

# Project Visual Enterprise



## Visualising the complete enterprise and its business logic

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Prepared for:

Stakeholders

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**Purpose**

The purpose of the project is to create a visual, interactive visualisation of the complete Enterprise and its business logic. This means to show everything an enterprise consists of, from products, people, organisations to relations and processes and more. We use several different visualisation techniques, some traditional and some more innovative. We aim to show the complete Enterprise to different

kinds of users. The user can reside in different organisational levels within the organisation and thus have different needs for information. We are sketching CEO Dashboards as well as views intended for information details for the individual from several perspectives. The Visual Enterprise is detached from the even bigger visualisation concept - the Corporate Command Central which includes hardware and innovative user interfaces.



The Visual Enterprise Project is limited to the visualisation of the Enterprise and its business logic.

The focus is the ability to derive knowledge and comprehension from the visualisation. We want to understand the nature of the complete enterprise and thus allow for decisions to be made based on facts rather than instinct or complacency.

information coming from different systems rather than simplify the intended situation. Our focus would be on the complete picture - in historic, present and future contexts.

This in combination with overflow of unstructured information makes swedish industry and corporations vulnarable and limiting the competitive advantages the enterprise possess.

## Filling the demand

### *Demands from the market*

The overview of the complete enterprise is missing. There are methods, like a Balanced Scorecard, of controlling an enterprise from top management in an overview manner, but no means of following the development in the enterprise that reflects the events in reality for the enterprise. The present available informationssystems (Qliktech, SAP, Hyperion etc) and techniques focuses mainly on one kind of information, whether it would be categorised as transaction data, subarea data (GIS, Product portfolio management, performance information etc) for the enterprise. These systems tends to increase the fragmented image of the enterprise, increase complexity in information retrieval and increase the dificulty of comparison of

### *Three main demands:*

- **Complete picture:** multidimensional information, informationstructure, historic data, all information areas - overview and details in conjunction.
- **Time:** covering past, present and simulating future
- **Managing the evolution of the enterprise in realtime**

*Summary:* The long term competitiveness of the swedish (and international) businesses is affected by the capabilitiy of running, maintaining and surveilling todays informationsystems. And in its extension follows the capacity for decisionmaking supplied by the informationsystems.

Visualising the complete enterprise is the only possible way to perceive and digest the enormous amount of critical information, derived from the complete enterprise, needed on a daily

Screenshots demonstrating different perspectives and views on informationstructure and extracted information.



basis. The visualisation is aimed for multiple roles in an enterprise. Individual needs for perceiving information is vital and implies multiple visualising techniques of the enterprise's information.

### Commercial prerequisites

The need is obvious.  
The potential is huge.

Business today is close to oblivious to the application of an complete picture of the enterprise. When shown a sketch of the complete picture, different reactions are received. Innovative, imaginative and creative processes are instantly started and a large amount of ideas how to apply it in practice. No matter type of enterprise the reactions are emotionally strong. The sense of a new era is spread across the room.

The speed of initial received business value is about 2-6 months for any enterprise. This implies education, level of insight and implementation across parts of the organisation.



A generic strategy map guides the entrance to the information from a balanced scorecard perspective of the enterprise.

### Potential public arenas affected

The initial focus is on large internationally active corporations with a turnover around SEK 10

billion. This indicates a fair amount of information vastly differently structured and digested.

The need is as large in the Swedish public sector as in the private sector and could well be applied within proactive groups in this sector, where Karolinska University Hospital shines at the moment. It applies in general to small and middle-sized organisations as well, but the acute need and awareness is stronger with the larger corporations.

### Project overview

- *Scientific quality and novelty value:*
- The novelty is having an actual visual image of the complete enterprise with the ability to interactively zoom in and out from overview to detail. The novelty value is tested in practice within the commercial and public sectors. No communication towards media or public communication channels has yet taken place. Scientific quality is not confirmed. We need to establish contacts with academia. However, we are not aware of anything that resembles our research. We apply most of our research directly with clients under real business conditions.

- *Demonstrational ability:*
- Is high. The developed application is in technical terms Java developed and thereby platform independent. Prototypes exist and are already beneficiary in creating comprehension and accelerating projects related to uncovering the business logic within corporations.

- *Feasibility:*
- Since 2003 Ortelius has focused on revealing business logic from different kinds of enterprises. 2008 we started visualising the business logic in alternate ways than traditional graphs or trees. We are currently on the edge of a breakthrough for the visualisation using interactive 3D-technology (OpenGL based) connected to the information. The technology and workflow has proven to be very efficient. It is based on standard Java

development techniques used in a creative manner. The visualisation disciplines involved are Data Visualisation, Scientific Visualisation and Information Visualisation. All disciplines will have to contribute with their specific strengths.

- *Own contributions*
- Ortelius Management contributes with its research and competence from business, IT-architecture, system analysis and visualisation fields. Ortelius Management also contribute with the proprietary software that holds and manages the information structures and business logics needed as a foundation for the visualisation.
- *Anticipated importance to society & anticipated importance to developing swedish industry*
- We hope to contribute to making abstract concepts within the corporate world more accessible to the many people.
- Increase the capability of understanding the nature of an enterprise and its evolving processes may contribute to enterprise growth and wealth of society in general.

## Description of problems addressed in visualisation & research needed

### *Moving images*

The visuals in the application is either 2D or interactive 3D. Most features when handling nodes and demonstrating information flows in the application has animation connected to them, producing moving images as well as “live” transitions from one perspective to another.

### *Multidimensional representation*

Multi-dimensional problems are represented in the early prototype and will be frequent throughout the visualisation.

More research is needed following intialised research tracks concerning multi-dimensional representations

### *Real-time visualisation*

Realtime updated information displayed on screen. Realtime in the information shown - the information is realtime updated to the database concurrently.

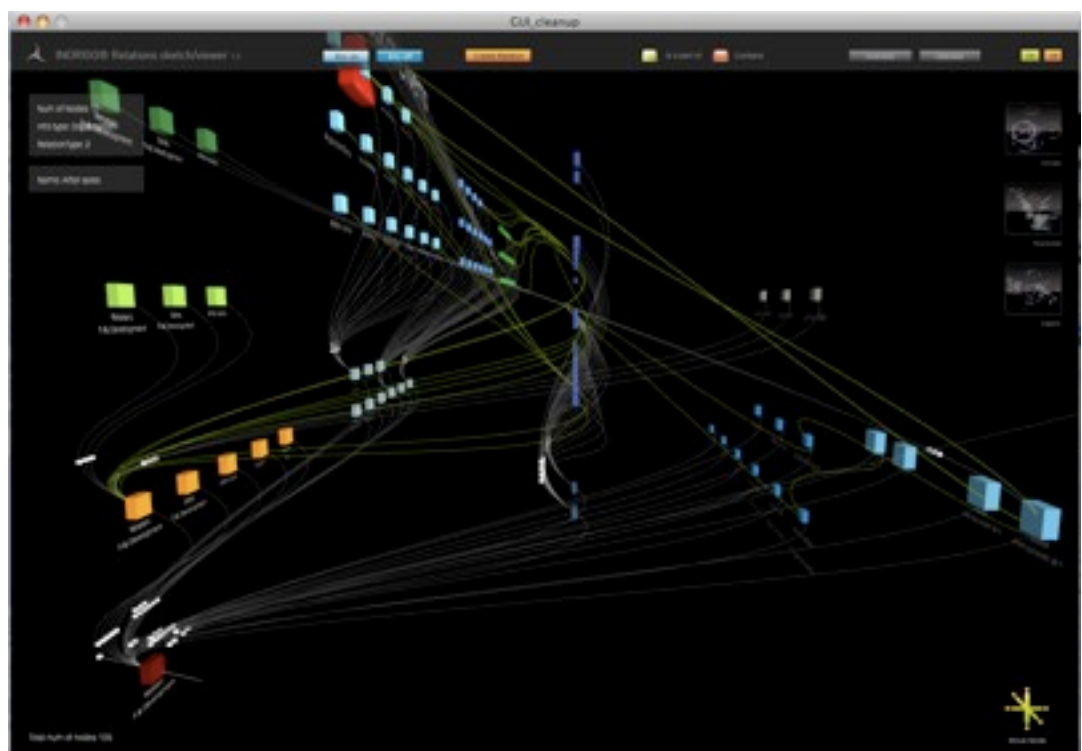
Research is needed in the realtime composition of multiple perspectives/views.

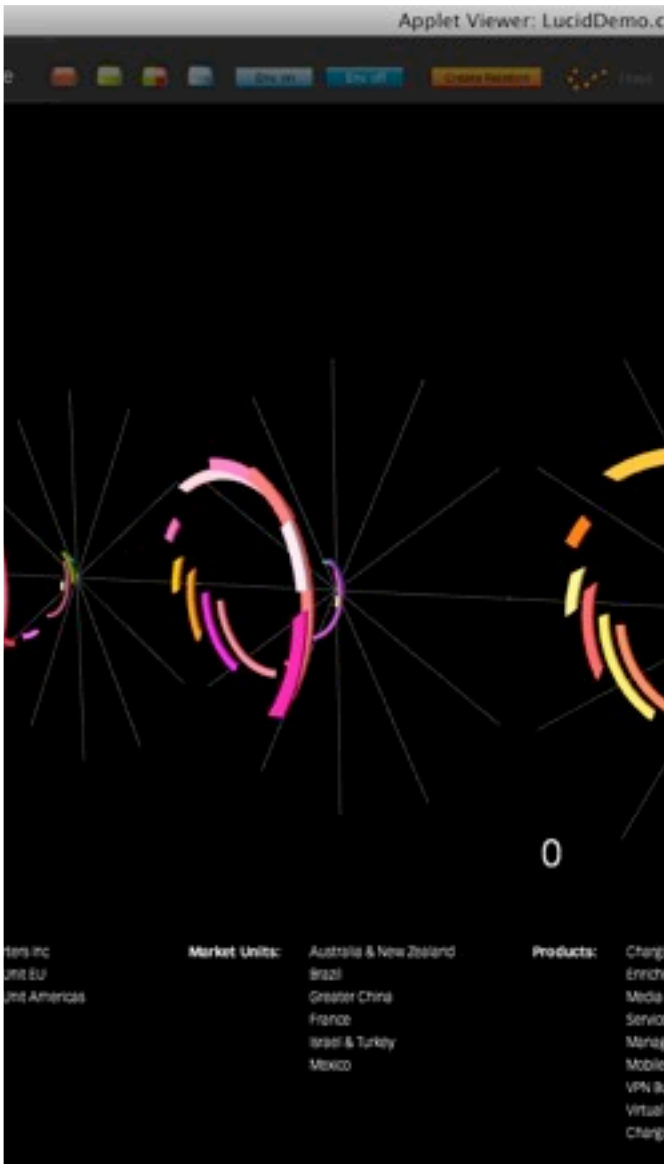
### *Cognition*

Research is needed regarding the cognition on the whole concept.

### Showing the information structure.

Here divided in organisation, client organisations, products and processes. The nodes has been neutralised and are displayed in generic shape.





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