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Accurately identifying who is inside a vehicle and delivering them an ultra-personalised experience is becoming a key consideration for automotive OEMs. This white paper from biometrics specialist analyst and consulting company, Goode Intelligence (GI), explores the key drivers and opportunity for biometric systems for the automotive industry.

IPHONE TOUCH-ID MOMENT FOR THE AUTO INDUSTRY

Biometrics is no longer a futurist technology for cars. In 2020 we witnessed the arrival of biometric technology into one of the most iconic luxury vehicles in the world, the Mercedes-Benz S-Class.

Mercedes-Benz announced in July 2020 that its new S-Class car will come with biometric technology integrated into its infotainment system enabling "verification of digital payment processes from the vehicle". The car will feature built-in fingerprint sensors into the dashboard display, face recognition supported by two cameras and the capability to use voice biometrics. The infotainment system is called 'My MBUX' and supports four different methods of authentication, three of them biometric, voice, face and fingerprint.

Figure 1: My MBUX from Mercedes-Benz

Source: Mercedes-Benz

The German auto giant followed a number of Chinese and South-East Asian (Japan and Korea) automotive OEMs in turning to biometric technology to enhance vehicle entry security and provide an ultra-personalised user experience once inside the cabin.

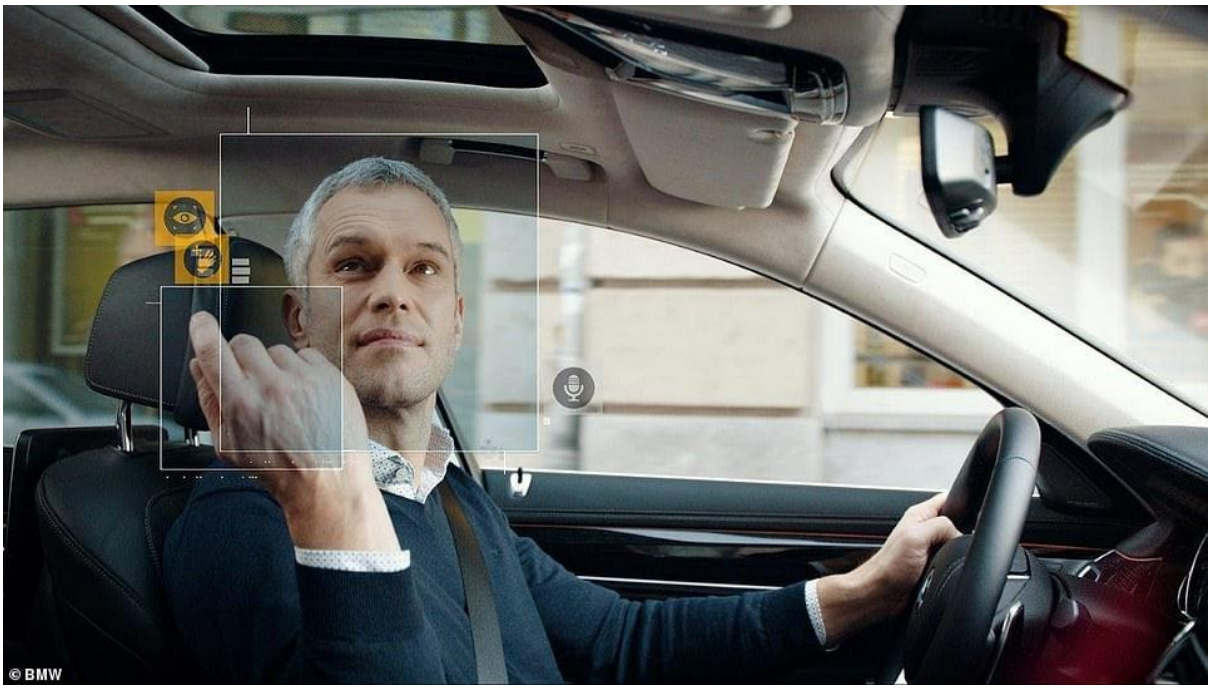
WHY ARE AUTOMOTIVE OEMS INTEGRATING BIOMETRICS?

Goode Intelligence believes that the current major drivers for integrating biometrics into vehicles are user experience, personalisation and occupant authentication.

Providing a personalised user experience is dependent on knowing who is in the automobile and biometrics provide a method of identifying and authenticating occupants. Christine Caviglioli, VP Automotive and Mobility Services at Gemalto, a Thales company told Goode Intelligence that the adoption of biometrics by the automotive industry is “part of the digitisation of the auto market where a seamless user experience is required”.

Gianni Uglietti, VP Marketing & Strategy, Automotive Business Line for IDEMIA in an interview with Goode Intelligence said that “the car companies are trying to have a more intimate relationship with the customers that is more personalised. The ability to access subscribed services in car – ‘follow-the-user’ services – for iOS and Android platforms.”

This is echoed by John Wojewidka, VP Communications at face biometric specialists FaceTec, who told GI in January 2020 that “personalisation, driver attention and health applications are the main drivers at the moment for auto OEMs”.



Source: BMW

Tied to driver/occupant authentication are a number of other drivers that include, vehicle entry and start, in-car payments, driver monitoring for health and wellbeing purposes, insurance and vehicle to home automation.

The seven major drivers are defined in the following infographic.

AUTOMOTIVE BIOMETRICS DRIVERS

Seven Key Drivers for Deploying Automotive Biometrics

Goode Intelligence

1 PERSONALISATION

Ultra-personalised services, once an occupant has biometrically authenticated

2 VEHICLE ENTRY

Biometrics on smartphone, wearable, fob or tokenless - car authenticates you

3 VEHICLE START

Additional layer of security once inside the vehicle, includes start button integration

4 IN-CAR PAYMENTS

Biometrically pay for goods and services in-car

5 INSURANCE

Supporting black-box insurance schemes - driver authentication is essential

6 HEALTH, WELLNESS & WELLBEING- HWW

In-cabin monitoring enables safer driving, becoming a crucial application for the connected car

7 VEHICLE TO HOME AUTOMATION

This is where the connected car meets the connected home - occupant authentication is essential

Information taken from the Goode Intelligence analyst report "Automotive Biometrics Market Analysis, & Forecasts 2021-2026"

As this report was written at the height of the COVID-19 epidemic, it is important to discuss what impact the 'new normal' is having on the adoption of biometrics in auto in the following section on the impact of COVID-19.

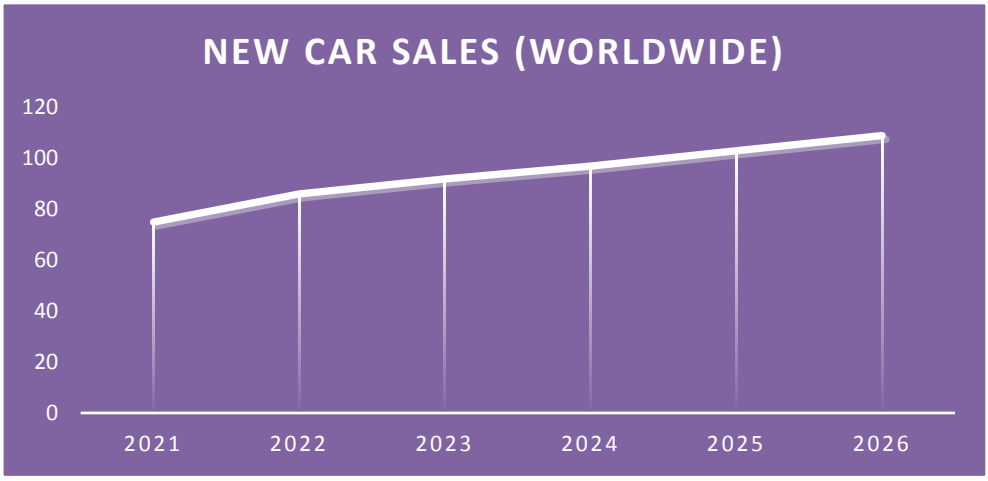
IMPACT OF COVID-19

2020 has been a difficult year for the world with the COVID-19 pandemic sweeping across the globe. There are both negative and positive effects from COVID-19 on the market for automotive biometrics.

The **COVID-19** epidemic has had a negative effect on worldwide car sales. For the first quarter of 2020, car sales were on average down by a third in most regions with Europe and China seeing a 50 percent decrease in new car sales.

Even with a recovery in progress at the start of Q3 2020 it is estimated that new car sales will be down by 20 percent versus 2019. With much of the world in a technical recession, new car sales will be depressed even with improvements to the epidemic situation.

Chart 1: New Car Sales million (worldwide) 2021-2026



Source: Copyright © Goode Intelligence 2020

A positive driver for deploying biometric systems for automobiles is for 'touchless' identification and authentication. This is especially important for drive-sharing and rental car delivery models. The ability to accurately identify and authenticate car users without physically touching a sensor or device is a compelling narrative in the current COVID-19 world. Face, Iris and Voice biometrics are examples of modalities that do not require the user to touch a sensor or device.

AUTOMOTIVE BIOMETRICS MARKET ANALYSIS AND FORECASTS 2021-2026

This white paper uses extracts from the Goode Intelligence market analyst report, “Automotive Biometrics Market Analysis & Forecasts 2021-2026”. This is the second edition of a report first published in 2017 and covers market analysis and forecasts for the adoption of biometrics for the automotive industry.

This 178 page report is packed full of detail and analysis and includes a review of current global adoption, market analysis including key drivers and barriers for adoption, interviews with leading stakeholders, technology analysis with reviews of key biometric technologies and profiles of companies supplying biometric systems for the automotive industry.

The report covers the latest developments in this sector including how biometrics is supporting modern methods of personal transportation delivery from ride-sharing to autonomous cars. These include:

- The benefits of using biometrics in the auto market
- The technologies that will dominate
- Disruptive business practices that biometrics could enable
- The effect of regulation on the market
- The sectors that will see the biggest growth
- The vendors set to dominate the market
- Opportunities for investment
- Whether in-car biometrics or biometric smartphones will be the dominant method for access control

Forecasts (regional and global) for in-car biometric integration, biometric smart mobile devices and smart wearable devices users and revenue for the six-year period 2021-2026.

Goode Intelligence forecasts that the revenue opportunity for biometric systems for the automotive industry will be valued at over $560 million by 2026

ABOUT GOODE INTELLIGENCE

Goode Intelligence (GI) is an identity, authentication and biometrics research, consulting and events company. Founded in 2007 by Alan Goode, GI is headquartered in London, UK.

For more information on this or any other research please visit **www.goodeintelligence.com**.