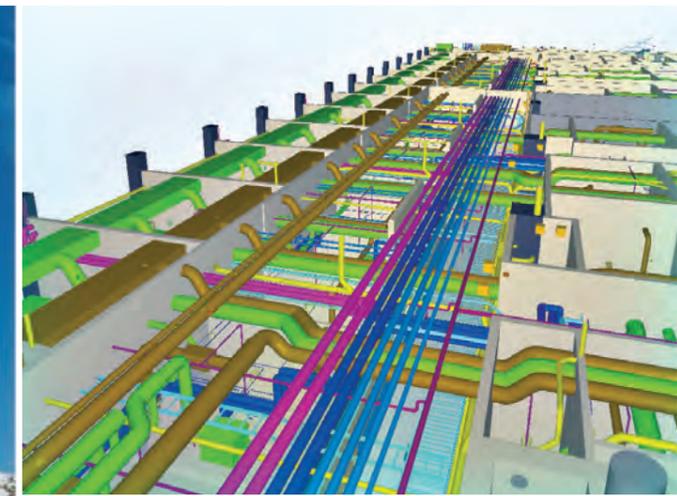


BIM in Building Projects

# New Karolinska Solna

Solna, Sweden



“We will not only use BIM to do production calculations and quantity take-offs, but also when we physically mark teledata in the project. We will let the designers use a specially designed software that will allow us to save about 1,000 hours of double work. All thanks to BIM.”

**Andreas Udd**  
Project Manager, Skanska Installation

The NKS Project is the first Skanska project in Sweden to have BIM requirements in the contract. This means that Skanska has been contracted to work in BIM and to deliver an object-oriented BIM model with information that is linked to the model through appendices or related databases. This BIM model will provide the client all information needed for FM services and future reconstruction.

Having a contractual delivery on BIM, a thorough basis for BIM usage throughout the project has been created. Even though the project has just recently got under way, BIMs position as a common tool is already winning grounds within the organization.

Intelligent 3-D design is a requirement in today's construction business. In the NKS project, every designer is allowed to use the software of their choice as long as export formats are compatible with other designer software. Project members use a central server to exchange model files weekly and Skanska chairs bi-weekly model coordination meetings where hard and soft clashes as well as better solutions are discussed. The models are also used to simulate movement of medical equipment and to assess accessibility of facilities management services.

The intelligence of the models is used to support the work of the project team across all phases. It

provides functions such as procurement and planners with detailed and efficient information takeoffs, and as a result time has been freed up to optimize and evaluate options and work with value-added tasks.

Working in close collaboration with Skanska UK, the team has now started to implement production progress tracking using the model. Combining experiences from the UK with new ideas of how to work with the tool, Skanska is now able to utilize it at an earlier stage. Working this way provides everyone involved in the project with a good visual tool of how work is progressing.

Using the model as a basis for facility management requires a clever way of locating objects; therefore an asset code was developed and is continuously implemented by designers as the design progresses. The asset code specifies location, function and product and can be, for example, electronically read by service technicians in the field to enable them

to register service errands and extract technical documentation and manuals on the spot.

New Karolinska Solna	
Gross area	320,000m <sup>2</sup> (3,400,000sf)
Floors	5 (mantel) – 11 (some care centers)
Rooms	approx. 8,000
Beds	600 + 100 outpatients, 100-bed patient hotel
Operating rooms	36
Radiation bunkers	8
Reception rooms	approx. 180
Price of building	SEK 14.5 billion (EUR 1.5 billion, USD 1.9 billion)
Price of services	SEK 294 million annually (EUR 29.5 million, USD 37.8 million)
PPP companies	Skanska, Innisfree