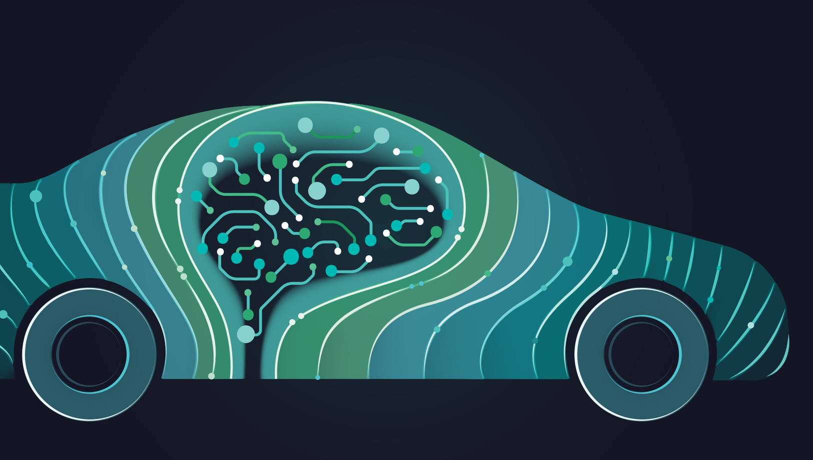
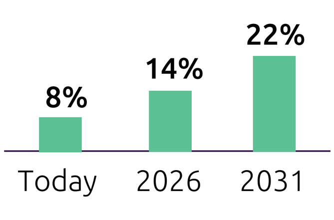
Capgemini RESEARCH INSTITUTE

NEXT DESTINATION: SOFTWARE

How automotive OEMs can harness the potential of software-driven transformation



Software will have a significant impact across the entire OEM value chain



Software revenue

Revenue from software-based features and services as share of overall revenue will grow

3x

Software capabilities

By 2026,

22%

of all people in R&D will be software experts

Computing

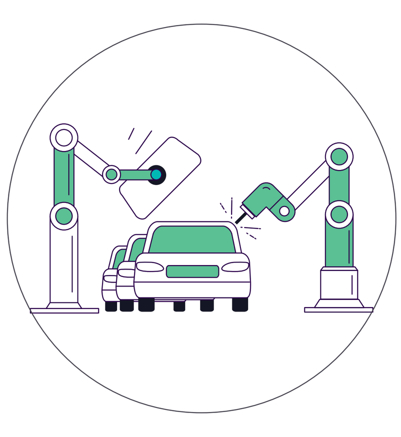
The share of offboard computing will increase to

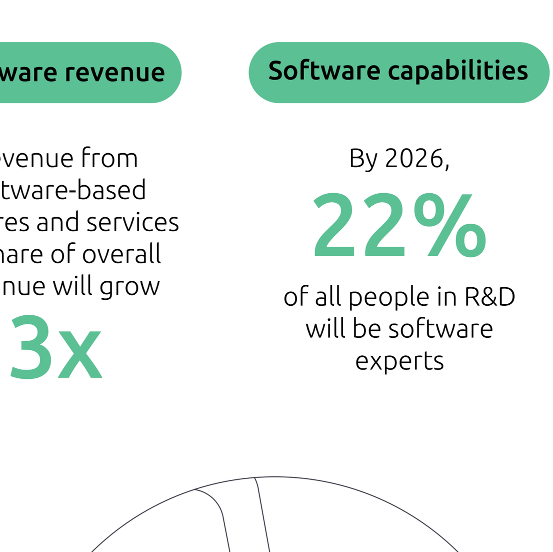
25%

by 2026, from

13%

currently





Software platform

By 2031, vehicles with common software platform will increase

5x

Share of vehicles by 2026

9% — Vehicles with Advanced autonomy (3/4)

36% — Connected vehicles with OTA

Connected services

By 2026,

80%

of OEMs plan to monetize connected services, compared to

13%

of OEMs today

Key software domain

81%

of OEMs rank software in product engineering as key to their software-driven transformation strategy - the most across all software domains

Partnerships

By 2026,

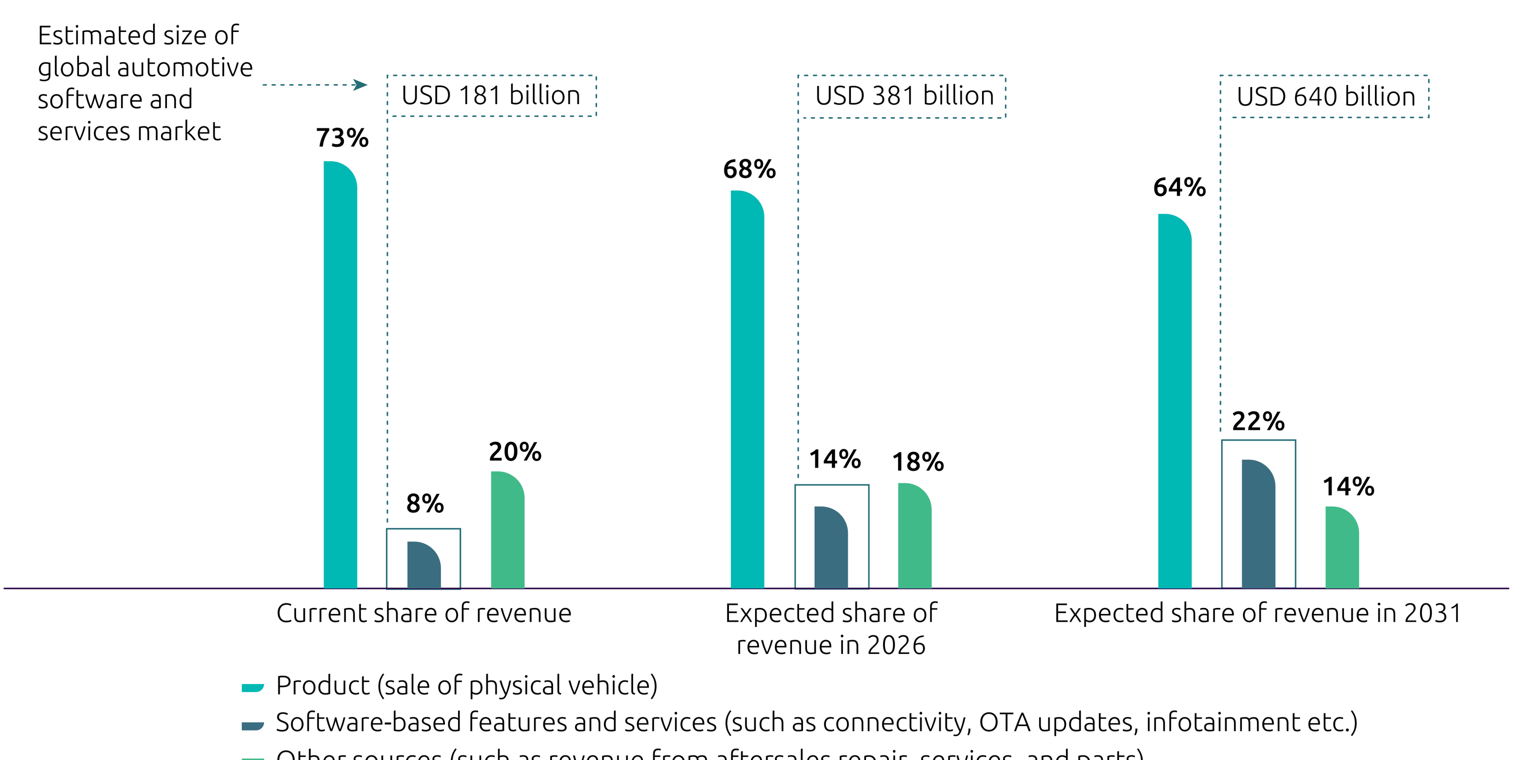
66%

of OEMs plan to partner with software firms and system integrator firms

Source: Capgemini Research Institute, Software in Automotive Industry survey, July 2021; N=148 OEMs, respondents primarily from general management function.

Revenue share of software-based features and services is set to more than triple in the next 10 years, amounting to $640 billion

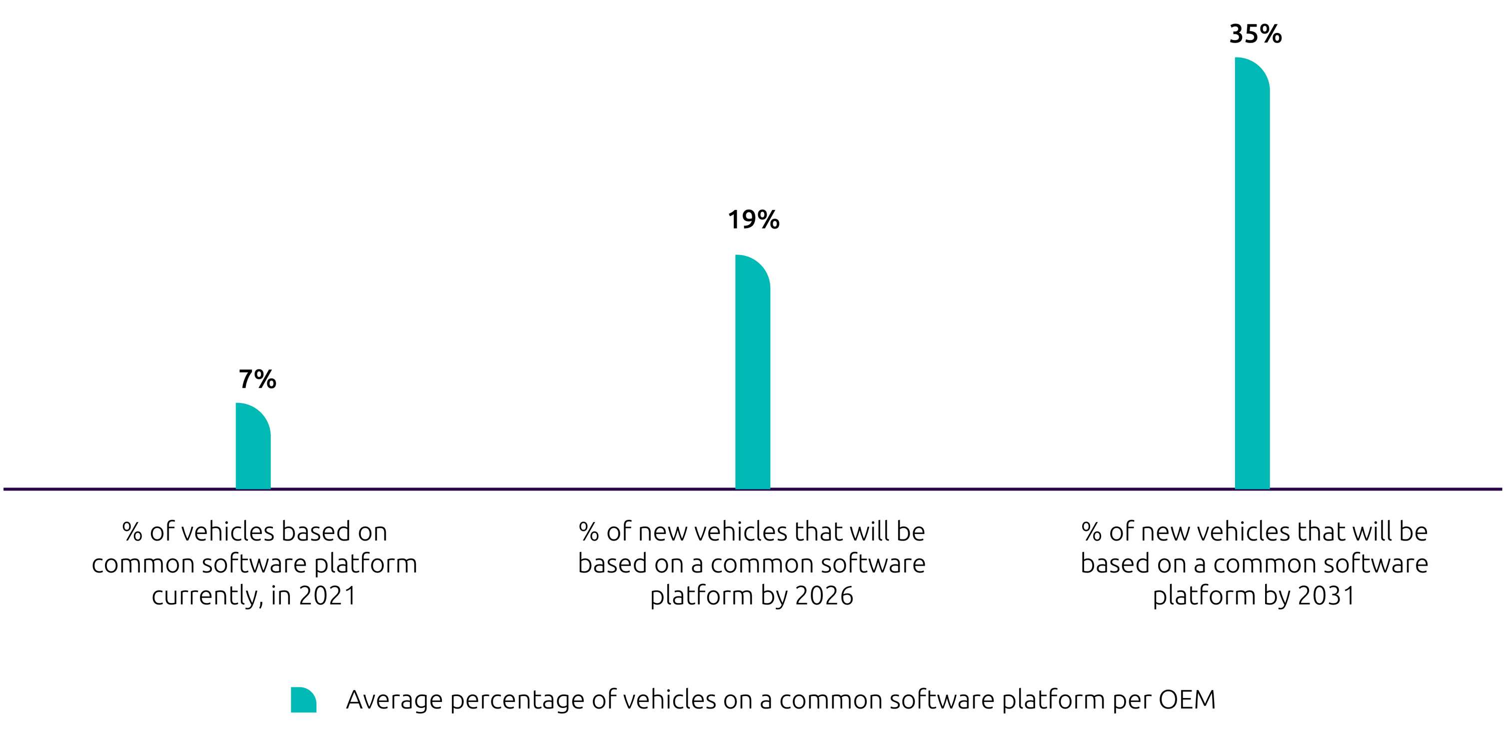
Current and expected revenue split for an OEM – by year



Source: Capgemini Research Institute, Software in Automotive Industry survey, July 2021; N=148 OEMs, respondents primarily from general management function.

A key driver of revenue from software-based features and services will be the adoption of a common software platform for the vehicle fleet

Average percentage of vehicles, per OEM, based on a common software platform, current and in the future

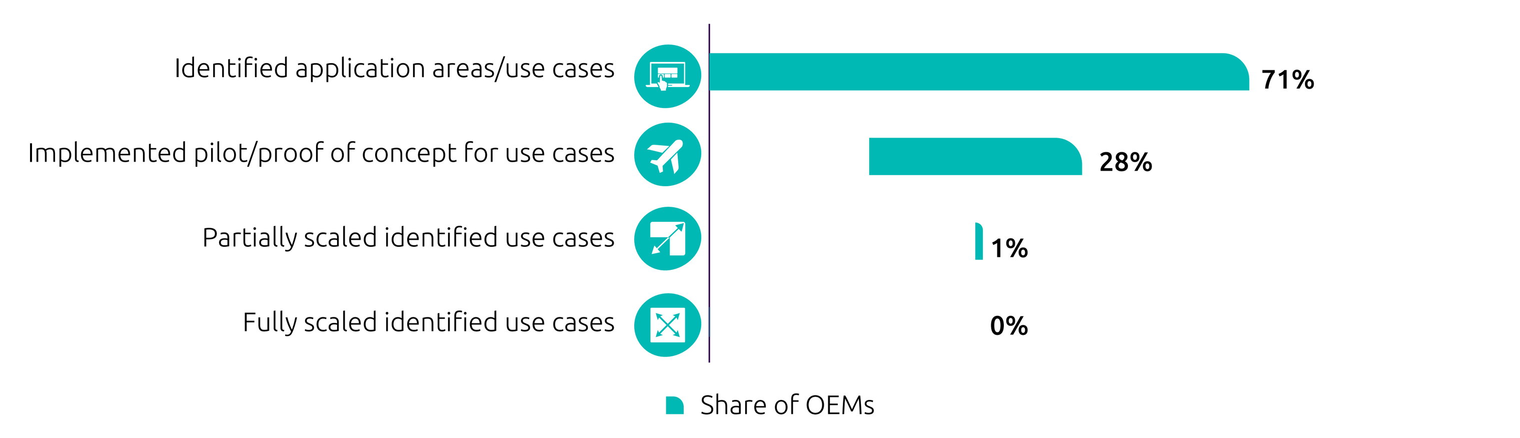


Source: Capgemini Research Institute, Software in Automotive Industry survey, July 2021; N=84 OEMs (represented by engineering/R&D function) who currently have/plan to have a common software platform in the next five years.

On average OEMs currently spend **2.2%** of their annual revenue on their software-driven transformation

However only 1% of OEMs have partially scaled and none have fully scaled their transformation use cases

Maturity of software-defined transformation for OEMs



Source: Capgemini Research Institute, Software in Automotive Industry survey, July 2021; N=148 OEMs, respondents primarily from general management function.

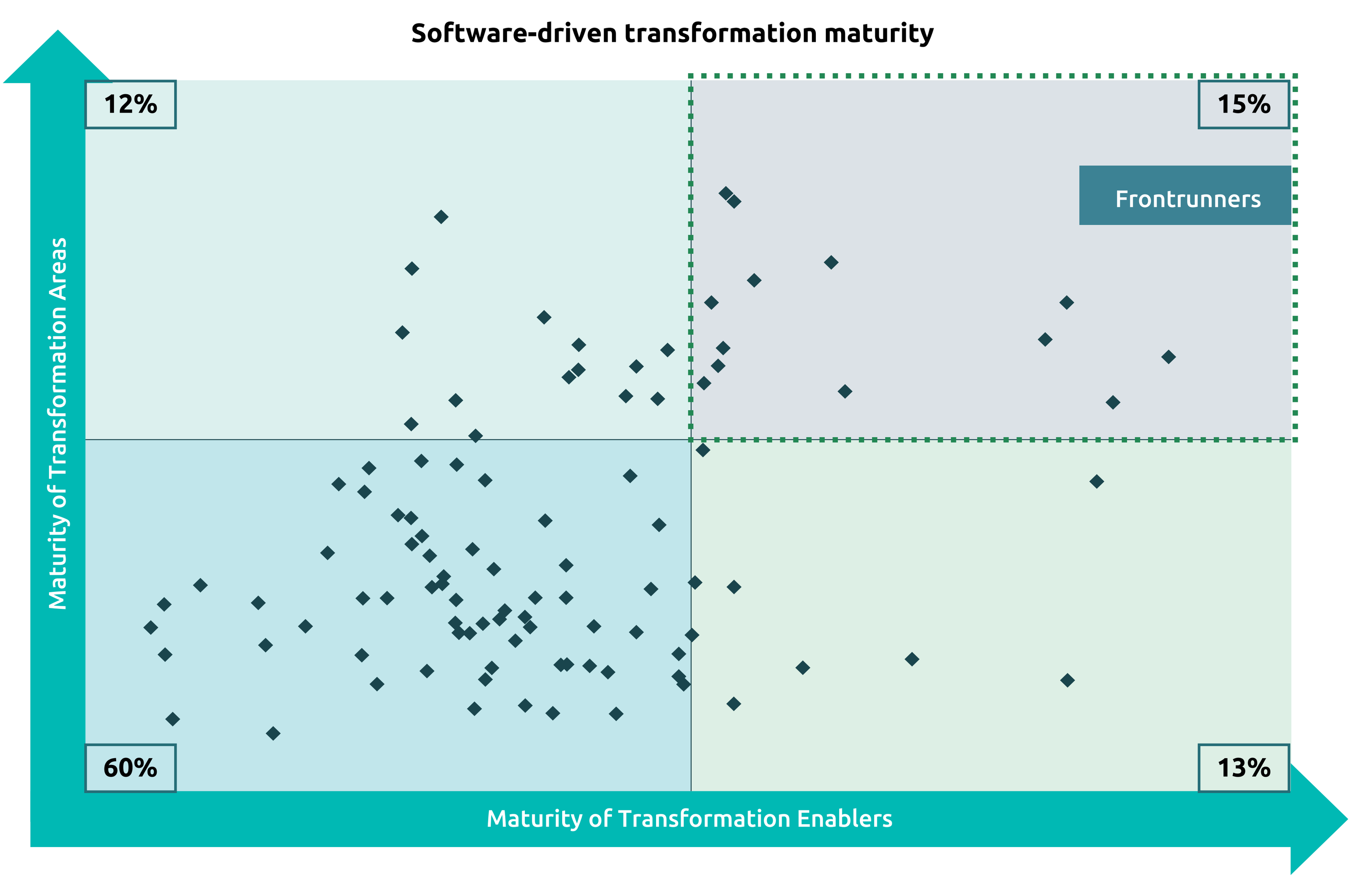
Partial scale: | Partially scaled the identified use cases for at least one model/production facility

Full scale: | Fully scaled the identified use cases for at least one model/production facility

60%

of OEMs are still beginners in their transformation journey

Software-driven transformation maturity



Source: Capgemini Research Institute, Software in Automotive Industry survey, July 2021; N=100 OEMs with at least both General Manager and Engineering representative roles.

For frontrunner OEMs, who are 15% of the overall OEMs, a successful transformation is likely to yield significantly better results

	Frontrunner OEMs	The rest of the OEMs
Revenue growth (2016-2020)	Revenue growth of 2.7%	Revenue decline of -6.4%*
Software-based revenue	Expect 28% of revenue from software by 2031	Expect 20% of revenue from software by 2031
Customer willingness to pay premium for software-based features and services	Willingness to pay 9.3% of vehicle price	Willingness to pay 6.3% of vehicle price
Customer willingness to share data	33% have customers highly willing to share data with them	11% have customers highly willing to share data with them

Source: Capgemini Research Institute, Software in Automotive Industry survey, July 2021; N=100 OEMs with at least both General Manager and Engineering representative roles. *Global automotive data from MarketLine[19].

How automotive OEMs can harness the full potential of their software-driven transformation

Transformation Enablers

1. Build a software-focused vision and strategy
2. Leverage software toolchains and agile to foster collaboration across organizational units
3. Forge strategic partnerships on key software frontiers
4. Strive for excellence by building and retaining software talent

Transformation Areas

5. Define a clear roadmap for the next-generation software architecture
6. Tap into the power of data to enable intelligent vehicles, operations, and services, faster

Source: Capgemini Research Institute analysis.

Download report

Subscribe to our research