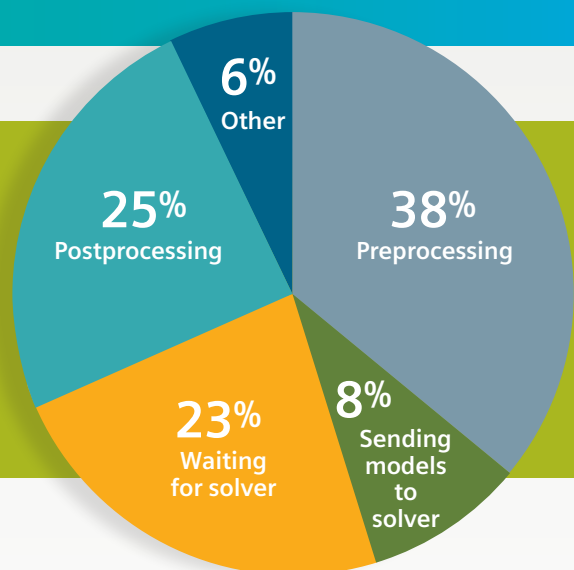Siemens PLM Software

Addressing bottlenecks in the simulation process

A recent study by the Tech-Clarity research firm analyzed the time spent in the simulation process:

(Source: Tech-Clarity, Bottlenecks of Simulation, 2016)

Pie chart:
- 38% Preprocessing
- 8% Sending models to solver
- 23% Waiting for solver
- 25% Postprocessing
- 6% Other

Bottlenecks throughout the process impede progress

Preprocessing time	Simulation modeling time	Postprocessing time
Top challenges	**Top challenges**	**Top challenges**
• Finding problematic geometry	• Assembly contact definition	• Time required to review results
• Recreating geometry	• Lack of knowledge	• Managing results data
• De-featuring	• Poor meshing	• Time required to prepare and share results
• Repetitive tasks	• Overly refined models	• Time required to sift through results
• Access to multi-CAD data	• Boundary condition errors	

Streamline your simulation process with Femap

Clean up geometry faster
84% of companies use two or more CAD tools

- Flexible access to multi-CAD data
- Identify and locate small features
- Fix problematic geometry
- Automated defeaturing
- Automate repetitive tasks

Accelerate finite element modeling
Top companies are 4.75 times more likely to automate tasks through customization

- Reduce time to define assembly contact
- Access to simulation modeling knowledge
- Leading-edge meshing tools
- Advanced boundary condition definition

Optimize for analysis
Companies use 3.3 different solvers

- Idealize models for solution efficiency
- 3D solids, 2D shells, 1D beams
- Flexibility for Iterative and sparse solutions
- Support for multiple solvers
- Analysis management tools

Understand results faster
54% of postprocessing time is spent working with data and preparing for analysis

- Streamlined input and management of results data
- Advanced data sorting, filtering, ranking and evaluation
- Automated analysis studies
- Visual review and reporting
- Extended results calculation and display tools

Realize the benefits of simulation

Reduced cost	Faster time to market	Improved quality	More innovation

Download the Tech-Clarity Bottlenecks of Simulation white paper
For more information about Femap, visit www.siemens.com/plm/femap