



SEGULA
TECHNOLOGIES

Hagora Pulse is a bundle of technology in a single concept car, from **Connected driving and health** to **Augmented reality**, as well as **Weight reduction and Energy efficiency**.

Aside from its potential use in connected vehicles, augmented reality is also taking centre stage with the **autonomous industrial drone ATLAS** for use in the Factory of the Future.

Finally, in addition to **its know-how of Style**, demonstrated by the innovative design of Hagora Pulse, the group is unveiling upmarket services from its product lines and has proven its ability to **manage complex projects from design to industrialisation**.

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HAGORA Pulse

AUTOMOTIVE ENGINEERING IS ENTERING A NEW DIMENSION



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CONNECTED DRIVING & HEALTH

Segula Technologies presents the next generation of e-sense, the application that lets you take control of your vehicle's dashboard.



CAR 2 CAR

Integrated to optics, a technology derived from Li-Fi helps avoiding collisions by transmitting information between vehicles.

CONNECTED HEALTH

Sensors have been integrated in the cabin of the vehicle (steering wheel and seat) to monitor vital signs for a swifter emergency service response.

PEDESTRIAN DETECTION

Cameras built in the windshield identify pedestrians about to cross in front of the vehicle : after taking proper action, the car will show a graphical image feedback when it is safe for them to go.

GESTURE COMMANDS

Drivers can now carry out certain commands and activate the windscreen information display with a simple head movement, without taking their hands off the wheel or their eyes off the road.

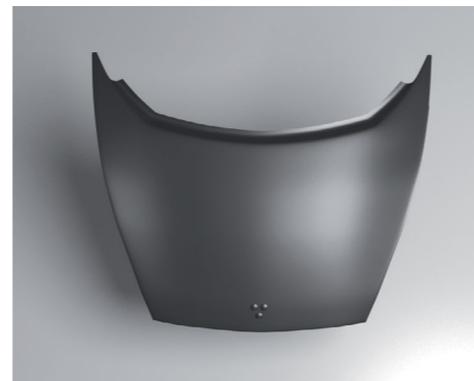
AUGMENTED REALITY

Segula Technologies is helping its clients to build the Factory of the Future with ATLAS, an industrial drone that replaces traditional assembly lines.

In addition to optimising production unit flexibility, ATLAS helps encouraging energy-efficient factories, better inventory management and improved productivity.



The use of augmented reality on this drone opens the door to a plethora of new uses, whether for routine maintenance operations or for other functions (complex industrial maintenance, quality control, etc.). This demonstration is carried out in partnership with Diota.



WEIGHT REDUCTION

Showcase of a bonnet made of composite materials (mainly composite skin and reinforced plastic structure), and particularly its response during a static loading or crash (pedestrian collision).

In comparison to a traditional sheet metal design, the use of this technology allows a considerable reduction in the bonnet's mass (around 50%) and a decrease in the number of parts by more than half (from five to two).

In parallel, Segula Technologies is demonstrating its technical mastery of stamping and geometry through the use of lighter steel, in partnership with ArcelorMittal and Autoform.

This offers numerous advantages for both manufacturers and end users: weight reduction, improved product quality, industrial performance and reduced fuel consumption.

ENERGY EFFICIENCY

URBAN STARC is reducing CO2 emissions and optimising vehicle thermal energy.



Engine heat that flows through the coolant circuit is recovered and stored in a thermal energy storage device using phase-change materials.

Stored energy can be used at any moment, without time constraints: within a vehicle to heat the passenger compartment or to quickly preheat the engine; or within the house, to reheat a hot water tank, for example.

Urban Starc potentially allows up to 25,000 kJ of energy to be stored, depending on the driving cycle. This represents an equivalent of 0.75 liters of fuel recovered as heat, enabling a CO2 reduction of 17 g/km.