

Arnulfpost

FEBRUARY 2024





HELLO, MUNICH

At Google, we've set the goal of net-zero emissions for the full scope of our operations and value chain by 2030. Transforming our data centers and office campuses to run 24/7 on carbon-free energy is an important – and particularly challenging – step towards this goal. Google CEO Sundar Pichai once called the “24/7 carbon-free energy” project “as ambitious as building a quantum computer or developing a self-driving car.”

When it comes to climate action, our physical locations play an important role. That's why we've make sustainability a priority when designing our offices, including the historic Arnulfpost – soon to be the site of our new engineering center.

In this spirit, we joined the Munich Climate Pact in the summer of 2023. By signing the pact, Google and 15 other Munich-based companies have made a binding commitment to speak out and take action for climate protection. You can find out more about the Climate Pact and our mission to make Arnulfpost an all-round sustainable space in this fifth edition of our newsletter.

We're well on our way to completing the Arnulfpost base build by 2025. Once we hit that key milestone, we'll share an updated timeline for the final phases of construction, including the interior, here in this newsletter. Until the engineering center opens its doors, this newsletter will continue to be our primary communication channel with locals and others interested in the project. (If you missed the first few editions, you can find them at realestate.withgoogle.com/arnulfpost).

Our team is always eager to hear any ideas, questions, or suggestions you may have. You can reach my colleagues at arnulfpost@google.com.



Sincerely,
Dr. Wieland Holfelder
Site Lead Google Munich



The patron of the Climate Pact, Munich's Economic Affairs Officer Clemens Baumgärtner with Wieland Holfelder, Google's Munich Site Lead.



"CLIMATE PROTECTION CALLS FOR PIONEERS"

In 2015, the city of Munich launched the Munich Climate Pact, through which major local companies pledge their commitment to meeting the city's climate protection targets. The third phase launched in summer 2023 with Google as one of 16 participating companies. Munich's Economic Affairs Officer Clemens Baumgärtner – patron of the Climate Pact – discusses the benefits of the initiative, Google's diverse sustainability efforts, and the role of the Arnulfpost in a double interview with Wieland Holfelder, Google's Munich Site Lead.

Mr. Baumgärtner, why did the city of Munich launch the Munich Climate Pact, and what are its goals?

C.B. — The basic idea behind the Munich Climate Pact was, and remains, to get large companies based locally on board with the city's goal of becoming climate neutral. We didn't want to do this through mandatory obligations, but through cooperation – that's why it's called a "pact" and not a "regulation."

We want companies like Google, BMW, Siemens, and Bayerischer Rundfunk (Bavarian Broadcasting) to set their own sustainability targets and to learn from each other how best to put these into action.

W.H. — This initiative gives us the exciting opportunity to exchange ideas with other large companies on the topic of climate protection. I believe the insights and understanding we gain from each other will serve as motivation for many other companies as well. We're looking forward to the next meeting with the other Climate Pact companies, which we'll be hosting in early 2024 at Google's Arnulfpark campus.

C.B. — The Climate Pact is also about being a role model. We see the participating companies as pioneers, who can inspire others to do more to protect our climate.



Google joins Munich Climate Pact in July 2023: Ceremony with pact patron Clemens Baumgärtner, Google Munich Site Lead Wieland Holfelder and other company representatives.

Mr. Holfelder, Google has become one of these pioneers.

What made you decide to sign the Climate Pact?

W.H. — Climate protection has been of fundamental importance to Google for many years. All the way back in 2007, our founders Larry Page and Sergey Brin announced their mission to make Google a carbon-neutral company. This has since developed into the concrete goal of operating carbon-free 24/7 worldwide by 2030. This also applies to the Arnulfpost in Munich. Beyond our climate protection measures for Google's own operations, we also want our products to support other companies and individuals in making environmentally friendly choices. For example, Google Search can be used to find more sustainable products, and Google Maps to find greener routes from A to B, with public transport, bicycles, or e-scooters as potential alternatives to cars. Partnerships with companies and local authorities are also important when it comes to making climate-friendly decisions. The Munich Climate Pact is a part of that.

What kind of insights do the companies exchange?

W.H. — Here's one example: The Arnulfpost is going to be connected to the district heating and cooling network. As it stands, our long-term goal of operating carbon-free worldwide by 2030 won't be fully realizable with Munich's district heating network. However, if the Munich municipal energy board realizes that many large companies are keen for carbon-free district heating, maybe it will transition to green energy sources a little sooner. The exchange facilitated by the Climate Pact can help us reach that critical mass and push for certain developments sooner.

C.B. — In my view, district cooling is a particularly important topic. I agree that if a number of strong buyers show an interest and are perhaps prepared to pay a higher price initially, we can accelerate expansion.

W.H. — But sustainable solutions don't have to be more expensive. Take clean energy, for example, which is cheaper through a long-term supply contract – a good option for many large companies. Climate protection shouldn't be a luxury: It needs to be affordable across the board to bring about real change.



Clemens Baumgärtner with Wieland Holfelder at the Arnulfpost construction site.

C.B. — As Munich’s head of economic affairs, I’m in favor of putting research and development at the forefront of climate protection, rather than imposing bans. This mindset encourages contribution from Munich players like universities and research institutes, as well as companies like Google offering tools such as Google Maps. This gives people climate-friendly options without imposing rules on them.

The Climate Pact places emphasis on individual responsibility, too. What kinds of target goals have participating companies set for themselves?

C.B. — Many targets and voluntary commitments center on making measurable reductions in greenhouse gas emissions. The current group has made “binding, effective, and visible” their motto. Over the previous two phases of the Climate Pact, the participating companies cut a total of 68,000 tons of carbon emissions. At the same time, the aim is for Munich’s major companies to drive broader change by making climate protection measures visible and sharing them with the outside world.

Mr. Holfelder, could you tell us how the Arnulfpost project is contributing to the Climate Pact's mission?

W.H. — We've set ourselves the overarching goal of achieving LEED Platinum certification, the highest level of the Leadership in Energy and Environmental Design ranking system. We've also set our sights on attaining the International Living Future Institute's Zero Carbon Certified Standard. This calls for the whole complex to not just be climate neutral, but totally carbon free. Measurable targets are important to us, because you can't improve what you don't measure.

What kind of concrete measures are involved?

W.H. — We've set ourselves the ambitious goal of preserving and repurposing as much raw material from the historic building complex as we can – because new builds are never the most environmentally friendly choice. Special rainwater collection systems will cover as much of our raw water supply as possible. I already mentioned the district heating and cooling network. We'll also be operating all appliances on electricity, including the kitchen equipment for our on-site cafés. This aligns well with our renewable energy procurement plans. If we equip our buildings with efficient electrical systems supplied with regional green energy, we can achieve our ambitious climate goals. Furthermore, we're using the Arnulfpost grounds to create new habitats for local wildlife, including birds native to the area.

Mr. Baumgärtner, what's your take on the Arnulfpost?

C.B. — I grew up in Munich, so I'm quite familiar with it from my childhood. I'm delighted that it's playing such a big role in the Climate Pact. For me, sustainability is also about preserving and using iconic buildings linked to Munich's local history, like the Arnulfpost. And I'm very pleased that parts of the Arnulfpost will remain open and accessible to the public.

W.H. — That's important to us, too. The rotunda's front part will be open to all during office hours. It will be kept at a comfortable temperature thanks to intelligent ventilation and "smart glass" technology in the roof. We're planning to open a café on the grounds, too, as well as spaces for programming classes for kids, among other things.

You mentioned that climate protection-based partnerships are important for Google. Aside from the Climate Pact, could you share an example of other ongoing partnerships?

W.H. — I'd be happy to. Using a tool called Environmental Insights Explorer, we provide cities with traffic and environmental data that can allow them to make informed choices about climate and environmental protection. With the help of artificial intelligence, it can use satellite images to classify buildings, identifying roof inclines and exposure to sunlight. In this way, the tool can predict the unharnessed potential for solar panels on the rooftops of Munich. Building and vehicle emissions can also be calculated using the Environmental Insights Explorer. We're also working on another project with the city of Hamburg. It's called Project Green Light and uses traffic data sourced from Google Maps to optimize traffic lights and cut down on congestion. This, too, helps reduce carbon emissions.



The front area of the rotunda. The rotunda will be freely accessible during normal office hours and temperature-controlled in a very climate-friendly way thanks to intelligent ventilation and “smart glass” in the roof construction.



A snow-covered Arnulfpost site in January 2024.



SUSTAINABLE SOLUTIONS FOR A MISSION THAT MATTERS

Whenever Google designs a new campus, sustainability is always a key consideration – from building with healthy materials to utilizing technology that can contribute to decreasing our carbon footprint. Real-time energy consumption monitoring across the entire complex also helps to make our new spaces as sustainable as possible.

From the very beginning, sustainability has been fundamental in the planning, restoration, expansion, and operations of the Arnulfpost. We want to preserve and use existing structures wherever feasible, thus securing the unique legacy of this historic complex for generations to come. “We’re embedding sustainability into every aspect of the design and construction of the Arnulfpost to ensure that the project helps Google achieve its ambitious goals for carbon reduction, circular operations, water conservation, public

health, and biodiversity,” says Andreas Gyr, who is responsible for sustainability at Google’s European locations. In 2020, he was honored with the Living Future Hero Award for sustainable building.

The Arnulfpost campus is striving for LEED Platinum certification. We hope to achieve this with state-of-the-art energy-saving technology for heating and cooling, as well as renewable energy. Additionally, the Arnulfpost has launched initiatives to significantly cut and divert waste, conserve water, and foster local biodiversity – both during construction and once the campus has opened its doors.

The Arnulfpost campus has been designed to consume minimal energy, with the remaining demand covered by renewable sources wherever possible. By preserving and restoring existing buildings, we’re eliminating a significant proportion of the embodied carbon emissions produced in the manufacture of new materials.



Link building facade elements taking shape.

In the complex's new buildings, the focus is on efficiency. Computer-aided analyses have revealed ways to cut energy consumption with smart ventilation and indoor climate systems, low-energy LED lighting, and more energy-efficient electric devices. Façade design – including automated shading elements – also plays a central role in conserving energy.

The site is connected to the highly efficient district heating and cooling network, with energy recycling simultaneously working to reduce overall demand. Waste heat from server room cooling systems, for example, is recycled to heat rooms and the warm water supply. The remaining demand is covered by carbon-free energy wherever possible.

We actively encourage all of our employees and visitors to use public transit, or other sustainable modes of transportation, so that the Arnulfpost doesn't increase local traffic or pollution. The limited car parking on-site is reserved for those with additional accessibility needs. Over 300 bicycle parking spots – mostly sheltered – are planned for various locations around the site, around 50 of which will be accessible to the public. Changing rooms and repair stations will make for seamless cycling commutes. Finally, several charging stations for electric vehicles will be installed at the Arnulfpost campus.

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