cohga
Integration made easy ™

CASE STUDY

Integrating cross-organisational systems at Trafikverket, Sweden.

TRAFIKVERKET

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Weave is a business integration framework for rapidly combining disparate information systems in an easy to use environment. It is based on open systems technology and it is independent from vendor specific technologies and proprietary application programming interfaces.

About Cohga

Cohga is a company with a focus on the development of systems integration products and the provision of associated professional services. Our philosophy is to use open, state of the art, and vendor independent technology to create products and solutions that meet and exceed client expectations.

On 1 April 2010, the Swedish national roads and railway authorities were merged into a single organisation called Trafikverket.

Today Trafikverket (Swedish Transport administration) is the agency responsible for planning activities for all modes of transport. The Authority also builds, maintains, and operates all national roads and railways.

The merger of two mature organisations with large information infrastructures resulted in their data holdings locked up in dedicated systems and domains designed to support specific processes or aspects of the operations. To access the individual systems in an integrated manner was extremely difficult.

In addition, the organisation faced the problem of staff extracting data for their own project needs. These uncontrolled copies increased the risk of making incorrect decisions with inaccurate data.

Like many other agencies, Trafikverket faces pressure to cut costs, with an expectation of reducing internal costs by 30% – 40% in the two years after the original organisations' amalgamation .

Trafikverket collects data at national and regional levels. At the national level, this primarily occurs in accordance with strict specifications, such as in the case of the NVDB (national road database) and GVT (common road and traffic data). Specifications are often missing at the regional level. Many projects have significant budget and time constraints and are initiated to deal with a specific problem. Thus, the review of previous surveys or field work information was
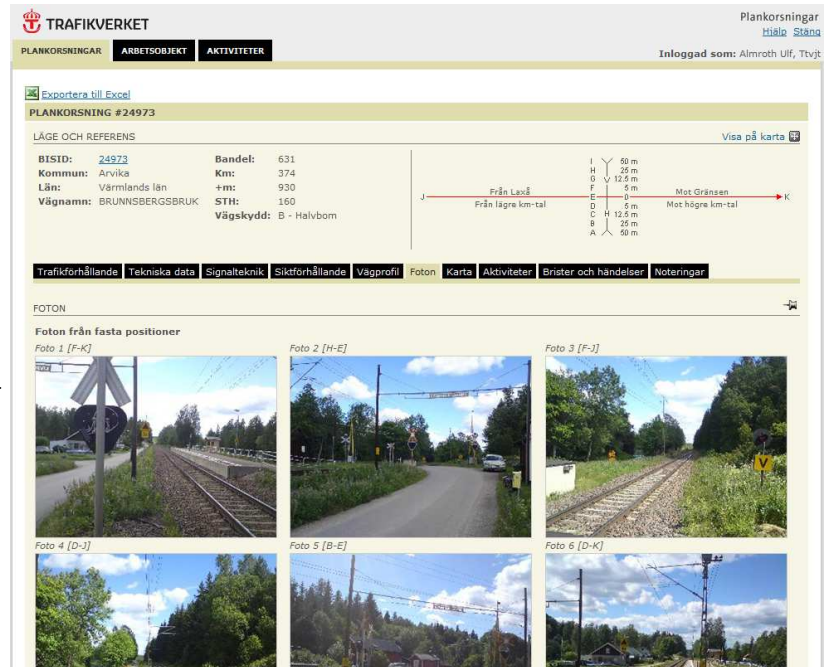
Business intelligence information on-demand

often omitted. The outcome was a lack of consistency in the data describing the same state or phenomenon at different points in time, which demands time-consuming editing at a later time.

In spite of the fact that "guides" are available on the Intranet, staff found it difficult to find relevant data. While being granted access to the data through using dedicated tools like AutoKaVy and Stånga, they were locked in silos. To compile a report or a map required the use of several tools, and (when possible) another tool to combine the exported data. For the preparation of more complex analysis or elaborated maps, most employees had to seek specialist assistance.

In this context, Weave was chosen for two roles in the administration of Trafikverket. Initially, to implement a true national portal called "Stigfinnaren" (Pathfinder), based on a prototype previously tried in the Stockholm region, followed in 2012 by the enhancement and replacement of some 15 individual web-based applications.

The two roles are connected in many ways, although they are considered as

separate projects. One project is the Stigfinnaren with a focus on transport planning tasks, with a second project for setting up a more efficient environment for the use of spatial data with the aim of cutting costs.

After evaluating other competing systems (international) Weave was seen as the business integration framework of choice with implementation services from Cohga and ESRI Sweden.

Weave is installed in the transport domain, a new IT domain where the systems from the original Roads and the Rail domains are being migrated. It integrates 2 ArcIMS map services and 4 Carmenta WMS services from the "road" domain with two ArcIMS services from the "rail" domain and 2 external wms services covering all of Sweden (background maps and aerial photos). Trafikverket has several spatial engines, 3 in the road domain and 2 in the rail domain. There are also 3 spatial connections to SQL Server 8 databases in the road domain. All these are also connected as data sources within Weave.

In addition, the system brings together 3 non geographic databases (property holdings, rights on property not owned & agreements/contracts) in the road domain and 2 databases in the rail
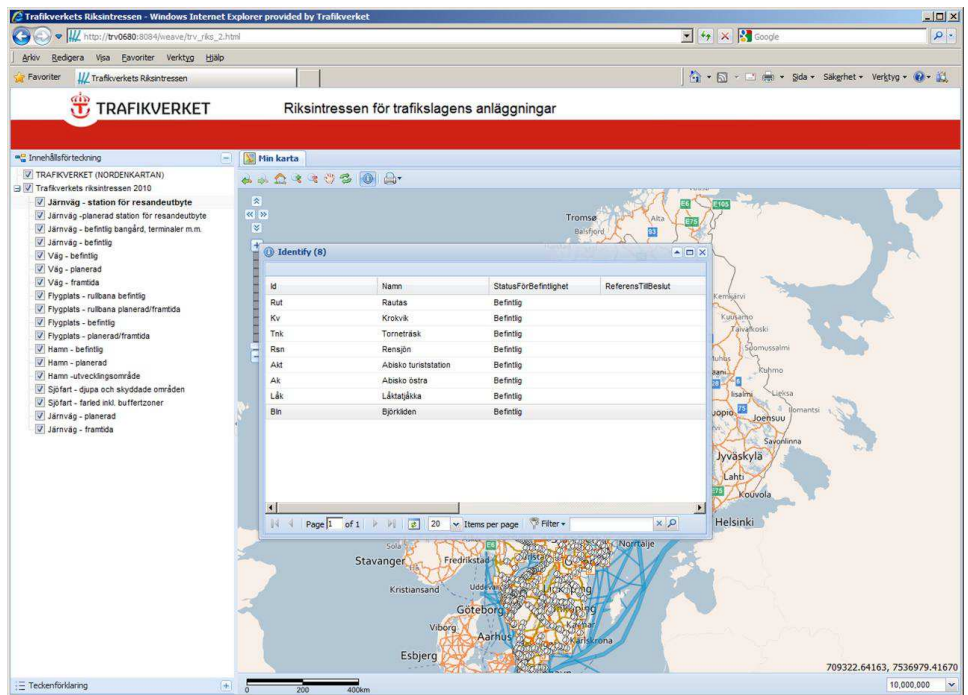
A national view of the organisation's information

domain containing information about level crossings and sites with data about facilities to transfer cargo between road and rail.

A future expansion will include connecting the Agresso financial system which is used for planning and monitoring. In addition, there will be a connection to the investment portal used for ongoing infrastructure projects (road & rail).

Another future connection is to the property administration system, not just to the databases of holdings & rights.

Presently Stigfinnaren has 2 clients, the "national pathfinder" published internally and one for external publication, restricted to "objects of national interest" (for road, railway, air and sea communication and transportation infrastructure objects that are considered to be of national importance for planning purposes at different levels).

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