

# IFC-based Regulation Impact Visualisation

## Task

Design and implement an IFC-based regulation impact visualisation system:

- Define a data model that links regulatory requirements to IFC elements, supporting both global and element-level impacts.
- Implement a visualiser that allows users to
  - select regulations and inspect their impact on the building, including affected elements and scope, and
  - select IFC elements and retrieve all applicable regulations.
- Design hierarchical or multi-level representations of regulations to enable structured filtering and exploration, optionally enhanced with embedding-based techniques.
- Optionally, integrate an IFC-specific regulation question answering component to support natural-language interaction with the model–regulation links.

## Project Characteristics

Modeling:	<input type="checkbox"/>
Mathematics:	<input type="checkbox"/>
Programming:	<input type="checkbox"/>
Science:	<input type="checkbox"/>

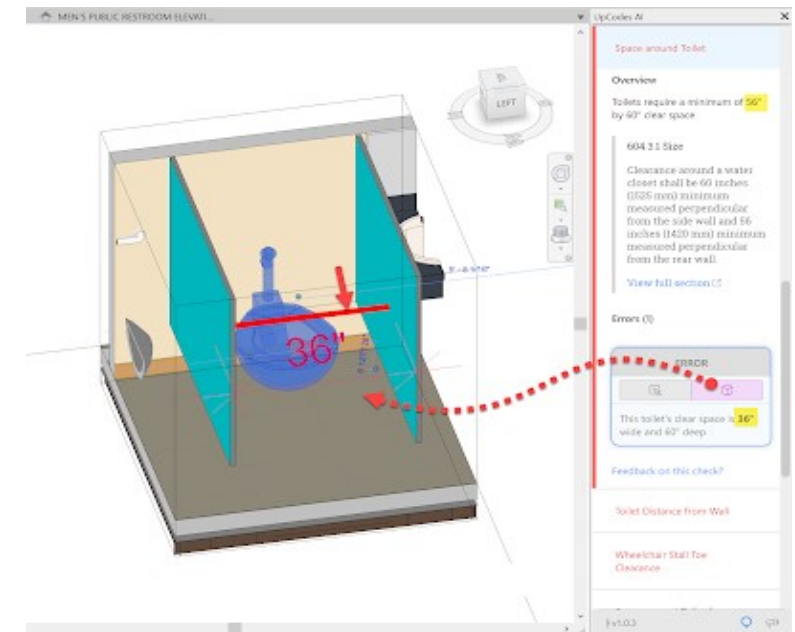


Figure 1. Real-time IFC/BIM-based code compliance visualisation [1]

[1] <https://bimchapters.blogspot.com/2019/05/upcodes-for-revit-real-time-code.html>