



# BIM Case Study References

09.2022

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# The real value of BIM?

## Saving time and money for everyone involved in a building's design and construction in a building's design, construction and security



Marc Ameryckx, BIM Development Manager at ASSA ABLOY Opening Solutions EMEA, talks about the benefits of a process which is much easier than many imagine

**For someone who may be totally new to the BIM process — whether an architect, specifier or building contractor — can you explain what it is?**

Every building project needs coordination of vast amounts of information to move it from the original idea to bricks and mortar. Fundamentally, BIM is the digitization of this process.

One important thing to understand is that it's not just software, and not just the visual model, but rather the process or workflow itself. The 3D renderings so often associated with BIM aren't only about aesthetics: The data behind the images is very important.

All the products and materials used within a construction process should be included, with as much high-quality data as possible assigned to them. All stakeholders then have access to this centralized source, *"the model"*, which ultimately helps to minimize design and engineering errors. When one stakeholder makes changes, the update propagates through the entire system. Everyone is always up to date.

Effective BIM helps eliminate mistakes before they happen or allows you to identify them as early as possible: The earlier you solve these problems, the less they cost.

**For an architect or building planner, what are the key benefits of involving security specialists in their BIM process?**

There is a major education benefit for architects and engineers, who are often not aware of the complexity of doors and security solutions.

As security solutions have developed and become more sophisticated, so has their impact on the overall building environment. If doors, entrances and access control solutions don't have the features required by the building manager from the outset, it can become a real challenge to implement this at a later stage.

Security systems are expensive and now crucial components within buildings. They should be

factored in as early as possible. Partnering with a security manufacturer who has BIM expertise is the best way to do this.

**Beyond design and construction stage, can an effective BIM process deliver benefits further down the line?**

BIM has benefits through a building's full life-cycle. If good quality data is put in at the start of the process, there are obvious long-term benefits for those maintaining and controlling the building once occupation begins. For example, the more data you have on the security products and solutions you have, the better you can maintain the building and act when needed.

Security managers should be pushing BIM workflows and data quality, so they can use the *"as built"* model in their assessments and understand systems that have been selected. If specifiers are thinking about security devices early in the process, this data is available for future use by maintenance or in consultation if something goes wrong.

Rather than having lots of documents stored in different places — many of which inevitably get lost or misplaced — a centralized, easily accessible BIM ecosystem will have all the data available that is required.

**It all sounds slightly futuristic. Is this something stakeholders should be looking at now? Or planning for the longer term?**

BIM is quickly moving to centre-stage, especially in complex and/or public building projects. Its benefits are too great to ignore: in cost reduction, on-time delivery, futureproofing buildings and creating a trustworthy data store for facilities management down the line.

For anyone who wants to get the most from their building over its full life-cycle, BIM is becoming a must.





### Looking further forward, where does the future of BIM lie?

In short, with better data and more sophisticated applications of that data. For example, we're beginning to see the development of "*digital twins*". Users can create a digital twin of a building to simulate different situations in advance, to find out what may happen if systems are changed. For instance, security managers could assess the impact of implementing an upgraded access control solution, reducing the risk of unforeseen complications. This ultimately relies on high-quality, accessible data.

The BIM process can sound daunting, as can the specification of security devices and solutions. This is why we have established regional ASSA ABLOY Opening Solutions BIM and Specification teams across the EMEA region. Digitization of the entire building design and construction process has already begun. We have the expertise to help architects, specifiers, planners and building contractors to offer effective, efficient BIM service.

ASSA ABLOY Opening Solutions BIM consultants have experience supporting projects from a single door up to 15,000. To learn more, please visit URL

<https://www.assaabloyopeningsolutions.co.uk/en/projectspecification/specification-bim/assa-abloy-openings-studio/>

# Accessing practical support with BIM and green building certifications



Marcello Aiolfi, Quality Director at ASSA ABLOY Opening Solutions EMEA, talks about supporting green building projects

## As buildings get smarter and greener, the construction process is digitizing to enable this.

Sustainability is becoming a more urgent goal for building owners and users. One result is fast-growing the demand for green building certifications — and therefore specification.

At the same time, the method of delivering these specifications — alongside the information that accompanies every project — is beginning to digitize. Building Information Modelling (BIM) is now a key tool.

BIM is not just a 3D design of a finished building. It is a data-rich, digital collaboration process. Its goal is to place every product and component in a comprehensive model with ongoing value through a building's life-cycle.

## Why green building is becoming urgent?

For both new builds and refurbishments, construction's direction of travel is clear: smarter and greener. Motives for this shift easy to find. According to UN Environment Programme estimates, buildings consume around 60% of the world's electricity<sup>1</sup>. Reducing waste with some urgency is critical to cutting carbon emissions and addressing climate change.

The importance of "greening" applies to technologies deployed inside a building, too — including security and access control systems. In a survey for ASSA ABLOY's most recent *"Wireless Access Control Report"*, 90 percent of industry professionals said sustainability would influence their future security commissioning<sup>2</sup>.

Green building's return on investment (ROI) can be financial as well as ethical. In another study, property experts Knight Frank *"found a positive and significant effect of Very Good, Excellent and Outstanding BREEAM ratings on prime central London office rents – ranging from 3.7% to 12.3% premiums."*<sup>3</sup>

And the benefits are not only in asset value: These buildings are more energy efficient, which helps reduce a growing and unpredictable running cost. They also promote healthier and more productive workforce and are future-proofed against the risk

of future regulatory changes, according to the World Green Building Council<sup>4</sup>.

## BIM and green building projects

BIM makes the process of building design intelligent and adaptive. To the relatively new field of green building, BIM brings transparency and knowledge sharing.

*"ASSA ABLOY has local BIM and specification consultants based all over the world,"* says Marc Ameryckx, BIM Manager at ASSA ABLOY Opening Solutions EMEA. *"They can enhance any project team with specialist knowledge about door solutions and technologies; regional regulations and certifications around the door; and much more."*

This is especially valuable when specifying security solutions, which is often complex and quickly eats into design time. With detailed specifications supplied digitally at an early stage, architects render door and security solutions accurately as soon as possible. This way, aesthetics and usability are not disrupted by last-minute changes.

In addition, the value of BIM extends through a building's life-cycle. The digital model — end-point of a successful process — becomes a centralized store for up-to-date documentation. This final resource can inform site audits, health and safety policy, maintenance schedules, refurbishment projects and more.

## ASSA ABLOY supports green building certification

*"Globally, ASSA ABLOY has great expertise in supporting green building projects,"* explains Marcello Aiolfi, Sustainability & Quality Director at ASSA ABLOY Opening Solutions EMEA. *"As well as local support through the specification and BIM process, we have created a number of resources to support a submission to the most important global green building certification schemes."*

Detailed contribution sheets for six leading green certification schemes are available to download: BREEAM, LEED, Green Star, WELL, DGNB and HQE<sup>5</sup>. Each sheet identifies the contribution made by multiple ASSA ABLOY products and



technologies towards criteria or credits in the scheme. They cover electronic access control solutions; doors and door closers; mechanical and electromechanical locking systems; and accessories including handles, panic devices and drop seals.

*“ASSA ABLOY Group is also an official partner in the World Green Building Council’s Europe Regional Network,” Marcello adds. “This enables us to advocate for the transformation of buildings and the construction sector — and to help communicate the advantages of greener building.”*

### **Wireless solutions can be energy saving**

As home of the renowned St Andrews Prize for the Environment, the University of St Andrews has a commitment to sustainability at its heart. For student accommodation, managers sought an energy-efficient access solution which respected and reflected these principles.

New Aperio wireless access control devices integrate fully with both the university’s existing security system and their student ID card. Facility managers enjoy the efficiency benefits of controlling access from a single point, in real time, for multiple buildings.

In comparison to a wired access control solution, Aperio devices offer significant energy efficiency benefits. Escutcheons are wireless, so can be installed with little energy use and no need for cabling to the mains. They draw no power when idle and their standard batteries consume minimal energy during operation. Maintenance typically demands nothing more than a battery change every couple of years.

*“Aperio gives us central access management and control and contributes to our award-winning track record in energy efficiency,” says Pauline Brown at the University of St Andrews<sup>6</sup>.*

*“Here and elsewhere, a wireless access control solution can be an important part of the picture as we design buildings and businesses to help create a more sustainable future,” adds Marcello.*

1: [www.euenergycentre.org/images/unep%20info%20sheet%20-%20ee%20buildings.pdf](http://www.euenergycentre.org/images/unep%20info%20sheet%20-%20ee%20buildings.pdf)

2: <https://campaigns.assaabloyopeningsolutions.eu/wareport2021>

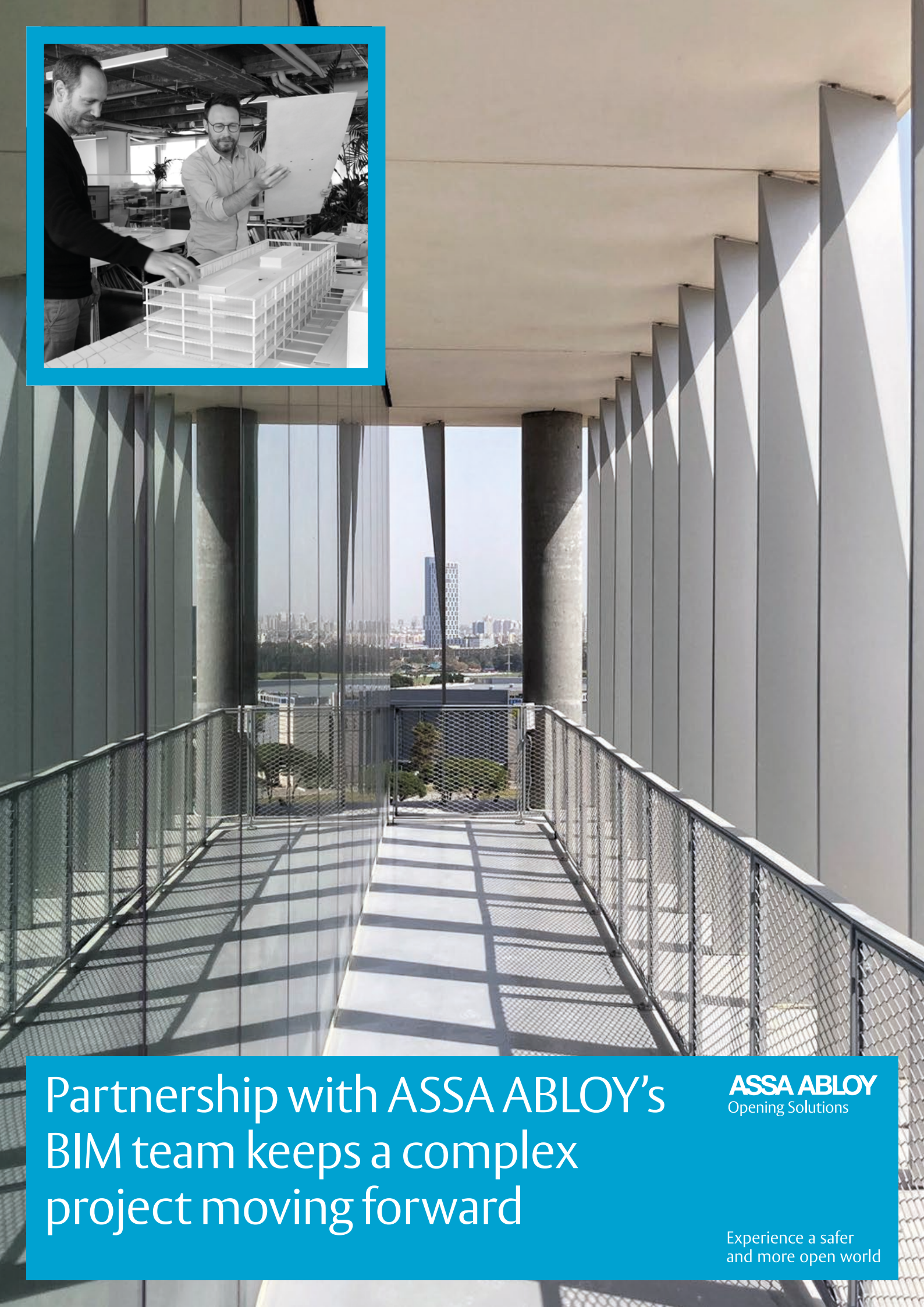
3: [www.knightfrank.com/research/article/2021-09-02-the-sustainability-series](http://www.knightfrank.com/research/article/2021-09-02-the-sustainability-series)

4: [www.worldgbc.org/news-media/business-case-green-building-review-costs-and-benefits-developers-investors-and-occupants](http://www.worldgbc.org/news-media/business-case-green-building-review-costs-and-benefits-developers-investors-and-occupants)

5: [www.assaabloy.com/hr/en/solutions/topics/bim-specification/bim-green-buildings/green-building-certification](http://www.assaabloy.com/hr/en/solutions/topics/bim-specification/bim-green-buildings/green-building-certification)

6: <https://youtu.be/Zo8UxL0VYGE>



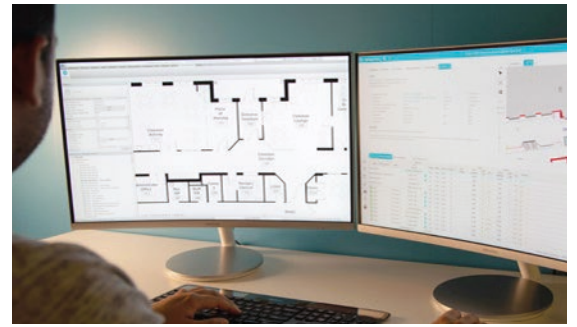


Partnership with ASSA ABLOY's  
BIM team keeps a complex  
project moving forward

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*“Openings Studio™ software introduced us to a whole new way of thinking and efficiency.”*

*Nimrod Schenkelbach, Architect in charge*

## Openings Studio™ works seamlessly with integration with Autodesk® Revit®



*“A direct channel between requirements and supplied solutions was very important. The software allowed us to manage all the data efficiently and keep it up to date.”*

Daniel Zarhy, Partner

**BIM partner:** Zarhy & STUDIO PEZ, Tel Aviv, Israel ([www.zarhy.com](http://www.zarhy.com))

**Type:** Architect

**Project:** Broadcom R&D Center at Tel Aviv University, a mixed-use university building to house both student classrooms and offices for faculty professors and Broadcom semiconductor engineers.

**Specification size:** 450 doors

**Date:** 2018

**Segment:** Education

**Software:** Autodesk® Revit® & Openings Studio™

**ASSA ABLOY hardware supplied:** Abloy electromechanical locks; TESA panic bars & U-shaped handles; Rockwood plates & handles



### Key project challenges

- Create a **fast start-up curve** for a customer who was new to the multidisciplinary BIM process
- Maintain the **flow of up-to-date information** for a complex, constantly changing project
- Bring additional, independent **security and safety expertise** to the project's BIM team
- Coordinate **knowledge transfer** between stakeholders through planning and construction phases



### Solution

ASSA ABLOY's expertise and experience in building information modeling (BIM) helped Zarhy Architects to provide ongoing ideas and specification support. This was essential in a multifaceted project. Our BIM professionals were fully integrated with the project from the beginning of its planning phase. They were available throughout — including via direct communication channels within Openings Studio™ software — to help ensure all required specifications for the project were met. According to Nimrod Schenkelbach, Architect in charge, ASSA ABLOY's **“deep understanding of complex safety and security requirements”** helped them identify and deliver creative solutions to their clients.

Openings Studio™ is always current and drawing on a comprehensive, ready-to-use BIM Objects library of hardware solutions. Also accessible through the life of the project and building — ensuring everyone working on the new R&D centre always finds the information they need, fast.

To find out more about streamlining your firm's project management and security design workflows, contact your local ASSA ABLOY BIM consultant or learn more here:

[assaabloyopeningsolutions.co.il/he/specification-bim](https://assaabloyopeningsolutions.co.il/he/specification-bim)

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Partnership with door  
and access experts helps  
ASSAR Architects deliver  
BIM vision

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*“Every stakeholder has access to the complete specification, which leads to fewer mistakes.”*

*Charlie Malou, Architect, Möbius I & II*

## Openings Studio™ software keeps project information transparent and flowing



*“Openings Studio™ is intuitive and the visual integration with Revit® saved valuable time for everyone on this project’s multidisciplinary team. The partnership helped ASSAR to deliver buildings with a perfect balance of aesthetics and function,”*

Charlie Malou, ASSAR

**BIM partner:** ASSAR, Brussels, Belgium  
([www.assar.com](http://www.assar.com))

**Type:** Architect

**Vision:** Architecture is not just about creating value in property: The quality of the living experience must also be taken into account. To create architecture that evolves over time requires collaboration and teamwork. Each ASSAR project is organized around specialized and complementary teams, in which architects, interior architects, urban planners and technicians share their knowledge.

**Project:** Möbius I & II, a pair of elegant, light-filled “sister towers” in North Brussels. They now house high-profile offices for corporate clients including Allianz (see [www.assar.com/project/tours-mobius](http://www.assar.com/project/tours-mobius)).

**Specification size:** 1800 doors

**Date:** 2017–2021

**Segment:** Corporate

**Software:** Autodesk® Revit® & Openings Studio™

**ASSA ABLOY hardware supplied:** Litto & effeff locks; ASSA ABLOY Door Closers; ASSA ABLOY architectural hardware



### Key project challenges

- Deliver complete specifications so everyone involved in project delivery could access a single, authoritative resource
- Work in an environment where delivery times are short and budget control must always be maintained

- Develop a BIM partnership to reflect ASSAR’s ethos, built around expertise, collaboration and teamwork



### Solution

Building information modelling (BIM) is a process which enables architects, building contractors, owners and consultants to work collaboratively. The BIM process creates an environment for better communication and transparency for the entire lifecycle of a building.

A BIM pioneer and member of the Belgian Building Research Institute’s Digital Construction Cluster, ASSAR has an established track record of successful BIM implementations. *“The goal is to centralize information and allow projects to run smoothly,”* explains Alexandra Dubuisson, ASSAR’s corporate BIM Manager. *“It eliminates a whole series of construction error risks and facilitates dialogue between project teams. At ASSAR, BIM is applied to all projects, according to its unique needs,”* she adds. ASSA ABLOY participates in the BIM process by providing subject matter expertise, as well as software solutions to aid in the scheduling and coordination of openings information for a project. *“Partnership with ASSA ABLOY’s BIM and specification team ensured accurate, detailed specifications for door and security hardware were always available,”* explains Charlie Malou, Architect at the Möbius project.

Learn more:

[assaabloyopeningsolutions.be/nl-BE/specificatie-bim](https://assaabloyopeningsolutions.be/nl-BE/specificatie-bim)

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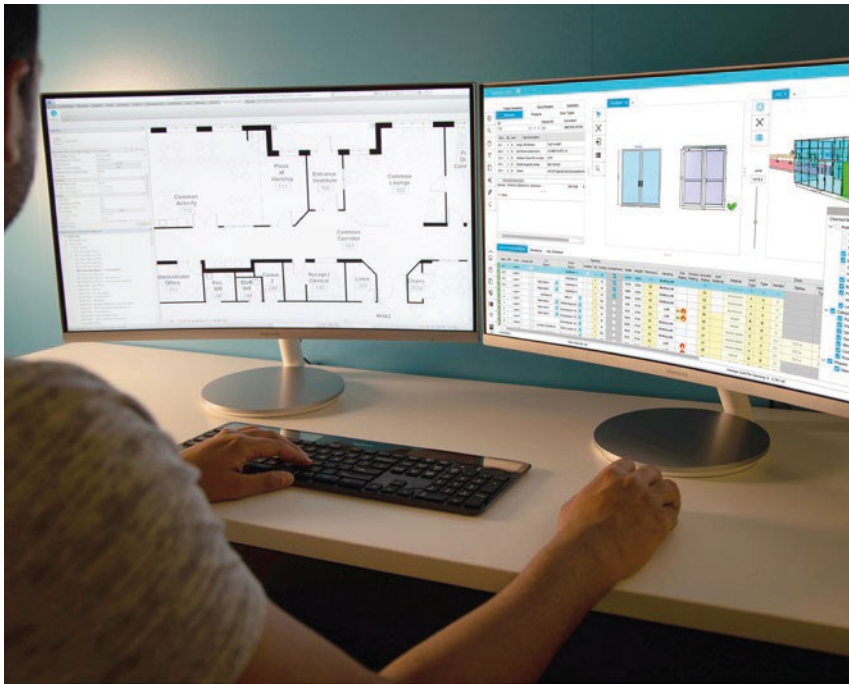


Specification experts  
ensure door package  
decisions are made sooner  
with software solutions

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*“Having access to support for complex door environments is super valuable and time-saving.”*

Jonatan Jacobsson, Engineer Architecture,  
TM Konsult



## TM Konsult adds value to the client relationship with BIM software solutions



*“All our projects are done today with the support of BIM in some way,”* says TM Konsult’s Jonatan Jacobsson. *“The value is there from day one for the consultant as well as the client.”*

**BIM partner:** TM Konsult, Lycksele, Sweden ([www.tm.nu](http://www.tm.nu))

**Type:** Architect/Planner

**Project:** Multiple projects between 2017 and 2021 including residential developments and public buildings. One such project is Norra Djäknén in Uppsala, a multimillion-euro project with several buildings incorporating a kindergarten, housing for elderly care.

**Specification size:** 50–1050 doors

**Date:** 2017–2021

**Segment:** Multiple

**Software:** Autodesk® Revit® & Openings Studio™

**ASSA ABLOY solutions supplied:** Extensive hardware including lock cases, lever handles, cylinders, door closers and electric strikes, plus electronic access control.



### Key project challenges

- Supporting clients of varying sizes with earlier, clearer information to speed up the specification process for door environments
- Adopting project tools to facilitate coordination and communication with the client, including by importing all changes quickly to the model
- Making specialist door knowledge available to both designer and client, including at dedicated door specification meetings for each project



### Solution

The BIM process is an ongoing dialogue. It enables efficient importing and exporting of critical project changes, so TM Konsult can remedy any errors fast — which keeps the project on track and the client happy.

Specifiers from ASSA ABLOY Opening Solutions contributed directly throughout the BIM process. Their specialized knowledge — and presence at relevant planning meetings — has enabled TM Konsult to deliver complete proposals for compliant door environments at an early stage. With door experts on board, decisions can be made quickly and discussions are faster to conclude.

To supplement specification input from ASSA ABLOY, TM Konsult uses Openings Studio™. The software exports updated door specification information seamlessly into the project’s Autodesk® Revit® model. When decisions about a door package are made, Openings Studio™ automatically updates with the parameters the architect or designer has chosen.

Different clients prefer to receive information in different ways: Openings Studio™ has the flexibility for TM Konsult to present it in a way that suits each. *“It has worked really well,”* concludes Jonatan Jacobsson.

### Learn more:

[assaabloyopeningsolutions.se/sv/local/se/projektering-och-bim](https://assaabloyopeningsolutions.se/sv/local/se/projektering-och-bim)

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For a Polish hotel developer,  
BIM partnership improves  
cost management

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“Our specification  
was connected and  
up to date with the  
BIM model.”

Andrzej Leszczyński, Head of Architecture,  
Structure Capital



## Structure Capital can access a full suite of ASSA ABLOY Door and Hardware specification



With Opening Studio  
you design, build and  
manage doors, frames  
and hardware easily.

**BIM partner:** Structure Capital, Poland  
(structurecapital.pl)  
**Type:** Construction investor  
**Project:** Structure Capital's real-estate investment  
activity aims to create buildings which combine  
form, function, and a return on investment (ROI).  
Their BIM capability is managed by a team with  
more than 10 years experience, across multiple  
development projects in the hospitality sector.  
**Specification size:** 756 doors  
**Date:** 2021  
**Segment:** Real estate investment / Hospitality  
**Software:** Autodesk® Revit® & AEC Suite  
**ASSA ABLOY solutions supplied:** Multiple  
solutions around the door, including EffEff Electric  
Strikes, Abloy Electric Locks, a range of TESA  
Hospitality solutions, ASSA ABLOY Door Closers,  
ASSA ABLOY Mercor Doors - TLB gates, Alpe Plus,  
Profile Plus & Donimet Raptor high acoustic  
insulation doors.



### Key project challenges

- Harness modern technology to improve the design, functionality, and construction efficiency of each hotel project
- Adopt a strict approach to cost control and cost management, to ensure finished buildings deliver a strong ROI
- Ensure total transparency for an ongoing project, so every relevant stakeholder can always access current data



### Solution

As a fund investing in the hospitality sector, Structure Capital places emphasis on ROI. To help achieve this, “it is important for us to have a clear vision of every project,” according to the company\*. For this reason, they run hotel design and construction projects along Building Information Modelling (BIM) principles. The BIM team from ASSA ABLOY Opening Solutions partner with Structure Capital to ensure transparent, up-to-date specifications for every door solution are available. Efficient specification and information exchange streamline the process of deploying multiple door solutions from ASSA ABLOY's comprehensive portfolio — from Door Systems till Electric Locks, Electric Strikes, Door closers and Hospitality Access Control Solutions. All tailored to the hotel sector. Intuitive software, Openings Studio™, delivers specifications quickly and accurately to designs in progress. Through the software, Structure Capital can connect every stakeholder in multiple teams to an updated, properly specified design model. The software logs every change, so it is easy to “rewind” to compare previous configurations of any opening. It gives project managers the detail they need to make key project decisions.

### Learn more:

[assaabloy.com/pl/pl/solutions/topics/bim-specification](https://assaabloy.com/pl/pl/solutions/topics/bim-specification)

\* <https://structurecapital.pl/en/strategy>





Pioneering Spanish  
architects thrive in  
BIM partnership with  
ASSA ABLOY

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*“The workflow and the after-care experience have been great.”*

*Javier Iribarren, Fenwick Iribarren Architects*



Openings Studio™

## Openings Studio™ software saves time and effort when importing specifications to Revit®



*“Projects are much more coordinated between the different disciplines, resulting in a more developed project arriving on site,” explains Javier Iribarren. “In a few years it is going to be the only way of developing these projects.”*

\* <https://brainsre.news/acciona-levanta-en-mesena-el-ultimo-gran-campus-empresarial-en-madrid/>

**BIM partner:** Fenwick Iribarren, Madrid, Spain ([www.fenwickirribarren.com](http://www.fenwickirribarren.com))

**Type:** Architects

**Company profile:** Founded in 1990, this internationally recognized studio has wide-ranging design expertise, including a specialism in acclaimed sporting venues such as the RCD Espanyol football stadium (Barcelona) and three Qatar 2022 FIFA World Cup stadia.

**Project:** Campus Acciona, a landmark new business and office development in the Hortaleza neighbourhood of Madrid\*.

**Specification size:** 554 doors

**Date:** 2020–21

**Segment:** Office / Corporate

**Software:** Autodesk® Revit®

**ASSA ABLOY hardware supplied:** ASSA ABLOY Door Closers: DC340, 500, 700 and 840. TESA TOP mortise panic exit device; CF60 series fire rated mortise lock; Cubo single lever handle; TX80 Euro profile high-security double cylinder.



### Key project challenges

- Save time in coordinating specification and parameters between building materials and the Revit® design
- Ensure software packages work together to create a transparent “living model” with the right level of detail

- Create an up-to-date document resource with long-lasting value for building maintenance and security teams
- Introduce key stakeholders in real estate development to the merits of a strong BIM partnership



### Solution

Fenwick Iribarren Architects have many years' experience working with BIM and have benefited from its transparency on projects in Spain and abroad. It brings multiple collaboration advantages to complex workflows. Partnering with an ASSA ABLOY specification and BIM specialist based in Spain helped coordinate the fast-changing information they require through design stage. They could quickly share alternative scenarios via the BIM model, for example. Openings Studio™ software streamlines information flow from ASSA ABLOY's specification database directly to an in-progress Revit® design. All kinds of solutions — from door closers to mechanical cylinders — are available with a few clicks. This replaces the often time-consuming process of adding door parameters manually. *“The software is very easy to learn,”* Javier adds. *“It is especially useful to update changes since it detects updates in the model. A high level of programming is not required and you don't need to use other packages like Excel to extract or import schedules.”*

The ASSA ABLOY Group is the global leader in access solutions. Every day, we help billions of people experience a more open world.

ASSA ABLOY Opening Solutions leads the development within door openings and products for access solutions in homes, businesses and institutions. Our offering includes doors, door and window hardware, locks, access control and service.

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