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ESI Group, Strategic Partner for French Start-Ups

The French Start-Up Gazelle Tech Wins the Sustainable Innovation Prize Awarded by Climate Action During COP25, & Validates its Business Model Thanks to Virtual Prototyping

ESI Group, a world player in virtual prototyping software and services for industrials, and Gazelle Tech, a French start-up developing a sustainable vehicle concept, emphasized the strategic nature of their cooperation in light of the second fundraiser aiming to certify their ultra-lightweight vehicle concept, and the start-up's success as it was awarded the Sustainable Innovation prize of Climate Actions during COP25 conference in Madrid.

Rewarded by key leaders of sustainable mobility and innovation, Gazelle Tech finalized its second fundraising of M€ 1.1million with the support of Nouvelle-Aquitaine region and Bpifrance.

Gazelle Tech is developing a concept for sustainable mobility with their vehicle prototype, conceived thanks to ESI's Virtual Prototyping solutions. In less than three years, the start-up has created a vehicle concept that is disruptive in its:

- lightweight composition 1/2 of the typical weight, reducing energy consumption by 40%
- manufacturing process built-in portable micro-factories that can be shipped across the world, and specifically to developing nations
- design developed virtually, foregoing physical prototyping altogether, and bringing about considerable cost savings.

This collaboration between the two companies confirms the relevance of ESI to the start-up ecosystem, thanks to the efficiency of its solutions and the expertise of its teams, in developing and quickly certifying innovative concepts and business models while keeping costs minimal.

Founded in 2014 in Bordeaux, France, Gazelle Tech is the first manufacturer of micro-factories for car assembly. The use of composite materials, especially in the vehicle chassis, allows for a 40% decrease in vehicle consumption resulting from the significantly lighter weight, while preserving safety and comfort. The company was born from a desire to make mobility accessible in isolated and rural areas, specifically in emerging countries, by enabling vehicle production locally. The Gazelle Tech vehicle body is composed of ten



parts that can be assembled in one hour, in dedicated container micro-factories that can be installed anywhere, no matter how far from an industrial area. The certification of this vehicle is now the startup's next step.

Founder Gaël Lavaud recalls how the first Gazelle prototype came to light in 2015, and how ESI's simulation software was instrumental in that process: "We were capable of developing this vehicle model and ensuring its performance, thanks to a virtual prototype on which we iterated as many times as necessary until design validation. Resorting to physical tests and prototypes would have slowed down our time to market, in addition to associated costs – too high for a start-up like ours." Lavaud continued: "Being capable of showing a functioning prototype of the vehicle to our investors proved decisive. We have, over time, established a true strategic partnership with ESI, founded on a solid relationship of mutual trust that goes far beyond customer-supplier ties."

Cristel de Rouvray, Chief Executive Officer of ESI Group, commented: "*Time is a valuable asset that start-ups don't have. They must establish themselves and develop quickly to survive and meet their growth objectives.* We are proud of the support we bring to this pioneering company as they pave the way to validating their business model, in record time, thanks to the elimination of physical tests and prototypes. This illustrates ESI's capacity to support innovation and empower promising start-ups to accelerate their development."

Meet Gaël Lavaud and Cristel de Rouvray at CES in January, where they'll be hosting a round table discussion. Contact us to sign up!

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About ESI

ESI Group is a leading innovator in Virtual Prototyping software and services. Specialist in material physics, ESI has developed a unique proficiency in helping industrial manufacturers replace physical prototypes by virtual prototypes, allowing them to virtually manufacture, assemble, test and pre-certify their future products. Coupled with the latest technologies, Virtual Prototyping is now anchored in the wider concept of the Product Performance Lifecycle[™], which addresses the operational performance of a product during its entire lifecycle, from launch to disposal. The creation of a Hybrid Twin[™], leveraging simulation, physics and data analytics, enables manufacturers to deliver smarter and connected products, to predict performance and to anticipate maintenance needs.

ESI is a French company listed in compartment B of NYSE Euronext Paris. Present in more than 40 countries, and addressing every major industrial sector, ESI Group employs about 1200 high-level specialists around the world and reported annual sales of €139 million in 2018. For more information, please visit www.esi-group.com.

About Virtual Prototyping



The transformation of the industrial sector towards a new economy focused on usage is a reality impacting all stakeholders – reducing time to market, intensifying competition, putting pressure on cost, along with regulatory, safety, and environmental disruptions. The challenge for industrials is considerable: to innovate and transform while boosting growth and profitability.

Virtual Prototyping brings an answer allowing industrials to eliminate physical tests and real prototypes. The benefits of ESI's simulation solutions translate into concrete financial and performance improvements, from initial production to full Product Performance Lifecycle[™], paving the way for predictive maintenance.



