Productivity and quality with Information Management

In the Vera Technology Programme launched by Tekes, the National Technology Agency of Finland, in 1997, construction processes and information systems are developed simultaneously. The target of the Programme is to promote the implementation and use of information technology and networks and to make it possible to manage the information flows during the entire life cycle of the building.
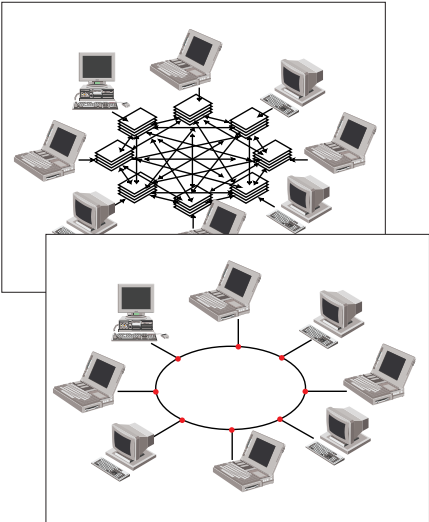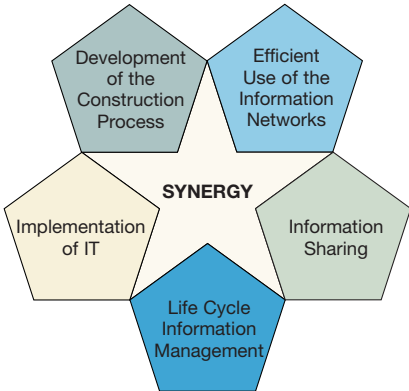

The target of the Vera Technology Programme is to help the parties in a construction project to form networks and share project data instead of paper documents.

In the Sanomatalo building project advanced IT applications were used in the comfort and energy consumption simulation already in early design stages. The software was developed by Olof Granlund Oy as a part of the Vera Technology Programme. Owner: Sanoma Corporation • Architectural design: SARC Architects Ltd • Building services design: Olof Granlund Oy • Structural design: Magnus Malmberg Consulting Engineers.

Focus on the life cycle information management

The life cycle information management, one of the five main themes of the Programme, has had and it will have a very central role among the projects of the Programme. Information management throughout the entire life cycle of the building is very important in the modern construction process and it forms a base for a broader application of the principles of sustainable development. In the future building, design and construction data must be part of the whole entirety and available for the utilisation of the building owners.

The five main themes of the Vera Programme

Strong emphasis on international cooperation

The Vera Technology Programme has been very active in the participation in the work of IAI, International Alliance for Interoperability. In the framework of IAI, a common database structure for all software in the AEC/FM industry, is under development. Using this IFC database structure, the various parties to a construction project may make use of and complement the jointly used database for the building. IAI is an international organisation with a membership of building owners, construction firms, architectural and engineering offices and software companies.

Research on product model technology in construction has long been active in Finland. This has created recognition of know-how world wide both in academia and the industry.

The Finnish impact in the development of the IFC database structure has been significant and Finnish software companies have applied it among the first companies in the world.

New competition factors improve the status of construction business

The Vera Programme affects operations in the AEC/FM processes. When the information flows are managed, the life cycle concept becomes a competitive factor. And when the fragmented construction process is managed and integrated, it is possible to offer the demanding customer the service he needs. Information becomes a part of the product.

The goals of the Vera Programme
- improvement in return on investments
- improving quality and overall profitability of construction
- increasing construction exports

The programme also creates new businesses for the AEC/FM industry. These include services primarily in the information technology.

Schedule and budget

The overall budget for the Vera Programme is FIM 250 million (EUR 42 million), of which Tekes' share is FIM 120 million (EUR 20 million). The rest is financed by the participating companies. By the summer 2000 the programme covers already over 100 projects, of which more than 70 are industrial and about 30 research projects.

The latest information on the Programme and its projects is available from the Internet **http://www.tekes.fi/english/programm/ vera/** and **http://cic.vtt.fi/vera/ english.htm**
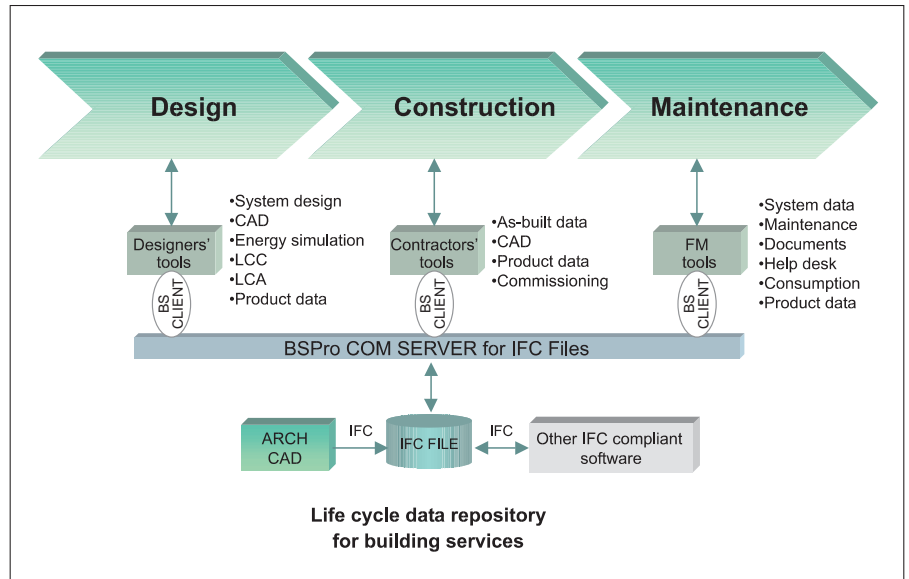
A new software called BSPro COM SERVER for IFC Files has been developed in the BSPro project managed by Olof Granlund Oy. It works as a link between the IFC based building database and current software products used by different partners throughout the building life cycle.

The project schedules can be linked to the product model of a building that allows the follow-up of construction work in design stage. The procedure has been applied by YIT, a Finnish construction company, in a project in Helsinki.

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