

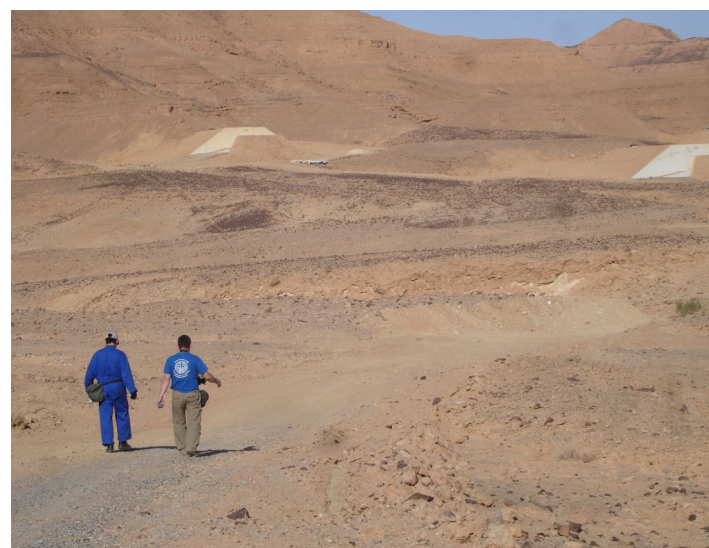
Centre for Chemistry and Technology of the Organisation for the Prohibition of Chemical Weapons

The Hague, The Netherlands

Project update



Final Design



Investing in science and technology to uphold the Convention

The Centre for Chemistry and Technology – the ChemTech Centre – will be a recognised leader in research, analysis, training, and capacity building. It will be a flagship for the OPCW and its broader community and will significantly enhance the capabilities and standing of the OPCW as the global leader in the effort to rid the world of chemical weapons.

The Project

The OPCW Laboratory and Equipment Store was inaugurated in 1996 in the town of Rijswijk, which is just outside The Hague. Initially, the work of the Laboratory and Equipment Store focused primarily on supporting the OPCW's demilitarisation activities and missions, routine inspections of industrial facilities for verification purposes, and international cooperation and assistance activities.

In recent years, however, the work of the Laboratory and Equipment Store has changed and grown significantly to reflect States Parties' changing and growing requirements. Currently, these include responding to the emergence of new chemical weapons threats, which require the development of new and improved verification tools and expanded capabilities to conduct non-routine missions, and providing greater support for international cooperation and assistance activities.

The growing and evolving activities of the Laboratory and Equipment Store, however, have led to increasingly severe space constraints in the Rijswijk facility, which is a rented facility that has no possibility for expansion. Moreover, the facility's infrastructure is ageing as no major infrastructure upgrades have been undertaken since the OPCW's arrival. To meet the future needs of the Laboratory and Equipment Store, in 2017 the Technical Secretariat began to study options for upgrading their capabilities. Between September and November 2017, the Technical Secretariat prepared a report describing the need, initial estimated cost, and initial estimated timeline for a project to construct a new facility for the Laboratory and Equipment Store. The Needs Statement was presented to State Parties at the Twenty-Second Session of the Conference of the States Parties in November 2017, and the project to construct the new ChemTech Centre began.

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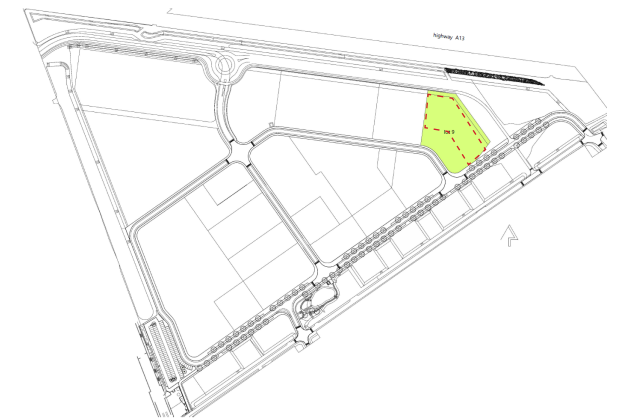
Location and plot

Accessibility

The site for the new ChemTech Centre is characterised by excellent accessibility and visibility, as well as a close proximity to the OPCW headquarters. The plot has access to the A12 and is located close to Rotterdam, The Hague and Schiphol airport. It is well connected by public transport and the regional bicycle network. Plot regulations dictate a detached building with a versatile appearance. The north side provides an oblique view of the OPCW ChemTech Centre from the A12 and the train tracks. The southeast section offers a prestigious front towards the main road of the Heron Business Park, and welcomes people arriving by car and on foot from the light rail station. The southwest side connects to an informal street more suitable for the logistic activities related to deliveries and maneuvering trucks.

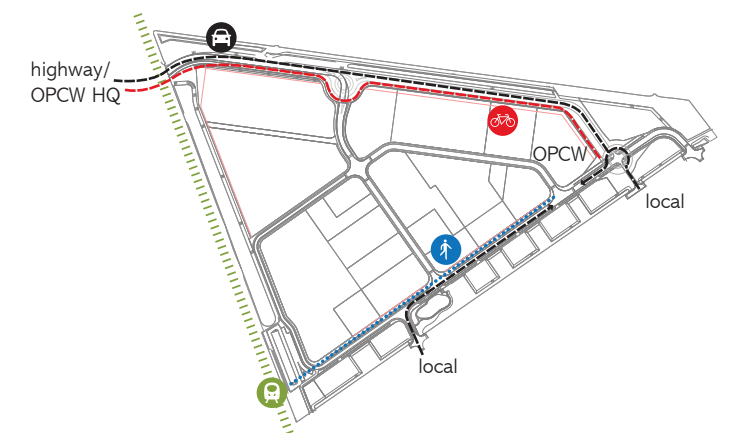
Terrain logistics

The plot for the new ChemTech Centre is 6,400 m². The layout of the parking lot and logistics leaves much space for programmes such as: the laboratory, equipment store, indoor training area and logistics, which are housed on the ground floor. The layout provides an elegant entrance to the grounds with a view of the main entrance to the building. The equipment store and loading area are positioned on the west side of the plot to separate logistics and maneuvering in this area from the main parking area.



Plot

The building plot is located at the Northeast corner of the Heron Business park (lot 9).



Connectivity

The Heron Business park is easily accessible through the highway (A13) and by metro (station Nootdorp).



Visibility

The building plot is located on a visible location on the A13 and train track.

- A OPCW exposure towards highway and train
- B Front for local exposure at Heron Business park
- C Logistics
- D Side of OPCW plot towards neighbour

An architectural rendering of a modern, multi-story building with a complex, angular design. The building features a mix of materials, including wood cladding on the upper levels and dark, metallic-looking panels on the lower levels. A large, flat roof section is covered with solar panels. The building is surrounded by landscaped areas with trees and greenery. In the foreground, there are pedestrian walkways and a small parking area. The background shows a line of trees and a clear sky.

The site for the new ChemTech Centre is characterised by excellent accessibility and visibility, as well as a close proximity to the OPCW headquarters.

Architectural vision, design under development

Functional design

A clear organisation

The laboratory, training, offices and equipment store are organised in a simple fold around the building's heart. The double height Equipment store is positioned in front of the double high indoor training area. Together they form a clear building structure on the westside of the plot that facilitates flexibility. On the Southeast the laboratory area is positioned next to equipment store on the ground floor. The offices and training labs on the first floor are positioned next to the central heart.

Location of the laboratory

The laboratory facility plays a key role in the OPCW's tasks. The location of the laboratory programme in relation to the equipment store is an important choice in the layout and workflow of the building. The requirements for the proximity to the warehouse and central facilities along with safety, routing and load-bearing capacity requirements make the ground floor the preferred location compared to an elevated location. The support area between the equipment store and the laboratory can facilitate all necessary central facilities, relations, safety measures and protocols.

An elevated heart

By combining the equipment store, indoor training area, laboratory facilities and the necessary central facilities on the ground floor, we were able to create a spacious, elevated heart of the building. It accommodates the canteen and meeting areas, providing views over the highway and into the training laboratory, training areas, offices and the equipment store). A spacious route from the entrance area with facilities on the ground floor leads staff, trainees and screened visitors to this distinctive, flexible space. Installation spaces have been placed on top of the two building parts. In this way the programme can be serviced efficient and flexible.

Routing

The covered and out of sight loading area provides a safe and secure loading and unloading area for the equipment store, indoor training area and general facilities. Keeping the equipment store and the laboratory on the ground floor together with the loading area allows for optimal routing and workflow.

Accessibility

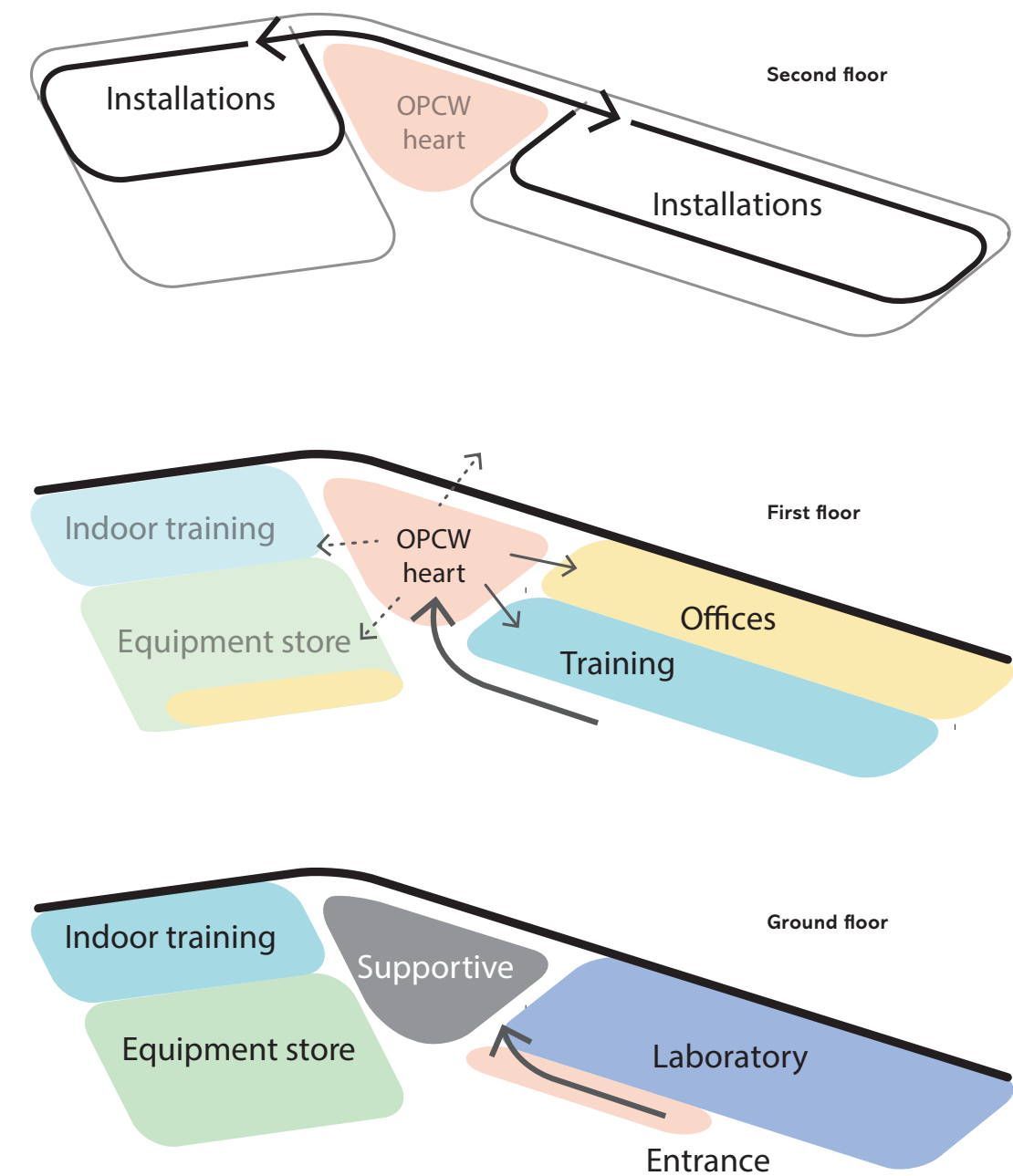
The main entrance houses the reception desk along with a visitor waiting area, and other facilities. From here, a wide staircase—that doubles as a grandstand—and an elevator leads to the heart of the building. This multifunctional space provides access to central facilities and, for those authorised, to the training labs, offices, and Indoor training area. From the central space, a pleasant outdoor terrace on the second floor can be reached by stairs or elevator.

Optimizations Final Design

During the Final Design phase the functional layout has been further developed and adapted to implement the user wishes for the office landscape, the new requirements for security (security room and guard house functionality) and the facility office.

The layout for the outside terrain has been optimized to improve safe access, reduce costs and complexity of the security boundaries.

Technical spaces for power supply have been integrated in the main building volume to create a more secure situation.



Organisation diagram

A spacious route from the entrance area with facilities on the ground floor leads staff, trainees and screened visitors to the common heart, a distinctive flexible space.



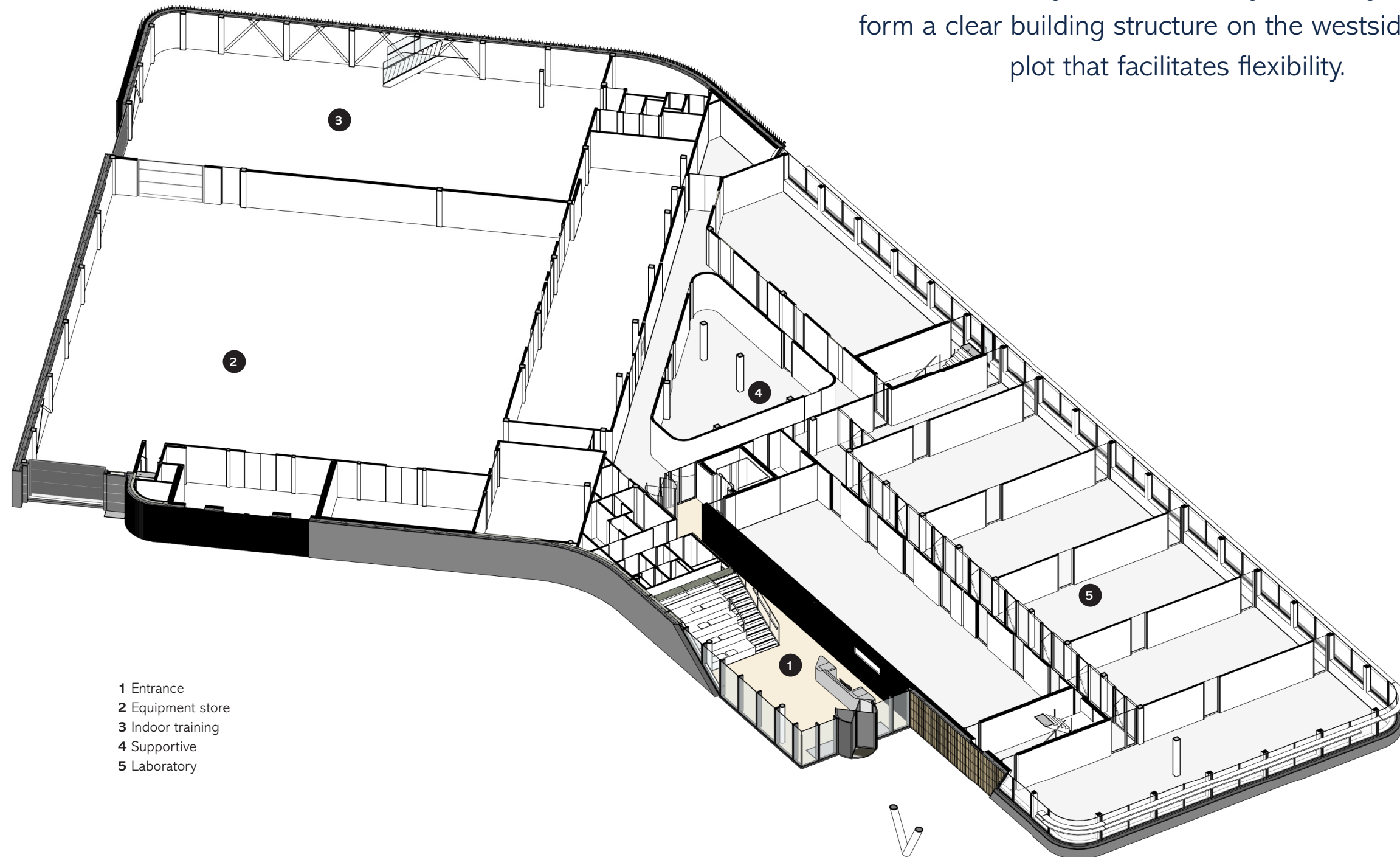
Entrance stairs and main classroom

Architectural vision, design under development

Axonometry ground floor

Entrance area with big staircase to the first floor and connection to Labs and Equipment Store on the ground floor

The double high Equipment store is positioned in front of the double high indoor training area. Together they form a clear building structure on the westside of the plot that facilitates flexibility.



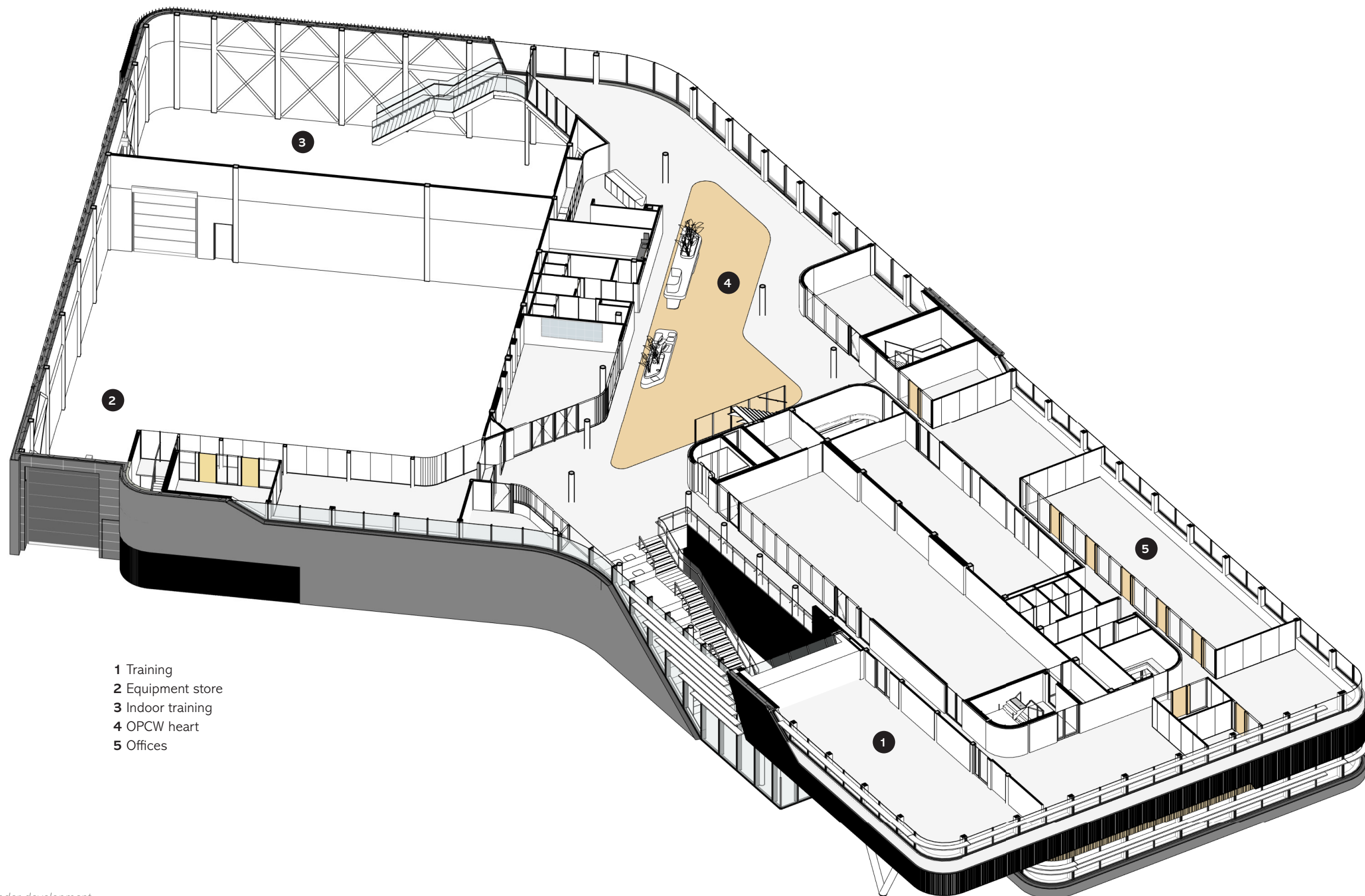


Keeping the equipment store and the laboratory on the ground floor together with the loading area allows for optimal routing and workflow.

Architectural vision, design under development

Axonometry first floor

The central heart connects the entrance, equipment store, training area and offices.



- 1 Training
- 2 Equipment store
- 3 Indoor training
- 4 OPCW heart
- 5 Offices

The common heart is essential in creating a community of international experts. It is a space that facilitates meeting, interaction and exchange for employees, (VIP) visitors and trainees to support the important tasks of OPCW.

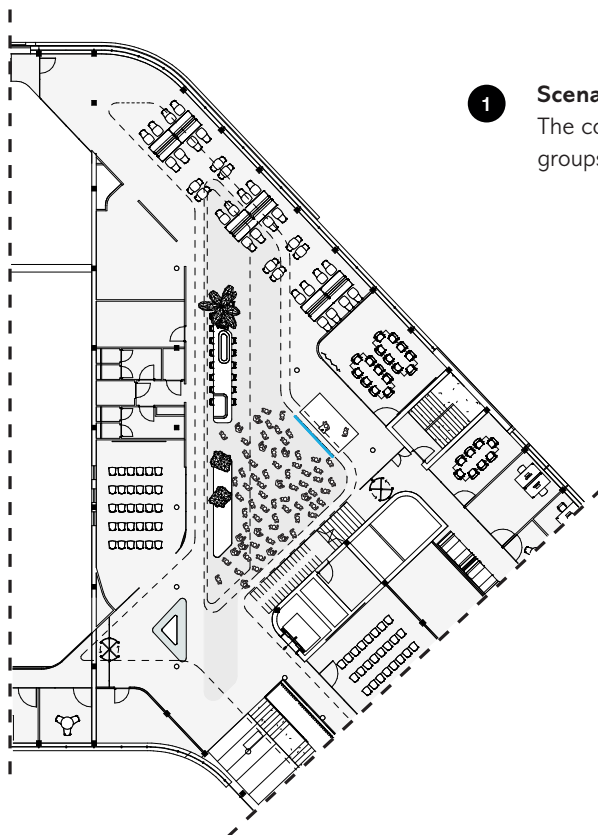


Architectural vision, design under development

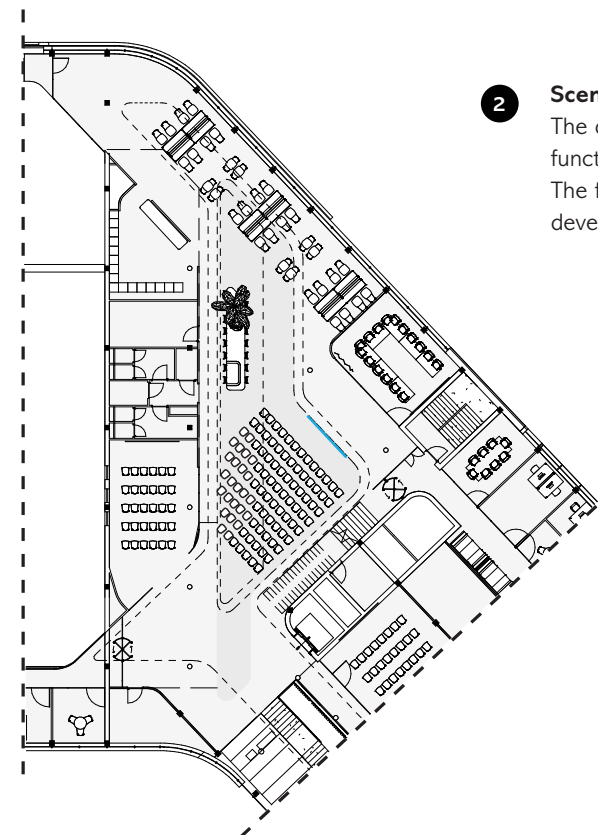
Common heart

In our view, the common heart is essential in creating a community of international experts. It is a space that facilitates meeting, interaction and exchange for employees, (VIP) visitors and trainees to support the important tasks of OPCW. From the common heart views are provided into

the Equipment store, the Indoor Training area, the Training Classrooms and Training Laboratory. The display area, multifunctional classroom, large meeting room and the canteen support the daily activities as well as multifunctional use.



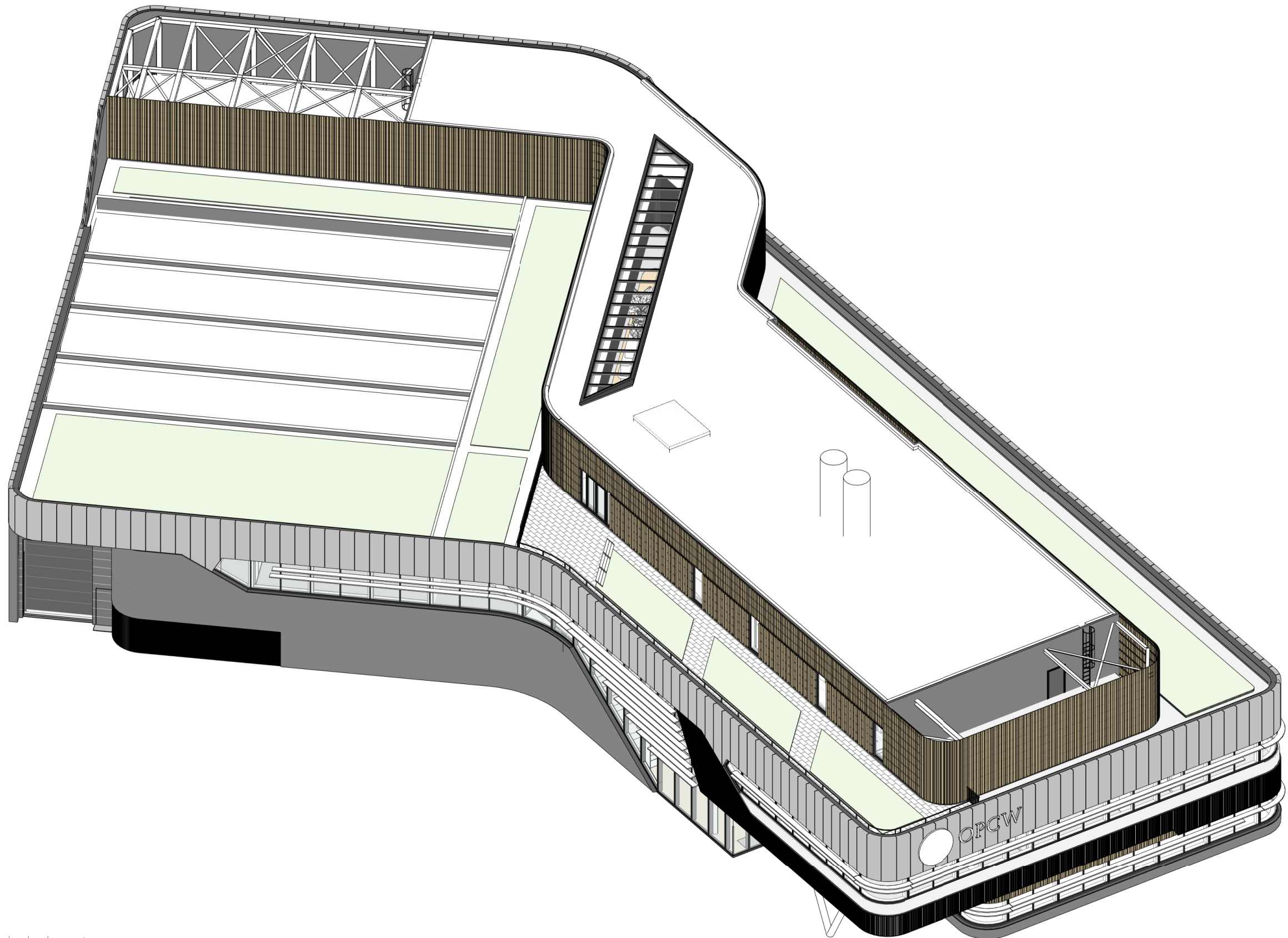
- 1 Scenario: speech / presentation**
The common heart can function as a reception area, that can host large groups. A small podium can be placed to facilitate a speech.



- 2 Scenario: symposium**
The double high common heart with the presentation screen, can functions as a space for a symposium by placing chairs in middle. The fixed and loose furniture arrangements have been further developed in the Final Design phase.

Axonometry building

Low roofs with solar panels and a lightweight high roof for an optimal sustainable design.



Architectural vision, design under development

Architectural design

Identity and character

The architecture of the new ChemTech Centre can be hugely beneficial in underlining the OPCW's role and importance. This requires exceptional architecture with international appeal. Presenting itself with a distinctive image—both in reality and in photography—the building will help to give the organisation a recognisable face. At the same time it will support and strengthen the OPCW's image and identity as a reliable and expert authority.

The design aims for an image that presents the OPCW as an international knowledge community with access to state-of-the-art facilities and equipment. Flowing lines and gentle curves create a contemporary look. The green facade on the north side—as requirement in the urban development conditions—is combined with a variety of simple yet high quality claddings such as corrugated aluminium, wood and stone or brickwork. Together, this create a striking image of a green, sustainable and future-oriented high-tech facility.

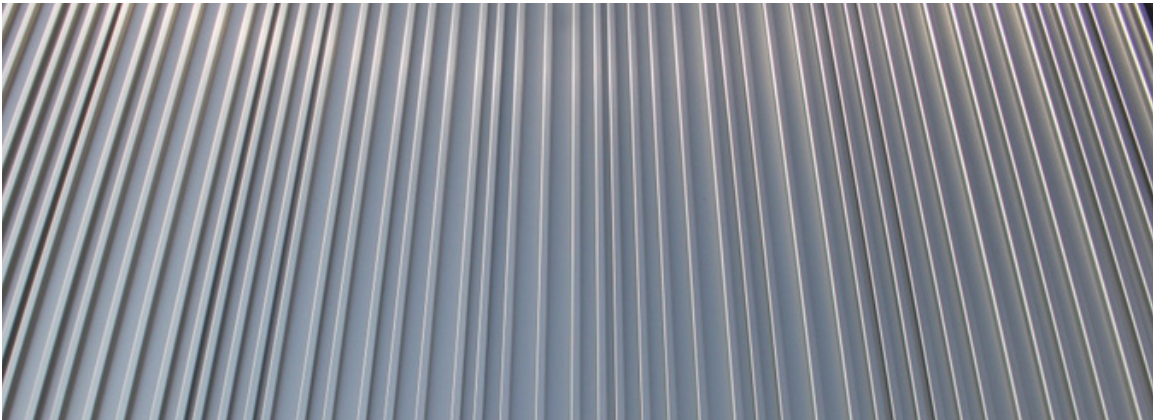
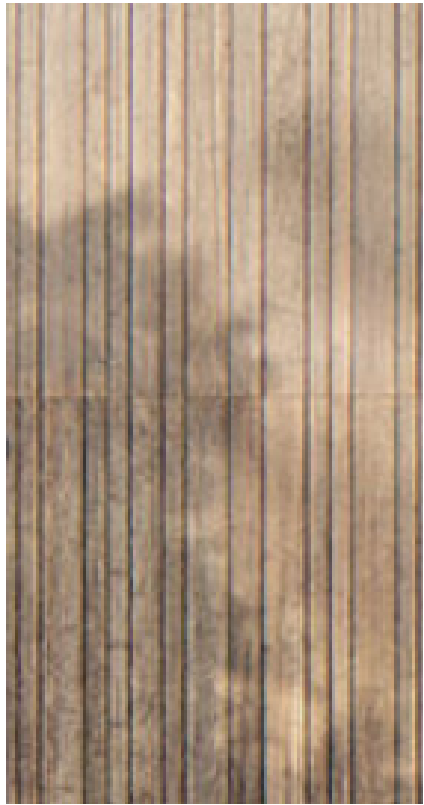
The façade envelopes and binds the different programmatic parts of the ChemTech Centre together into one building. The horizontal bands emphasise the versatile appearance of the building and allow for implementing programmatic, security and privacy requirements. The parts with a more closed character can be perfectly used to showcase the logo of OPCW towards the highway on the north and the entrance on the southeast.

The well insulated façade is a first step in creating a sustainable building. External sunshading lamella will reduce the energy consumption necessary for cooling while at the same time guarantee natural daylight entering the building and providing unobstructed views to the surrounding on sunny days.



Architectural vision, design under development

Architectural collage



The design aims for an image that presents the OPCW as an international knowledge community with access to state-of-the-art facilities and equipment.



Architectural vision, design under development

Donor Wall

The donor wall will be used for displaying member states and other donors that have made or will make contributions for the ChemTech Centre. The wall has been placed in the OPCW HQ in The Hague.

The metal lamella will be engraved with both country and flag. Together they form an image of the new common heart of the ChemTech Centre. In time these lamella will be incorporated in the entrance hall wall of the new ChemTech Centre.



Construction progress



Construction activities on site started in June 2021.
Construction of the ChemTech Centre is scheduled to be
completed by the end of 2022

Situation of the construction, 16 May 2022



Architectural vision, design under development



working together for a world
free of chemical weapons