ESI's Virtual Prototyping contributes to the project "*Passenger Seats of the Future*" led by Zodiac Seats France

ESI's Virtual Seat Solution
delivers predictive capabilities from design to pre-certification

Paris, France – June 3, 2015 – ESI Group, pioneer and world-leading solution provider in Virtual Prototyping for manufacturing industries announces its participation in the project "*Passenger Seats of the Future*". Led jointly with Zodiac Seats France this project involves French industrial, academic and institutional partners, and has as its objective the identification of innovative solutions that will meet the expectations of both airlines and passengers for aircraft seats.

In the highly competitive business of civil aviation, seats are a key element for airlines to maximize revenue by optimizing payload. Seats also embody an airline's differentiation strategy: they are the flagship component in the cabin and a means to entice and retain customers. Having the right seats represents a true competitive advantage and consequentially aircraft seats are of growing importance. This is well illustrated by the action of Air France, which is currently upgrading its long-haul fleet and will add 10,000 new economy class seats aboard 44 aircraft between June 2014 and July 2016.

Aside from the need to meet passengers' growing expectations in terms of comfort, future aircraft seats will have to answer challenges linked to weight reduction as a means to enable airlines to save substantial amounts of fuel. This must be achieved without negative impact on passenger safety and in compliance with evolving safety regulations. Future aircraft seats will need to be lighter, more comfortable, and also allow new in-flight activities (including phone calls, internet use, medical care…).

Furthermore seats must be adapted to the changing morphology of passengers, as our population ages and increases in size and weight. Seat designers and manufacturers must now cater to all types of passengers, whatever their age, weight or disability.

To speed up the research for solutions offering an optimal balance between passenger comfort, seat weight and morphological variations, Zodiac Seats France is leading the project "*Passenger Seats of the Future*". The laboratory LAMIH, UMR 8201 CNRS from the University of Valenciennes and Hainaut-Cambrésis is taking part in the project along with the laboratory LBMC, UMR-T 9406 from IFSTTAR and from the University Claude Bernard Lyon 1. On the industrial front, Texisense, a French company specialized in hi-tech sensors, and ESI have joined with several subsidiaries from the Zodiac Group: Zodiac Aerotechnics, Zodiac Aerosafety Systems and Zodiac Actuation systems.

ESI brings to this project a wealth of experience in Virtual Prototyping and seat comfort prediction - addressing static seating comfort, thermal comfort, and vibration absorption during different phases of a flight, and for all populations.

This experience is embodied in ESI's software Virtual Seat Solution, which is dedicated to the virtual design, manufacturing and prediction of seat performance and takes into account material physics, manufacturing processes and the behavior of a human body for all morphologies. Thanks to its unique precision, Virtual Seat Solution enables the creation of virtual seat prototypes and the evaluation of seat performance right from the early phases of design. Virtual Seat Solution empowers seat specialists to quickly explore different innovative designs at an affordable cost, and ultimately to pre-certify these designs before a physical prototype is ever produced.
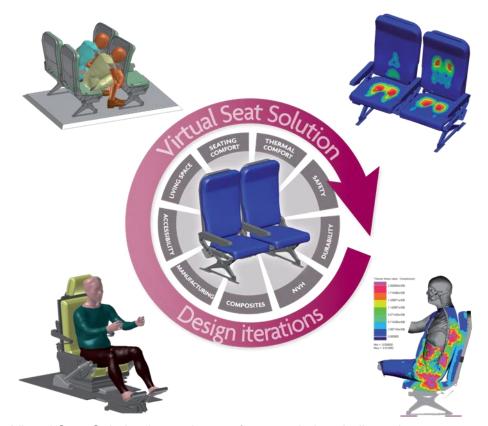

Image: Virtual Seat Solution is a unique software solution dedicated to seat prototyping

For more information about Virtual Seat Solution, please visit http://www.esi-group.com/virtual-seat-solution

For more ESI news, visit: www.esi-group.com/press

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About ESI Group

ESI is a world-leading provider of Virtual Product Engineering software and services with a strong foundation in the physics of the materials of which products are built.

Founded over 40 years ago, ESI has developed a unique proficiency in helping industrial manufacturers replace physical prototypes by virtually replicating the fabrication, assembly and testing of products in different environments. Virtual Prototyping enables ESI's clients to evaluate the performance of their product, and the consequences of its manufacturing history, under normal or accidental conditions. By benefiting from this information early in the process, enterprises know whether a product can be built, and whether it will meet its performance and certification objectives, before any physical prototype is built. To enable customer innovation, ESI's solutions integrate the latest technologies in high performance computing and immersive Virtual Reality, allowing companies to bring products to life before they even exist.

Today, ESI's customer base spans nearly every industry sector. The company employs about 1000 high-level specialists worldwide to address the needs of customers in more than 40 countries. For further information, visit www.esi-group.com.

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