SparxSystems CE: Belgian Railway relies on EA

In order to prepare itself for the liberalisation of national railway markets in 2023, the Belgian National Railway Company SNCB has developed an architecture continuum using Enterprise Architect over the last three years. With more than 1000 applications in use and a huge volume of data, this was not an easy task. Today, IT decisions can be made more easily based on reliable information, and the company is now able to move toward a modern IT landscape.
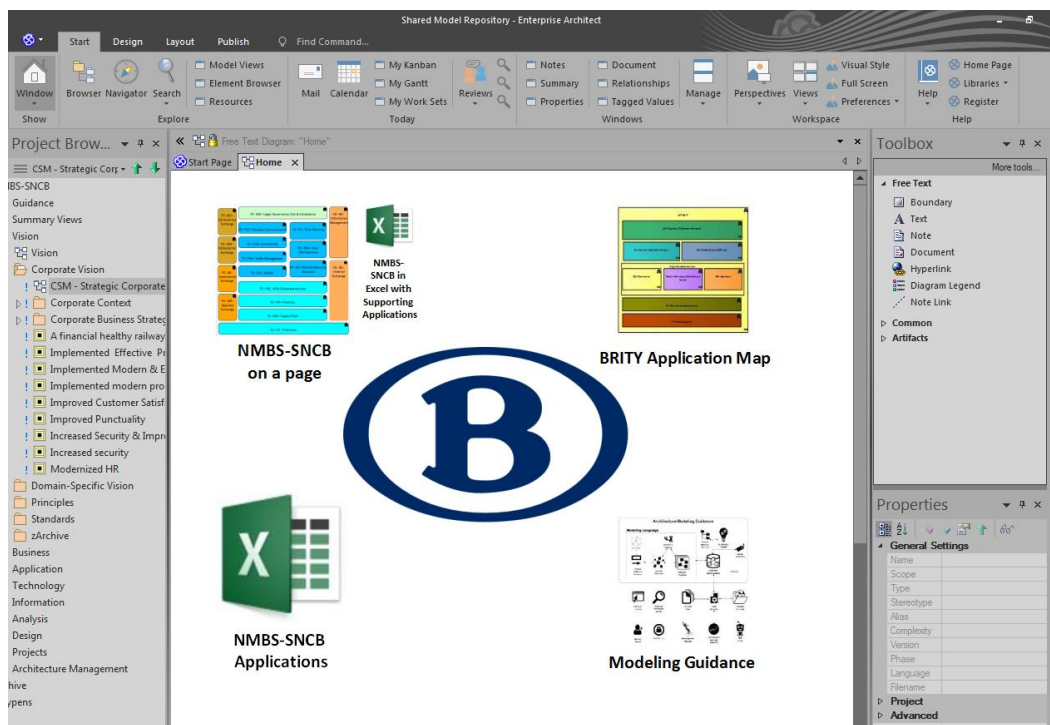

Luc Alix (left), Head of Enterprise Architecture and Alain Garsoux (right) in charge of Architecture Governance at Ypto, a subsidiary of the Belgian National Railway Company

Vienna/Brussels – In 2005, the Belgian National Railway Company was divided into three public companies, in accordance with European and Belgian regulations. This naturally had considerable consequences for the common IT: Thousands of components (applications, servers, networks, etc.) had to be recorded, analysed and reassigned. To ease this IT transformation, SNCB decided to create a new IT company called "YPTO", a 100% subsidiary. Ypto started to invest in its enterprise architecture with Enterprise Architect from Sparx Systems. Luc Alix, Head of Enterprise Architecture, hired Alain Garsoux to promote and improve Ypto's architectural knowledge database (continuum). Alix: "We very soon decided to define our own architecture framework by adopting and integrating major architecture standards like Archimate™, TOGAF™, BPMN, SAFe, etc.. The adopted prescriptive language helps the decision-making process by forcing us to address the important concerns and not getting lost in details."

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Enterprise Architect: Cost-effective and adaptable

Since a suitable tool is naturally required for the construction of such a complex IT landscape, the decision was made to purchase based on specificity. Enterprise Architect proved to be the cheapest and most adaptable solution. A. Garsoux explains: "Being active in the public sector forces us to regularly reconfirm the purchase, the good price of the platform has so far always made it possible to extend the licenses and to avoid migration tasks. This allows us to continuously work with the tool, which has now been ideally adapted and makes our architecture work much easier and more productive." Hans Bartmann, Managing Director of SparxSystems Central Europe: "We are pleased that Enterprise Architect has so far overcome the hurdle of tenders so well due to its excellent price-performance ratio, adaptability and openness to many languages and standards. At the same time we congratulate SNCB on their state-of-the-art IT architectural solution, which can also serve as a very good example for other companies!"
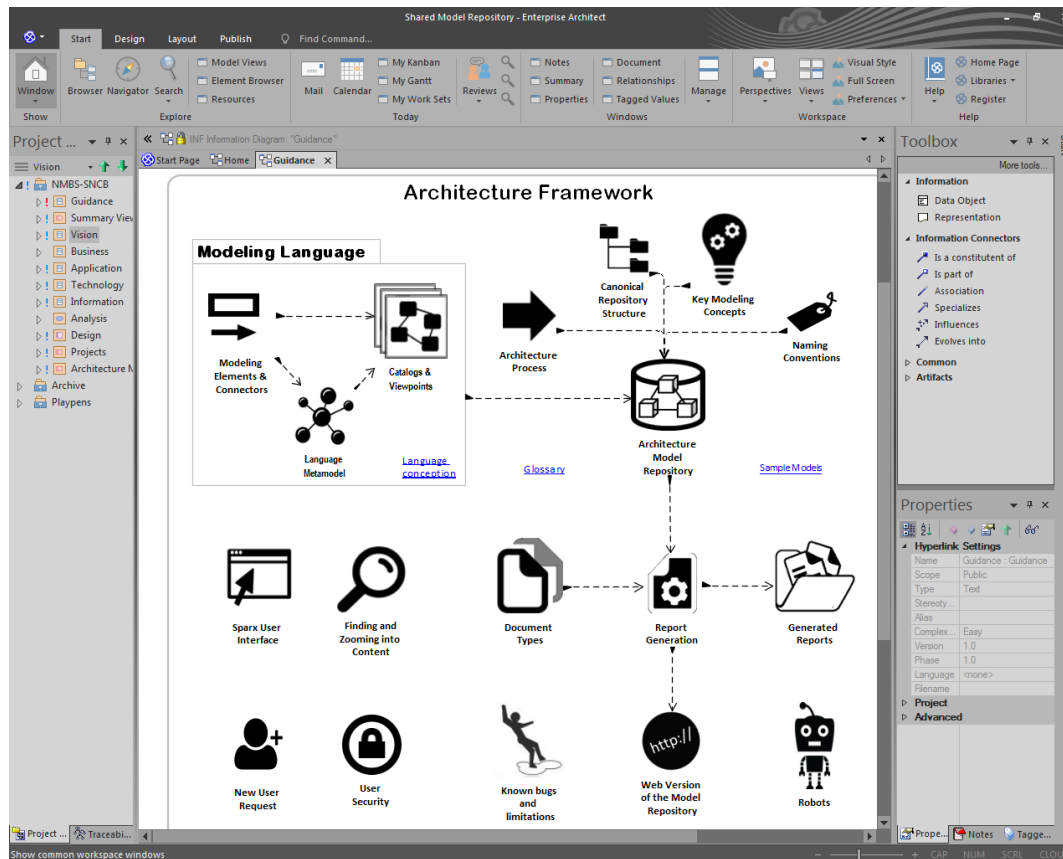

The EA Shared Model Repository provides an overview The EA Shared Model Repository provides an overview of the mapped areas and guidelines for modeling

Open tool to reduce complexity

During the embedding phase for the modeling platform, Ypto specified precise guidelines for solution architects. Standard architectural views were defined to support the work of 12 Enterprise Architects and 50 Solution Architects. "Thanks to pre-fab architecture diagrams, we are able to easily capture our current complex IT landscape into the architecture knowledge database (Continuum). The captured raw data is then transformed into actionable information to support decision making", says A. Garsoux. With this capture, a continuous documentation is automatically updated, which is of decisive importance for traceability and further developments.

The analysis of the existing applications showed for example that currently up to 20 applications are necessary for the handling of a single business activity. Since each of these applications (currently over 1.000) has to be maintained, the declared goal is to significantly

reduce this number. "For any new request for change, we always start by specifying the impacted business activities and the impacted applications. From this we can very quickly see - thanks to our architectural knowledge database - what things we want to keep and what needs to be renewed," says the IT architect.

The Architecture Framework provides an overall view of the IT architecture

New applications are subject to precise specifications

"Precise architectural principles have been defined for all applications, which must be adhered to. Only in this way can we ensure that we achieve a uniform architecture. The framework also helps us to make very efficient decisions on certain developments," explains A. Garsoux. The IT architect now describes the structure as mature and ready for roll-out in the company, which is already ongoing. But he also knows that this will require a lot of internal persuasion: "The commitment to this forward-looking IT architecture must now spread throughout the company, because this of course entails changes. Our delivered information convinced our management and we prove every day that we are taking a decisive step towards a prosperous future for SNCB!"

The SNCB

SNCB is Belgium's national railway company. It is a public company which provides the operation and marketing of railway services for national and international passenger and freight transport. It is also responsible for the maintenance of the rolling stock. SNCB employs around 21,000 people and has a turnover of 2.2 billion euros. It also owns shares in Eurostar and Thalys, as well as in the IFB and TRW branches. SNCB plays a crucial role in the development of sustainable mobility by providing a quality, reliable service that is in line with the market.

About Sparx Systems
Enterprise Architect is the world's premiere UML/SysML modeling platform. Produced in Australia by Sparx Systems since 1996, it has been implemented by over 650,000 users worldwide, due not only to its high performance at an unbeatable price. Enterprise Architect is a powerful yet intuitive modeling tool that facilitates any desired level of explicitness and precision in the development, analysis and documentation of even the most complex systems and architectures. Individuals and teams can use EA to design and produce software systems, perform business process modeling, handle requirements or model any process or system using standardized or custom modeling languages and frameworks with maximum reuse and traceability throughout. Pro Cloud Server and WebEA allow geographically-distributed model-based development and engineering teams to actively collaborate on any number of ongoing projects in real time. SparxSystems Software Central Europe was founded in 2004 in Vienna, Austria to provide individuals and organizations in Europe's core German-speaking and other economically-aligned markets with Enterprise Architect software licenses, training and support in their own language and time zone.