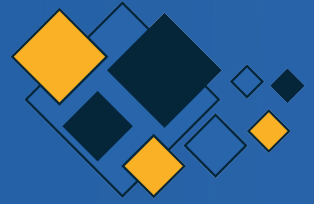


# Noesis Solutions and Maplesoft: Accelerate your Digital Engineering Journey



**noesis**  
a Cybertnet Group Company

**Maplesoft**  
Mathematics • Modeling • Simulation  
A Cybertnet Group Company

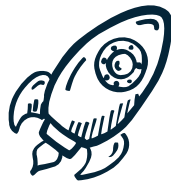
Transform your organization's product development journey with fresh solutions from **Maplesoft** and **Noesis Solutions**.



Inject innovation during the  
early design stages



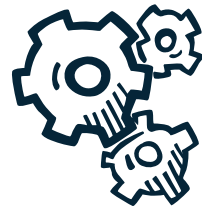
Gain a competitive advantage



Optimize your  
product development



Create better products



Transform your  
engineering workflow

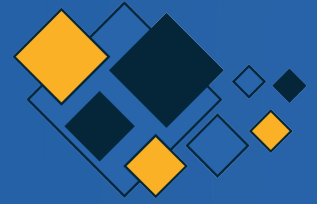


Save resource time and costs

Transform Your Product Development Journey  
**Build Better Products**



# Noesis Solutions and Maplesoft Workflow: Automotive Example



## From Concept to Operation:

### Verification Against Design Constraints

- Integration of constraints from system models.
- Extract critical engineering data from information silos.
- Generate reliable synthetic datasets.
- Automate V&V processes.

### Product Development

- Turn knowledge into actionable insights.
- Optimize & automate engineering workflows.
- Extend decision making using collaboration tools across stakeholders.

### Early Concept Design

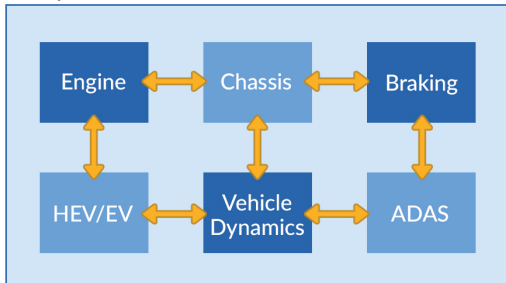
- Convert datasets into knowledge.
- Evaluate early design concepts using modeling and simulation.
- Add design robustness.
- Connect to existing CAE toolchains.

### Virtual Operation

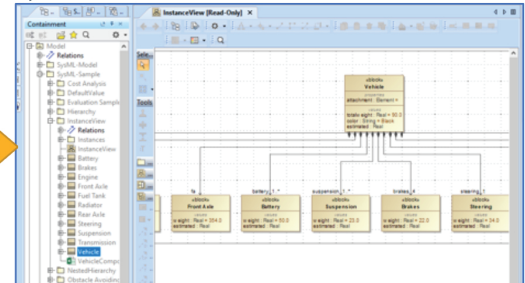
- Streamline system integration.
- Try out drive cycle & duty cycle scenarios.
- Validate operating conditions using virtual prototypes.

This example shows the optimization approach for the product development workflow of a new automotive system. The end result is a better product under reduced timelines, with data-led decisions, collaborating widely across the organization.

### Subsystems

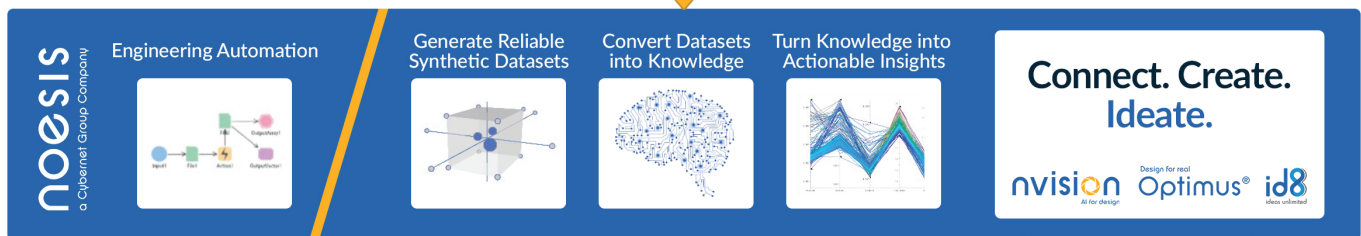


### System Model



Maple<sup>®</sup>  
Extract design  
constraints data  
via SysML

Digital Thread



### Design Space Exploration

- Maple<sup>®</sup>
  - Engineering Analysis
  - Design Robustness
- MapleSim<sup>®</sup>
  - Modeling & Simulation
  - Integration Testing

### Computing Resources

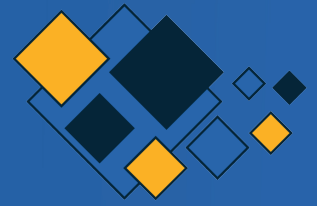
- LOCAL
  - ORACLE<sup>®</sup> CLOUD INFRASTRUCTURE
- PRIVATE CLOUD
  - HPC
  - aws

CAE  
Toolchain

### Design Documentation

Maple Flow<sup>®</sup>

# Noesis Solutions and Maplesoft: Products Included in the Solution



Combining solutions from both companies creates a complementary set of tools designed to ease your digitization journey right from early stages of product development, saving you valuable time & resources with your go-to-market strategy.

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Design for real  
**Optimus®**

- Automation and optimization tool.
- Effective implementation of an Objectives Driven Engineering process.
- Powerful range of capabilities for Engineering Process Integration, Design Space Exploration & Optimization, and Robustness & Reliability.

**id8**  
ideas unlimited

- A cloud-native, open & customizable platform.
- Streamlines engineering design processes in a collaborative environment.
- Empowers organizations to take full control of the engineering design process.

**nvision**  
AI for design

- Open, solver-agnostic modeling tool.
- Reduce design time by leveraging existing knowledge.
- Perform real time what-if studies and decision making.

**noesis**  
a Cybernet Group Company  
**Engineering Services**

- Personalized, Customer-centric Consultancy and Support.
- Support in making frugal use of data and IT resources.

**Maplesoft**  
Mathematics • Modeling • Simulation  
A Cybernet Group Company

 **Maple™**

- Useful for modeling and analyzing complex systems.
- Efficient data management.
- Equation solvers and scripting.

 **MapleSim™**

- High performance modeling and simulation tool.
- Multi Domain modeling capabilities.
- Real time behavior simulation.

 **Maple Flow™**

- Easier design documentation.
- Help calculate and solve equations.
- Features such as fast solvers, built-in units tracking, flexible plots, and more.

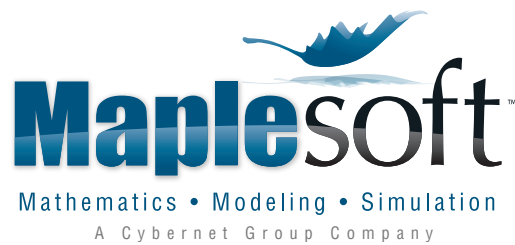
 **Maplesoft Engineering Solutions**

- Professional Services to fast-track your projects.
- Support for creating initial models and connecting complex engineering datasets.



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For more information visit our **Solution Website** or email **[info@noesisolutions.com](mailto:info@noesisolutions.com)**

