

# What is HEEDS?

Discover Better Designs, Faster!

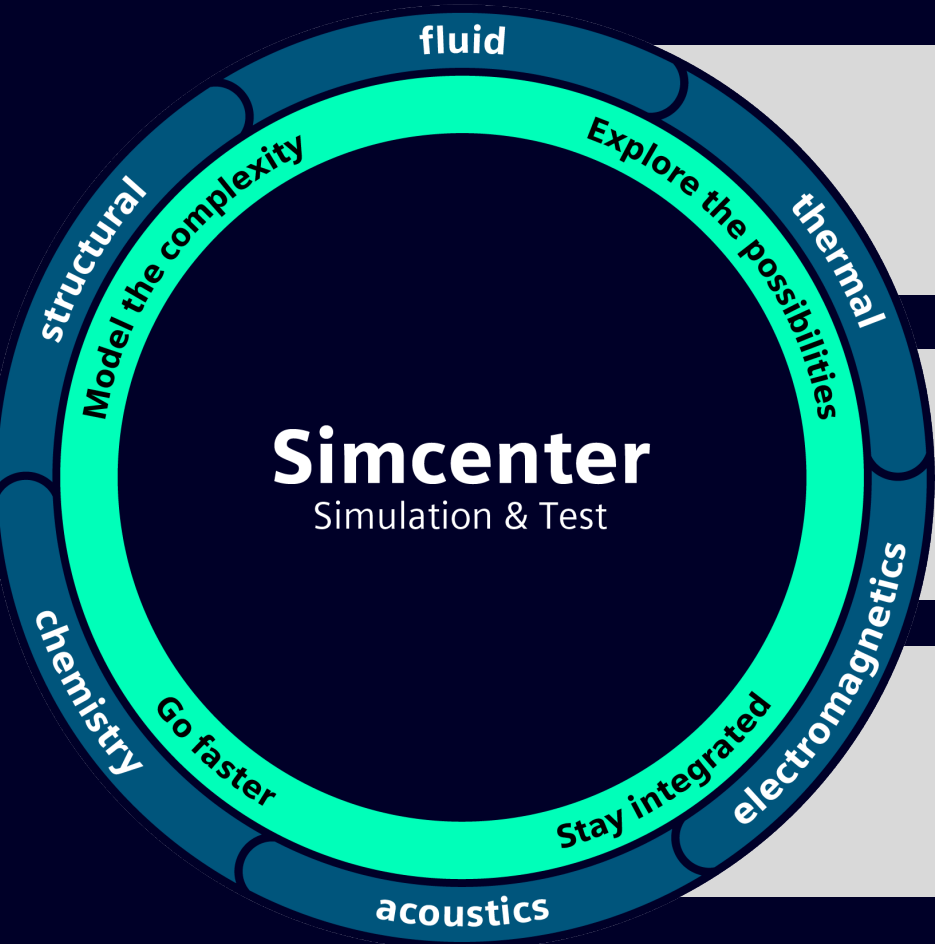
## What is HEEDS?

HEEDS is a multi-disciplinary design analysis and optimization (MDAO) software solution that automates workflows and performs design space exploration and optimization to accelerate product development and reduce overall cost.

Designers and Engineers use HEEDS to remove productivity barriers, find improvements in existing products, or discover innovative solutions that satisfy all performance requirements – *faster!*



# Simcenter: Automate, Simulate, Explore, Test



### System Simulation

Simcenter Amesim, Simcenter Flomaster, Simcenter System Architect, Simcenter System Analyst, Simcenter Embedded Software Designer, Simcenter Prescan

### Mechanical Simulation / CFD / Electromagnetics & Electronics

Simcenter 3D, Simcenter STAR-CCM+, Simcenter Nastran, Simcenter Femap, Simcenter FLOEFD, Simcenter MAGNET, Simcenter Madymo, Simcenter Tyre, Simcenter Motorsolve, Simcenter Speed

### Physical Testing

Simcenter Testlab, Simcenter Testxpress, Simcenter Tecware, Simcenter T3STER, Simcenter TERALED, Simcenter POWERTESTER

Exploration & Analytics/Workflow Automation – HEEEDS

# HEEDS Enables Product Development



Abaqus



Abaqus/CAE



Adams/Car



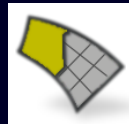
Adams/Chassis



Adams/View



AFSIM



ANSA



ANSYS



ANSYS EDT



ANSYS STK



Aspen HYSYS



Autodesk Inventor



AVL-DVI



AVL-EXCITE



AVL-EXCITE  
Piston&Rings



CATIA



CATIA  
Analysis



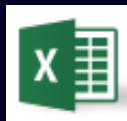
Comsol



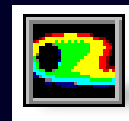
Creo  
Parametric



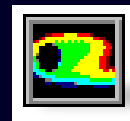
Es-ice



Excel



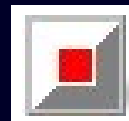
Fluent 2D



Fluent 3D



FMU



GTI



Hyper Lynx



JMAG



LS-DYNA



Mathcad



MATLAB



Moldflow



Nastran



NX CAD



ONNX



Plant Simulation



PROII



Pro-STAR



Python



Ricardo SDF



Simcenter  
3D



Simcenter  
3D Motion



Simcenter  
Amesim



Simcenter  
Architect



Simcenter Battery  
Design Studio



Simcenter  
FEMAP



Simcenter  
FloEFD



Simcenter  
FloMASTER



Simcenter  
FloTHERM



Simcenter  
FloTHERM XT



Simcenter  
MADYMO



Simcenter  
Magnet



Simcenter  
Motorsolve



Simcenter  
Prescan



Simcenter  
Samcef



Simcenter  
STAR-CD



Simcenter  
STAR-CCM+



Simcenter  
System Synthesis



Solid Edge



SolidWorks

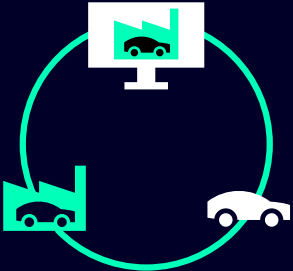
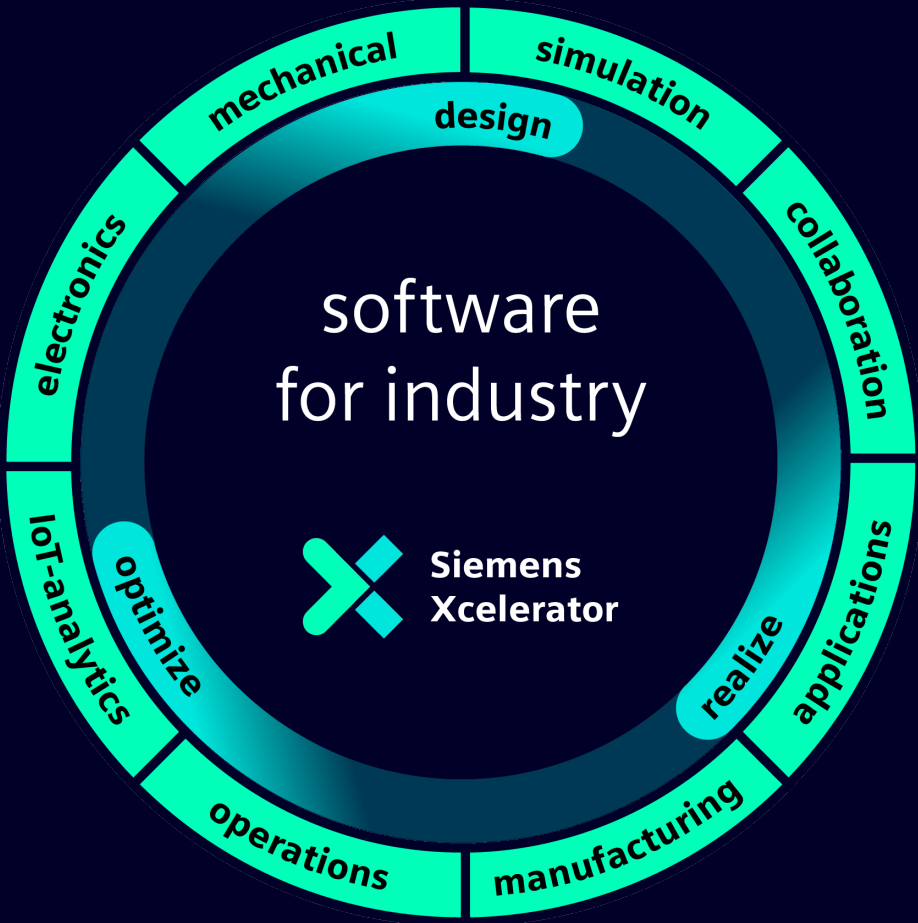


SolidWorks  
Simulation



Add Your  
Tool

# Siemens Xcelerator



**Comprehensive digital twin**



**Personalized Adaptable / Modern**



**Flexible / Open ecosystem**

# Advantages of HEEDS



## Ease of Use

HEEDS is used by ALL in product development to Discover Better Designs, *Faster*, while competitive software is aimed only at experts in statistics and optimization.



## More Innovative Solutions

HEEDS has a proven track record of thoroughly searching for more design options in less time, yielding many more innovative solutions.



## Accelerated Designs

HEEDS helps customers to deliver market-leading products in record time.



## Deeper Insights for Informed Decision-Making

HEEDS provides insight and discoveries of designs that are production-ready (digital twin).



## Seamless Integration

HEEDS easily interfaces with commercial CAD and CAE tools as well as internal software.



## Outstanding Global Customer Support

The Global HEEDS Team is readily accessible and responsive.

# Summary

HEEDS uses its four key enabling technologies to **Discover Better Designs, *Faster*** and drive product innovation through design space exploration!

## Four Enabling Technologies

### Process Automation

Automates data sharing in desired workflows

### Distributed Execution

Manages various compute resources (Linux, Windows, Cloud)

### Efficient Search

Discovers better designs, *faster!*

### Insight & Discovery

Post-processing images, tables, 2-D, 3-D plots, and more!

## Advantages of HEEDS

Ease of Use for the Entire Team

Accelerated Designs

Seamless Integration

More Innovative Solutions

Deeper Insights

Outstanding Global Customer Support