



The Circle,  
Zurich airport (ZH)  
Switzerland

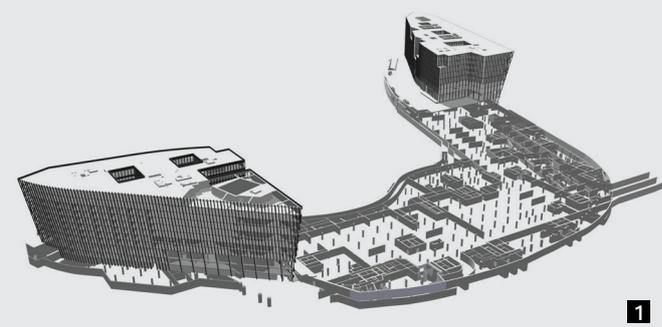
### Allplan in practice

## BIG, BIGGER, THE CIRCLE

### "The Circle" comes to life

The biggest high-rise project in Switzerland is becoming a reality: After six years of intense preparation, the end of April 2015 marked the symbolic green light for the implementation of the major project "The Circle" at Zurich airport. With a total investment of around CHF 1 billion and within walking distance of the terminal, a high-quality, mixed-use development is emerging, providing 180,000 square meters of usable space. The first and second stages are to be completed at the end of 2018 and in 2019 respectively. In February

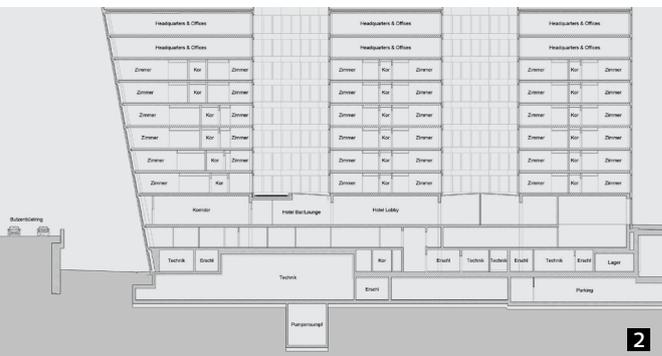
2009, Flughafen Zürich AG announced that it was launching the development of a new major project at the airport. At the foot of Butzenbüel Hill, the airport operator has central land reserves with a buildable, crescent-shaped base area of 37,000 square meters, on which a usable floor area of around 200,000 square meters can be built in compliance with zoning regulations. The aim was not to explicitly build another shopping center, but rather to offer a sophisticated mix of hotels, restaurants, headquarters, offices, and event and health facilities.



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- 1 Visualization of the 3D model (BIM CAD software Allplan)
- 2 Section of sub-project H11, Hotel Hyatt Place (BIM CAD software Allplan)
- 3 Plan of sub-project H11, Hotel Hyatt Place (BIM CAD software Allplan)

In February 2009, a three-stage public architectural competition was launched, whose winner was announced in February 2010. The legal building permit was granted in April 2012, and at the same time, a successful deal with the international hotel company Hyatt was publicized. At the end of 2013, it was revealed that Swiss Life would be involved as a co-investor with a 49% share in the newly-established partnership, with Flughafen Zürich AG holding 51%. The investors made the final decision regarding the development in December 2014: After securing the financing and leasing for over 50 percent of the usable space, the green light was given for the billion-franc project.

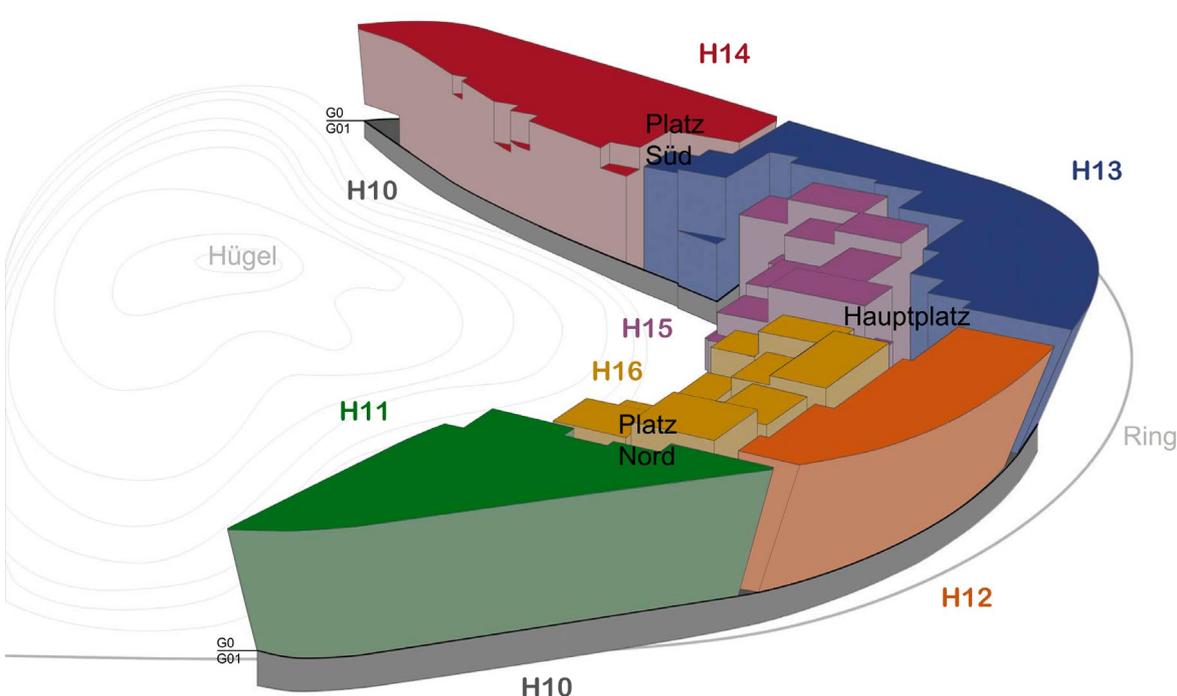
### WINNING PROJECT "DIVERS(C)ITY"

The winning project of the 70-year-old renowned Japanese architect Riken Yamamoto from Yokohama won out against over 90 applications from 12 countries, including applications from Zaha Hadid and David Chipperfield. Flughafen Zürich AG promised "a milestone in the architectural landscape around Zurich airport" with this project. The design contains a light-flooded, partially overhanging facade, which completely encloses the foot of the Butzenbuelring. Behind this facade, various cubic structures made of glass are arranged facing the hill. From the airport, the project conveys the image of a uniform and "large-scale building," and from the hill it conveys the image of a small city, says the judges' report. A certain "Swissness"

can be perceived in the strategy chosen by the architect. The idea of an inner city with streets, alleys, and squares corresponds to the philosophy of "The Circle." The new complex is expected to be brought to life by two hotels, a convention center, a medical center by the University Hospital of Zurich, shops, and restaurants, as well as art, cultural, entertainment and educational facilities, to name but a few examples.

### THE ENTIRE BASEMENT AND TWO BUILDINGS WILL BE DESIGNED WITH ALLPLAN.

Shortly after the investors announced the decision to implement the project in December 2014, the general contracting company HRS Real Estate AG were awarded the contract for the project management and construction site management of "The Circle." The agreed budget is within the scope of the original cost expectations, according to the client. The general contractor HRS has commissioned three architectural firms with the detailed design, who have divided the components among themselves. The company architekten: RLC AG from Rheineck, a member of the RLC Group, is responsible for the basement, sub-object H 11 (Hyatt hotel on the north side) and sub-object H 14 (restaurant, event and office area on the south side). RLC is one of the leading architecture companies in eastern Switzerland and employs a total of 80 people. Up to eight of their staff are



Sub-objects scheme

working on "The Circle" project, with various roles. Daniel Zweifel is a certified building construction technician and is responsible for CAD at RLC in Rheineck. He has been working in this office for 11 years and has been working with Allplan for almost 13 years.

### "WE HAVE NEVER HAD A BUILDING OF SUCH LARGE PROPORTIONS."

"The Circle" project is also an extraordinary challenge for RLC and the team: "We have never had a building of such large proportions," says Daniel Zweifel. The basement has a floor area of 37,000 square meters. It is not surprising that the number of plans and the volume of data has increased drastically. An architectural challenge is the glass facade on the airport side, which follows the irregular shape of the Butzenhügel on the floor plan and is slanted from ground level to its full height. "Thanks to designing the model in 3D with Allplan, we can efficiently address these challenges," says Daniel Zweifel, who manages individual components of the project as a technician.

#### PROJECT INFORMATION AT A GLANCE

##### > Facts & Figures

- > **Base area:** 37,000 m<sup>2</sup>
- > **Usable floor area:** 180,000 m<sup>2</sup>
- > **Parking spaces:** 520
- > **Investment:** CHF 1 billion
- > **Completion:** Planned for 2018

##### > Involved in the project

- > **Owner / developer:** Flughafen Zürich AG
- > **Co-investor:** Swiss Life AG
- > **Architect:** Riken Yamamoto & Field Shop, Yokohama, Japan
- > **Project management and construction site management as the general contractor:** HRS Real Estate AG, Zurich

##### > Detailed Design

- > **H10, H11, H14:** architekten : RLC AG, Rheineck
- > **H13:** Fischer Architekten AG, Zurich
- > **H12, H15, H16:** Richter Dahl Rocha & Associés architects SA, Lausanne

Despite the advantages seen to date of planning using the 3D model, it was discussed at the start of the project whether to build in 2D or 3D. What are the main benefits of designing in the 3D model for Daniel Zweifel? "Above all to control complex details, but also the ability to extract sections or calculate cut and fill." However, the short timeframe



"I am very pleased with the efficiency and intuitiveness with which they develop the building parts in the 3D model."

Daniel Zweifel, certified building construction technician, architekten : RLC AG, Rheineck

is also a challenge with "The Circle" major project. After the appointment of the general contractor in February 2015, the organization and detailed design began immediately. This also meant that those responsible at RLC had to quickly provide the necessary staff to start the preparatory work. The interfaces and data exchange procedures had to be clearly defined since the detailed design was divided amongst three offices (see also Sub-Projects, location). "For the data exchange, it was agreed that all documents should be stored on the approved object-oriented platform in DWG, PDF and IFC formats," explains Daniel Zweifel. IFC makes it possible to export the 3D building model.

**"WE WANT TO ACHIEVE COMPLETION AS EFFICIENTLY AS POSSIBLE."**

Junior draftsmen are also working on "The Circle" project. Daniel Zweifel said the following about their approach: "I am very pleased with the efficiency and intuitiveness with which they develop the building parts in the 3D model." Daniel Zweifel also knows that he and his colleagues are far from utilizing the full potential of Allplan. Nevertheless, he has a clear idea of how to use it: "For us, it is important that we use the program's tools to allow us to achieve completion as efficiently as possible."

## ABOUT ALLPLAN

ALLPLAN is a global provider of BIM design software for the AEC industry. True to our "Design to Build" claim, we cover the entire process from the first concept to final detailed design for the construction site and for prefabrication. Allplan users create deliverables of the highest quality and level of detail thanks to lean workflows. ALLPLAN offers powerful integrated cloud technology to

support interdisciplinary collaboration on building and civil engineering projects. Around the world over 500 dedicated employees continue to write the ALLPLAN success story. Headquartered in Munich, Germany, ALLPLAN is part of the Nemetschek Group which is a pioneer for digital transformation in the construction sector.

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