

This is how you explore the future

- SEAT and Xplora are looking for innovative solutions in one of the world's biggest technology hubs
- In Tel Aviv (Israel) there are 6,600 startups, 800 of which are dedicated to the car industry
- Artificial intelligence that warns the driver of distractions or windows that darken automatically are the future of your car

Martorell, 17/02/2020. "Warning, distraction! Driver falling asleep!" This could be how cars warn drivers in the future if they detect that their eyes are closed or that they take their eyes off the road. And we will also be able to regulate how much light passes through the windows at the touch of a button. These are just some of the innovative solutions that SEAT is working on through the Xplora project in Tel Aviv, Israel, one of the technologically most advanced places on the planet. **"If we want to shape the future, we have to be in the most innovative ecosystems"**, says Stefan Ilijevic, the head of Product innovation at SEAT.

Computer Vision AI for a safer driving experience. Eye openness, angle of vision, head position... An algorithm analyses the actions of the driver and warns them in the event of distraction or drowsiness. It also detects mobile phone use and whether the seatbelt is fastened. SEAT has teamed up with the startup *Eyesight Technologies* to work on adapting this driver monitoring system in its cars. According to a report by the European Commission, 36% of collisions are due to some form of driver distraction and tiredness in the three seconds leading up to an accident.

"Our software is a key to safety", says Tal Krzypow, the Vice-president of Product at Eyesight Technologies. Furthermore, it can be used to identify the driver and adapt to their preferences, from the interior temperature to the position of the door mirrors. **"There will even be further benefits when our system combines with others that, for example, are able to detect pedestrians. The software can analyse whether the driver sees them and sends a warning if this is not the case"**, Krzypow concludes.

Light control at the touch of a button. Sometimes, sunlight through the window is blinding while we drive. Other times we just want more privacy. A new active glazing technology by Gauzy enables users to darken or lighten the glass of the windscreen, side windows or sunroof on demand: **"we've developed different types of films coated with specially curated formulations and emulsions that react to an electric impulse to let in more or less light"**, says Adrian Lofer, a cofounder and CTO of the nanotechnology business *Gauzy* which is collaborating with SEAT. **"We are the only material science company working with both SPD and Liquid Crystal based nanotechnology. Both technologies allow glass to shift to shaded or opaque for a custom user experience, and back to transparent instantly for driving,"** he adds.

In the Silicon Valley of the Middle East. Several of the world's most successful businesses started out in someone's home garage. Gauzy began in the kitchen of one of its founders, who

was looking for a way to make windows more private. Today, Gauzy has more than 100 employees including PhD Chemists and Mechanical Engineers, with two manufacturing facilities in Israel and Europe, making it a prime example of the innovative culture of Tel Aviv. Like them, there are 6,600 startups, 800 of which are dedicated to the automotive industry, concentrated in an area measuring just 35 square kilometres. According to Aitor Aizkorreta, the head of scouting for SEAT in Israel, **“this concentration of emerging companies makes Tel Aviv one of the easiest global innovation hubs to explore for solutions that improve our cars and services.”**

Xploring leading edge technology. In just two years, SEAT has worked with more than 200 emerging Israeli businesses through Xplora. The goal is to carry out at least 10 proofs of concept every year to test how selected innovations would adapt in vehicles and services. The team responsible for Innovation at SEAT is especially looking for solutions that enhance well-being and safety, cybersecurity, sustainability and artificial intelligence. To do this they have joined forces with VW Group brand importer in Israel Champion Motors. **“Our role is to build bridges between SEAT and startups to reach across possible cultural differences when working together and promote business synergies”**, explains Champion Motors executive director Tal Brin.

Shaping the future. “If you want to be a leader of the disruption in the car industry instead of a spectator, then not only do you have to be in Tel Aviv, but in the world's other major technology hubs as well”, assures Stefan Ilijevic. Being there, he adds, **“not only enables you to be the first and apply new technologies, but you can also attract the best talent, as they want to work in companies that are spearheading change.”**

SEAT is the only company that designs, develops, manufactures and markets cars in Spain. Member of the Volkswagen Group, the multinational has its headquarters in Martorell (Barcelona), exports the 80% of its vehicles, and is present in 80 countries on all five continents. In 2019, SEAT sold 574,100 cars, the highest figure in the history of the company.

The SEAT Group employs over 15,000 professionals and has three production centres – Barcelona, El Prat de Llobregat and Martorell, where it manufactures the highly successful Ibiza, Arona and Leon. Additionally, the company produces the Ateca in the Czech Republic, the Tarraco in Germany, the Alhambra in Portugal and the Mii electric, SEAT's first 100% electric car, in Slovakia.

The multinational has a Technical Centre, which operates as a knowledge hub that brings together 1,000 engineers who are focused on developing innovation for Spain's largest industrial investor in R&D. SEAT already features the latest connectivity technology in its vehicle range and it is currently engaged in the company's global digitalisation process to promote the mobility of the future.

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