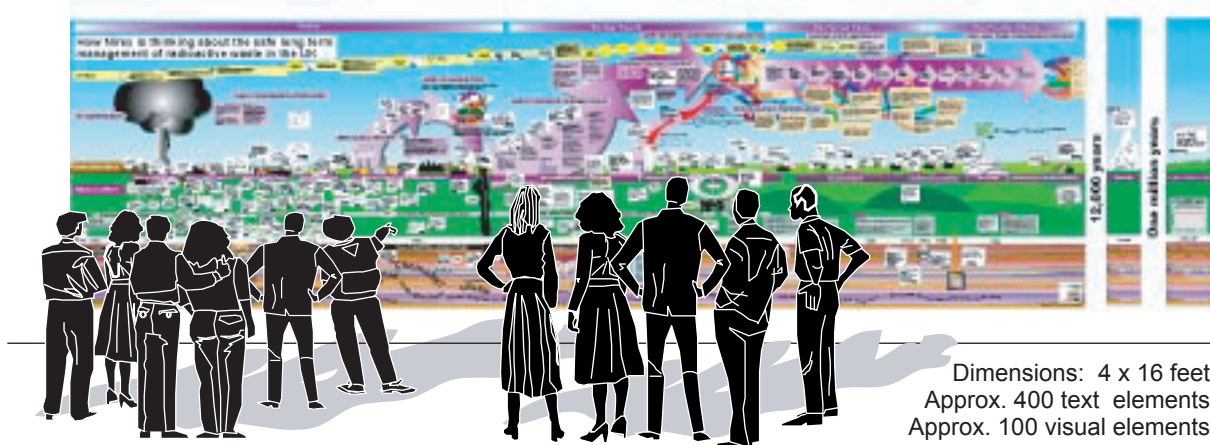


Thinking More Effectively And Strategically About the Long Term Management of Radioactive Waste – A Visual Analytics Approach



The Challenge

Nirex, the British regulatory agency responsible for long term management of radioactive waste, asked the International Futures Forum and MacroVU Analytics to develop a new way of addressing the question:

How shall we (our society) think together about the responsibility for radioactive material that will deteriorate over a 300,000 year period, when human beings have only existed for less than 75,000 years, have had language and the ability to reason in an advanced way for less than 50,000 years, and when the oldest continuous human organisations are less than 3,000 years old?

This way of thinking is extremely complex and involves an entire society thinking in concert in novel and complex ways. This is a serious, long-term issue on which there are multiple perspectives, and which requires many actors, publics and processes to reach a working consensus in order to make decisions and implement legitimate actions. Until now human societies have relied upon their political processes to “think through” these issues. This is almost certainly an inadequate way of proceeding – a lesson that Nirex learned from past experience.

The different publics and communities involved start from very different framings of the challenge, speak different ‘languages’, hold different standards of proof, etc. For example, take the question ‘Is deep disposal safe?’ The criteria for answering that question in the affirmative at a political level (eg in the House of Commons), at the scientific level (e.g. in a refereed journal) and at a psychological level will be different. Nirex strategy relies on all of these communities arriving at compatible answers to this and other questions.

The strategic info-mural project

Visual analytics provides a tool for addressing these aims. Our project produced a 3 x 15 foot information mural that enables Nirex to view its history, current decision making environment, and plans in one sweeping panorama. It made visible the complex layers of this issue and provides a clear diagrammatic description of previous and foreseeable deliberations that will be necessary to bring all of the stakeholder communities into as much consensus as possible. It made more visible how Nirex is thinking about its own thinking process. One outcome of this project was to enable Nirex to become more explicit in “thinking about the thinking process” so that these insights be embedded into the overall Nirex management structure. It enabled the Nirex's strategy and thinking to be more visible and transparent both within the boundaries of the organization and outside it for conversations with stakeholders.



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