

The research project looks at how to integrate indicators for sustainable development into a building information model. The idea is to combine the fields of sustainability, digital construction, and renovation.

The case study for the ongoing research is the listed building 'white-hall' which is part of a factory site and is going to be transformed into the faculty of architecture of the HEIA-FR.

The data requisitioned from the existing building is used to create a digital twin. It will undergo several iterations in order to arrive at an optimal version for reuse and simulation of possible designs. With the aim of carrying out a precise analysis of the state of the building, its structure, its components and its materials in order to optimise the choices for a renovation that takes into account the values of sustainable development.

To create a reliable and accurate decision model we use various tools such as LIDAR, drone, photogrammetry combined with conventional data such as plans, documentation and knowledge of renovation and history specialists as well as formal information from occupants.

In order to build a model that can be evolving and participative for future users and visitors to come.

The BIM-Ren research aims to provide an innovative approach to the integration of a precise, reliable and applicable methodology for buildings with heritage value.

## Integrating SD indicators into a BIM of a factory heritage site

*Sandra Rihs*  
**HEIA-FR**