

The Vanguard System™

Web-based Collaborative Modeling for Enterprise Simulation and Planning



The Vanguard System can help you answer pivotal questions such as:

- What are the major risks we face now?
- How much cash do we need to be sure we can cover all planned activities?
- In which projects should we invest to maximize the portfolio effect and cancel risk?
- Should we go forward with a planned expansion?
- How will acquiring a competitor affect our expected profits and risks?
- Should we sell an under-performing division?

The Vanguard System™ is the first business analytics application to support modeling and simulation on an enterprise scale. It is used in proactive decision-making, resource optimization, and strategic planning.

The Vanguard System combines all the elements necessary for Web-based, enterprise-wide decision-making — *collaborative modeling, knowledge-capture, and sophisticated analytics*. It has the power to satisfy the demands of a professional modeling group, and the simplicity to satisfy the needs of individuals throughout an organization who make daily operational decisions.

Business Modeling

Modeling and simulation is an essential process in modern business management. Models allow you to test ideas in a virtual world where mistakes are inexpensive. They also provide a framework for comparing competing alternatives. And, they help you to clarify the potential risks and rewards of pursuing actions.

What's more, modeling is pervasive. Every time someone in your organization builds a spreadsheet to “run the numbers”, they are building a model. Companies invest

significantly in this activity, and they invest even more by shaping company strategy around the results models generate. Because of this importance, there are advantages in treating modeling as an enterprise-wide, strategic initiative.

Enterprise Simulation

Applying modeling techniques on an enterprise scale is frequently called Enterprise Simulation (ES). It has two distinct objectives:

1. Provide a top-down view of a business enterprise to support strategic decision-making.
2. Enable a wide spectrum of individuals in an enterprise to apply modeling techniques to routine decisions.

Until now, no tools have existed that could satisfy these objectives. Business Intelligence (BI) and similar historical reporting systems help monitor business operations, but they cannot help you evaluate new ideas for which there is no history. Spreadsheets, the default modeling tool when there is no coordinated modeling effort, are flexible but lack scalability, a collaborative nature, and a means of publishing for widespread use.

Enterprise-Class Abilities

The Vanguard System has the analytic power to handle the most demanding types of analysis, the capacity to handle enterprise-scale models, and the structure required to allow many individuals to work together in the business planning process. Vanguard's features include:

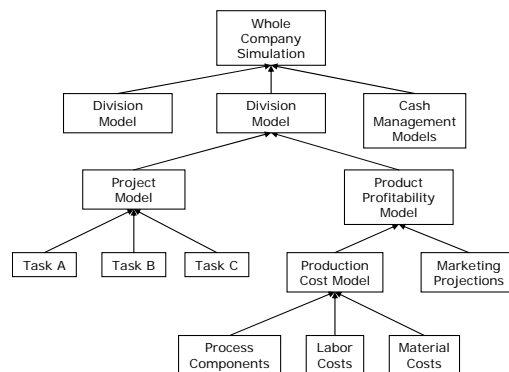
- Best-in-class Forecasting, Monte Carlo Simulation, Optimization, and other capabilities
- Grid computing to handle simulations at up to 1,000 times the speed of spreadsheets
- Support for collaborative, distributed modeling
- Networked for geographically disperse user groups
- Web-based Knowledge Portal interface
- Complete user authentication and access control
- Real-time roll-up and analysis
- Model roll-back to any date and time
- Support for Web Services, ODBC and other system integration protocols

The Vanguard System is unique in its ability to satisfy ES objectives. It can cut the cost of building business models by simplifying model structures and encouraging reuse of prior work. It can improve the accuracy of models by allowing you to divide the modeling task between individuals with specific domain knowledge. And, the Vanguard System can encourage widespread use of modeling in routine decisions by making models as easy to use as a Web site.

Collaborative Modeling

Collaborative modeling allows many individuals in your company to contribute to a joint modeling effort in a way that risks and opportunities throughout your organization are captured and rolled up in real-time without any loss of detail.

Vanguard's component-based modeling technology allows you to build large-scale, distributed models by linking together smaller, component models that are built independently. Users can model facets of a business in a way that is most useful to them and the system ensures that these models will work as components in a collaborative model. The intricate complexities of getting all of the component models to work together when they are built by people in different countries using different currencies, different time scales, different update schedules, etc., are all handled completely automatically by the Vanguard System.



The Vanguard System has the capacity to handle extremely large collaborative models including a whole company simulation.

Web-based Knowledge Portal

Models can be shared with others and applied at all levels of an organization by publishing them to the Vanguard System's Wiki-style Knowledge Portal. Here, models take on two new characteristics: they are simultaneously Web applications that any individual with a

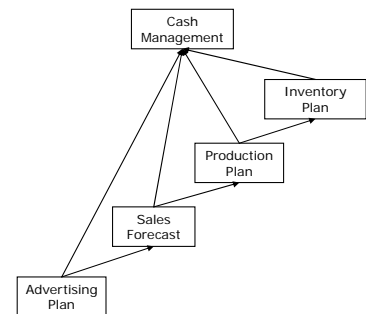
Web browser can use; and, they are components that anyone can link to in their models. Users don't need to know anything about modeling, and modelers don't need to know anything about how to build web applications.

If you are a Web-based user, the Knowledge Portal becomes a resource where you can find pre-built models to use in your work. Since the models are completely open and transparent, you can see all underlying assumptions and suggest improvements. Plus, users who have some modeling skills can even update the models themselves without fear that they will break something. This open update architecture is based on the Wiki style of Knowledge Management.

The real benefit the Knowledge Portal provides goes beyond making specialized decision-support models available to all employees; the real benefit is that these models are automatically converted into components that you can use as the basis for other, higher-level models. This means that you don't have to start from scratch when you build new models.

For example, users in Operations will not have to forecast sales as part of their production-planning model because they can link to a sales forecast model maintained by Marketing. Similarly, an inventory-planning model can get its basic input by linking to the newly created production model.

This sort of collaborative modeling is less structured than a top-down company simulation in that these models grow from the bottom-up in an organic manner. However, these models are no less real-time and robust than top-down models.



Modelers build on prior work by linking component models in the Knowledge Portal.

Find Out More

To learn more about the Vanguard System, log on to www.vanguardsw.com, email sales@vanguardsw.com, or call 919.859.4101.

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