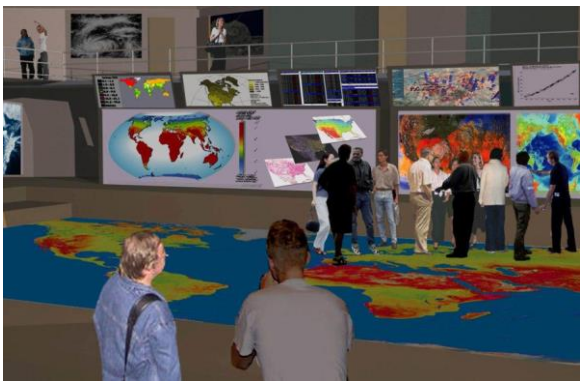
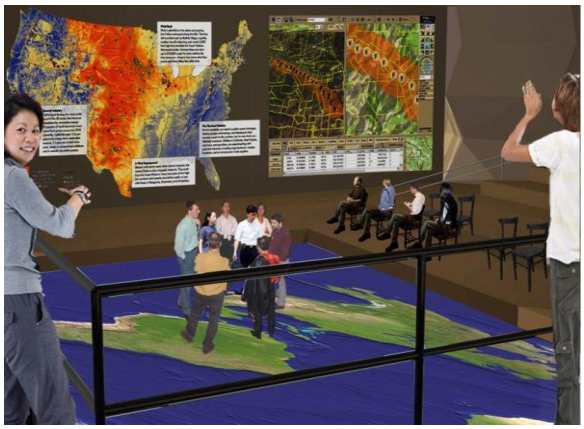
World Resources Simulation Center

Executive Summary

The World Resources Simulation Center (SimCenter) is a large format, immersive visualization and simulation facility. With access to world resource inventory statistics, it is designed for leaders and decision makers to experience deeply the interconnected nature of Earth's living and non-living systems and understand the systemic problems and opportunities facing humanity. With the urgency of a 'command-and-control' center, the SimCenter provides local and global leaders a unique resource for collaborating efficiently with others from business, governments, universities and NGOs for optimal outcomes for everyone. Using the latest in visualization and simulation technologies, users can experiment easily with a range of scenarios, creatively design answers to problems and find new commercial opportunities. It allows decision makers to decide quickly on policies, strategies and plans for making informed and sustainable choices benefiting society as a whole.





Artist renderings of the
World Resources Simulation Center.

The SimCenter takes advantage of current and evolving technology which turns vast amounts of data into accessible information, layered and displayed as 3-D map projections. This gives users the ability to conduct geospatial analysis, and to explore, visualize and create optimal scenarios that add insight and certainty to decision making. This visualization and simulation infrastructure can provide in-depth access to networked, globally distributed data on local and global resources, cultures, markets, trends and conditions.

The SimCenter has four major functions:

- Resource and demand assessment
- Long range forecasting and trend analysis
- Visualization and simulation to facilitate informed decision making
- Education and facilitation for decision makers in business and governments as well as students

What is possible with advanced display and simulation capabilities?

- 3-D visual display of high resolution information to large groups
- Integration of environmental resource and geographic data from layered maps and satellite images into the decision-making process
- Large-scale planning and development that is environmentally sustainable
- Market demand and resource forecasting
- Facilitated gaming and scenario planning for entire communities, regions and cultures

The philosophical foundation for The World Resources Simulation Center is in its founding premise posed as a question in R. Buckminster Fuller's World Game™:

"How do we make the world work for 100% of humanity in the shortest possible time through spontaneous cooperation without ecological damage or disadvantage to anyone?"

Who uses the SimCenter?

- Policy makers at the international, federal, state and local level
- Business and professional groups for strategic planning and technical training
- Experts and students conducting research and training on local and global issues, then exploring the relationships between issues with local and global consequences

How is the World Resource Simulation Center used?

While it is true that much of the information that will be displayed at the SimCenter is accessible to individuals on the web, it is important to appreciate that there is another dynamic that occurs when leaders and decision makers gather to consider issues and study options in a defined context. The SimCenter context is that of finding solutions to challenges *that work for everyone*, while minimizing our impact on the environment.

What is unique and powerful about the SimCenter are the large scale visualization and scenario simulations, in-person-interactive discussions, the group discovery process and the face-to-face research. Insights are gained; new levels of understanding are available when bright minds have access to new ways of *experiencing* complex data and are creatively guided through vision, strategy and problem solving discussions in the context of workability for all. **We learn faster together.** Multiple implications of decisions can be simulated and explored in the moment. *"What-ifs"* can be examined until optimal solutions are found.

The SimCenter recognizes that every solution to a current problem situation has a consequence and that all unintended and unanticipated implications must be considered as part of any solution. The combined technologies demonstrate long term, future scenarios for those engaged in strategic development. With this approach, strategies based on cooperation and tested through simulation find a path to action and implementation . . . **a future by intentional design.**

Comprehensive Anticipatory Design Science requires us to look at the interconnectedness of all issues, anticipate the trends and future needs of society, and then, using our best scientific knowledge, engineer the optimal solutions for humanity.

The issues that assault us daily are individual expressions of complex, interconnected geophysical, economic and social/cultural conditions. The complexity of these interrelationships demands that we deal with multiple issues simultaneously. Cutting edge visualization and simulation technologies along with geographic information system (GIS) technology, mapping software and simulation technologies provide a much needed multi-dimensional view. Through collaborative planning and design, users can accelerate action from what they discover. A paradigm shift can result that inspires breakthrough solutions to global and local problems. **This is precisely the role of the World Resource Simulation Center**.

"Our greatest problem is the educational problem of getting man to realize what his problems are and what the most effective priorities may be for solving them."

-R. Buckminster Fuller

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