An outlook on INTELLIGENCE in 2024

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IHS Markit 8 key transformative technologies for 2018

- **AI**: Industry innovations in autonomous vehicles, infotainment, natural language processing, and augmented reality, security and access.

- **IoT**: Compounding adoption of analytics-driven IoT platforms, computing at the edge, and data exchange brokerages (DEBs).

- **Cloud & Virtualization**: Services enabling improved machine learning and AI, radically transforming business’ usage and understanding of data.

**Chart 1**

- **AI in new vehicles ADAS or infotainment systems 2015 & 2025**
  - 2015: 5%
  - 2025: 109%

**Chart 2**

- **40B IoT devices at the edge between 2018 and 2025**

**Chart 3**

- **Off-Premises Cloud Services Market – 22% CAGR**
  - 2016: $124B
  - 2021: $343B
IHS Markit 8 key transformative technologies for 2018

**Connectivity**
A host of other iterations of LTE, from Cat 1 to Gigabit LTE, will serve consumer, enterprise, and IoT use cases before and after 5G is commercially launched.

**Computer vision**
From facial recognition software to self-driving cars, advanced robotics, and surveillance, this technology will accelerate innovation across multiple industries.

**Ubiquitous video**
Continued consumption of video, to alter strategies in multiple markets not directly tied to video or display supply chains.

**Robots & drones**
The potential of robots and drones to transform long-standing business models.

**Blockchain**
Blockchain-based services beyond financial services are already being deployed and will continue to grow.
Why do we care about this?

Because technology is at the heart of the automotive industry and has been for a long time
The average value of electronic systems per car is growing at over 5% CAGR to over $1,600 by 2022.
This new technology enables new features, but also creates new risks

**Infotainment**
Content through vehicle makes car a multi-use device for consumer (like smartphone)

**Securing the car**
All of this data now makes the car a vulnerable device with critical implications

**Telematics**
Driver more involved with data will customize system upgrades

**Data vendors**
Car becomes new channel to reach consumers for operators and app developers
Connectivity is being widely deployed into cars directly, via OBDs and being brought in by consumer devices

Connectivity is being integrated into cars to support in-vehicle entertainment, provide information about traffic conditions, monitor engine performance and enable the car to respond to its surrounding environment.

In 2018, an estimated 65M connectable devices in the connected car

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>America</td>
<td>27%</td>
</tr>
<tr>
<td>EMEA</td>
<td>27%</td>
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<tr>
<td>APAC</td>
<td>46%</td>
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</tbody>
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![Graph showing the expected number of connectable devices in automotive and infotainment sectors from 2018 to 2030.](image)
While automotive may not have the scale of other connected devices, it is now becoming part of the same broader ecosystem.
Auto makers are already embedding AI and deep learning systems into cars, led by speech-based infotainment control systems.
Automotive voice control is growing at a similar pace to smart home voice control (as indicated by smart speaker shipments)

- Amazon Alexa has early mover advantage
- Google’s global presence, greater user scale and expected price drop will see it overtake Amazon in coming years
- Apple will capture share – but premium price positioning will limit mass market potential
- Installed base of over 60m by 2020
- Prices at lower end will drop rapidly
Thank you!

Find out more:
Chris – the digital assistant for drivers

The smart, retrofit device for every car
Large installed base accessible for aftermarket product

- Germany: 47 m cars on the road
- USA: 220 m cars on the road
- 3.3 m cars sold in 2016 in the USA
Verticalization of assistants - We are the "co-driver"

- Home
  - "Helping Hand"

- Car
  - "Co-Driver"

- Office
  - "Professional Assistance"

Digital Assistant

- Artificial Intelligence
- Voice
- Natural Language Understanding
- Machine Learning
- User Interface

Data

- Behavioral Data
- Contextual Data
- Sensor Data
Drivers are distracted - urgent need for an assistant

The risk of an accident is higher when drivers are distracted

- Sending messages: 5x increase
- Programming navigation device: ~6x increase
- Radio: 1.1x increase
- Calls: 2.4x increase
- Audiobooks: 1.3x increase

Fatalities per 100 million miles travelled

First half of the year

- '06: 1.4
- '08: 1.3
- '10: 1.2
- '12: 1.1
- '14: 1.3
- '16: 1.12

Source: National Highway Transportation Safety Administration

Source: Bavaria Direkt 2017, Marketwatch 2017

“Snapchat effect”
The solution: A 100% touch-free experience

- Natural Language
- Glanceable Display
- Intuitive Gestures
Chris - Your digital co-driver

Voice assistant with gesture control
Premium design
Fits into every car
Works with Android and iOS
Free updates and new features
A platform turning the in-car experience into a conversation - Online and offline
Get in touch

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German Autolabs

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