Digital design and modelling ensures that clients and users get the building results they want. Digital 3D models provide better collaboration between project parties, to ensure that the project is well-coordinated before the construction phase begins.

3D design
Ramboll has more than 10 years of experience with 3D design from both small and large projects. 3D design makes it possible to improve coordination between disciplines. The client gets a project where solutions are optimised and easy to construct. 3D models allow for clash detection in all phases linking the architectural, structural and building services. Each discipline has its own 3D models to work with. These models can be combined into an aggregated 3D model. The aggregated model forms a strong basis for communication and decision-making throughout the project lifecycle.

Building Information Modelling (BIM)
BIM modelling offers valuable data for use during the entire project. Ramboll uses this information from the BIM models for calculation and simulations and in connection with sustainability certification such as DGNB. BIM models can be used as well for operation and maintenance.

3D design tools in Ramboll
Ramboll focuses on 3D software which is tailored to match client and project needs.
- For structural service, we use Tekla Structures or Autodesk Revit.
- For building services, we use Revit with/without MagiCAD.
- Ramboll also uses structural design tools such as Robot and FEM-Design, which can be linked directly to the models.

It is essential that the 3D tools can exchange data seamlessly to ensure efficient interdisciplinary collaboration. Efficient collaboration is the backbone in a digital design process, and for this reason Ramboll fully supports the open building, SMART format, IFC. Furthermore, we use the market-leading software to manage consistency and clash detection, to ensure that the final design has the highest possible quality. Such checking is an integrated part of the design process at Ramboll.

For cost estimation in all building phases, we primarily use the calculation tool, Sigma Enterprise.

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