



PEGASUS



PROJECT PART-FINANCED
BY THE EUROPEAN UNION



Sixth Framework Programme

Project: PEGASUS

Code: IP 026673-2



Project Objectives

- To develop a new and innovative methodology for automotive SMEs:
 - ✓ Delivering integrating engineering and new processing concepts specifically (but not exclusively) for plastic moulded components.
- To provide enhanced capabilities for SMEs to design a new generation of sustainable knowledge-based services/products.
- To deliver a working demonstration of the above



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General Information

Number of partners:	21
Number of EU Member States:	8*
Duration:	4 years
Budget:	More than € 9M
EC contribution:	More than € 5M

*Belgium, France, Germany, Poland, Portugal, Spain, The Netherlands, UK



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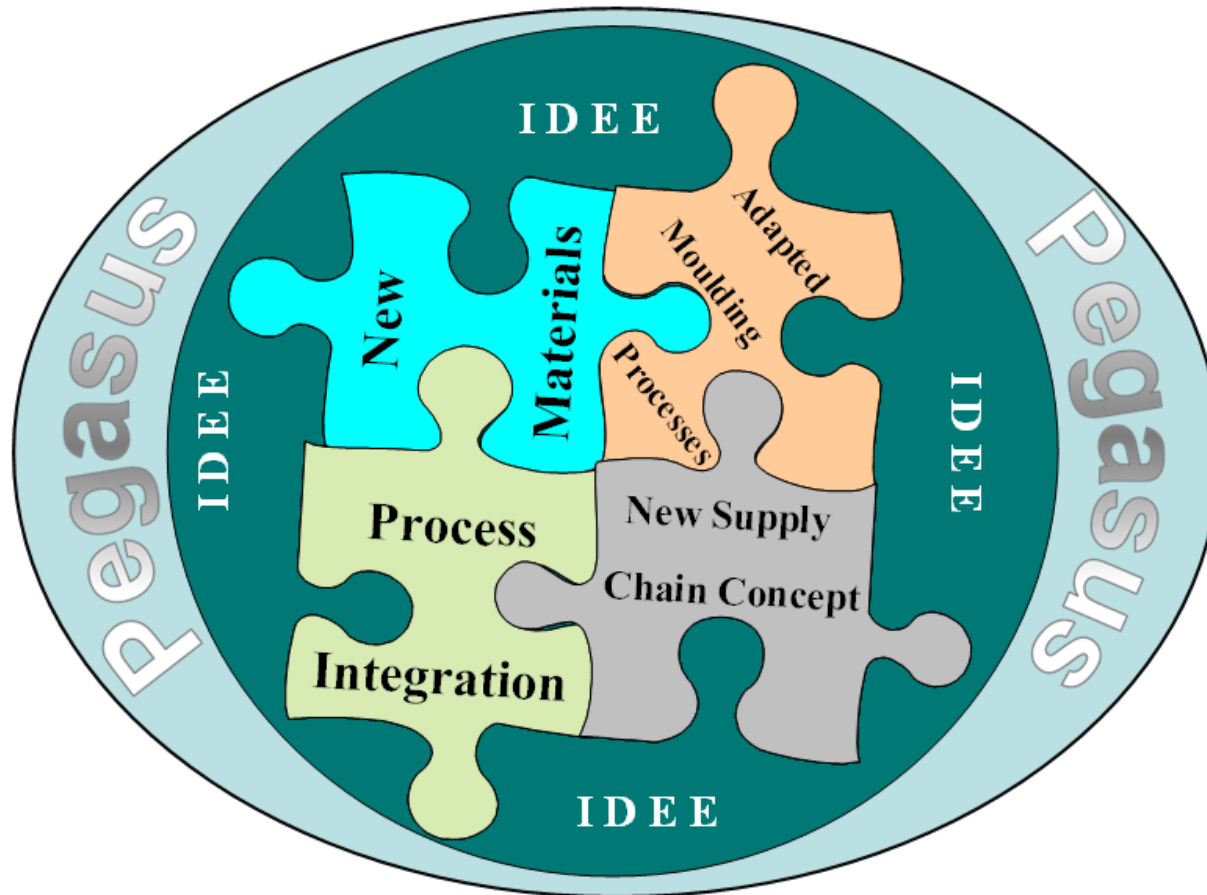
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PEGASUS Approach (I) - Multidisciplinary



IDEE = Integrated Design and Engineering Environment



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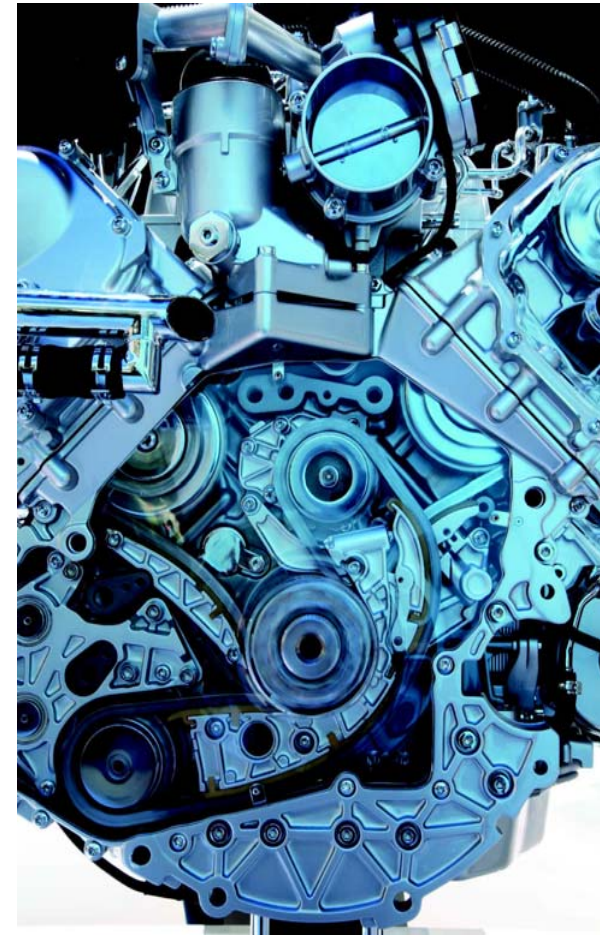
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PEGASUS approach (II) - IDEE

- **New Integrated Design and Engineering Environment (IDEE):**
 - Knowledge Based Engineering (KBE) system developed for SMEs supplying the automotive sector.
 - Fast, multi-disciplined and objective evaluation capabilities based on existing Aerospace models.
 - The IDEE will include:
 - ✓ Allow collaboration on customised high-tech services
 - ✓ Facilitate decision making processes from concept to production, including technical, environmental and economic consideration.



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PEGASUS approach (III) – New materials

- **New Materials:**

- To develop practical breakthrough materials with required functionality:

- ✓ Nanoparticle pigments for Class-A quality UV-stable mouldings that avoid the need for painting.

- ✓ Innovative adhesives for disassembly “on-command”.

- ✓ Localised strengthening of automotive body parts using long fibre reinforced thermoplastics (LFT), maintaining Class-A finish.

- ✓ Variable density foams for improved pedestrian impact protection.



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PEGASUS approach (IV) - Processing

- **Processing:**

- Leading edge technologies adapted, for new materials and integration.
- Increased customisation:
- Flexible process configuration on-demand through integration:
 - ✓ Multi-material moulding.
 - ✓ Localised reinforcement.
 - ✓ In-mould assembly and/or decoration.
 - ✓ Back and/or over-moulding.
- Component integration:
 - ✓ Multiple functionality; eg one-piece bumper with integral light clusters, etc.



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Expected Impact ... among others

- **The IDEE methodology will:**
 - Minimise “trial and error” from concept through production with commensurate savings
 - Enable late selection of configuration options
- **Reduced material and energy consumption:**
 - Integrated manufacturing with fewer steps
 - Less vehicle components
 - Elimination of assembly tasks
 - Paintless process
 - Reduced weight for improved CO₂ emissions



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Partnership

AIMPLAS	Spain	Setemip	France
Smithers Rapra	UK	LMS	Belgium
Plasdan	Portugal	Bostik	Netherlands
Schneider Form	Germany	Smart Car	Germany
Eipstemics	UK	EuPC	Belgium
Addcomp	Netherlands	SMMT	UK
Bax Spuiterij	Netherlands	TNO	Netherlands
QS Grimm	Germany	ICT Fraunhofer	Germany
Acteco	Spain	TU Delft	Netherlands
Jacob Composite	Germany	U Minho	Portugal
Osowaplast	Poland		



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