

Munich, June 14, 2016

## Facts and figures on the new Siemens Headquarters in Munich

### **About the construction project**

In the summer of 2010, Siemens decided to rebuild its corporate headquarters at Wittelsbacherplatz. Shortly after announcing that it planned to construct a new building, the company organized an architectural competition in cooperation with the city of Munich. The Danish architectural firm Henning Larsen Architects won this competition with a design that unites tradition with the future. The historic Ludwig Ferdinand Palais and its adjacent building were to be renovated and integrated seamlessly into a new, cutting-edge building. Within a few years, an ultramodern office building was created in the heart of the city – a building that blends modern architecture with highly efficient technology while meeting the most stringent sustainability standards. Following its grand opening in June 2016, the new headquarters, which offers about 45,000 square meters of aboveground floor space, will provide an inspiring working environment for around 1,200 employees. Featuring green inner courtyards, a café and a restaurant, the highly accessible ground level creates a new pedestrian passageway enabling Munich residents and visitors to the Bavarian capital to stroll directly from the city's center to its art district.

- Project period: 2010 – 2016
- Above-ground floor space: about 45,000 square meters
- Workspaces for about 1,200 employees
- Architect: Henning Larsen Architects, Denmark
- Low-energy building with Platinum certifications: national certification according to the standards of the German Sustainable Building Council (DGNB) and international certification according to Leadership in Energy and Environmental Design (LEED) standards.

**Key figures for the new building**

Building lot	Around 11,000 square meters (including the buildings that already existed before the project began)
Ground floor	About 8,500 square meters open for public access/use
Number of levels	Three belowground levels, the ground level, four office levels, two rooftop levels

**Construction work**

Project period	Some six years in total, including: <ul style="list-style-type: none"><li>– About 1.5 years of development work</li><li>– Around 1 year of teardown work</li><li>– Roughly 0.5 years of excavation work</li><li>– About 3 years of construction work for the new building and renovation work on the existing buildings</li></ul>
Teardown/removal	Some 150,000 cubic meters of rubble and excavated material from the 14-meter-deep excavation pit
Construction workers	Each day, an average of 400 – 600 workers from more than 20 countries
Construction companies	Around 400 different companies (excluding planners), of which about half are based in Bavaria

**Shell construction**

Foundation slab	About 8,500 square meters, 1.2 meters thick
Reinforced steel	6,000 tons <ul style="list-style-type: none"><li>→ weighing as much as thirteen 200-meter-long Siemens ICE 3 trains</li></ul>
Concrete	40,000 cubic meters <ul style="list-style-type: none"><li>→ equal to a ten-meter-square block that is 400 meters high</li></ul>
Glass façade	A total of 16,000 square meters of glass panels <ul style="list-style-type: none"><li>→ west façade with about 2,500 glass slats that open and close automatically depending on the sun's position</li><li>→ inner courtyards with tilted glass plates</li></ul>

### Interior design and building technology

Piping	66 kilometers (17 km for water, 25 km for heating, 13 km for cooling and 11 km for sprinkler piping) → nearly three times the length of Munich's middle ring road
Power cables	250 kilometers → five times the circumference of Lake Starnberg
Central air treatment	Around 200,000 cubic meters of fresh air throughput per hour
Elevators	24
Building automation	About 30,000 data points continuously analyze the building. Over 300 kilometers of data cables in 150 control cabinets provide data on temperature, air quality, lighting and building security
Fire protection	Over 5,000 fire and smoke detectors
System network	A DESIGO system from Siemens links all subsystems (such as HVAC, light, energy, access and video management as well as fire protection).
Room automation	The RoomOptiControl module enables employees to adjust the lighting and room climate to meet their needs and provides them with tips for saving energy.
Digital infrastructure	Private and public data network via Wi-Fi, an in-house cell phone network, LED monitors and information screens as well ultramodern media technology.

### Greenery

Trees	Seventeen new trees planted in the publicly accessible inner courtyards and in the green area adjacent to the Oskar-von-Miller-Ring road; the eight Globosum Norway maple trees at Wittelsbacherplatz remain.
Groundcover	11,000 new shrubs and bulbs

### Sustainability

- The exterior grounds and surfaces feature a particularly sustainable design, for example through the creation of unpaved areas (use of grass pavers,

vegetation that provides shade) and bright paved areas, and through the planting of vegetation on roof areas.

- Seventy kilometers of water piping have been installed in the thermally activated foundation slab (corresponds to the distance between Munich and Ingolstadt). Up to 100,000 liters of water (enough to fill 500 bathtubs) flow through them each hour. During the winter, they help heat the building, and during the summer, they help cool it.
- With the aid of a so-called bivalent heat system, heat pumps double as chillers, and renewable energy that is extracted from the ambient air and from the ground water is integrated.
- All drives used in the pumps are energy-optimized and feature efficiencies above 95 percent. This corresponds to the highest efficiency category.
- The use of nearly 7,400 LED lamps cuts energy consumption by nearly 50 percent compared to traditional lighting. The use of intelligent control technology in the form of daylight sensors and presence detectors reduces power consumption by about another 25 percent.
- The ventilation system in the meeting rooms uses CO<sub>2</sub> sensors to measure the air breathed by meeting participants and optimizes the intake of fresh air.
- A photovoltaic system supplies one-third of the overall power consumed; more than 800 panels covering more than 1,300 square meters of the roof with a capacity of about 300 kW contribute to sustainable power generation.
- Each year, around 1,500 cubic meters of rainwater are to be used for toilet flushing or for watering the exterior grounds. Thus, in combination with water-saving fixtures and showers, water consumption is about 50 percent below the legally prescribed reference level for new buildings.
- More than 10,000 cubic meters of certified wood and engineered wood from sustainably managed forests; no wood preservatives are used.
- About one-third of the construction materials are from local sources – including some 23,000 natural stone tiles from Altmuehltal area that are being used for the ground level and for the façades.
- About 50 tons of glass, 150 tons of aluminum and 3,500 tons of steel that are 100-percent recycled have been used.
- The underground garage offers about 450 parking spaces, 21 of which are currently equipped with e-car charging stations. The bicycle room, with a

capacity of 200 bikes, offers protection from the elements and features charging units for about 20 electric bicycles.

**Savings:**

- Compared to the former building complex, the new building reduces the CO<sub>2</sub> footprint by nearly 90 percent.
- The use of primary energy is reduced by 88.5 percent – to 40 kWh/m<sup>2</sup>\*a.
- The amount of primary energy required is more than 50 percent below the level specified by the German Energy Saving Ordinance (EnEV).
- The building requires 90 percent less electric power than the old building complex did. The energy saved in this way would be enough to power 750 four-person households each year.
- Water consumption is reduced by 75 percent. This would be enough water to supply 180 four-person households each year.
- The heating, too, requires significantly less energy, which saves the equivalent of 550,000 liters of heating oil each year – enough to heat over 400 apartments with 100-square-meters of floor space each.

This press release and additional press materials are available here:

[www.siemens.com/press/headquarters](http://www.siemens.com/press/headquarters)

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