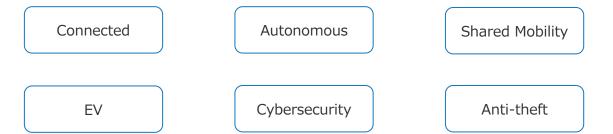


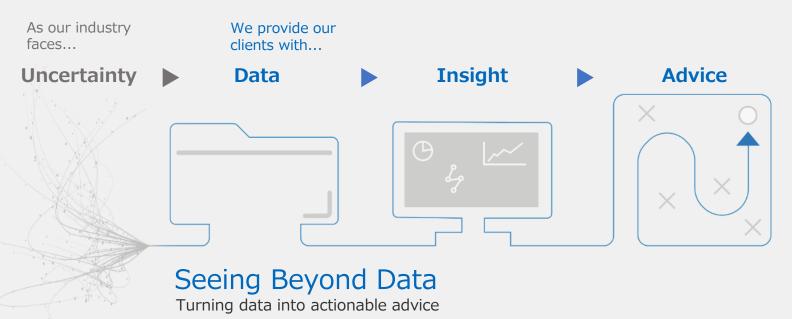
About SBD Automotive

Management & technology consultants to the automotive industry for over 20 years

Our expertise:



Our role:





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Facts and Figures of the Paris Auto Show 2024

Show highlights



170+

Total exhibitors



Asian OEM Exhibitors



Korea

Kia

m 500,000

Visitors expected

Japan

THR

OEMs in attendance

USA Ford Tesla Cadillac

Europe China Aito **Alfa Romeo** BYD Alpine **Dongfeng Forthing Audi** GAC **BMW** Hongqi Citroen Leapmotor **Dacia** Skyworth Mini THR **Peugeot XPENG** Renault

Skoda Volkswagen





The main trends of the Paris Auto Show 2024

Electric Vehicles

The show highlighted the growing prominence of more affordable electric vehicles.

Both European and Chinese manufacturers showcased their latest electric models.

Top Trends

Shared architectures

Citroen presented updated C4 and C4X and new C5 Air Cross, a "multi-energy" family C-segment SUV. **Leapmotor** showed the B10 and C16. Both use "Leap 3.5 architecture" that will provide features like "advanced driver assistance," a digital cockpit and intelligent driving capabilities.

Premium segment

Chinese brands were aiming at the premium segment. Xpeng exhibited premium models - G9 SUV and P7+ sedan. Hongqi, the official car supplier for Chinese government dignitaries, is aiming to rival Bentley and Rolls-Royce.

Cockpits and **AI**

New, and updated, cockpits were displayed at the Paris Motor Show. Usage of Artificial Intelligence was mainly limited to **cockpit applications** to support native voice assistants.



PARIS

90th Edition 14 -20 October 2024

Other Trends

Concepts

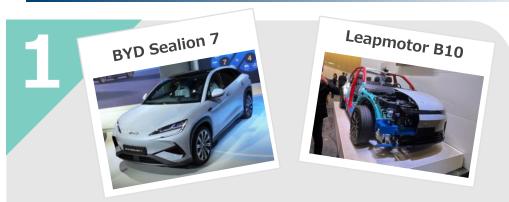
A range of concepts were shown at the Paris Auto show. Both European and Chinese manufacturers showcased their latest concepts, demonstrating advancements in technology, range, and charging infrastructure. Efficiency statistics were quoted with some concepts.

CEO Keynotes

Stricter EU CO₂ targets are coming into force in 2025. The **CEOs of Renault, BMW and Stellantis** discussed how the future of the industry will continue to depend on government policies, technological advancements and consumer preferences.



More affordable electric vehicles will be available in Europe



- The **BYD** Sealion 7 is capable of 'Dual Gun' charging and uses "blade battery" technology. The batteries have lithium iron phosphate cathodes and are cobalt-free. In Europe, it will be available as a plug-in hybrid or battery electric and is expected to go on sale early 2025.
- World debut of **Leapmotor's** B10 and C16. The B10 is expected to go on sale in 2025 and will be the first global model produced by Leapmotor. It is built on the LEAP 3.5 architecture and has a customizable digital cockpit. The **Leapmotor** C16 battery is cellto-chassis (cells are installed directly in the car without diversions via modules). Unlike the C10, the C16 has an 800-volt architecture for fast charging and silicon carbide inverters with low power consumption.

Takeaway(s):

- BYD Sealion 7 will be a Tesla Model Y, Kia EV6 and VW ID.5 rival. The Sealion 7 will be available with 71.8 kwh or 80.6 kwh battery sizes, compared to 56 kwh and 75 kwh of Tesla Model Y.
- Leapmotor B10 will be a true SDV volume passenger car.





- The **Renault** 4 will have bi-directional charging, with vehicle-toload and vehicle-to-grid functionality. The model is available with 40 kwh or 52 kwh NMC batteries (same sizes as Renault 5). Peugeot E-408 will be fitted with 58.2 kwh (usable) NMC battery.
- First 'audience' showing of the **Skoda** Elrog, which will be available with 55, 63 and 82 kwh battery sizes. The largest battery size is available with different electric motor options. For comparison, the current VW ID.3 is available with 58 and 77 kwh batteries.
- Valeo presented 'Predict4Range', which helps deliver efficient thermal management strategies of BEVs for extended driving range, and extended battery lifespan.

Takeaway(s):

- Renault 4 and 5 have managed to achieve a design which balances nostalgic and futuristic elements.
- The Elrog is Skoda's first BEV model in the compact SUV segment and is smaller than the Enyag.



Asian brands mainly aiming the premium segment



- The **Skyworth** Y is one of the most accomplished interior at the Paris show: pillar to pillar dashboard, four large seats, a screen on the back of each front backrest, and a huge curved TV at the back.
- The THR LSR-05 is fitted with the Stealth Seat-Slide System, that allows for significant seat movement using linear guides. Its platform incorporates two rear 93 kW (800 V) variable-flux in-wheel motors and a front 220 kW (800 V) motor. This setup supports the four-wheel steering system. It also includes active suspension and a contactless charging system.

Takeaway(s):

Visionary concepts from two non-automotive companies: Skyworth is a Chinese company that design and manufacture TVs and other audio-visual products; THR is a Japanese company that offers solutions in the field of robotics and automation.





- **Aito** M9 is produced by **Seres** (**Huawei** contribute to the electric powertrain, sensors, and infotainment). It is fitted with adaptive matrix LED units with an integrated projector. The cabin is available with 12.3-inch digital instrument cluster, a 15.6-inch central infotainment screen, a 16-inch front passenger screen and 75-inch head-up display.
- **Hongqi**, the official car supplier for Chinese government dignitaries, is aiming to rival Bentley and Rolls-Royce. Two electric models both be built on "TianGong" Electric Platform.
- GAC presented the HYPTEC SSR all-electric, carbon-fiber supercar. It can accelerate from 0 to 62 mph in 1.9 seconds and has 1,225 bhp. Its 900V silicon carbide charging allows it to charge to 80% in 22 minutes.

Takeaway(s):

The Chinese brands present at Paris are mainly aiming to the luxury segment. Xpeng, Hongqi, GAC and Aito offer competitive pricing and are rapidly developing electric vehicle technologies.



Cockpit artificial intelligence to support native voice assistants

Xpeng P7+







- **Xpeng** P7+ is marketed as the worlds first 'AI-defined' vehicle. The vehicle has the capability to learn from behaviors and preferences. The P7+ integrates AI technology across the chassis, powertrain, driving system, smart cockpit. Xpeng's AI Hawkeye Visual Solution for advanced ADAS, uses two 8megapixelel cameras (front and rear), millimeter-wave radars, and ultrasonic radars.
- **The Audi** S6 e-tron, as part of modular infotainment system, is available with ChatGPT. The system forwards responses onto ChatGPT when the 'Hey Audi' assistant cannot answer. It comes with an 11.9-inch virtual driver information display and a 14.5inch central touchscreen combined into a single, curved panel in the cockpit area. Plus, there's also a 10.9-inch touchscreen for the front passenger.

Takeaway(s):

- Xpeng P7+ is expected to compete with Tesla Model 3, BYD Seal and BMW i4.
- Audi's latest software and infotainment are on hand on the S6, providing infotainment and device integration capabilities.





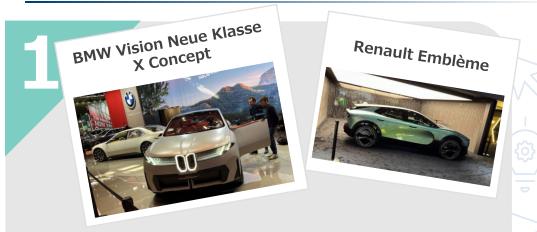
- Updated Citroen C4 and C4 X were shown with ChatGPT available on some infotainment systems (with 10-inch screen). ChatGPT is integrated into the infotainment system using SoundHound's voice and audio recognition system.
- The **BMW** Neue Klasse can project driving information onto the lower part of the windscreen. It will come with a personal AI assistant as part of operating system 9.
- Valeo presented the 'Pantomime' AI solutions that bring intelligence into the vehicles and assist the interaction with a construction worker, traffic police and cyclists in edge case situations.

Takeaway(s):

For some OEMs, ChatGPT is not being offered as the only source for the vehicle voice assistant. It is used if the native assistant cannot provide an answer.



Concepts shown at the Paris Auto Show



Vehicle Concepts

- The interior of the **BMW** Neue Klasse will not be available with leather or chrome parts. Where possible voice, touchscreen and gesture control will be used instead of switch gear. The cockpit is made of a central display and a widescreen display. It will have an 800-volt drivetrain with lithium iron phosphate (LFP) and lithium nickel manganese cobalt oxide (NMC) batteries. Battery sizes will be 75, 90 and 105kWh.
- Renault say that the **Renault** Emblème concept will be able to reduce CO₂ emissions by 90% across the vehicle lifecycle when compared to an equivalent car in 2024. The vision for the concept is to have a 40kW battery and a range-extending hydrogen fuel cell.

Takeaway(s):

- BMW and Renault concepts showcase eco-friendly family demo designs using low-carbon or natural materials.
- Renault highlighted multiple features that help reduce drag coefficient of the vehicle.

Alpine A390_β

Peugeot Inception



- The **Alpine** A390 β concept's exterior is announced to be faithful to the production EV, due in 2025, and will share a platform with the Renault Scenic. The cabin is still conceptual but features recycled carbon crystal-lined floor and 3D-printed, bio-sourced elastomer padding within the wraparound front seat headrests.
- The **Peugeot** Inception has a 100kWh battery that's claimed to be capable of 4.97 miles per kWh for a total range of 500 miles. It is equipped with 800V charging hardware. It can use induction although this is a feature not confirmed for production cars. The Inception does not have physical controls or a traditional dashboard. The steering column has been replaced by a 'steerby-wire' system.

Takeaway(s):

Alpine and Peugeot concepts present futuristic interior designs and cockpits, with minimal physical controls and dashboards.





CEO Keynote Speeches

Christophe Perillat



- Mr. de Meo spoke about how EVs will be a big part of the future and that there is no going back on electrification. However, the cost of the electricity to produce the Renault 4 and 5 in France is twice the cost of labor.
- Renault's top priority is to introduce as much innovation as they
 can related to the digital user experience. Renault is asking for
 combustion engine phase-out limits to be lifted pragmatically
 because the price of batteries is still 2-3 times higher than an
 ICE engine.
- Valeo's CEO, Mr. Perillat discussed how automotive players will work in closer collaboration to form a complete ecosystem. He expects vehicles to be fitted from factory with a minimum set of sensors making any car potentially SAE L2+.

Takeaway(s):

 The new automotive strategy game is the creation of partnerships between OEMs and suppliers. This may explain why OEMs are trying to merge priorities to reduce investment in assets and capital to benefit multiple priorities.





- Oliver Zipse discussed how EU policy makers need to create a coherent framework. He urged policymakers to find intermediate targets and make new targets as current targets are not realistic for market condition. Mr. Zipse is also asking for incentives and investments in charging infrastructure.
- Carlos Tavarez, CEO of Stellantis, stated that Stellantis will be compliant with the 2025 EU emissions targets without the need to purchase credits. Mr. Tavarez also mentioned that Stellantis had gained a meaningful insight into how Chinese brands develop EVs thanks to the investment in Leapmotor.

Takeaway(s):

• European OEMs don't need protection but fair conditions. Tariffs will make cars more expensive for European consumers and will create a trade conflict from which no one gains from.



How SBD Automotive can help

Contact SBD Automotive



If you have any questions or feedback about SBD Automotive's research reports or SBD Automotive's consulting services, you can email us:



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See you at CES 2025...





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