

**Energy management specialist streamlines product development process using a system simulation approach**



**Schneider Electric**

[www.schneider-electric.com](http://www.schneider-electric.com)

Schneider Electric SA is a France-based multinational corporation that specializes in electricity distribution, automation management and produces installation components for energy management.

Schneider Electric has been using simulation tools for a long time. The company has well-established solutions for each specific physical domain. Taken individually, each kind of simulation software helped the company to solve issues. However, Schneider Electric recognized that they needed a standard tool covering all domains to support them in:

- Making the product synthesis with different physical couplings
- Evaluating the impact of a design choice on the overall system
- Comparing the efficiency of different design architectures
- Recording all engineering knowledge gained during the design phase
- Rapidly evaluating evolving demands for product features

Schneider Electric had three main objectives for this analysis: first, to understand how it would have helped to make greater use of a multi-domain system simulation tool during the research and development (R&D) phase; second, to track the effectiveness of electronic simulation; and third, to provide a simulation package to continuous engineering team for the products. Having this knowledge would help the engineering team rapidly and easily perform an analysis on evolving requests from customers.


**Simulation and Forecasting Technology role**

Multi-domain system for R&D, evaluating impact of design choice, recording engineering knowledge

**Sector**

Engineering and Electronics

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**SIEMENS**

**Energy and utilities**

**Schneider Electric**  
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**Product LMS**

**Business challenges**  
Develop products that are reliable and safe.  
Manage a complex organization with many different processes.  
Develop cost-effective solutions that are optimized for manufacturability, assembly and test.  
Create solutions that can be manufactured around the world and meet local environmental standards.

**Keys to success**  
Evaluate the impact of a design choice on the overall system.  
Compare different architectures early in the design process.  
Reuse engineering knowledge gained during the design phase.

**Results**  
Significantly enhanced productivity due to the sharing and reuse of engineering knowledge.

For the rest, the huge LMS Amesim sub-models database allowed the company to address the other studies required to develop benchmark specifications. Once this model had been designed, Schneider Electric was able to easily and quickly analyse many parameters, including frequency device compatibility (50 to 500 Hz), imperfect electrical network, change of materials or geometry of electromagnetic actuator, and overloading of coils and the electronic components.

and efficient solver friendly interface led LMS Amesim as our solution for simulation."

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