

ANTWERP | SUSTAINABLE CHEMISTRY MEETS RESILIENT PORT CITY

The Future of Chemistry is Here

Chemistry is at a crossroads: innovate or pollute. In Antwerp, Belgium, home to the largest integrated chemical cluster in Europe and the second-largest chemical cluster in the world, groundbreaking solutions are being developed, tested, and implemented to drive a green transformation.

A world map with a dark blue background and light blue landmasses. A red location pin is placed over Belgium, with the word "ANTWERP" in white capital letters to its left.

ANTWERP



JOHAN KLAPS

Johan Klaps is Vice-Mayor (Port and Economy) for the City of Antwerp.



Blue Gate Antwerp has transformed into a cutting-edge, climate-positive business park.

Image: Blue Gate Antwerp



Once a heavily polluted petroleum site, Blue Gate is now a model of sustainable redevelopment.

Image: Blue Gate Antwerp



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The Challenge: Innovate or Fall Behind

Traditional chemistry is under regulatory and consumer pressures due to its environmental impact, which includes high carbon emissions, waste and pollution, and energy-intensive processes. The industry must shift towards greener solutions to meet global climate targets and ensure long-term competitiveness. The time for bold action is now.

With its world-class port, Antwerp is dedicated to leading the fight against climate change by strengthening its resilience. Alongside innovating traditional industries such as diamonds, fashion, and retail, its key priorities

also include creating a healthier city and shaping the port of the future. A significant focus is on accelerating the sustainable transition of its chemical industry.

These priorities align with the United Nations Sustainable Development Goals (SDGs) and form the backbone of Antwerp's ambitious Climate Action Plan. The plan aims to cut CO₂ emissions by up to 55% by 2030 and achieve complete climate neutrality by 2050.

But what does a sustainable transformation of the chemical industry look like? One thing is sure: innovation is key.

Beyond innovation and business, sustainability and liveability go hand in hand at Blue Gate Antwerp.

Our Answer: A Sustainable Chemistry Ecosystem

To accelerate the pace of innovation, Antwerp has brought together industry leaders, promising start-ups, knowledge centres, and policymakers to form a unique ecosystem. Together with the Port of Antwerp-Bruges and the University of Antwerp, the city has launched multiple innovation hubs where start-ups and corporates develop solutions to address today's biggest challenges.

For large industry players, this means cutting CO₂ emissions, boosting recycling efforts, and closing production loops. Meanwhile, start-ups are inventing eco-friendly materials, plant-based alternatives, and innovative ways to reuse carbon.

Climate-Neutral, Water-Bound Business Park

The transition to sustainable chemistry needed a physical hub where its unique ecosystem of key players, businesses and innovators can collaborate and drive groundbreaking solutions to decarbonise the chemical industry. Enter Blue Gate Antwerp.

Once a heavily polluted petroleum site, it has been transformed into a state-of-the-art, climate-positive business park. Spanning 63 hectares, this ambitious redevelopment has been recognised by the UN as a model for brownfield regeneration. It proves that even the most contaminated industrial zones can be reclaimed for a greener future.

More than just a business park, Blue Gate Antwerp offers an innovative ecosystem and thriving environment for entrepreneurs to turn ideas into reality. Innovation hubs provide tailored support to start-ups across their innovation journey, such as:

BlueApp – A collaboration space with labs, academic expertise and essential services, where start-ups, companies and the University of Antwerp tackle urgent chemistry challenges and translate ideas into stable commercial solutions.

BlueChem – Located next to BlueApp, this hub provides specialised labs and office spaces for cross-sector innovation and collaborations between start-ups/scale-ups and corporates.

As they scale, start-ups can access other hub resources to fuel their growth. For example, pilot installations can be tested at **NextGen Demo** before moving on to full-scale production at **NextGen District**.

Why Blue Gate Antwerp?

Ideal location: Close proximity to Port of Antwerp-Bruges for logistics connectivity.

Green infrastructure: A circular business park with eco-friendly buildings, renewable energy, and smart waste and water systems.

Strong industry network: Close ties with top chemical and tech companies boost innovation and growth.

Government & academic support: Backing from Antwerp, Flanders, and research institutes support turning ideas into reality.

Leading companies that have chosen to locate their operations in Blue Gate Antwerp include global technology company Amazon, multinational logistics company DHL Express, and sustainable logistics real estate company Montea.



BlueChem is the first incubator for sustainable chemistry in Belgium. Images show the external building, an interior and BlueChem laboratories.
Image: Victoriano Moreno



The River Scheldt flows through Europe's largest chemical cluster in the Port of Antwerp-Bruges.
Image: Lucid

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The Outcome: Shaping the Future of Chemistry

Beyond innovation and business, sustainability and liveability go hand-in-hand at Blue Gate Antwerp. Green spaces, heritage conservation, and a new cycling network integrate the site with the city, reinforcing Antwerp's connection to its river and contributing to revitalising its quays. With public facilities such as schools, the city of Antwerp is redefining industry and the future of sustainable urban development.

These circular economy hubs in the Port of Antwerp-Bruges are drawing sustainable chemistry entrepreneurs and companies focused on recycling, sustainable materials,

and carbon-neutral output. With dedicated state-of-the-art infrastructure, close collaboration with leading chemical companies and full government support, this world-class and unique ecosystem is not just shaping the future of chemistry in Belgium—it's setting a global benchmark for building a sustainable chemistry industry in the future. 🌱

Learn more about developing a sustainable future for the chemical industry at <https://www.businessinantwerp.eu/en/future-proof-chemical-industry>.