

Key Advantages of Arena Simulation Software

Arena Methodology Features:

Arena uses an **entity-based, flowcharting methodology** for modeling dynamic processes. Most other commercial simulation products are code-based and require programming in proprietary scripting languages, and many simulation products force you concentrate primarily on animating a process rather than documenting it.

Arena is a Visio-compatible, flowcharting tool. Entities in an Arena model proceed through a flow chart of the process and seize control of resource capacity as they are processed. The flowchart approach to model building makes the most sense to engineers and to process designers who must be able to carefully document a process in order to accurately model it and analyze it. This results in models that become highly detailed documents of the processes being studied. Arena's flowcharting methodology makes Arena:

- Easier to learn than other simulation tools
- Easier to validate, verify, and debug
- Easier to communicate the intricacies of complex processes to others

Ease of use translates to rapid model development. Be cautious when evaluating other tools and the hidden costs associated with development time!

Arena Technology Features:

Arena Runtime feature allows analysts to perform what-if simulation analysis using an Arena model built by someone else. When a model enters runtime mode, an analyst can modify the characteristics of any objects in the model, including module data, object positions, animation pictures, etc., but may not add or delete objects in the model or items in a module repeat group.

Import Visio Flowcharts and translate any Visio shape into an Arena module. This leverages all process documentation already done in Visio and your corporate investment in Visio flowcharting software.

Import AutoCAD drawings plus objects, clipart, pictures, video clips, etc, for convincing 2d animation.

More than 5,000 intricate animation objects are included in Arena's animation library. Custom animation can also be created by the user. Clipart, bitmaps, AutoCad drawings and many other animation file types can be imported into Arena.

ODBC data compatibility. Import and export data from/to any ODBC data file. File types include: Excel, Access, XML, text, Sequential, LOTUS, and Active X Data Object (ADO).

Visual Basic scripting. Unlike other tools that use proprietary scripting languages, Arena uses a standard VBA editor (included) and the Arena object model to build custom user interfaces and custom data interfaces to Arena models.

VB Automation. All Arena functions can be automated with Visual Basic Programming. Both the building and the execution of Arena models can be fully automated through VB programming and the Arena Object Model.

VB Macro Recorder. Arena includes a Visual Basic macro recorder that produces Visual Basic programs of all mouse movement and keyboard actions, which is used to automate the building of Arena models from external data files.

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General-purpose DES modeling tools. Arena is the leading general-purpose Discrete Event Simulation package. Any process you can describe can be modeled in Arena, including customer service, finance, order & fulfillment, billing, logistics, etc.

Real Time modeling. Arena Real Time allows the model to run in real time or some multiple of real time, and to communicate asynchronously with external devices or external applications. This technology is useful for system testing and operator training, using Arena as the "virtual" system that communicates with actual devices.

SIMAN simulation language engine. The SIMAN simulation language is the engine in Arena. Arena is a language-based simulation tool, it's not a simulator that has 'canned' or prescribed functionality. Having a simulation language as its engine makes Arena models run extremely fast and makes it possible for you to model any complex process that can be verbalized and described. SIMAN was the predecessor to Arena and was the world's first PC-based simulation language when it was introduced in 1982.

OptQuest for Arena optimization software included. Most Arena packages includes the state-of-the-art solver for Discrete Event Simulation: OptQuest. OptQuest is developed by OptTek Systems, Inc. in Boulder, CO.

Arena Reputation:

24 years leading the simulation industry. Arena has been on the market for nearly a quarter century.. Many other simulation vendors have come and gone out of business during this time. Others simulation companies have consolidated with former competitors as the simulation industry has shaken out the fringe players. No other simulation vendor has withstood the test of time and triumphed like Arena has.

Extensive User Base. With 300,000 users world-wide and growing, Arena advice and support is easy to find. Arena is supported by academic as well as commercial users. In addition to Rockwell's technical support and consulting services, our unique user zone enables modelers from around the world to communicate and share knowledge. www.arenasimulation.com/user

Taught in most universities that offer Industrial Engineering / Systems Engineering degrees. Arena is taught in most universities around the world that offer these degrees as well as in many business schools. Each year, more than 30,000 students who have studied Arena are graduated from these schools.

4 university textbooks in print. These graduate and undergraduate textbooks are currently in print. They provide extensive resources and reference materials for advanced Arena users:

- [Applied Simulation Modeling](#) (Seila, Ceric, Tadikamalla)
- [Simulation and Analysis with Arena](#) (Altiok, Melamed)
- [Process Analysis and Improvements](#) (Seppanen, Kumar, Chandra)
- [Simulation With Arena](#) (Kelton, Sadowski, Sturrock)

A fifth Arena-based university textbook will be published in July 2007:

Healthcare Operations: Quantitative Methods for Quality and Performance Improvement.

- Authored by Daniel B. McLaughlin and Julie M. Hays. (faculty at College of Business, Saint Thomas University, in Minneapolis, Minnesota)
- It will have a chapter on simulation with Arena and will include an Arena 11.0 CD.
- The publisher is Health Administration Press, a division of the Foundation of the American College of Healthcare Executives.

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