

# Energy Transition Campus Amsterdam

Together with Shell



A vibrant, open campus, in the heart of Europe, where great minds come together to tackle the world's biggest energy challenges.





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# The energy challenge



Society faces a dual challenge: how to make a transition to a low-carbon energy future and manage the impact of climate change, whilst also extending the economic and social benefits of energy to everyone on the planet? This is a challenge that requires changes in the way energy is produced, used and made accessible to more people, while drastically cutting emissions.

The transition to more and cleaner energy solutions, core to Shell's renewed strategy, requires collaboration to solve the complex challenges it poses, as they are often beyond Shell's existing capabilities. A more collaborative approach to innovation helps advance the development and commercialisation of new technologies, and scale existing ones that are crucial for various consumer applications such as green hydrogen and low carbon transport fuels.

Together with Shell, start-ups, scale-ups, research institutes, academia and mature companies have the opportunity to collaborate and innovate, developing energy, material and digital solutions for today and tomorrow.



## Transforming into an open campus





# Transforming into an open campus

Tackling climate change is an urgent challenge. It requires a fundamental transformation of the global economy and the energy system. Shell recognises that the level of collaboration required to get to a net-zero emissions energy system is unprecedented, and so it is opening the doors of the technology centre in Amsterdam to welcome in like-minded enterprises of all shapes and sizes.

The Shell Technology Centre Amsterdam (STCA) is transforming into the Energy Transition Campus Amsterdam. It is the ideal location to bring together collaborative partnerships to foster science, technology and innovation. Bringing experts and innovative minds together, the open campus is set up to thrive in the energy transition.

## An ideal location for:



Identifying and unlocking new value streams / value chains for the future.



Industry's brightest minds collaborating for the common goal.



Thought leadership and developing technology solutions in sustainable energy and materials.



Rich partnerships, integrated solutions, value chain development, long lasting legacy projects.

## The purpose of the Energy Transition Campus Amsterdam





# The purpose of the Energy Transition Campus Amsterdam

The campus brings together the brightest innovators to work together under one roof with one purpose: to solve the world's biggest energy challenges through collaboration and technological innovation.

Success is solving the challenges of today and enabling the world to thrive through the energy transition. The Energy Transition Campus Amsterdam will be the catalyst and platform for individual companies that are committed to common goals.

## Focus on key themes:



Hydrogen



Carbon Capture Usage and Storage (CCUS) and geothermal



Chemicals circularity



Electrification



Carbon abatement through nature based solutions



Low carbon fuels

# A history of technological breakthroughs

Shell's Technology Centre Amsterdam (STCA) enjoys a rich heritage of technological development and innovation going back more than 100 years.



Shell built the first laboratory on the northern bank of the IJ River in 1914. STCA is now one of Shell's most important research centres worldwide.



# A history of technological breakthroughs



## Sustainable synthetic fuels

Shell accepted the challenge from the Dutch Ministry of Infrastructure and Water Management to produce 500 litres of sustainable, synthetic kerosene as a step to making aviation more sustainable. Synthetic kerosene, made using green hydrogen and CO<sub>2</sub>, was used on a KLM flight to Madrid.

# A history of technological breakthroughs



## Green Hydrogen

Hydrogen is a major chemical building block in the manufacturing of many products. Being able to produce it by electrolysis based on sustainable electricity ("green hydrogen") is a positive way to limit the resulting CO<sub>2</sub> emissions.

At Energy Transition Campus Amsterdam, green hydrogen is produced with electricity generated by the 232 solar panels located on its roof which are dedicated to this purpose.

This hydrogen is split for use between a major test installation and a hydrogen pump providing fuel for cars.



# A history of technological breakthroughs



## Circular plastic

A technique, known as pyrolysis, turns hard to recycle plastic waste into liquid. Through new in-house technology Shell turns this liquid into suitable feedstock to convert it back to plastics.

These plastics are the building blocks of everyday consumer goods like clothing, computers and mobile phones.

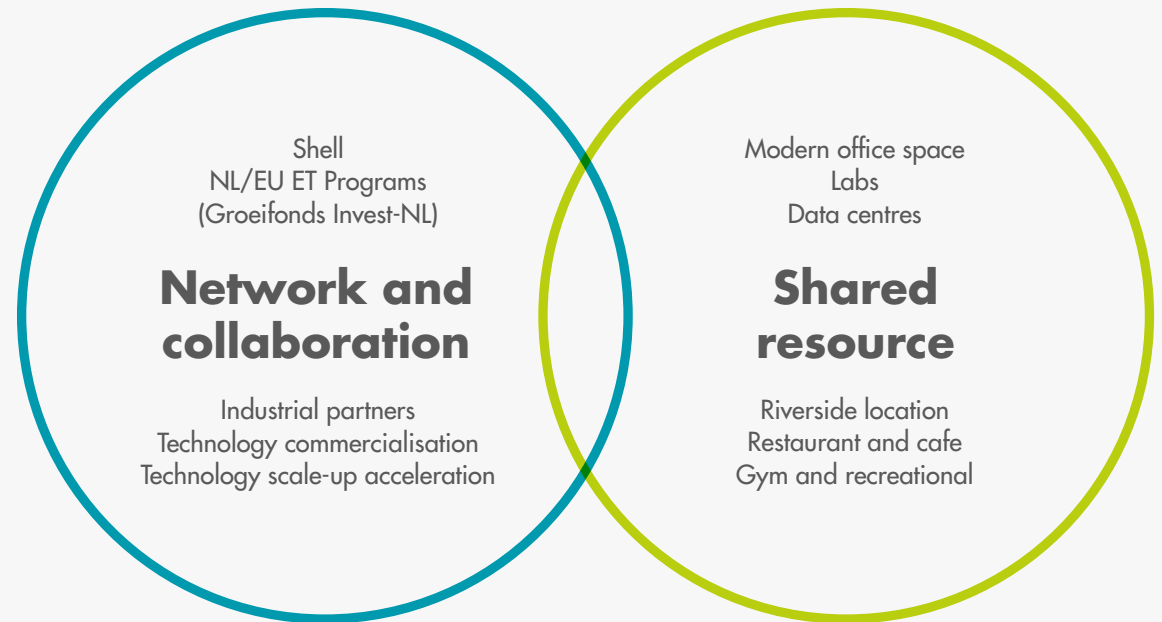
**A community for today to make a better tomorrow**





## A community for today to make a better tomorrow

The Energy Transition Campus Amsterdam brings together parties that complement each other to take innovative ideas from lab to market. Start-ups, research institutes and mature companies together with the existing Shell community all have something unique to bring to the table.



# A community for today to make a better tomorrow



Access to world-class facilities, innovation experience and industry expertise: the campus has all the ingredients to foster an ecosystem that enables start-ups and scale-ups to reach their full potential and bring their innovative solutions to deployment.

The Energy Transition Campus Amsterdam is where research institutes can translate their deep thinking and research into commercial viability and make real societal impact. Mature companies can advance commercial energy solutions by unlocking value through technology collaboration.

The campus community can make a fulfilling impact on society by co-creating innovative, sustainable energy solutions with partners in an inspiring environment.



## The Energy Transition Campus Amsterdam offer



# The Energy Transition Campus Amsterdam offer

People working at the Energy Transition Campus Amsterdam learn, develop, and innovate to make a real-life impact.



**Start-up  
and  
scale-up  
companies**



**Research  
Institutes  
and  
academia**



**Mature  
companies**



# The Energy Transition Campus Amsterdam offer



## Start-ups and scale-ups

Clean tech entrepreneurs have a need for investment, a workspace, talented staff, customers, knowledge, expertise and mentoring. The Energy Transition Campus Amsterdam gives them the opportunity to reach their full potential and accelerate energy solutions.

Together, the campus community can:

- Develop innovations that anticipate tomorrow's challenges.
- Find innovative technology solutions for new value chains.
- Access world class laboratory facilities.
- Make a platform for scaling and attracting new customers and investors.

# The Energy Transition Campus Amsterdam offer



## Research Institutes / Academia

The Energy Transition Campus Amsterdam makes it possible for researchers and academics to concentrate on translating deep thinking and research into commercial viability and real societal impact.

The campus offers a collaborative environment to work on programmes that benefit society, and provides affordable access to world-class facilities and expertise to develop scientists and engineers of the future.



# The Energy Transition Campus Amsterdam offer



## **Mature Companies**

The Energy Transition Campus Amsterdam makes collaborative growth viable, simple and cost efficient. It empowers companies to unlock value through technology collaboration and to achieve the common goal of advancing commercial energy solutions through trusted and complementary partnerships.

Mature companies working toward impactful innovation that anticipates the challenges of today and tomorrow can benefit from affordable access to world class facilities and industry expertise.



**A building for today to solve the challenges of tomorrow**





# A building for today to solve the challenges of tomorrow



The Energy Transition Campus Amsterdam is powered by 362 solar panels. Together with electricity from Dutch offshore wind farms, these panels provide site the size of 13 soccer fields with energy.

In total there are 594 solar panels on-site; 232 panels are dedicated to the production of green hydrogen.

The temperature is controlled via an underground thermal energy storage. In winter, heat sources supply hot water to heat the building. Once this has cooled, it is stored in the cold sources in the ground, which then cool the building in summer. When the water is heated up again, it is returned to the hot springs for storage.

This combination of sustainable energy systems ensures that the Energy Transition Campus Amsterdam has the highest sustainability credentials.



# Location, location, location

The open campus is located at a prime location in Amsterdam, in the heart of Europe. One of the city's key assets is its talent pool, particularly in digitalisation, systems integration and technology upscaling. This makes it possible for campus partners to access the skills needed to thrive through the energy transition.

The community at the Energy Transition Campus Amsterdam will have access to unique, world-class, higher technical readiness level laboratories. They will have access to industry expertise in a campus environment that fosters creativity and innovative thinking.

Partners get the opportunity to flexibly rent office space, lab space and lab services such as 3D printing. All tailor-made to meet their needs.



- Address: Grasweg 31, 1031HW Amsterdam.
- State-of-the-art offices with beautiful views over the IJ river and the Amsterdam City Centre.
- World-class laboratory and research facilities.
- Excellent facilities: meeting and convention centre, restaurant, café, gym, gardens.

- **City centre** 20 minutes
- **Central station** 15 minutes
- **Highway A10** 10 minutes
- **Schiphol airport** 25 minutes
- **Schiphol airport** 40 minutes

## Facilities and Labs





## Facilities and Labs



As a world-class leading technology and research platform in both Amsterdam and in the Shell portfolio, the Energy Transition Campus Amsterdam has a number of characteristics and capacity capabilities that allow partners to access the opportunity to work with each other to develop energy transition themes.



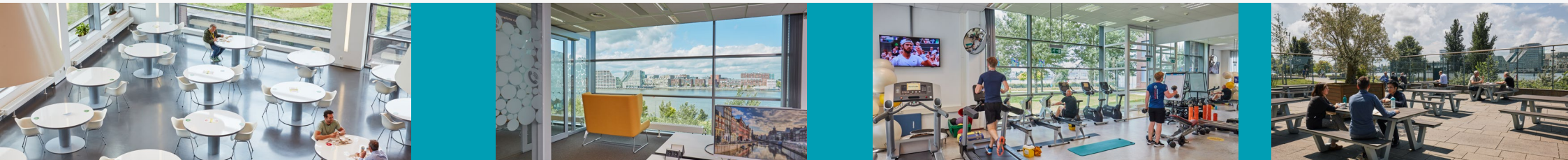
# Facilities and Labs



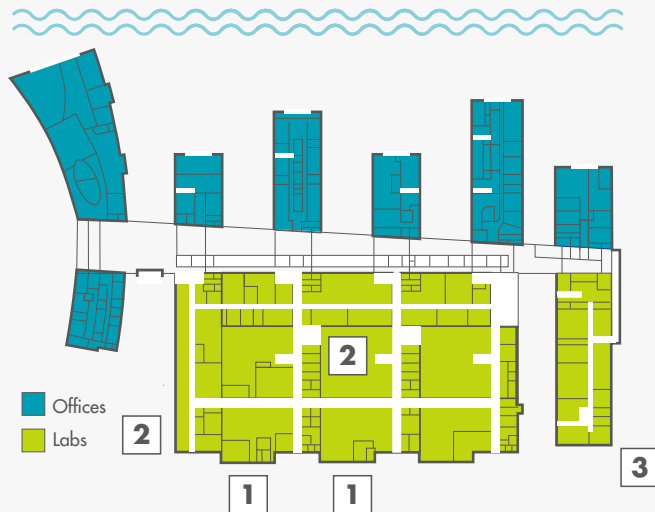
## Offices and facilities

- The building has 5 office wings with 24 independent office units. Total office space: 27,932 square metres.
- Independent office units are available between 511 – 1.140 square metres. (LFA) / 28-78 workstations.
- 1 office unit is split up in studios for start-ups (max 4 people) and scale-ups (12-15 people max).

- 1 Restaurant with terrace**
- 2 Meeting Centre (1st and 2nd floor)**
- 3 Café Rhazes with terrace**
- 4 Gym**
- 5 Gardens**

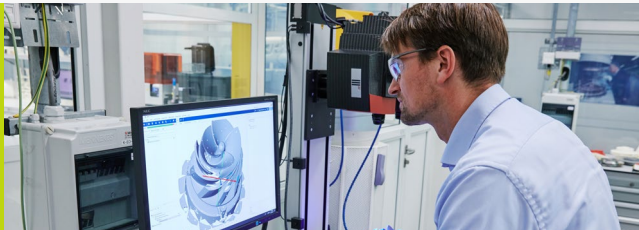


# Facilities and Labs



## Labs

- Lab space: 24,471 square metres.
- 1 Halls (the six large rooms on ground level) are between 600-800 square metres each with high ceilings. Some have local extra levels to work on tall test rigs/pilot plants, or just to create extra floor space.
  - 2 Laboratories are comparatively smaller rooms. They start at about 15 square metres, ranging all the way to 500 square metres. They have relatively low ceilings, they are fitted with lab tables, fume hoods, and comparatively smaller lab equipment including analytical equipment. Most labs can be closed off.
  - 3 The outside plot is the space located outside the building. This is used for large pilots, demo plants or for equipment that can't sit inside due to the risk profile. The outside plot is a restricted area.



**Calling the brightest minds and energy pioneers**





## Calling the brightest minds and energy pioneers



With 1,300 test installations and test setups mostly designed, built and maintained in-house, the Energy Transition Campus Amsterdam is unique.

This world-class collaboration of start-ups, scale-ups, research institutes, academia and mature companies creates a melting pot of skills, knowledge and experience working on platforms, products and innovations for energy transition.

# Calling the brightest minds and energy pioneers

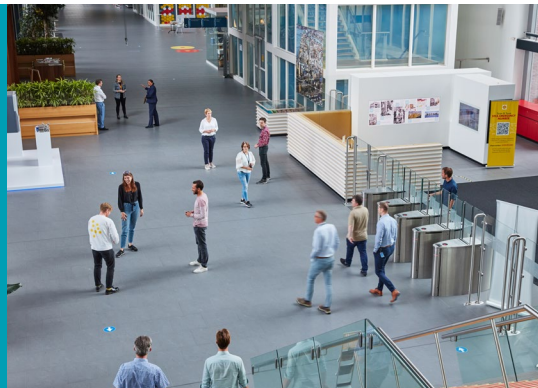


We are transforming our technology centre in Amsterdam into an open innovation campus where great minds come together to tackle the big energy challenges in the world.



We are looking for innovators to collaborate for the common goal – developing technology solutions in sustainable energy, materials and digital solutions.

In a collaborative, vibrant setting, we offer office space, lab space, lab services and joint facilities.



If you are a start-up, scale-up, research institute, academic or mature company working in the energy transition space, please contact us.





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