THE ARENA DIFFERENCE

If all simulation packages are the same, why do more simulation professionals overwhelmingly choose Arena?

ARENA FLOW CHARTING METHODOLGY

There is a <u>fundamental</u> difference in the modeling approach between Arena and the majority of other simulation packages. Arena uses a **flowchart based modeling (FBM)** methodology compared to an **animation based modeling (ABM)** paradigm. Everything you model in Arena will take advantage of the easy to learn flowchart modules. Most other commercial simulation products will focus on animating the model. When it comes to complex systems they will require programming in proprietary scripting languages. Arena uses the easy to use flow chart modeling paradigm and is robust enough to model any system to any level of complexity. Some ABM packages tout they are 'object oriented', but they still focus primarily on process layout and animation rather than process flow. They provide a simple set of modeling objects and require users to reprogram these objects in order to model their processes. Arena users will focus on documenting the process rather than animating it.

Another important distinction - with ABM, logic is buried under objects, behind the scenes. In Arena, you can always track your entity as it flows through your logic, one block at a time. In ABM tools you cannot see your entities moving through line of codes. In Arena you can have all your logic in the same window; not hidden behind objects.

The conclusion is clear, 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 flowchart based modeling methodology makes Arena:

- Easier to learn than other simulation tools
- Easier to share and communicate complex models with others
- Easier to validate, verify, and debug

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

"Flowchart style modeling makes it much easier to pass the model to your colleagues; there are significant differences between the learning curve when a model is passed for modifications required by someone who did NOT build the model."
–Senior Consultant

"The exact control of Resources through the use of the individual Seize, Delay, and Release blocks allows for a more detailed and realistic control of these resources in manufacturing processes. This was difficult to do in < competitor product name removed>. Students have been able to easily apply the software and use Arena to complete industry projects. In the past, with <specific competitor product name removed>, student industry projects have been difficult to develop, simply due to the complexity of manufacturing systems and < competitor product name removed> difficulty in actually setting the model up with this complexity in mind. It appears the flowchart modeling abilities allows students better flexibility in dealing with these complex systems."
–University Professor

"Seize Delay Release is what I missed the most when I was using <competitor name removed>. To do the equivalent of seizing 2 different resources at a different time in a sequence in <competitor name removed>, you need to code a "coordinated task sequence" with C++ code, which is painful and very hard to debug. I spent more time debugging than programming in my project."
-Simulation Professional when forced to use a competitor product at a new company

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ARENA TECHNOLOGY FEATURES

ARENA RUNTIME	Unlimited runtime privileges within your organization for easy model sharing and "what-if" simulation analysis. Unlimited runtime packages are provided in most of our commercial packages.
IMPORT VISIO FLOWCHARTS	Translate any Visio shape into an Arena module. Leverage the process documentation already done in Visio.
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).
CUSTOMIZE ANIMATION	Import AutoCAD drawings and objects, clipart, pictures, video clips, etc can be imported for convincing 2d animation. More than 5,000 intricate animation objects are included in Arena's animation library. Custom animation can also be created.
VUSUAL BASIC INTEGRATION	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. All Arena functions can be automated with Visual Basic Programming. Arena can integrate with any application that can also communicate with VBA for increased flexibility.
GENERAL PURPOSE DES MODELING	Any process you can describe can be modeled in Arena, including customer service, finance, order & fulfillment, billing, logistics, etc. When surveyed, 100% of our customers list Arena's flexibility as a significant reason for their purchase.
SIMAN SIMULATION LANGUAGE ENGINE	The SIMAN simulation language is the engine in Arena. Arena is a language-based simulation tool, it's <u>not</u> 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 described. SIMAN was the predecessor to Arena and was the world's first PC-based simulation language when it was introduced in 1982.

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OUR REPUTATION

Over 25 years leading the simulation industry. Arena has been on the market for almost three decades! Many other simulation vendors have come and gone out of business during this time. Other simulation companies have consolidated with former competitors as the simulation industry has shaken out the fringe players. Arena is a product of Rockwell Automation; a $4.3 billion dollar company with over 20,000 employees worldwide. No other simulation vendor has withstood the test of time and triumphed like Arena has. We are committed to being simulation professional's tool of choice and promise exciting new innovations in the next decade!

Extensive user base. With 350,000 users world-wide and growing, Arena advice and support is easy to find. Arena is supported by academic as well as commercial users. Our users are passionate about the Arena simulation work they do and we make it a point to connect users worldwide, so whether you are a new to Arena or a long time user, we encourage you to connect with our community via Linked in and facebook.

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.

Reference Material. We are proud to say that Arena continues to be the most well-documented simulation software package on the market! Whether you are a university professor, a student or a commercial Arena customer, the texts below are excellent resources for teaching and to further develop your modeling skills and simulation knowledge.

- Simulation With Arena (Kelton, Sadowski, Swets)
- Applied Simulation Modeling (Seila, Ceric, Tadikamalla)
- Simulation Modeling and Analysis with Arena (Altiok, Melamed)
- Process Analysis and Improvements (Seppanen, Kumar, Chandra)
- Simulation Modeling and Arena (Rossetti)
- Healthcare Operations: Quantitative Methods for Quality and Performance Improvement (McLaughlin)
- Dynamic Capacity Management for Healthcare (Story)

THE GLOBAL ARENA

ARENA COMPARISON STATEMENT
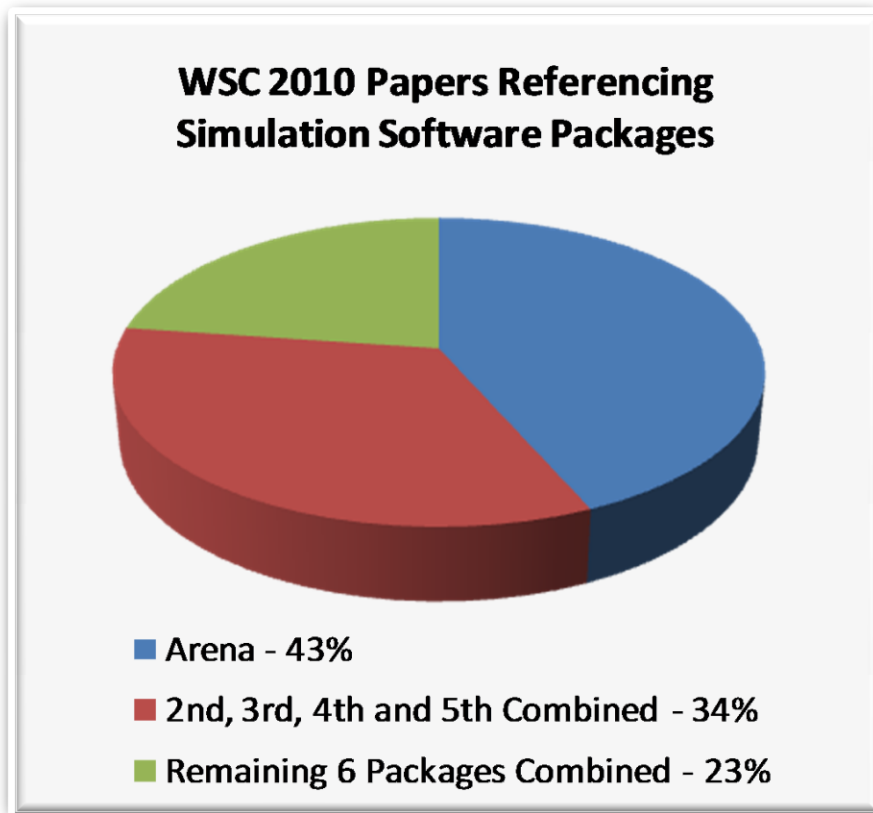
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Still not convinced that Arena is the right package for your team? It is not easy to compare packages when every vendor claims the same thing...make your work easier, improve your productivity, save you money. But how can you decide what really sets one product apart from all the rest?

Empirical Evidence.

Look at the evidence shown in the pages of the proceedings of the world's <u>leading</u> conference on discrete-event simulation—the Winter Simulation Conference (www.wintersim.org). If you were to search for the number of papers that reference the various simulation packages, here's what you'd find:

Arena was used for projects more than the 2nd, 3rd 4th and 5th next packages combined!

Those numbers are quite revealing. If the other high-end packages were as good as Arena, wouldn't you expect *roughly* the same number of simulation professionals to submit technical papers referencing each of these packages at the world's leading simulation venue? The numbers aren't even close!

WSC 2010 Papers Referencing Simulation Software Packages

- Arena - 43%
- 2nd, 3rd, 4th and 5th Combined - 34%
- Remaining 6 Packages Combined - 23%

It's hard to find reliable, feature-by-feature comparisons of all the simulation packages on the market. Yet when you look at the **empirical evidence**, it's easy to see what the world body of simulation users thinks about the various tools out there. Clearly, Arena is the undisputed tool of choice among serious users of business process simulation. It's not the least expensive package on the market, nor is it the most expensive; it's simply the best.

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THE ARENA TEAM

We can't be modest when it comes to our team! You will not find a more dedicated or passionate group than our team. With primary operations in the US and over 23 partners worldwide our team works hard every day to bring the best simulation software package to the market. Did you know in May we held an ArenaSphere conference in Las Vegas, gathering users from around the globe? We promise ArenaSphere 2012 to be even bigger and better and hope to meet you there!