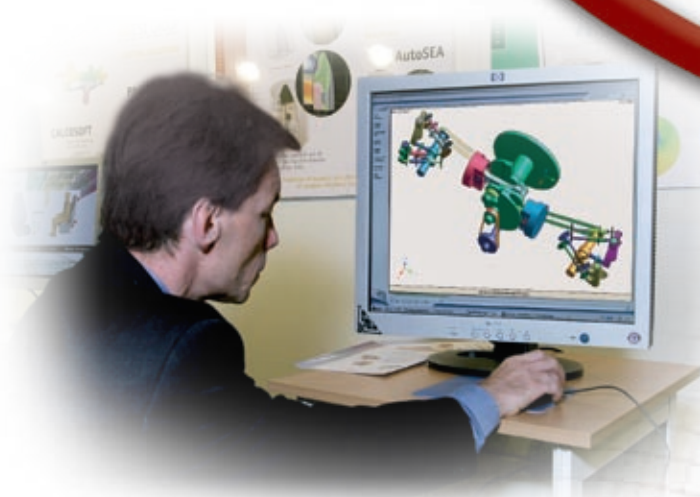


# VIRTUAL PERFORMANCE SOLUTION

## Optimizing your Product Performance with Simulation-Based Design



- o PAM-CRASH
- o PAM-SAFE
- o PAM-SHOCK
- o PAM-MEDYSA
- o PAM-OPT
- o Visual for PAM



With Virtual Performance Solution, improve the efficiency of your Computer Aided Engineering workflows during product development.

Benefit from the qualified compute model library (crash dummies, human models, barriers...).

Use one simulation model for all your load cases based on Implicit and Explicit solution schemes.

*“ ESI Group backed up by local services and engineering simulation software has helped ŠKODA reach new standards in design and production ”*

**Milos Safr, Head of FEM Simulations ŠKODA Auto a.s.**

*“ Working in close relationship with TRW, ESI Group succeeded in delivering a leading edge technology which meets TRW requests. This technology provides TRW with a competitive advantage in the design of advanced airbags ”*

**Chuan Seng Lee, CAE Design Analysis Manager, TRW Automotive**

## ESI Group introduces: The new Virtual Performance Solution

### PAM-CRASH



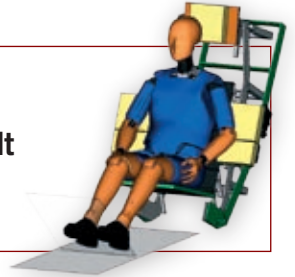
**PAM-CRASH offers predictive virtual testing for Crash and Safety professionals across the extended enterprise.**

Front Impact - Courtesy of ŠKODA Auto

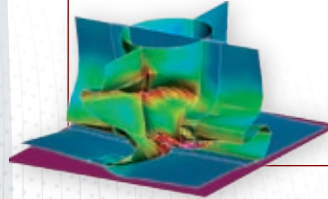
### PAM-SAFE

**PAM-SAFE optimizes your safety simulation from airbag folding and deployment, to seatbelt modelling, and dummy impact.**

Crash Dummy and Barrier Model



### PAM-SHOCK



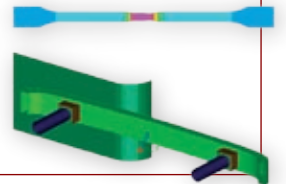
**PAM-SHOCK analyzes the dynamic behavior of your product under high speed impact.**

Crash Absorption  
Courtesy of DLR

### PAM-OPT

**PAM-OPT accelerates your decision-making by analyzing and optimizing design simulation process or material data.**

Material fitting and bumper design optimization



### PAM-MEDYSA

**PAM-MEDYSA evaluates Motion and Dynamics of Mechanical Systems for your product real life performance.**

Motorcycle Motor Dynamic Performances



### VISUAL for PAM

**VISUAL for PAM delivers a powerful open collaborative engineering framework for your simulation.**

Visual Crash for PAM



## Benefits

- **Innovate and collaborate in an open environment**
- **Run all your performance simulations on a single compute model**
- **Accelerate your product development: gain time, quality and lower costs.**



**SUPPORTED PLATFORMS:**

HP, IBM, SUN, LINUX, Windows.

Detailed specifications upon request.



Courtesy of ŠKODA Auto

**Customer References**

AIRBUS , Aishin AW, ALCAN SINGEN GMBH, ARCELOR, ARKEMA, AUDI, AUTOLIV, Bentley Consulting, BERTRANDT Gaimersheim, BOEING, Bridport Aviation products, Centro Tecnológico de Automoción de Galicia, CERA, CIDAUT, Commercial Vehicle Group , Corus Technology BV, Chrysler, CRC-ACS (Composites Research Corporation, Australia), CSC / BAE Systems, CVUT-UST, CVUT-UVLT, DLR, EADS, EDAG, ETBS, FAURECIA, FORD Motor Company, GESTAMP Automoción, General Motors, GRUPO ANTOLIN, Gyeongsang National Univ, Hawker de Havilland, HEULIEZ, HITACHI, HONDA, HYUNDAI, IDESTYLE, IDIADA, IMTSSA, IPECO Consulting, IVM, Key Safety Systems, L&L Products Europe SAS, Lear, Lockheed Martin, Magna, Mitsubishi Electric, Mollertech Eurostyle, NASA, Nippon Steel, NISSAN, NLR , PLASTIC OMNIUM ,P & R Engineering, RENAULT, SENER Ingeniería y Sistemas, S.A., SEAT, SEGULA, ŠKODA Auto, Takata-Petri, Tecosim, Thales Alenia Space, THYSSSEN KRUPP, TRW, TRW Automotive, T-SYSTEMS, TU, UWB - MECHANICAL DEPT. II, V & M France , Visteon, Volke, Volkswagen AG, Yamaha Motor...

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## About ESI Group

*ESI Group is a world-leading supplier and pioneer of digital simulation software for prototyping and manufacturing processes that take into account the physics of materials. ESI Group has developed an extensive suite of coherent, industry-oriented applications to realistically simulate a product's behavior during testing, to fine-tune manufacturing processes in accordance with desired product performance, and to evaluate the environment's impact on product performance. ESI Group's products represent a unique collaborative and open virtual engineering environment known as the Virtual Try-Out Space, enabling virtual prototypes to be improved in a continuous and collaborative manner while eliminating the need for physical prototypes during product development. The company employs over 700 high-level specialists worldwide covering more than 30 countries. ESI Group is listed in compartment C of Euronext Paris. For further information, visit [www.esi-group.com](http://www.esi-group.com).*

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