



TABLE OF CONTENTS



About SBD

Introduction

Executive Summary

Top Trends

Special Edition

Major Movers

Big Thoughts

Everything Else

Contact Us

RELATED SBD REPORTS



220 - Bi-Monthly Market Insights

SBD's Bi-Monthly Market Insights contextualize the most important announcements for industry stakeholders. Further analysis identifies their short and long-term impacts and maps out the best practices for responding to them.

#2210



Disruption

Radar

Quarterly Wrap-Ups

Many companies today have quarterly reviews that work to assess their recent activity, output, and financial results while looking to the future. These reviews often provide an outside-in perspective, that helps re-tune tactics, and an opportunity for companies to establish targets for the next quarter.

Within the connected, autonomous, shared mobility, EV, and security (CASES) sectors - a multitude of new developments and announcements occur within each quarter. Likewise, across these sectors, every quarter provides a new series of announcements, partnerships, and acquisitions. This is in addition to the new technologies, innovations, and concepts showcased by key industry players at automotive events held throughout the year. With more announcements coming from the CASES landscape at an increasingly frequent rate, tracking these developments and assessing the most significant ones for the industry can quickly become a difficult task.

SBD's Quarterly Wrap-Ups provide a structured, focused, analysis of CASES developments over the previous quarter. Each report highlights the key themes of the announcements made every quarter as well as the subtle market changes that could point towards longer-term trends in the future. The report series works similarly to understand, and anticipate, how this market as a whole is expected to change in the coming months.

COVERAGE































FREQUENCY

PUBLICATION FORMAT



Key questions answered

- > What were the key themes across all the CASESrelated announcements made over the last 3 months?
- > What do these how could they affect the eco-system?
- > What should you look out for over the coming months?
- announcements mean and
- > What subtle changes to the CASES market occurred that may point towards longerterm trends?

This research supports









Do I have access?





Request a quote for

Quarterly Wrap-Ups Quarterly Report for 2023

Request price



SBD

Quarterly Wrap-Up
Summary & insights of the top trends from the last three months





2210 - Quarterly Wrap-Up

Cyber security and authentication going

mainstream

About SBD »	<u>2</u>	Special Edition »	<u>31</u>
		 AI's early applications in automotive 	
Introduction »	<u>5</u>		
 Hot off the press 		Major Movers »	<u>34</u>
Executive Summary »	<u>7</u>	European Council	
		 Mercedes-Benz 	
Top Trends »	<u>10</u>	 AFEELA 	
 Google establishing new partnerships 		 C2A Security 	
 Automakers prioritize car navigation upgrades 		 BMW Group 	
 Tech giants are improving the interactive experience 		Big Thoughts »	41
 New players joining the SDV bandwagon 		Software Defined Vehicles	
 Specialized AV developers are the most preferred partners 			
 Autonomous mobility inching closer to commercialization 		Everything Else »	<u>50</u>
 Automakers are investing more in hydrogen fuel 		List of News Articles	
 EV players engage in a price war 		Contact Us »	<u>59</u>
 New EVs come with extended range 			



Introduction

SBD

Introduction

SBD's Quarterly Wrap-up helps you quickly catch-up on **CASES trends** from the **last three** months, providing insights from our analysts on the impact of major announcements.



How to use this Report

Top Trends

- Trends organized within SBD's Trend Radar and categorized by CASES
- Related news explained for each trend along with data and insights

Major Movers

- Five organizations picked based on their impact over the last quarter
- Announcements relating to each of the companies analyzed

Big Thoughts

- One big topic chosen that is relevant to each quarter
- SBD experts analyze the topic in depth providing data & insight

Everything Else

- Complete list of every major news article and announcement from the last quarter
- Articles organized by CASES



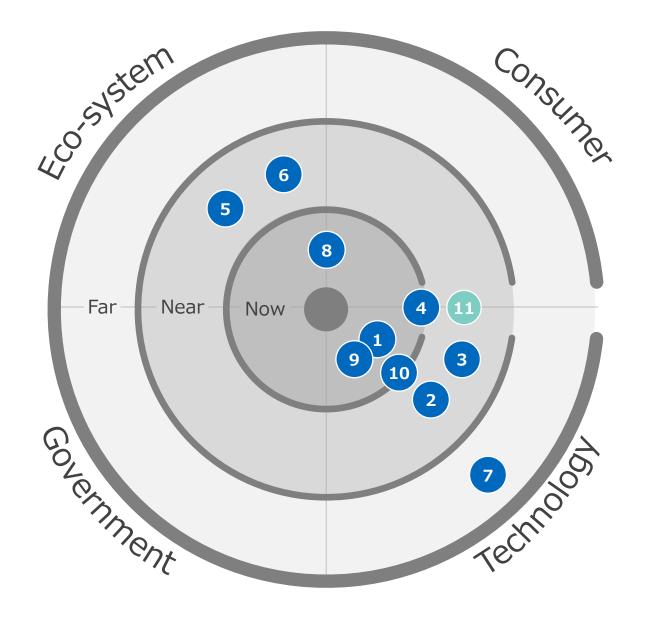
Example slides from the report







Q1 2023 Trend Radar



- Google establishing new partnerships

 Tech giant Google is working on supplying vehicle software and services
- Automakers prioritize car navigation upgrades
 Automakers look to add more screens and embedded applications
- Tech giants are improving the interactive experience

 The interactive in-cabin experience are seeing significant updates
 - 4 New players joining the SDV bandwagon
 Automakers and suppliers moving towards the SDV Architecture
- Specialized AV developers are the most preferred partners
 Automakers are further developing autonomy with the help of strategic partners
 - Autonomous mobility inching closer to commercialization
 Investments being made to enhance the safety, efficiency and reliability of autonomous vehicles
 - Automakers are investing more in Hydrogen fuel Some automakers are exploring hydrogen fuel cell technology
- 8 EV players engage in a price war Strategic price cuts occur for EVs across market
 - 9 New EVs come with extended range
 Automakers are deploying better EV technology on high-end models
 - Cyber security and authentication going mainstream
 With more connectivity in cars keeping them secure is an issue
 - AI's early applications in automotive

 OEMs are integrating AI into their entire value chain

 Special edition (Let us know if you'd like to hear more in future editions)

Othe

Global



Google establishing new partnerships: In the news

Google lost some footing in the automotive industry when Stellantis announced several months ago they were not going to use Android Automotive software (unlike GM). However, recent developments show that Google is still a major player in the automotive software industry. Some new partnerships and improvement/upgrades in the existing services indicate that Google is pushing hard to stay relevant.



Polestar to utilize new Google services

- Polestar will utilize the new technology Google showcased at CES 2023
- Google's new HD map will debut on the Polestar 3. The HD map features will include detailed up-to date road information. Google plans on leveraging this detail to help with assisted driving
- Now available in the US, Polestar 2 owners can use Google-Assistant-enabled devices to remotely access their vehicle.



Mercedes-Benz partnering with Google

- Announced in February 2023, Mercedes-Benz will be partnering with Google to bring their technology into Mercedes-Benz vehicles
- Mercedes-Benz will add Google's geospatial offering, information on locations, traffic information, and automatic routing within their new Mercedes-Benz Operating System (MB.OS)
- Assisted driving features
 will get an extended range
 of visibility via the Google
 Maps data, that
 complements the sensor suite (limited range)







Google adding EV-specific data points to their maps

- EV owners with built-in navigation can now use a host of ext. features that Google is adding to their maps
 - Automatic EV charging stops for one-stop trips
 - Adding a "very fast charging" filter
 - Searching for the destination will show if there are any charging stations there
- Polestar, GM (some vehicles) and Renault are a few automakers that are using 'EV map' services from Google.



4 New players joining the SDV bandwagon: In the news

The slow nature of the automotive product lifecycle has traditionally made it difficult to respond to the ever-changing market dynamics and update vehicle features on the go. The convergence of electrification, autonomous driving and enhanced in-car UI/EX coupled with ubiquitous connectivity now creates an opportunity for the entire automotive industry to overcome these limitations and enhance customer experiences through novel business models, features, and experiences – all primarily enabled by software.

Oualcomm launches Qualcom Snapdragon Auto 5G platform targeting SDV

- Oualcomm has released the Snapdragon Auto 5G Modem-RF Gen 2 which boasts highperformance processing power and network capacity.
- It enables short-range safety and mobility services and features a nextgeneration location engine. As fewer components are needed, the new technology will result in lower costs.
- Snapdragon Auto 5G Modem-RF Gen 2 will be commercially available by late 2023. It is 3GPP Release 16 compliant.

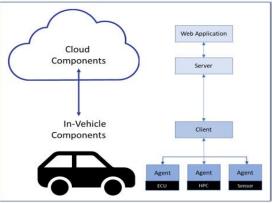
Infineon, Apex.AI Apex.Al partner on SDVs

- Infineon Technologies AG and software firm Apex.AI have co-developed a new platform that expedites software development for automotive customers and enables faster integration of safety-critical automotive functions into future vehicles.
- By integrating Apex.AI's software development kit and Infineon's AURIX TC3X microcontroller, the new platform will help manufacturers and their partners introduce new features and critical safety functions into vehicles.

KIA allows OTA software upgrades

- Updates for the car's head unit and navigation system will be simple to acquire through Kia's OTA, and any potential software faults will be fixed.
- Kia's OTA ensures that consumers no longer need to manually download via the official Kia Navigation Updater Portal or go to a Kia dealership to update their vehicle's software.
- Customers will benefit from more comfort and time savings through the OTA technology, which automatically updates the navigation and infotainment systems.





Top Trends



6 Autonomous mobility inching closer to commercialization: In the news

Shared mobility backed by autonomous driving technology can decrease transportation costs, expedite goods deliveries, reduce downtime and increase accessibility to low-income households and persons with mobility issues. A lot of investments are being made by automakers and AV developers in this space to enhance the safety, efficiency, and reliability of autonomous vehicles so they can be deployed in real-world scenarios. This is expected to continue in the future as automakers and tech companies introduce more pilot trials and governments make laws to make autonomous mobility a commercially viable option.



Toyota Gosei teases SAE L4 mobility concept TOYODA GOSEI vehicle

- Toyoda Gosei Co., Ltd., a company within the Toyota Group, has developed innovative technologies to be incorporated into the MX 221 concept model which is an SAE Level vehicle designed for autonomous mobility
- The technologies include a lap airbag, wireless power supply, LED lights for communication, and a UV-C LED disinfecting system. The vehicle is a collaborative project among six Toyota **Group companies** and is expected to launch after 2030.

University of Notre Dame STARSHIP launches robotic deliveries

- The University of Notre Dame, GrubHub, and Starship Technologies are introducing robot delivery via Starship's fleet on campus
- Starship's fleet of up to 30 on-demand robots will deliver from six campus eateries: Au Bon Pain, Garbanzo, The Gilded Bean, Hagerty Family Cafe, Modern Market, and Taco Bell. The University's more than 17,000 students, faculty, and staff

Gatik launches Gatik driverless deliveries in **Texas**

- Gatik has started its driverless delivery operations in collaboration with Kroger, the American retail company
- Gatik will operate 20-foot trucks that can transport frozen food seven days a week to make multiple deliveries to three Kroger **locations** from the company's Dallas distribution center.
- Trucks will run 12 hours a day, seven days a week, and will be doing a minimum of four runs to each of the dropoff locations





















8 EV players engage in a price war: In the news

Lowering the prices of EV models can increase their accessibility and lead to higher sales and market share. EV demand is expected to grow as more people become aware of their environmental benefits, and price cuts may be a strategy to capitalize on this demand, rather than being a sign of declining popularity.



Tesla price drop

- Tesla has reduced prices by up to £8000 for the Model 3 and Model Y vehicles in the UK.
- All undelivered orders will have their pricing updated automatically to reflect the changes. The discounts mirror those made in China and other Asian markets.



Ford cuts prices on Mustang Mach-E

- Ford is cutting prices by up to 8% on various versions of the Mach-E, as well as cutting the price of the extended-range battery by about 19%.
- This move is aimed to remain competitive and to make
 Mach-E one of the bestselling EVs.
- Although Ford may lose money on some trim levels, it expects to see profitability in its EV production as technology and cost efficiencies improve.







Request the price





Contact SBD Automotive

Do you have any questions?

If you have any questions or feedback about this research report or SBD Automotive's consulting services, you can email us at info@sbdautomotive.com or discuss with your local account manager below.



info@sbdautomotive.com

Book a meeting



USA

UK

Germany

India

China

Japan



Garren Carr North America garrencarr@sbdautomotive.com +1 734 619 7969

Luigi Bisbiglia
UK, South & West Europe
luigibisbiglia@sbdautomotive.com
+44 1908 305102

Andrea Sroczynski
Germany, North & East Europe
andreasroczynski@sbdautomotive.com
+49 211 9753153-1

SBD China Sales Team
China
salesChina@sbdautomotive.com
+86 18516653761

SBD Japan Sales Team
Japan, South Korea & Australia
postbox@sbdautomotive.com
+81 52 253 6201