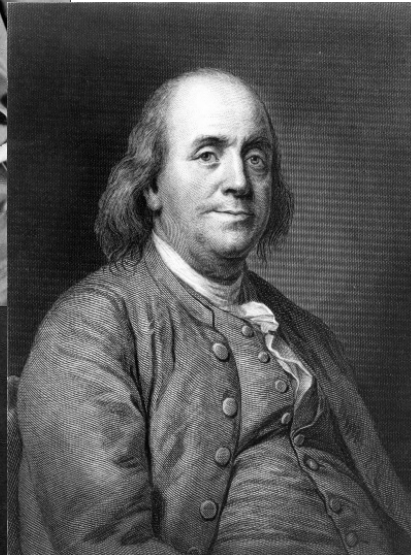
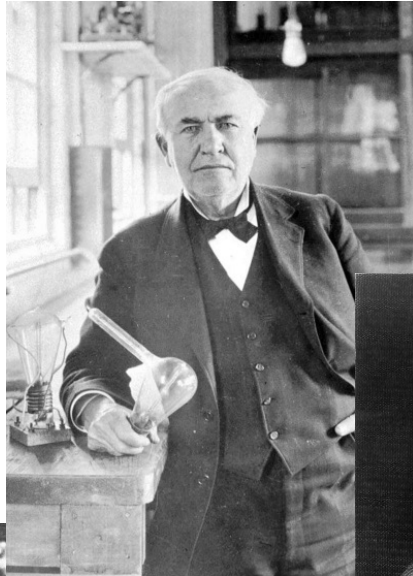
“...Don’t concentrate on the finger or you  
will miss all that heavenly glory...”

Bruce Lee, Enter the Dragon

# ALM is Evolving to Accommodate the True Digital Age

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How are you going  
to power your ALM?





**Thank You!**  
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