

Press Release Paris, November 14th, 2019

Renault Group relies on ESI Group's Virtual Prototyping technologies for the Clio 5 concept

ESI Group, world player in virtual prototyping software and services for industrials, supported its strategic partner Renault Group in the realization of the new Clio 5 concept. Thanks to this collaboration and a consortium of partners, the Clio 5 obtained a 5-star rating at the Euro NCAP safety test.

The cooperation between ESI and Renault Group started in 2001, mainly focused on design and manufacturing methodologies for various vehicle models. Positioned as an agent of change working alongside Renault Group's experts, ESI is one of the companies involved in the digital transformation initiated by Renault Group in 2017. Renault Clio's fifth generation is the first vehicle of the Group to benefit from the latest evolutions of this transformation program.

ESI relied on its expertise in physics of materials and its teams' know-how to virtualize the concept stage until the crash-test certification. All physical tests were immediately successful, and no further testing was needed. This cooperation allowed a considerable rationalization of the concept phase, reducing the time spent on tests and consequently related costs.

The certification of a vehicle with a single physical prototype is a world premiere. It is as significant as the first virtual crash-test that was realized by ESI's founders in 1985. This achievement positions Renault Group among the leading automotive industrials, equipped to seize the opportunities presented by the future of mobility. Thanks to this accomplishment, ESI meets its vision: to allow industrials to virtually manufacture their products with zero physical tests, zero physical prototypes, and zero unpredicted downtime. ESI provides a global answer to the increasing requirements of the automotive industry: innovate while producing faster, with more reliability and less cost.

"The virtual prototype of the new Clio is the result of a long collaboration," said Cristel de Rouvray, CEO of ESI Group. "We are proud to have supported the teams of Renault Group throughout this project, and to have helped them increase their competitiveness in the field of numerical simulation and virtual crash testing, allowing them to get it right the first time in their development cycle," she added.

Olivier Colmard, Vice-President of Numerical Simulation and PLM at Renault, commented: "The complementarity of the teams and the employed methodology allowed a considerable reduction in the Engineering phase in accordance with the objectives set by the Group."

G-FC-19-51-A



He concluded: "Thanks to ESI and their Virtual Performance Solution (VPS), we succeeded in developing one of our new vehicles, achieving good physical tests right the first time, allowing us to earn the whole five stars on the Euro NCAP safety test, following its stricter protocol launched in 2018."

Contacts ESI Group Florence Barré press@esi-group.com +33 1 49 78 28 28

SHAN – Press Esigroup@shan.fr

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 product 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 management, paving the way for predictive maintenance.

