

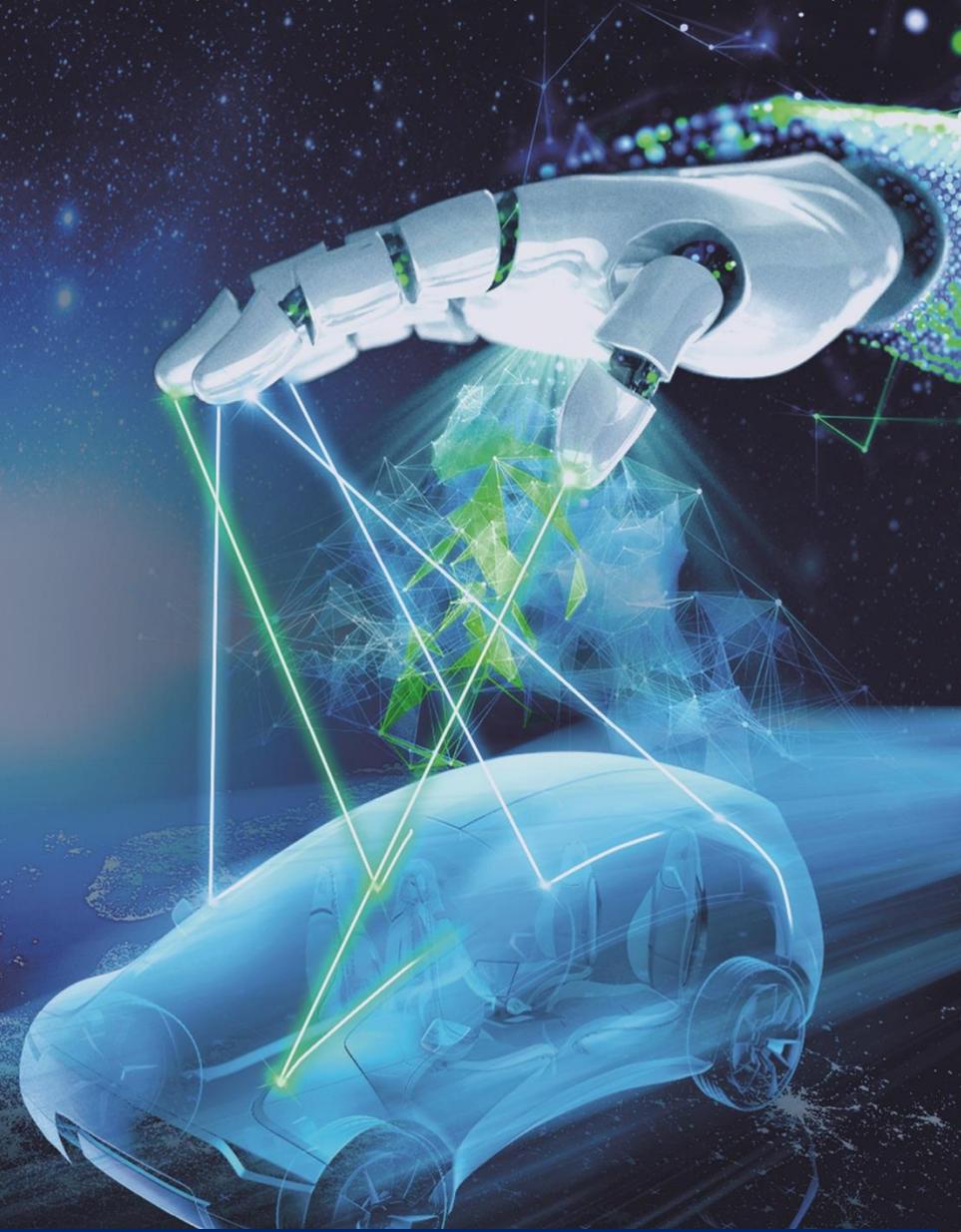


KPMG's 21st consecutive

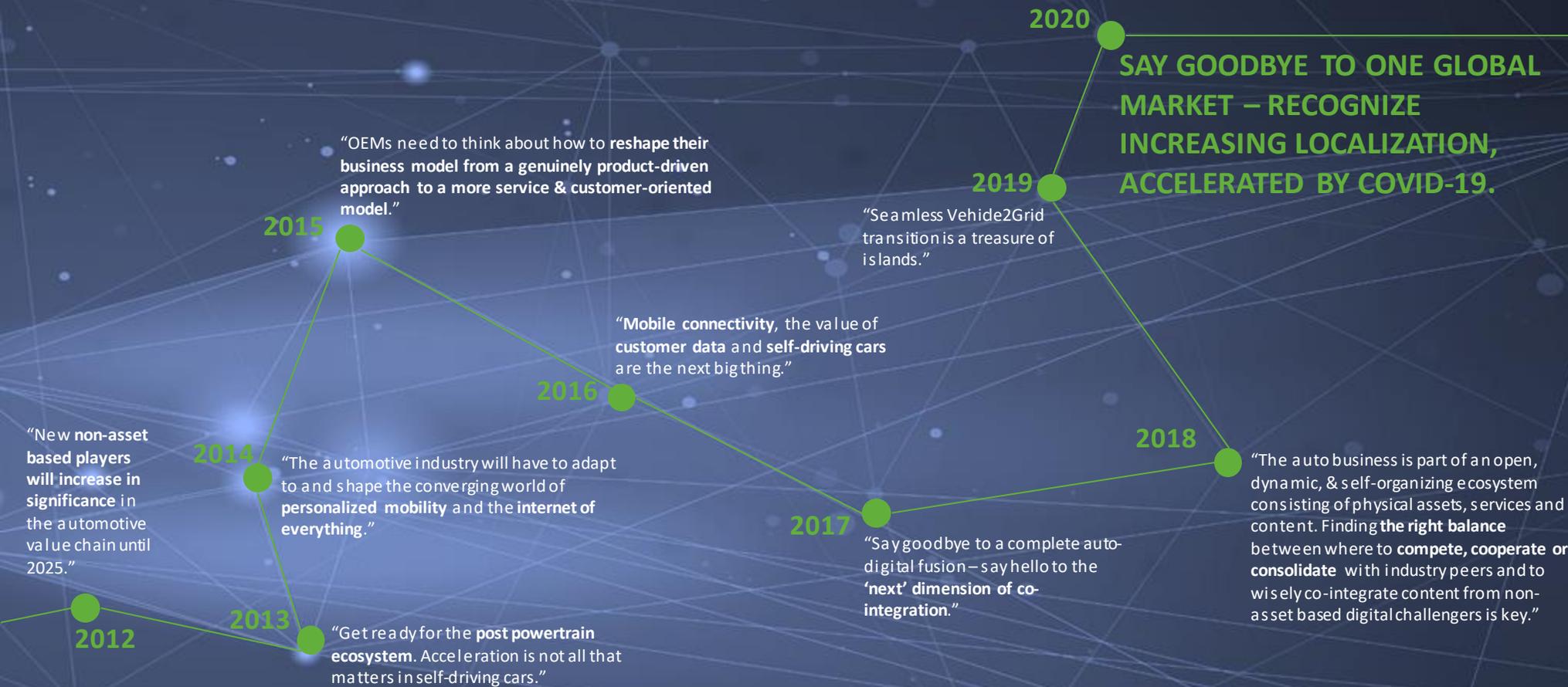
Including
COVID-19
Insights

Global Automotive Executive Survey 2020

Say goodbye to one global market – recognize increasing localization, accelerated by COVID-19.



OUR GLOBAL AUTOMOTIVE EXECUTIVE SURVEY JOURNEY | AN ADVENTURE SINCE 21 YEARS...



OUR COVID-19 JOURNEY



WHAT'S NEW IN THIS YEAR'S SURVEY

★ DEMOGRAPHICS: MORE RESPONDENTS THAN EVER!

- Over **1.100** executives from **30** countries
- More than **2.000** consumer opinions from **30** countries
- **NEW:** Integration of **truck manufacturers** into the stakeholder portfolio of automotive & ICT companies
- More than **50%** of the executives are **CEOs & C-level**



★ INTERACTIVE ONLINE SURVEY

- The platform has a completely **new look** and is **easy to use**
- Explore your own analyses based on your specific interest
- **Customize your own dashboards**
- See the difference in opinion: **Executives vs. Consumers**



★ MOBILE VERSION

- A comprehensive mobile version for on the go was created for your mobile/tablet
- 90% of the dashboards can be interactively viewed on your mobile/tablet



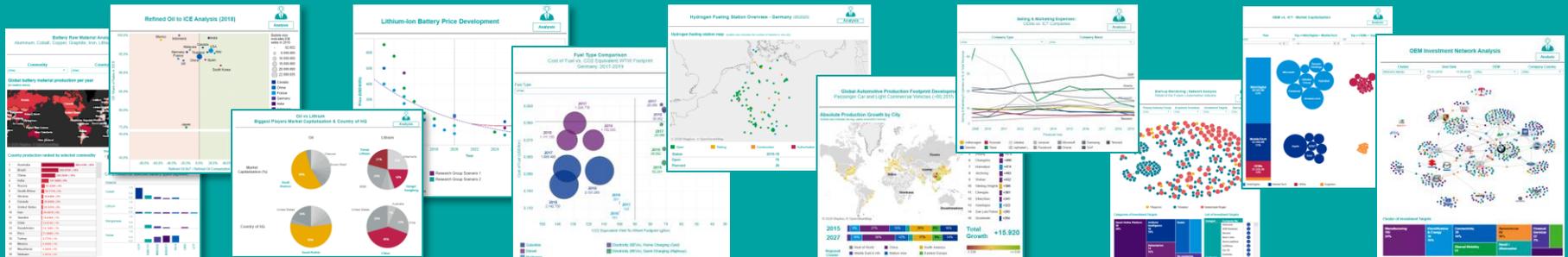
★ NEW FUNCTIONALITIES:

- Improved **search function** has been developed
- **Chapter highlights** have been created
- New **share functionalities**



★ HOW AUTOMOTIVE INSTITUTE ANALYSES COMPLEMENT THIS YEAR'S SURVEY LIKE NEVER BEFORE:

- Raw materials
- Balances of trade
- China subsidy strategy
- Oil/lithium players
- Battery prices
- Cost of fuel/CO2
- Hydrogen fueling
- Global footprints
- Marketing expenses
- R&D to revenue ratio
- Start-up monitoring
- Market cap.
- Cash positions
- Investment network
- ...



14
Automotive Institute analyses revealing deep industry know-how

COVID-19 HIGHLIGHT | 8 KEY OPINIONS ABOUT THE IMPACT OF COVID-19

[Click here for direct access to COVID-19 chapter](#)

1

We believe that it is essential to acknowledge COVID-19 as a global wave movement, which must be assessed simultaneously from a global production and sales footprint perspective.

2

Wave management models capturing the time delay within supply and demand chains are now required. This is a development that we have already seen with the SARS disease, but which began to decline after the initial wave.

3

The COVID-19 crisis will lead to fundamental changes in demand, with the effect of a much deeper systematic recession. Sales teams should not be laid off. Instead, companies should focus intensely on managing customer relationships and digital demand and providing flexible, low up-front cost offerings to actively counteract increasing consumer uncertainty and TCO-driven purchases.

4

KPMG's Automotive Institute believes that there will be long-term effects on public transport. People will move away from public transport and are willing to spend more money to feel safe – China's panic-like fear of disease and fever has led to an increasing demand in the high-end and low-end sectors.

5

Companies with strong liquidity can take advantage of the opportunities in new partnerships that lie ahead, including the detection of M&A targets in a market that expects widespread consolidation. The crisis also serves certain companies with the ability to redefine themselves in the market.

6

Differentiating between cultures becomes essential: While China and the USA tend to have spending cultures, consumers in Japan and Germany are rather reluctant to spend. Increasing credit volumes could result in growth in demand.

7

CO2 targets will be tested, and the widespread adoption of e-mobility will depend on high government subsidies. Without these, e-mobility will only be able to survive in certain application areas, such as in cities.

8

There is only one way forward and that is to redefine competition towards industry-wide "co-ompetition". This means to collectively ensure supply chain stability, alongside a global readjustment to a reduced demand structure, channeled through digital demand management and service factories.

EXECUTIVE SUMMARY | SAY GOODBYE TO ONE GLOBAL MARKET – RECOGNIZE INCREASING LOCALIZATION, ACCELERATED BY COVID-19

Almost **all execs see sustainability** as a key differentiator (98%), but **17%** of consumers still do not recognize this at all - KPMG believes that the industry would benefit from a cradle to grave sustainability rating.

Community and group thinking on sustainability does not yet exist in the automotive industry, mainly because the **criteria for classifying a product as sustainable are still not precise and transparent enough for customers.**

83% of execs agree that regulators and **industry policies** are driving technological agendas – subsidy strategies and tax breaks will be essential instruments.

73% of execs agree that a country's mineral resources dictate the **country's preferred powertrain technology.**

76% of executives agree that by 2030 **less than 5% of global car production** will occur in Western Europe - a 9% increase in voter share since last year.

BEVs, connectivity & digitalization, FCEVs, and PHEVs have established themselves as the most important key trends in the industry since 2017.

We believe that it is essential to acknowledge COVID-19 as a global **wave movement**, which must be assessed simultaneously from a global production and sales footprint perspective.

People will **move away from public transport** and may be willing to spend more money to feel safe. In China, for example, we have already seen an increase in demand in the **high-end and low-end passenger vehicle segments** due to the panic-like fear of disease.

SUSTAINABILITY

INDUSTRY POLITICS

RAW MATERIALS

REGIONAL SHIFTS

KEY TRENDS

COVID-19

Competition is back: In contrast to last year, competition (50%) between automotive manufacturers and ICT companies has increased.

CO-OMPETITION

Nearly **three in four** executives agree that the importance of **financial service** entities will increase, with the debt levels of OEMs expected to rise.

TRANSFORMATION READINESS

More than **40%** of all executives agree that monetizing data is best done with **safety-oriented applications** such as car-2-x communication.

DATA SUPREMACY

ECOSYSTEM VALUE

MEGATRENDS

GAES 2020

PRODUCT VALUE

COMBUSTION ENGINE & VEHICLE ARCHITECTURE

For the first time in the history of our survey, execs think that by **2030** the largest share of vehicles will not be powered by an ICE: **FCEVs, BEVs, PHEVs, and ICEs will co-exist.**

ELECTRIC & FUEL CELL READINESS

Providing a hassle-free and a seamless charging experience is essential for general BEV adoption - **84%** of consumers see the **responsibility for charging infrastructure with OEMs.**

AUTONOMY READINESS

77% of execs agree that **mixed traffic** between a autonomous and non-autonomous vehicles will lead to severe safety issues and liability claims.

CUSTOMER VALUE

RETAIL OF THE FUTURE

More than **60%** of execs believe that the number of physical **retail outlets** will decrease between **20-30%** globally.

SEAMLESS MULTIMODAL MOBILITY

COVID-19 will lead to **much tighter budget mgmt.** and TCO-orientation among consumers. Consumers will weigh up **physical integrity risks against budgetary restrictions.**

CUSTOMER CENTRICITY

Customer mobility decisions will be driven by **data privacy & security, TCO, and a seamless and hassle-free** mobility experience.

One of the biggest challenges for retail organizations will be the **software-driven development** in vehicles, for which consumers are favor a central support organization.

There is no **"one and only" global mobility concept:** Instead, we expect to see different mobility concepts for cities and rural areas. More than **80%** of global executives agree.

OEMs can defend their lead in the battle for valuable **customer relationships** - **nearly half** of all execs and consumers agree that OEMs will also be closest to the customer in 5 years' time.

The increasing amount of software in vehicles will impact the **independent aftermarket:** The more software, the less successful the independent aftermarket will become.

KPMG's Automotive Institute believes that **post-COVID uncertainty** demands solutions for customers that allow for more **flexibility in contractual commitments.**

We are further from **online purchasing** than expected: **1 in 5 global consumers say that they will not buy a car online.**

MEGATRENDS

AUTOMOTIVE KEY TRENDS

One global answer to all strategic directions does not reflect reality - companies must develop **independent regional strategies** for customers and markets alike.

76% of executives agree that by 2030 less than **5%** of global car production will occur in **Western Europe** - a 9% increase since last year.

REGIONAL SHIFTS

SUSTAINABILITY

Almost all execs see sustainability as a key differentiator (**98%**), but **17%** of consumers still do not recognize that at all - KPMG believes that the industry would benefit from a **cradle to grave sustainability rating**.

Community and group thinking on sustainability does not yet exist in the automotive industry, mainly because the **criteria for classifying a product as sustainable** are still not precise and transparent enough for customers to make reliable decisions.

COVID-19 may now shift the industry's focus from technological development to a more **survival and operationally focused** agenda.

BEV, connectivity & digitalization, FCEV, and PHEV have established themselves as the most important key trends in the industry since 2017.

Instead of simply one global regional shift in the automotive industry, we will witness a variety of more **localized shifts** for different technologies, markets, and applications, assisted by an as yet undetermined degree of **deglobalization** following COVID-19.

INDUSTRY POLITICS

RAW MATERIALS

73% of execs agree that a country's mineral resources dictate the country's preferred powertrain technology.

83% of execs agree that regulators and industry policies are driving technological agendas – subsidy strategies and tax breaks will be essential instruments.

Raw materials will play a crucial future role in driving regionally differentiated industry politics, technological agendas of OEMs, and EV battery prices. Through their impact on regionally differentiated industry politics, **raw materials will furthermore prevent the development of a single globally dominant powertrain** in the long run.

Efficiency savings through economies of scale will not outweigh increases in demand for batteries and battery raw materials – this will result in **increased battery prices** in the mid to long-term.

SUSTAINABILITY

COVID-19 shifts consumer priorities and strengthens TCO-driven thinking: wide-spread adoption of sustainability as a key differentiator may now become more difficult in the short-term.

INDUSTRY POLITICS

In response to a drastic change in external market conditions due to the COVID-19 crisis, the extension of subsidies for EVs in China this year demonstrates the remarkable flexibility of China's industry politics.

RAW MATERIALS

If government EV incentives fall away in the wake of a COVID-19, we believe that short-term purchase decisions will be dominated by TCO factors, significantly impacting the rate of transition to low carbon mobility.

REGIONAL SHIFTS

With the expectation that COVID-19 will have a greater impact on the automotive industry in Western Europe than in China, we will likely see a further reduction in the production share accounted for by Western Europe.

AUTOMOTIVE KEY TRENDS

In light of negative growth in both global production and sales in 2019, one can expect cost cutting and rationalization, combined with increased M&A activity.

PRODUCT VALUE

COMBUSTION ENGINE & VEHICLE ARCHITECTURE

There will be **no clear single investment strategy**, as long as raw materials and industry politics have a country-specific or regional root.

For the first time in the history of our survey, executives think that by **2030** the largest share of vehicles will not be powered by an ICE drivetrain: FCEVs, BEVs, PHEVs, and ICEs will co-exist and complement each other.

Providing a hassle-free and a seamless charging experience is essential for general BEV adoption - **84%** of consumers see the responsibility for charging infrastructure with OEMs.

77% of execs agree that mixed traffic between autonomous and non-autonomous vehicles will lead to severe safety issues and liability claims.

Both executives and consumers believe that fully **autonomous vehicles** are further from being implemented than originally predicted. More than 1 in 5 execs don't believe in the adoption of autonomous vehicles before **2040**.

KPMG's Automotive Institute believes that autonomous vehicles will only be truly successful in isolated regions – **"islands of autonomy"** – where each vehicle follows the same set of rules, grounded in bionic swarm intelligence.

AUTONOMY READINESS

ELECTRIC & FUEL CELL READINESS

For consumers, **price** is the most important aspect when considering buying an **EV**.

Executives continue to see **BMW** as the top e-mobility leader, but its leading position is challenged by **Tesla**, which strengthened its second-place ranking this year.

84% of executives think that **FCEVs** will experience their breakthrough in industrial transportation - a **5%** increase compared to **2019**.

COMBUSTION ENGINE & VEHICLE ARCHITECTURE

KPMG's Automotive Institute believes that COVID-19 will lead to a delayed development of the future powertrain mix forecasted, especially if subsidy schemes are to fundamentally change.

ELECTRIC & FUEL CELL READINESS

The recent drop in crude oil prices due to COVID-19 also lowers the cost of fuel for ICE vehicles powered by diesel and gasoline, resulting in lower costs in USD/km compared to BEVs.

AUTONOMY READINESS

With the economic impact of COVID-19 reinforcing TCO-driven thinking, we believe the uncertainty surrounding the application of AVs is likely to only increase in the short to medium term, as the focus of consumers shifts to only necessary, as well as tried and tested, technologies.

CUSTOMER VALUE

Understanding your customer at individual touchpoints is key – customer mobility decisions will be driven by **data privacy & security, TCO**, and a **seamless and hassle-free** mobility experience.

CUSTOMER CENTRICITY

It is crystal clear: OEMs can defend their lead in the battle for valuable customer relationships - **nearly half of all execs and consumers agree** that OEMs will also be closest to the customer in 5 years' time.

With increasing complexity in customer relationship management, one might expect **marketing expenses** to increase; this isn't the case for automotive players. Tech giants, meanwhile, are pursuing the opposite strategy.

Long-term cumulative total cost of usership (**TCU**) for mobility services is being neglected. TCO seems to not be a main driver in customer decision-making when choosing between these different services.

We are further from online purchasing than expected: **One in five** global consumers say that they will not buy a car online.

RETAIL OF THE FUTURE

One of the **biggest challenges** for retail organizations will be the software-driven development in vehicles, for which consumers are most likely to favour a central support organization.

More than **60%** of execs believe that the number of physical retail outlets will decrease between **20-30% globally**.

The increasing amount of software in vehicles will have an impact on the **independent aftermarket**: The more software components are built into cars, the less successful the independent aftermarket will become.

SEAMLESS MULTIMODAL MOBILITY

KPMG's Automotive Institute believes that post-COVID uncertainty demands solutions for customers that allow for more **flexibility in contractual commitments**.

There is no "one and only" global mobility concept: Instead, we expect to see different mobility concepts for cities and rural areas. More than **80%** of global executives agree that cities will have completely different mobility concepts than rural areas.

CUSTOMER CENTRICITY

53% of consumers make data and cyber security an absolute prerequisite for their purchase decision. This is followed by TCO, with 46% of all consumers in agreement and which is likely to further increase due to restricted spending behaviour as a result of COVID-19.

SEAMLESS MULTIMODAL MOBILITY

A direct response to the more difficult post-COVID economic environment: Help customers by offering contract flexibility with subscription models.

COVID-19 will lead to a much tighter budget management and TCO orientation among consumers. Consumers will weigh up the risk of physical integrity against cost when considering mobility services.

RETAIL OF THE FUTURE

There will be a dramatic reduction or reshaping of 20%-30% of physical retail outlets. The post-COVID-19 crisis will enforce this result.

ECOSYSTEM VALUE

CO-OMPETITION

Market capitalization of the **top 15** mobile tech & web/digital companies is **more than 5 times** as high as that of the **top 50** traditional automotive OEMs & suppliers.

Competition is back: In contrast to last year and according to this year's executives, **competition** between automotive manufacturers and ICT companies has increased.

We see cultural similarities and geographical axes between **USA/China** and **Germany/Japan** – a finding also reflected in the responses of this year's survey.

More than **40%** of all executives agree that monetizing data is best done with **safety-oriented applications** such as car-2-x communication.

DATA SUPREMACY

China is the frontrunner in thinking in ecosystems: In comparison to traditional auto manufacturers, **ICT companies** are the clear winners of the **data race**.

Executives and consumers are not aligned regarding who consumers would **trust** most with their data.

TRANSFORMATION READINESS

Executives have shown a stable opinion in the last three years: New values, such as **miles driven**, measure market success, not units sold.

82% of executives are confident that measuring vehicle usage or miles driven will become the new focus. However, most companies still do not implement ecosystem-oriented measures.

Nearly **three in four** executives agree that the importance of financial service entities will increase, with debt levels expected to rise.

Due to an increasing number of mobility service offerings, we expect **debt levels** and the **importance of financial services** to increase.

CO-OMPETITION

With the currently expected post COVID-19 economic recession, we believe that even more OEM and Tier One suppliers will be forced to start cooperating and consolidating within the industry, than we have ever seen before.

TRANSFORMATION READINESS

In the future, profits will be determined by access to data and miles travelled, not by units sold, especially if car ownership in certain applications, such as cities, is fundamentally decreasing. One prerequisite, especially in COVID-19 times, will be making people feel safe in cars used by others, as in mobility solutions.

DATA SUPREMACY

Safety-oriented applications like car2x communication or even physical safety dominate the opinion of the executives surveyed worldwide (41%). With new realities after COVID-19, we even assume that this perspective will grow, as now physical integrity becomes much more important.

MATERIALS | THE MATERIALS WE HAVE AVAILABLE FOR YOU

TODAY JUNE 5TH

MID-JULY 2020



INTERACTIVE ONLINE
VERSION

VISIT THE [LINK](#)



THIS PRESS DOCUMENT
WITH KEY MESSAGES



FLYER



EXECUTIVE SUMMARY

WITH TOPICS THAT CATCH THE MOST
INTEREST AMONG OUR READERS

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