Driver monitoring technologies will become more of a necessity for the deployment of higher levels of automation in vehicles.
Autonomous car technologies have been actively researched and are now being deployed by OEMs. It is now technically feasible to have a highly automated vehicle that requires no input from the driver. However, the role that humans as drivers need to play in terms of regaining control of the autonomous car is not clear.

SBD’s ‘Driver Monitoring and its Future Implications for Autonomous Vehicles’ report explains why driver monitoring technologies are going to become more of a necessity for the deployment of higher levels of automation in vehicles.

### Why We Need a Better Driver Monitoring System

**2015**
- Driver controls his car

**2019**
- Enhance safety
- Reduce traffic accidents

**20XX**
- Driver does not need to control his car

- Reading a book, magazine etc.
- Office work
- Watching videos, movies etc.
- Surfing web
- Chatting with co-passengers

### The Need For DM

Learn more about the current DM systems and the driver states and parameters that need to be monitored.

### Key Players

A detailed overview of OEMs, Tier 1 suppliers, universities, wearable providers and other players outside of the automotive industry who are involved in developing DM solutions.

### SBD Expert Analysis

SBD experts assess technologies for measuring driver parameters and recommend the best option for DM which is supported by use cases.
The Need For Driver Monitoring

Cognitive Workload

- Sleepy
- Mentally off
- Fully alert
- Distracted
- Overloaded

Driving Styles

- Safe
- Cautious
- Aggressive
- Chaotic

The Report Provides 2 More Driver States

Key Players

For Each Key Player Involved in Developing DM Solutions, SBD Provide a Detailed Overview of Key Parameters, Patents, Technology and Project Partners

Key Parameters

- Gaze direction
- Eyelid movement
- Brain waves
- Heart rate
- Skin conductance
- Respiration
- Blood pressure

Patents Filed

- Infrared (IR) camera: 10
- Capacitive sensor: 0

Technology

- Infrared (IR) camera
- Capacitive sensor

Project Partners

Example Expert Requirement Analysis

Driver Monitoring Requirement for Various SAE Levels

<table>
<thead>
<tr>
<th>SAE Levels of automation</th>
<th>Cognitive workload</th>
<th>Physical position</th>
<th>Medical condition</th>
<th>Driving style</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 0</td>
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<tr>
<td>Level 5</td>
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</tbody>
</table>

Full analysis revealed within the report

Key:
- Must have
- Not needed
- Good to have
- Highly recommended

The Report Provides 7 Further Areas of Expert Analysis Including the Best Option for Driver Monitoring

Discover How To Regain Control Of The Autonomous Car Through Driver Monitoring Technologies
SBD is a world-leading knowledge partner to the global automotive industry, providing actionable insight and strategic support in the development of more connected, secure and safe vehicles.

**Intelligence • Insight • Evaluation • Strategy**

**Our Intelligence & Insight Services**
- Model-level Databases
- Technology Forecasts
- Supplier Intelligence
- Market Regulations
- News Analysis

**Our Evaluation Services**
- Expert Product Testing
- Consumer Product Testing
- Iterative Prototype Evaluation
- KPI Testing
- Cyber Security Testing

**Our Strategy Services**
- New Market Entry Support
- RFP/RFQ Management
- M&A Due Diligence
- Strategic Workshops
- Supplier Positioning Support

Working closely with major OEMs, suppliers and industry bodies, SBD provides unrivalled sector insight and consultancy – helping you gain greater clarity and make better decisions.

**You May Also Be Interested In These Research Topics**

**Connected Car**
- OE Connected Services
- Smartphone Integration
- Automotive Apps
- User Experience & HMI
- Big Data
- Legislation Tracking
- Market Forecasts

**Safe Car**
- Autonomous Vehicles
- ADAS (Advanced Driver Assistance Systems)
- HMI Benchmarking
- ADAS Market Forecasts
- V2X
- Legislation Tracking

**Secure Car**
- Automotive Cyber Security
- Electronic Theft Threats
- Global Theft Monitoring
- Theft Intelligence Reports
- Current Theft Methods
- Insurance Group Ratings

**Driver Monitoring**
Ref: SAF801-153

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