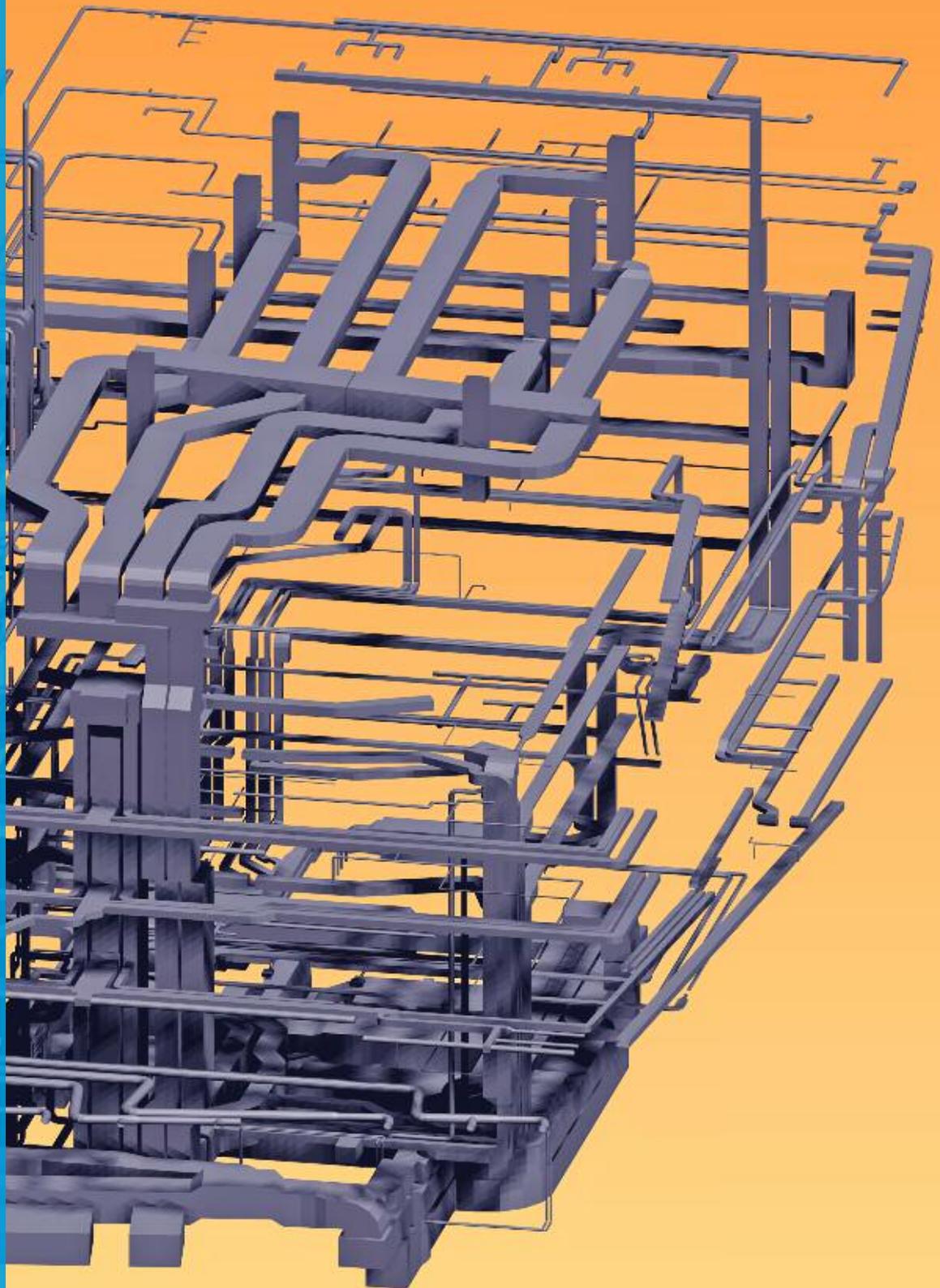


MagiCAD at work:

Rambøll takes the lead in 3D design

Austurhöfn, Iceland



The Icelandic National Concert & Conference Centre was a major challenge

When Rambøll started this project, they knew they were in for a challenge. At the project's peak, 30 to 40 consultants worked full time on the project. During the entire project, an additional 60 engineers and specialists were involved for shorter periods.

Rambøll was assigned responsibility for building services and structural design. All design work was to be integrated into one digital project model in 3D. MagiCAD is their choice for building services – piping, ventilation and electrical systems.

3D – the only way to go

For Rambøll, working in 2D is no longer an option on “green field projects”. The whole organisation is being trained and ready for 3D projects, following the Rambøll strategy.

In the Icelandic project, the architectural design was challenging for the technical consultants. Working in 3D with MagiCAD and Tekla allowed Rambøll to reach a higher quality. They were also able to solve any installation problems and collisions at the model stage, not during actual construction.

Another reason for 3D is the ability to present all design work to contractors and Icelandic authorities during the project, in a clear and understandable way. Visualising the end result from 2D drawings is never easy, and with such an artistic building it would be almost impossible, even for a trained eye.

Government clients in Denmark are already including 3D as one of their criteria in Digital Construction ('Det Digitale Byggeri' in Danish).

“MagiCAD is a stable software package with a great deal of building objects at our disposal. The close collaboration with the supplier is also an advantage, particularly in a project of this size. It's probably the world's largest project model of its kind”, says Geert Stryg, Project Manager at Rambøll Denmark.



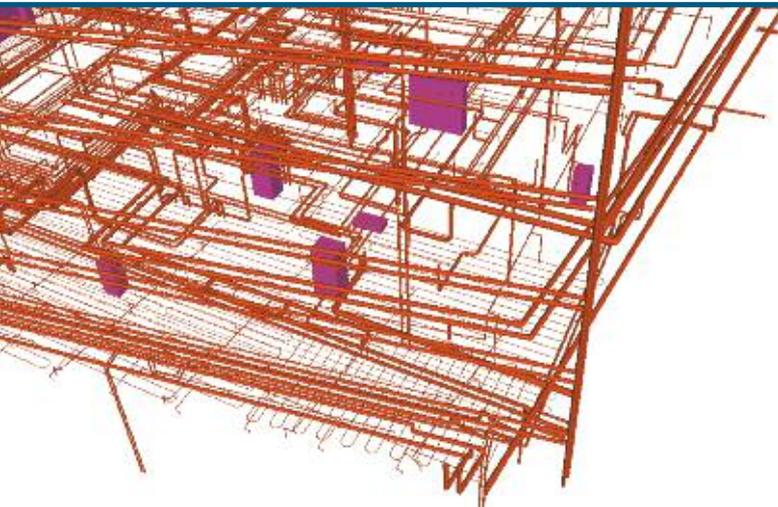
Rambøll has been using MagiCAD in a variety of small and large projects since 2004. The choice of MagiCAD was based on a number of important criteria. Rambøll's strategy is to be a leading Digital Construction company. This calls for easy-to-use building services software. It must be capable of 3D construction in a Building Information Model (BIM) workflow, using IFC standard for data import/export with other applications. MagiCAD fulfilled their requirements, and has been an essential success factor in the Icelandic National Concert & Conference Centre project.

BIM is better with IFC

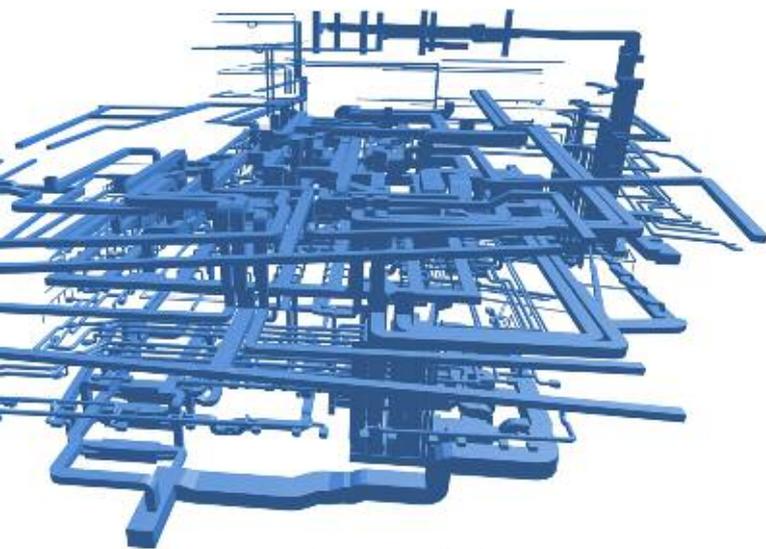
Building Information Model (BIM) is no news to Rambøll – it's already a natural way of thinking within the organisation. In short, they see BIM as a cross-discipline concept for the coordination of information. And this coordination requires a common language, IFC.

MagiCAD allows users to save drawings according to the IFC standard with outstanding quality. MagiCAD is IFC-certified at the highest level, Step 2 of IFC 2x3. The IFC files can be exported to other IFC-compatible programs for calculations, and for viewing with common viewers such as Solibri Model checker or NavisWorks.

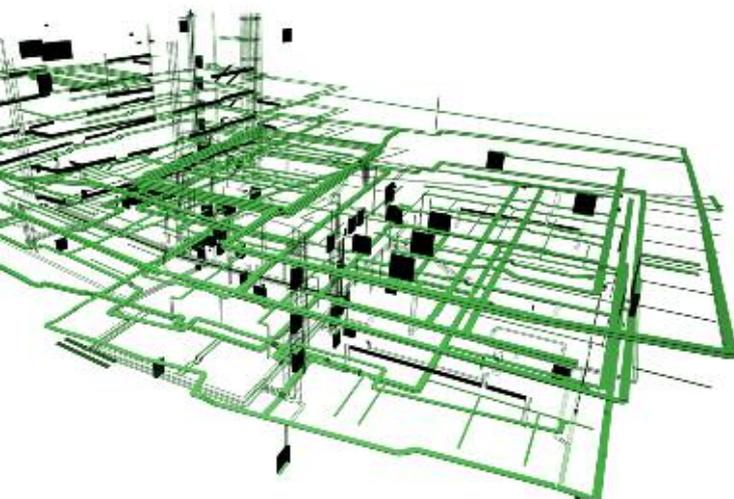
“It’s probably the world’s largest project model of its kind”



MagiCAD Heating & Piping



MagiCAD Ventilation



MagiCAD Electrical

All-out digital

Rambøll set out from the beginning to run this as a “paperless” project. The digital models from MagiCAD and other programs are all considered as originals. This makes it possible to work digitally all through the project, even on the building site.

All drawings and documents are handled through the project web, which is available to everybody involved in the project. This web tool has been developed by Rambøll and is now available for purchase by other companies.

A steep learning curve

Rambøll has taken a great leap into 3D construction with the Icelandic project. Now they know they can handle even the largest and most complex building projects. Collaboration and communication has worked according to plan, internally as well as with external partners. Experiences gained in this project are now carried along into new projects. One is the new headquarters for Rambøll Denmark, currently in the planning stages.

Rambøll Copenhagen

Rambøll’s Copenhagen office was responsible for the Icelandic National Concert & Conference Centre. Rambøll Copenhagen has the largest planning and design environment under one roof in Northern Europe, employing more than 240 highly skilled experts within the field of building design. It operates both within the Danish capital and in a broad international context.

Rambøll Copenhagen is part of the Rambøll Group, which employs more than 7,000 people. It’s a leading Nordic company operating in a broad international context from 116 offices in the Nordic region and the UK, and from 24 permanent offices in the rest of the world. The company provides engineering, consultancy, product development and operating services within the areas of buildings, infrastructure, industrial processes, energy, water and environment, telecommunications, management and IT.

www.ramboll.com

A hot design for Iceland

The Icelandic National Concert & Conference Centre will be a spectacular landmark for Reykjavik. It is situated in the capital's East Harbour – Austurhöfn in Iceland. The 32,000 m² centre is part of a master plan for the area around the port of Reykjavik. Besides the concert and conference centre, it will include facilities for the Icelandic Symphony Orchestra, a large 5-star hotel and spa, an academy of art, bank headquarters, a cinema and new city square and shopping precinct along with an array of new housing and commercial properties along the fjord.

Total investment (est.) € 130 M
Total floor area 32,000 m²

Architect
Henning Larsen Architects
Artist
Ólafur Elíasson

Technical consultants
Rambøll Denmark, in cooperation with the Icelandic companies VGK Hönnun Hf and Rafhönnun Hf.

Project timeline

- 2000 Decision taken to construct a concert hall and conference centre at Reykjavik's East Harbour
- 2004 International PPP-competition held in order to get planning proposals
- 2005 The Portus Group was appointed as development company by Austurhöfn-TR, a company owned by the Icelandic state and the city of Reykjavik. Construction work begins
- 2008 Early in 2008, Rambøll hands over its part of the project to the contractor
- 2010 Grand opening

PROGMAN OY

Progman Oy is a software house specialising in the development of software for building services. One of its most successful products is the MagiCAD program, a market-leading AutoCAD application for heating, piping, ventilation, electrical design and 3D building models. The company employs 40 professionals who are all eager to meet your needs. Our subsidiary CADCOM AB represents our expertise in Sweden. In addition we have partners in Norway, Denmark, Iceland, Lithuania, Latvia, the Benelux, Russia, Ukraine and Turkey.

www.progman.fi