

Use case

How do you structure your data in order to enrich your **BIM objects** during project phases?

The implementation of property sets within the SYSTRA Group

Nowadays, the adoption of a common language is key to the success of engineering companies working in BIM. Companies operating on an international scale are often confronted with difficulty achieving coherence between the BIM processes in each of their subsidiaries around the world.

Beyond this need for uniformity within their structure, these companies must also deal with specific contractual or business requirements: each country has its own codes and its own standards, and each discipline involved in a construction project has its own needs and tools... that's a lot of challenges that BIM experts have to grapple with on a daily basis!

Structuring BIM data around a shared data repository has enabled the SYSTRA Group to rise to these challenges. Valentin MALEMANCHE, Marketing Manager at BIM&CO, and Lucas GIBAUD, BIM Production Specialist & Developer at SYSTRA, explain how SYSTRA has drawn on the technical solutions developed by BIM&CO to meet the BIM challenges involved in a project.

Overall objective

SYSTRA's objective is to facilitate access to BIM data in a secure and reliable manner, and as such that it is interoperable by all BIM SYSTRA players throughout the world.

The company's goal is also to harness project information using a tool that is adapted to suit all business units within the group, more specifically, through the adoption of an open standard.



Feedback on the project genesis

Work surrounding data structuring, which is essential to the implementation of a global process, began in 2015 within the SYSTRA group's technical division. The initial idea was to enhance the skill set of the various members of the division: *« It was during this period, and within this framework, that the benefits of BIM, and the roadmap for the various disciplines, were defined »*, sums up Lucas GIBAUD, BIM Production Specialist & Developer at SYSTRA.

Structuring work was then undertaken involving the implementation of a shared data repository within the various entities of the technical division: each entity indexed all of the objects that it had designed, defining the respective level of development for each of the objects, while taking into account the specific contractual and business requirements, as well as the geometric and information-related aspect, depending on the project phase.

To this end, several Excel files were used, cataloguing the level of detail in terms of the information and geometry expected for each category of objects.

« In 2019, we hoped to establish coherence between all of this data, so as to be able to capitalise on it and to share it on a group-wide level. This resulted in an evaluation of what had already been done, and subsequently in the creation of an internal classification system, with a view to adopting a common language specific to the various entities within the group. A common dictionary of properties has been compiled, containing the definition of the various object development levels during the course of the different phases of a project », explains Lucas GIBAUD.

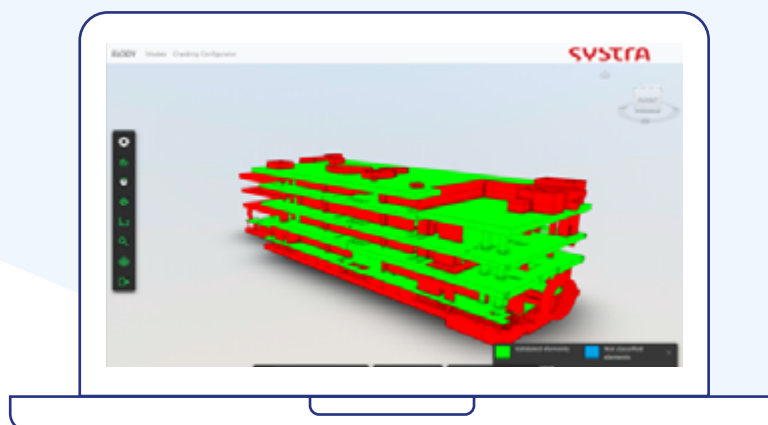


« A tool such as Onfly was selected with a view to enabling the direct centralisation of information within a single tool, and facilitating the work of SYSTRA employees, who would not have to work in Excel », adds Valentin MALEMANCHE.



Onfly, a specific response for the deployment of this standard

The Onfly area dedicated to Systra, referred to internally as the “SYSTRA Object Register”, is a BIM data repository, hosted in the cloud and shared within the SYSTRA group. Specifically, it enables each player within a project to draw on a data structure that is standardised within the SYSTRA group for use in his/her project, while recovering BIM objects that respond specifically to his/her needs.



In order to create this data repository, SYSTRA utilised property sets, which represents a simple solution by which to easily manage the enrichment of objects with data. In SYSTRA's case, a property set represents all of the properties that are relevant depending on the ongoing project phase. The set enables the assignment of properties to one or more objects, in just a few clicks. *« In order to be able to use property sets, configuration work must be carried out in advance within Onfly. The BIM Manager, or administrator, tags properties in accordance with the nomenclature of his/her project phase, in order to define the relevant properties for each of the phases. The SYSTRA teams can thus apply their naming convention online and implement the data repository directly within the library of objects »*, explains Valentin MALEMANCHE.

« The property sets, coupled with our BIM data control application, eLODy, represent a genuine guarantee of the reliability of the BIM data used within the SYSTRA group's projects! », concludes Lucas GIBAUD.

Although the project phases represent the main use case for the property sets, in reality their application is manifold. In fact, they can prove useful depending on the different business units, as they enable the definition of properties specific to the requirements of the various business software applications. The property sets can also be used with a view to easily applying properties specific to the standards applicable within a territory, or specific to a type of project.

www.onfly.io | www.systra.com

