# Siemens Zug campus

## Construction project and building facts

### Project

- In 2011, the Siemens Board gave the green light for the Siemens Zug campus project.
- The campus is the international headquarters of the Siemens Building Technologies Division; Building Technologies has been located in Zug since 1998.
- Office and production building construction schedule: May 2016 through July 2018
- The Siemens Zug campus comprises an office building with 1,000 work spaces (650 currently in use by Siemens), a factory and an existing building that will be refurbished in 2021. It is expected to completely house the approximately 450 employees of the Research & Development Department by the end of 2022.
- The investment volume for new buildings, renovations and related measures amounts to CHF 250 million.
- The city of Zug is taking over the former Siemens office building. Other buildings were also sold.

### Planning and construction phase details

- 65,000 $m^3$ excavated soil
- 1,000 bored piles, 30 m each
- 240,000 $m^3$ above-ground construction volume
- 35,000 $m^3$ concrete, 4,000 tons reinforced steel

### Model project for Building Information Modeling

- The Siemens Zug campus is one of the first new construction projects to use Building Information Modeling (BIM) for planning and implementation.

**The Siemens Building Technologies (BT) Division** is not only a leading developer and supplier of products, systems solutions and services in building automation, energy efficiency, fire protection and security, but also a pioneer in building digitalization. In 2018, BT had more than 28,000 employees in more than 400 locations worldwide and posted sales totaling 6.6 billion euros.


- The digital twin – a 3D model of the building, enhanced with technical information relevant for later operations – is the foundation for efficient, cost-optimized and forward-looking building management (predictive maintenance).

**Office building: facts and figures**

- Footprint: 56 x 56 meters
- 7 stories (plus 2 underground levels)
- 1,000 work spaces
- 32,000 $m^2$ gross floor area; 11,000 $m^2$ of which is the two-story underground garage
- 18,400 $m^2$ of the rentable office space; 7,000 $m^2$ designated for leasing (second, third, and parts of fourth floor)
- Building height: approx. 25 m
- Atrium: 16 x 20 m
- Underground parking garage with 250 spaces
- Semi-public use of ground floor with public café
- Workplace concept: Flexible, open office spaces that promote mobile working

**Production building: facts and figures**

- 3 stories (plus basement level)
- Footprint: approx. 125 x 50 m
- Building height: approx. 16 m
- Production on two floors (ground floor and first upper floor)
- On 2nd upper floor: 1,200 $m^2$ rentable office space, occupational training, laboratory space
- Nitrogen tanks and waste containers integrated in the building
- Automatic transport and storage system for production
- Compressed air systems with energy recovery system for water heating

**Smart Building technology on the campus**

- Campus equipped with solutions and products from Building Technologies


- Various applications can document, measure and adjust consumption of electricity, heat, air conditioning and water.
- Optimal lighting conditions and perfect room conditions with room automation
- More than 6,500 data points are connected in the office building and 5,500 data points in the production building.
- Progressive room conditioning with hybrid cooling and heating panels for the highest level of comfort
- Demand-based air conditioning and heating and cooling generation
- LED lighting solutions integrated into the building automation
- Automatic energy-guided sun protection
- Integrated fire safety and security solutions
  (video surveillance: Siveillance VMS; fire safety: Sinteso)
- Room reservation system connected to Siport access control and Desigo CC for demand-based room control and digital signage

**Sustainability and energy on the campus**

- Lake water as source for heating by using efficient heat pumps
- Water from Lake Zug for direct cooling
- No fossil fuels needed
- HVAC systems equipped with heat and cold recovery systems
- Integrated building automation system with energy optimization (based on Desigo CC)
- Photovoltaic system on roof of production building (commissioning planned for spring 2019)
- Green roofs
- Rain water use in office building (approximately 1,500 $m^3$ per year).
- Sustainable disposal concept for entire campus
- LEED Platinum certification for the office building
- LEED Gold certification for the production building
- Numerous bike racks around the building, plus charging stations for e-bikes