university of groningen

Feringa Building

Home to Nobel Prize Winners



May 2021

Content

- Background
- Facts & Figures
- Location and Design
  - Plinth
  - Mid-sections
- Schedule





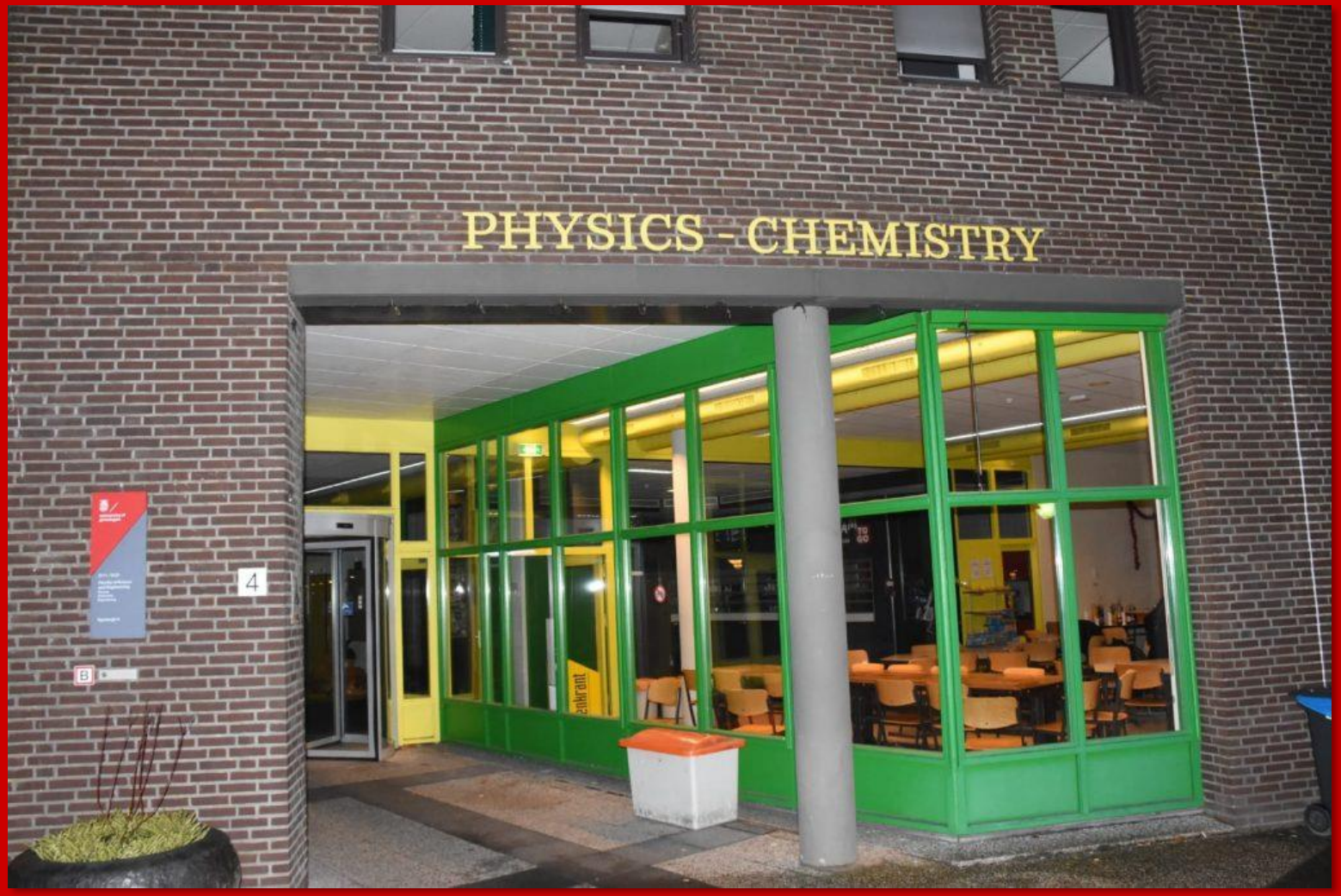








Background



Replacement of Nijenborgh 4

This laboratory complex (1969) for research and education in chemistry, physics and engineering is technically outdated and no longer meets today's high standards.

After thorough research (renovations vs. new building), the University decided to build the Feringa Building to replace Nijenborgh 4.



Named after Ben Feringa

The name of the new building was changed in the design phase from ‘Zernikeborg’ to ‘Feringa Building’. Professor Ben Feringa was awarded his Nobel Prize (2016). After Frits Zernike (1953), he is the second Nobel Prize winner at the Faculty of Science & Engineering, ‘Home to Nobel Prize Winners’.





Use of the Feringa Building

Education and research in chemistry, physics, astronomy and engineering:

- Stratingh Institute for Chemistry
- Engineering and Technology Institute Groningen (ENTEG)
- Zernike Institute for Advanced Materials (ZIAM)
- Groningen Biomolecular Sciences and Biotechnology Institute (GBB)
- Van Swinderen Institute for Particle Physics and Gravity
- Kapteyn Astronomical Institute
- SRON Netherlands Institute for Space Research

Facts & Figures



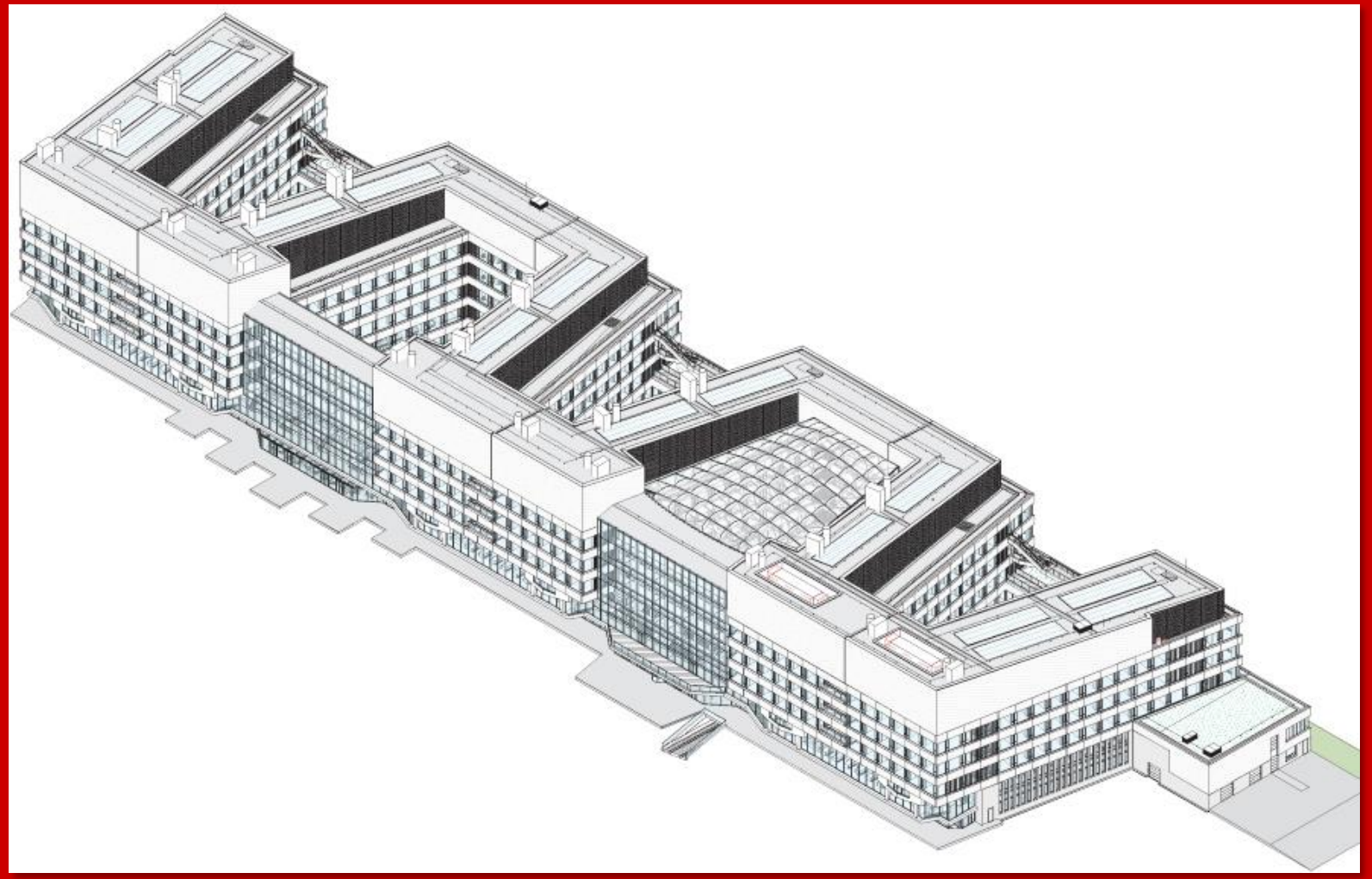
Project in numbers

- 64,000 m^2 Gross Floor Area
- 260 metres long, 63 metres wide
- Five stories high, with an extra floor for installations
- Room for 1,400 students and 850 staff members
- A large lecture room with 420 seats, can be divided in 180 and 240 seats
- Restaurant with 250 seats
- 3 km of lab tables and 450 fume hoods (‘zuurkasten’)
- Clean rooms, low vibration laboratories and 30 laser labs
- Air volume flow of 900.000 m^3/h

Sustainable design

- Optimal insulation
- HR $^{++}$ glass
- 900 m^2 solar panels (± 120,000 WP)
- LED lights in addition to natural daylight
- Gasless heating
- Geothermal heating and cooling system (‘WKO’) with heat pumps (‘warmtepomp’)
- Energy-saving auto-close fume hoods

Location & Design




Feringa Building

Location of Feringa Building

Zernike Campus Groningen

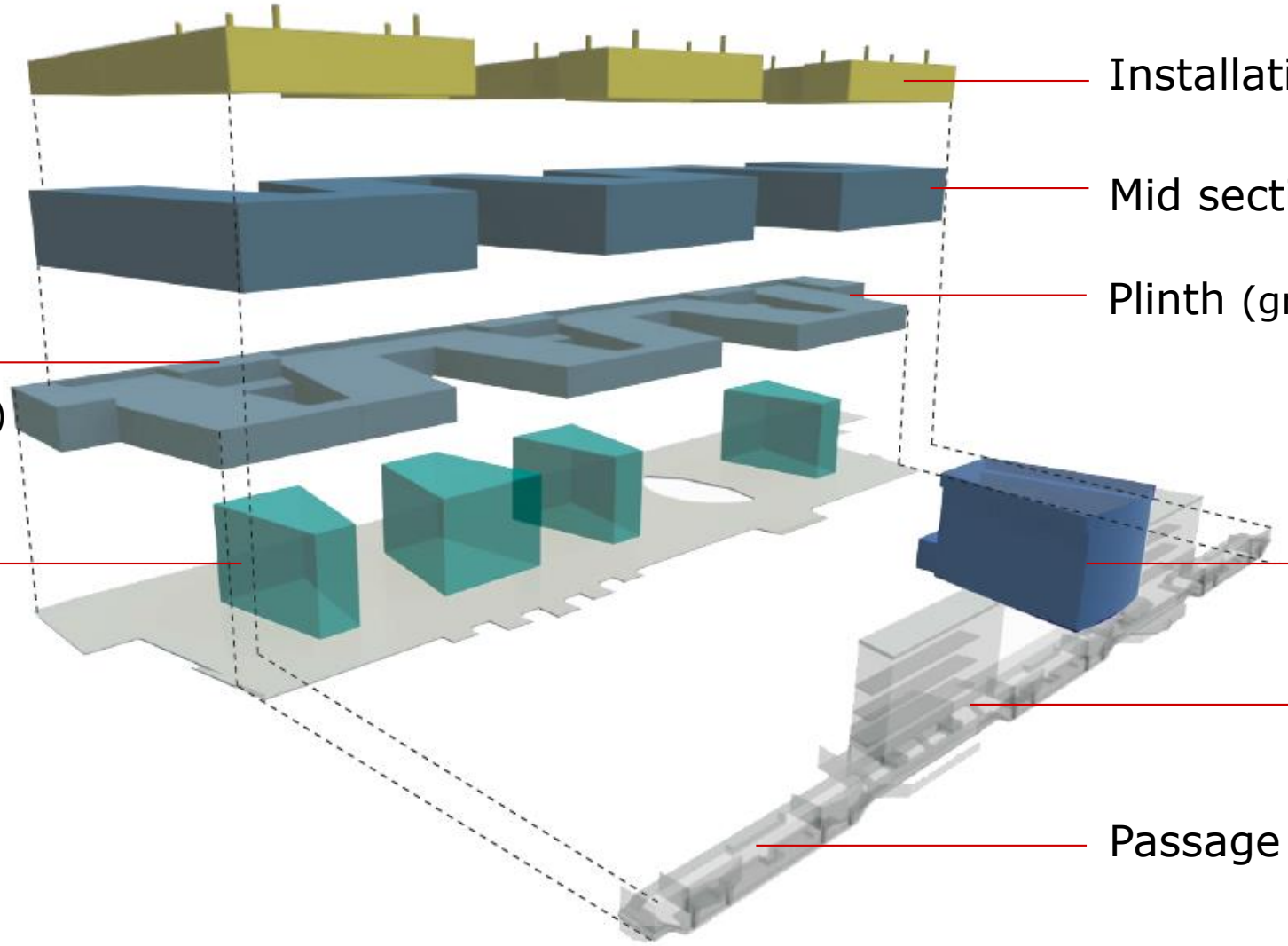


Please note:

This is the definitive location of the Feringa Building. During the design process the building was shifted 80 metres southwards. Most impressions used in this presentation show the old location.



Lay-out of the building



Installations (roof-top)

Mid sections (2nd, 3rd & 4th floors)

Plinth (ground and 1st floors)

Backbone
(logistics corridor)

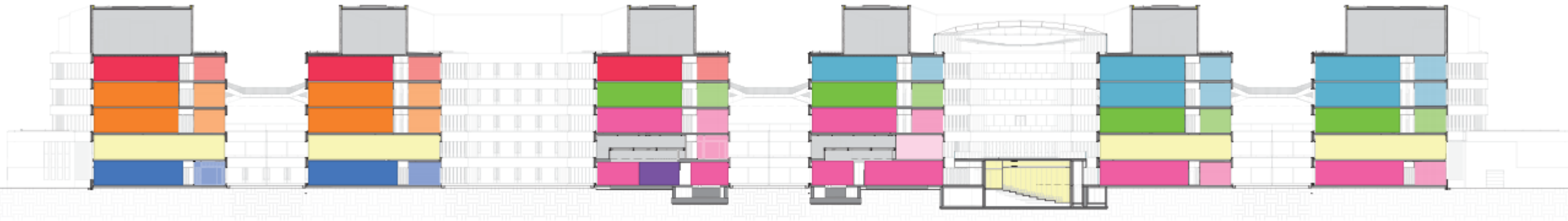
Open patios

Main entrance,
atrium & auditorium

Restaurant

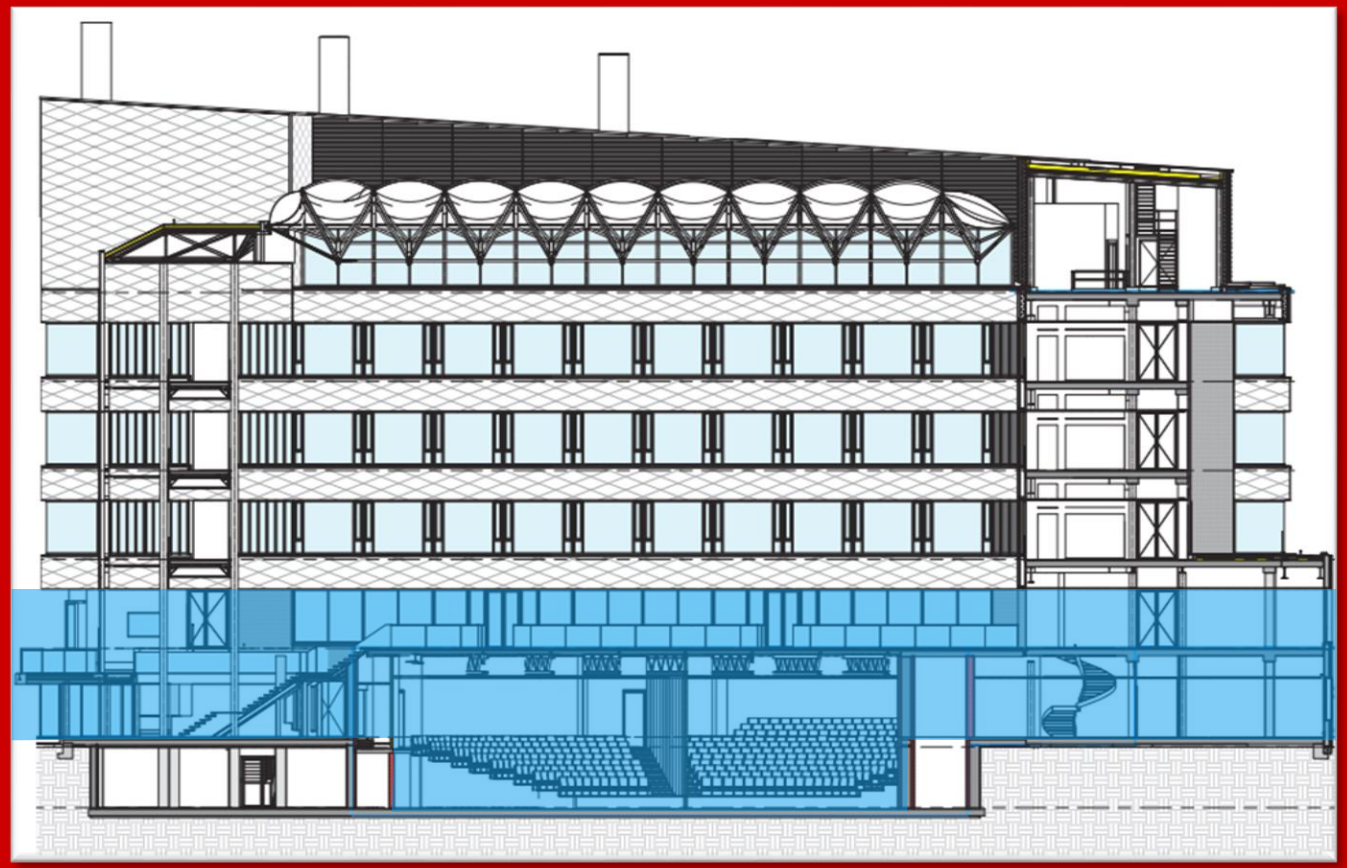
Passage (front corridor)

Lay-out of the building



GBB
Practical education
Theoretical education
SRON
ENTEG
Zernike
Stratingh
VSI
Meetingcenter
Kapteyn

Plinth
(ground & 1st floors)



Plinth (ground & 1st floors)

The ground and first floors form the ‘Plinth’, which will house:

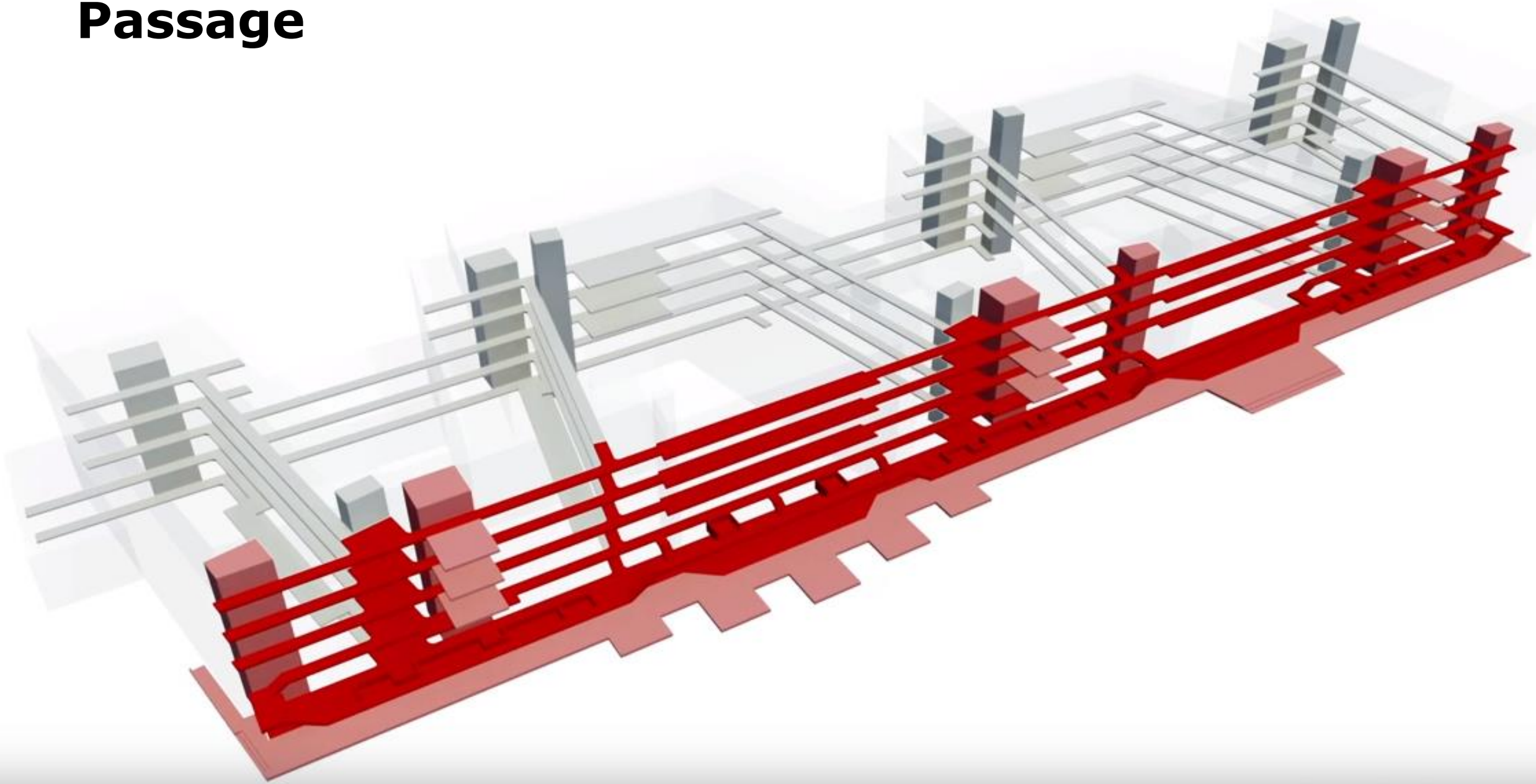
- the research cluster
- the clean rooms
- the atrium* with access to
- the auditorium (large lecture room)
- a conference room
- social corners
- workspaces for students
- the restaurant with an outdoor terrace

* the lively atrium is a large entrance area, suitable for exhibitions, conferences and as a place to meet, study and take a break.


LAB CAFE

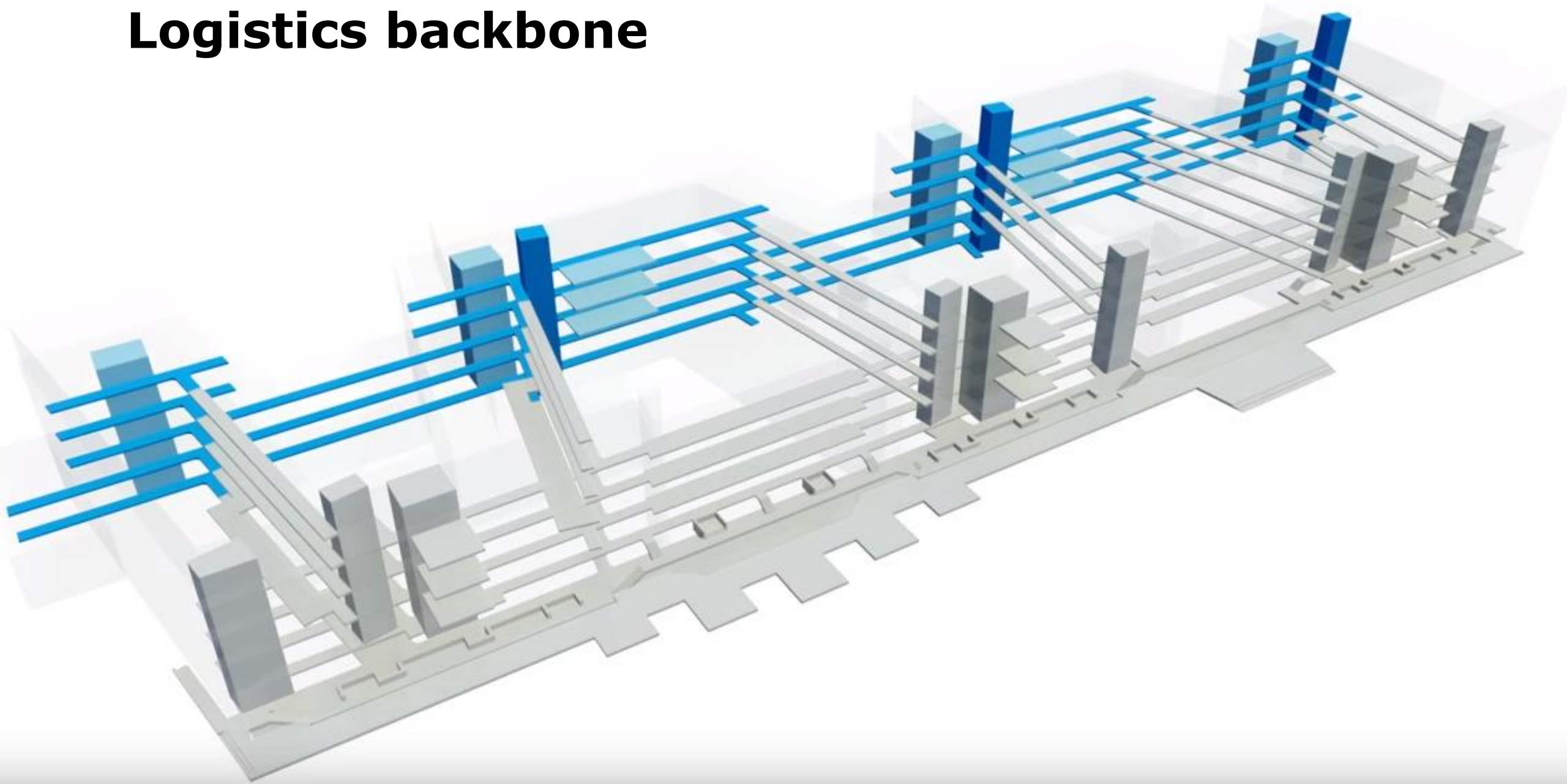


Passage

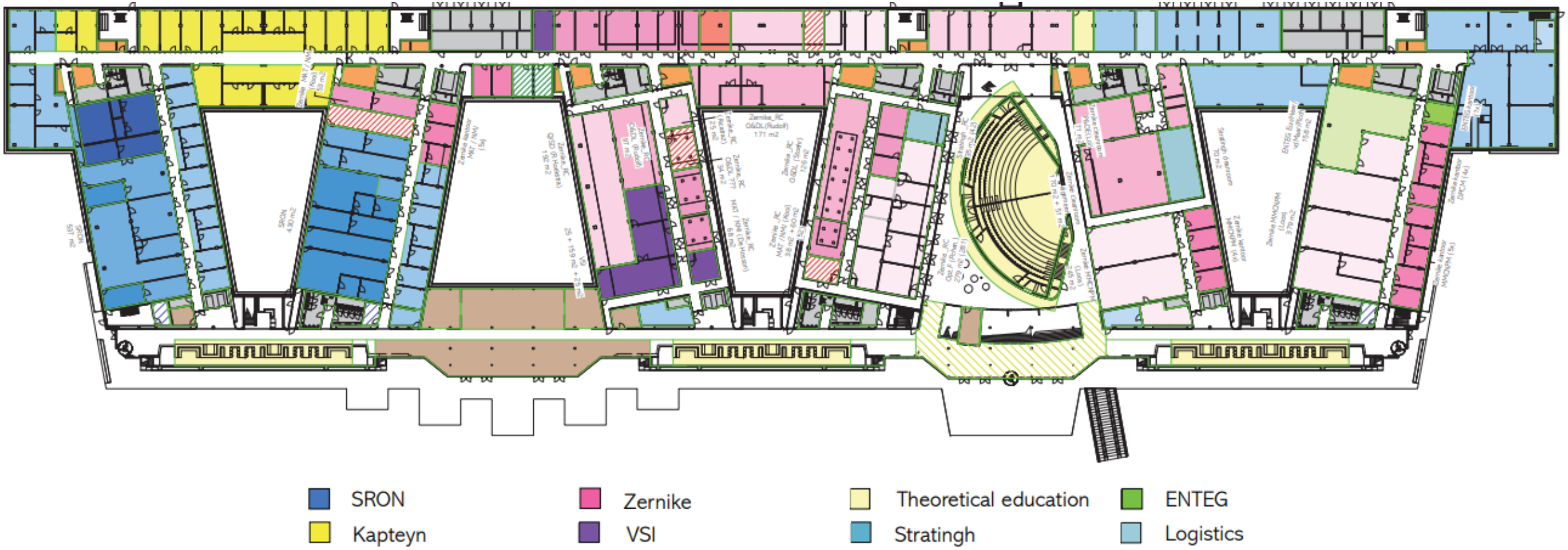




Logistics backbone



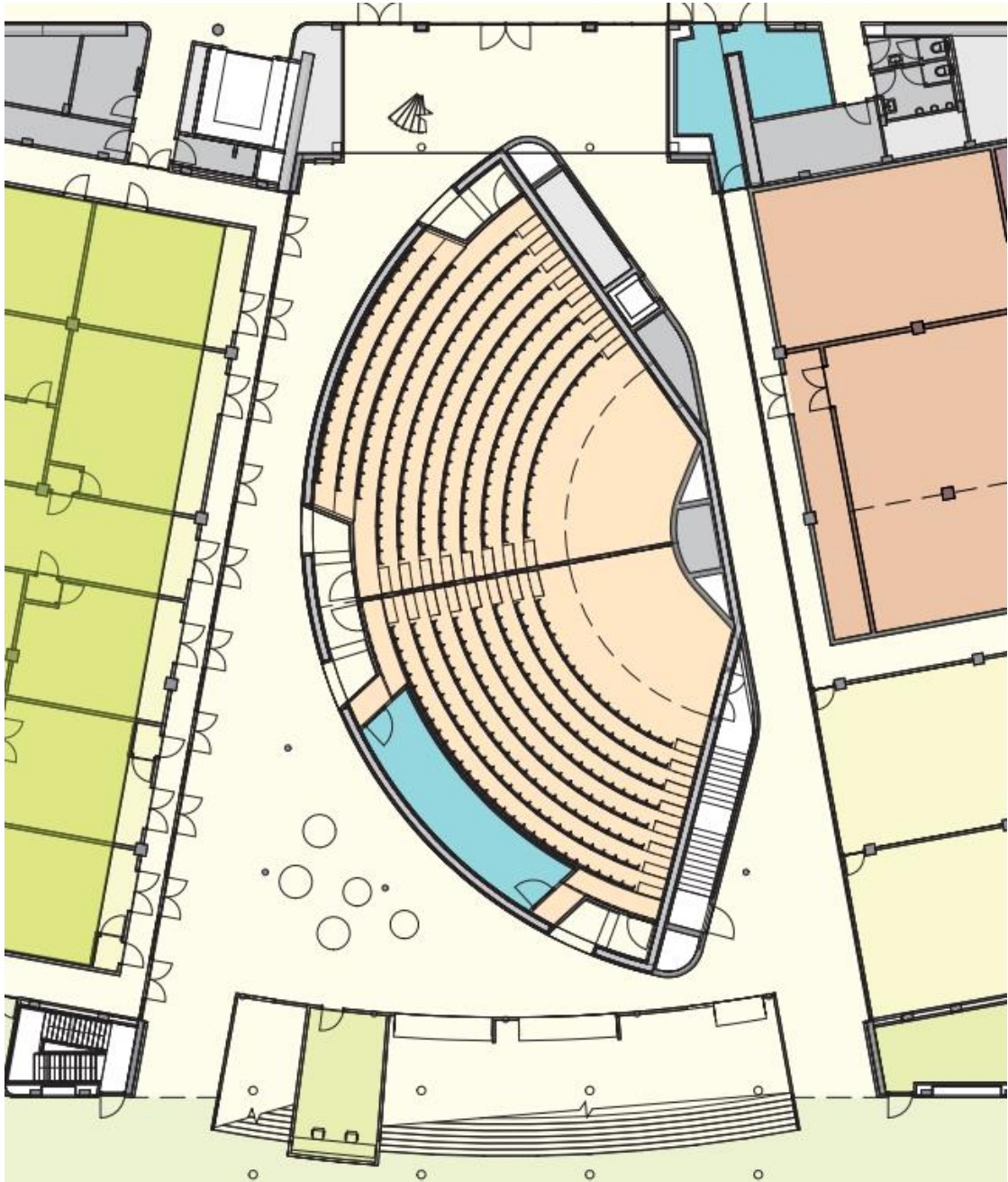
Lay-out of ground floor



ground floor

Auditorium

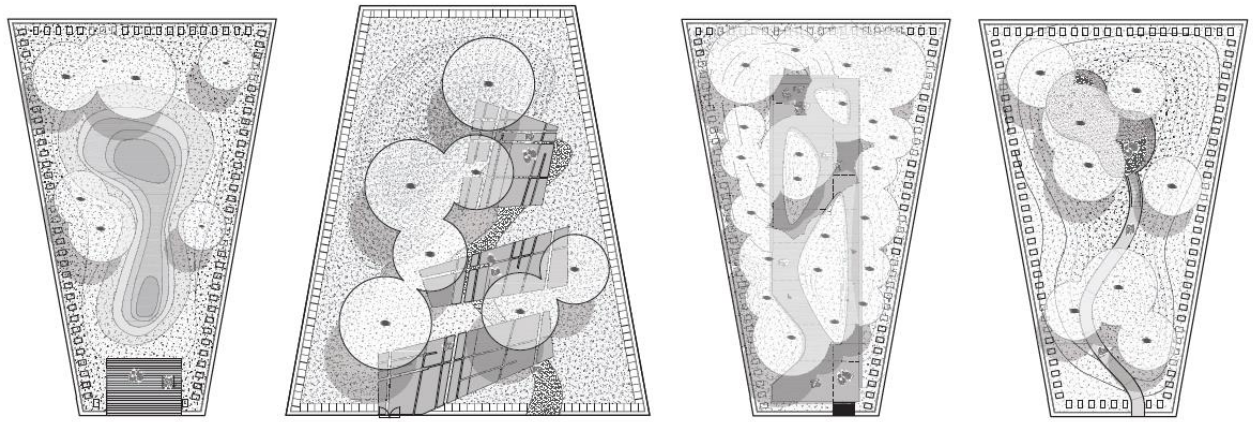
The large lecture room beneath the atrium has seating for 420 people, but can be partitioned into two rooms for 180 and 240 visitors.





Patios

4 courtyards:

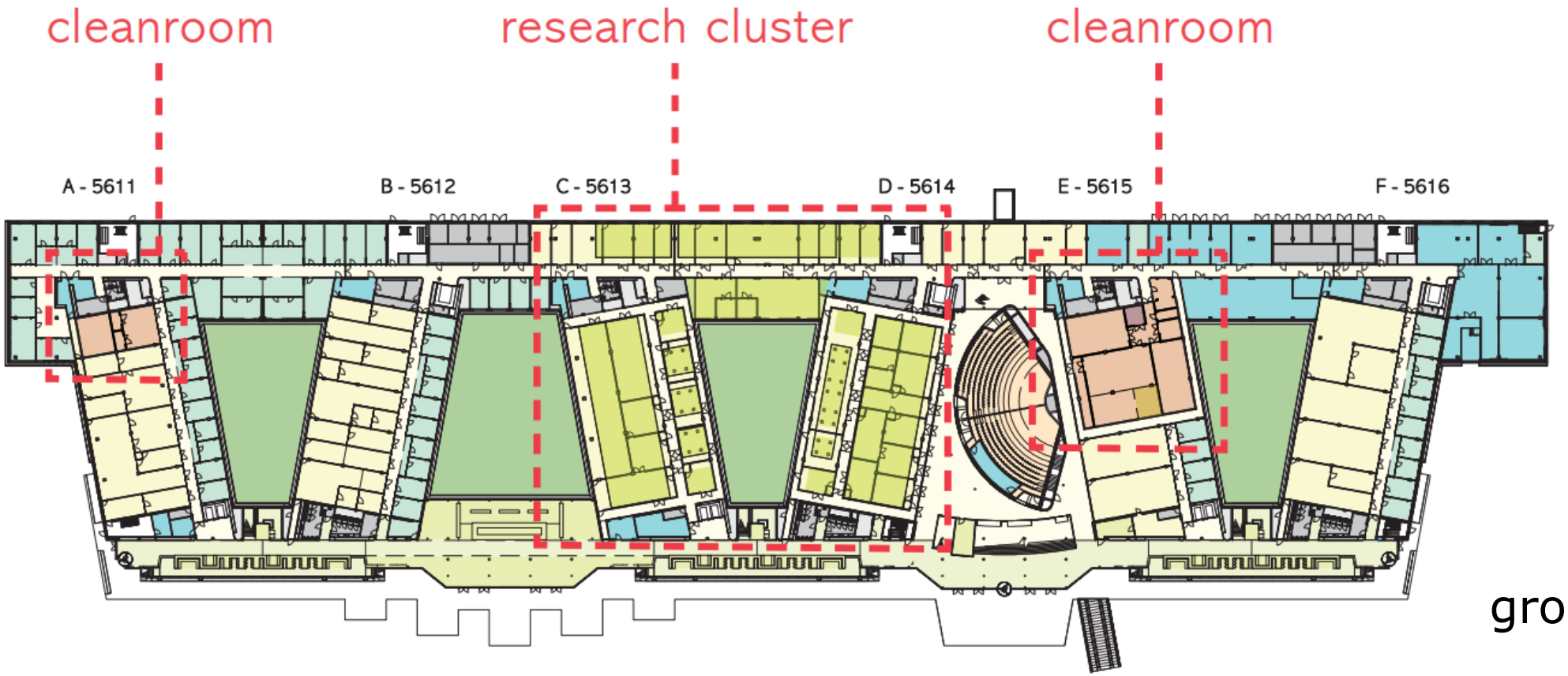






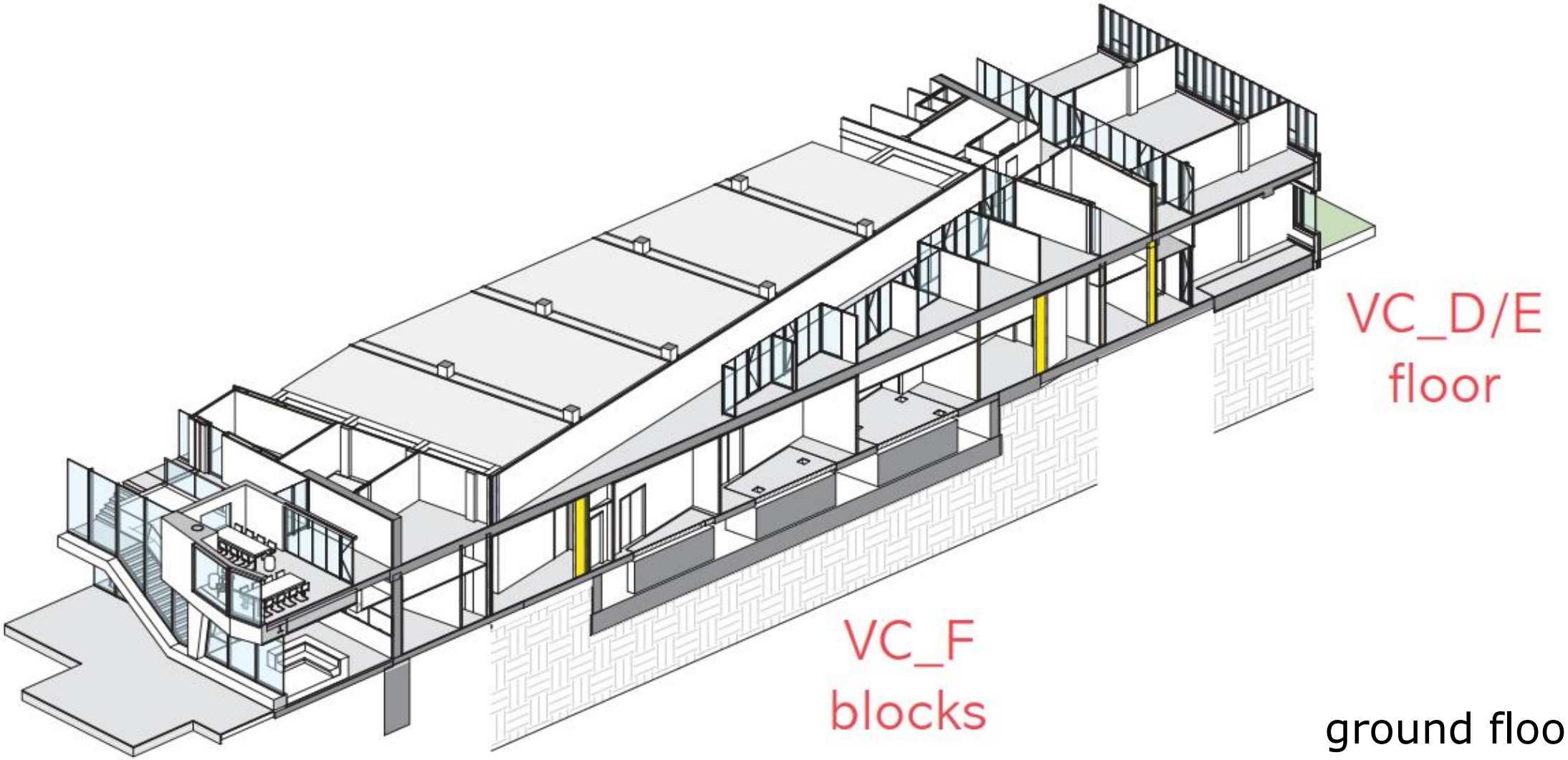
Research cluster & clean rooms

The research cluster is located in the core of the building, enabling vibration-proof laboratories with high VC-D, VC-E or VC-F criteria.

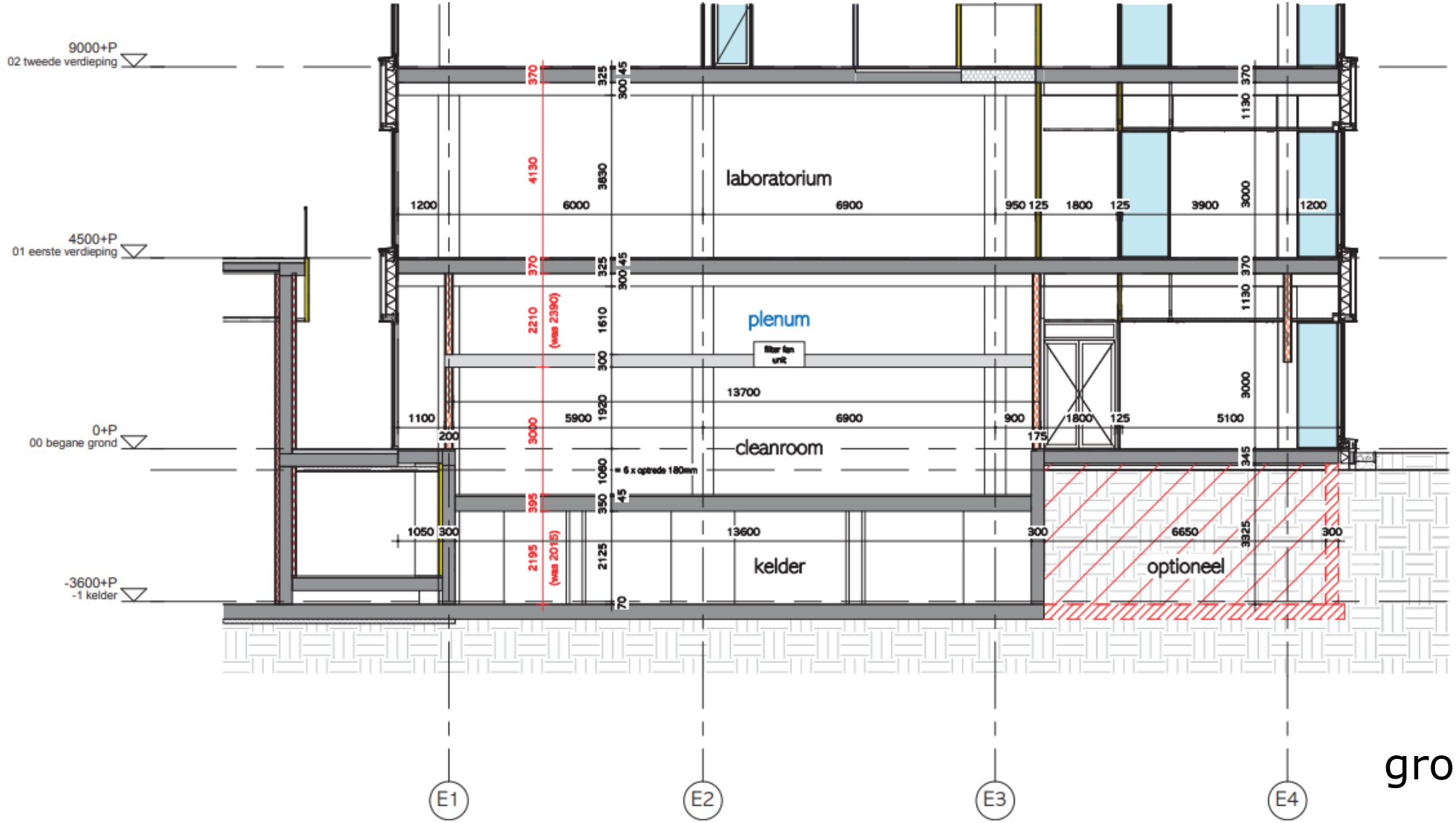


ground floor

Research Cluster



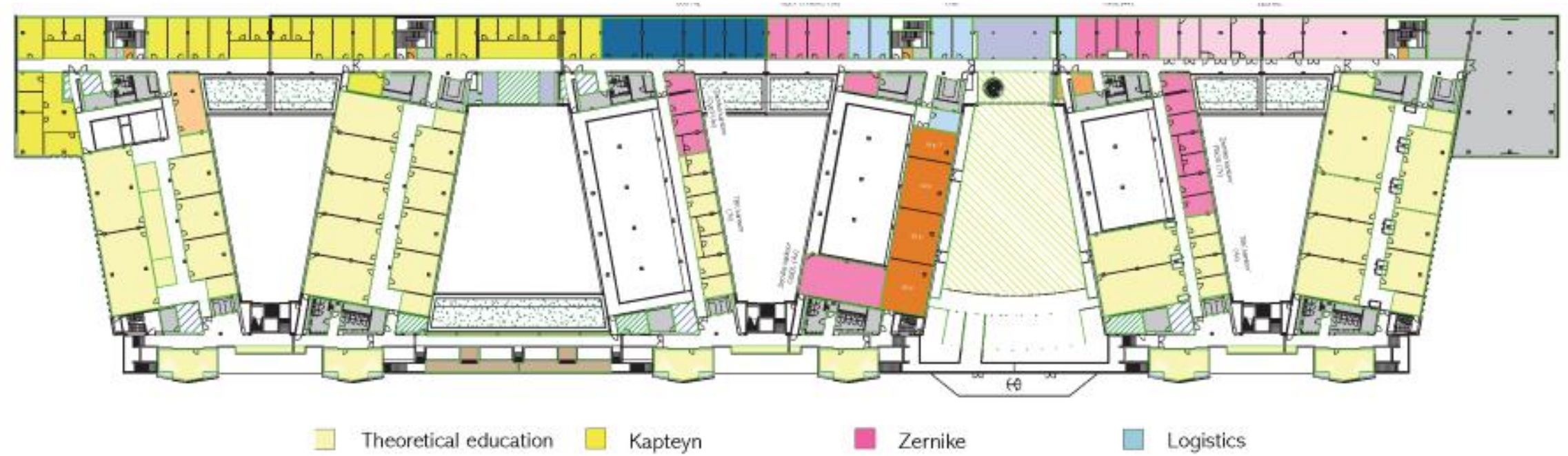
Clean rooms



ground floor

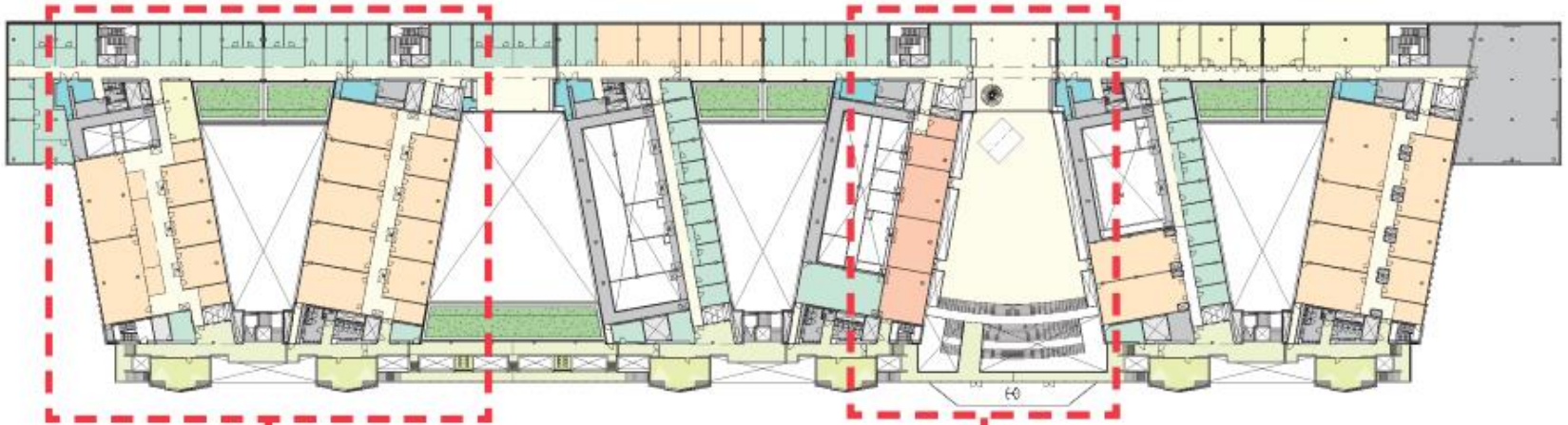


Lay-out of first floor



first floor

Theoretical education

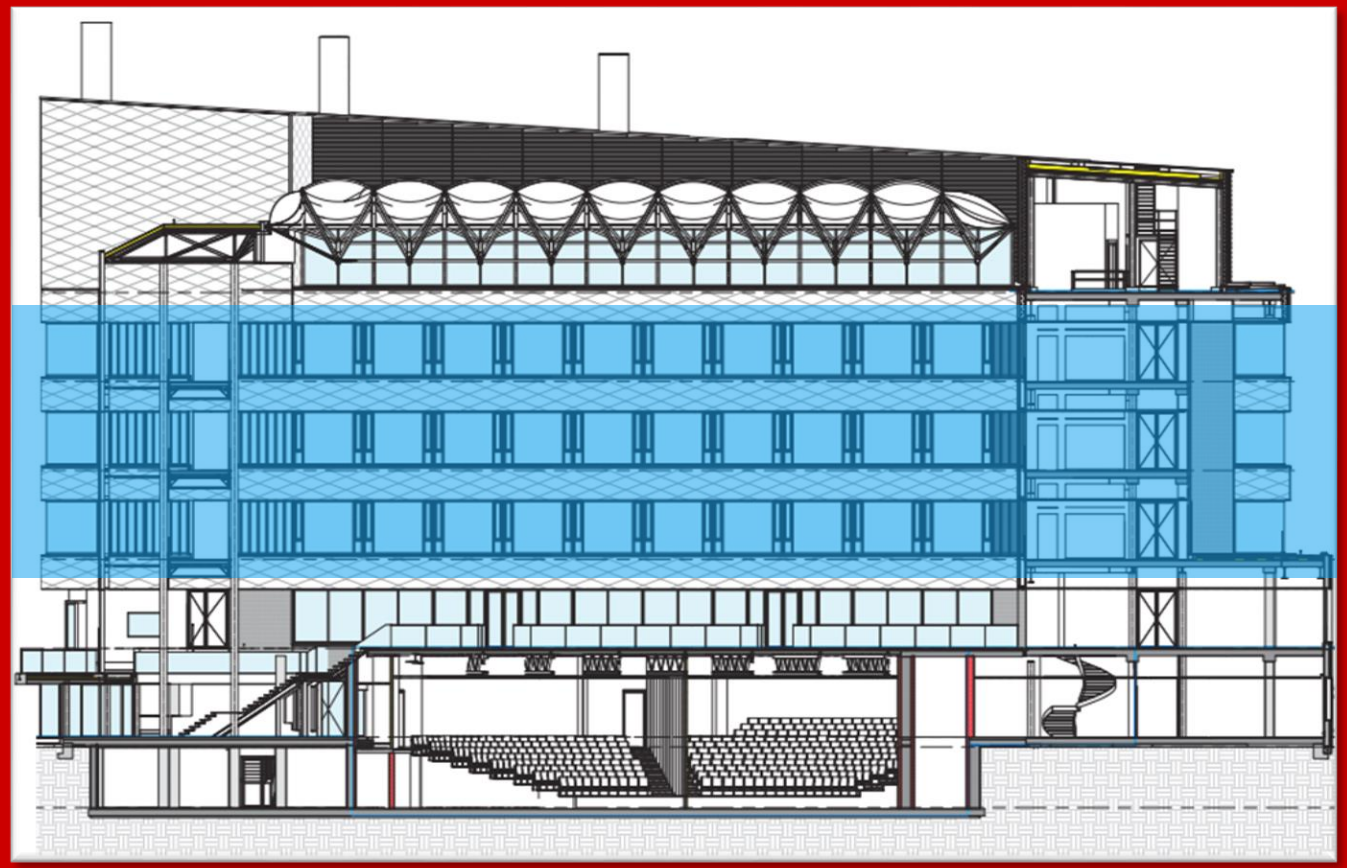




first floor

Mid sections

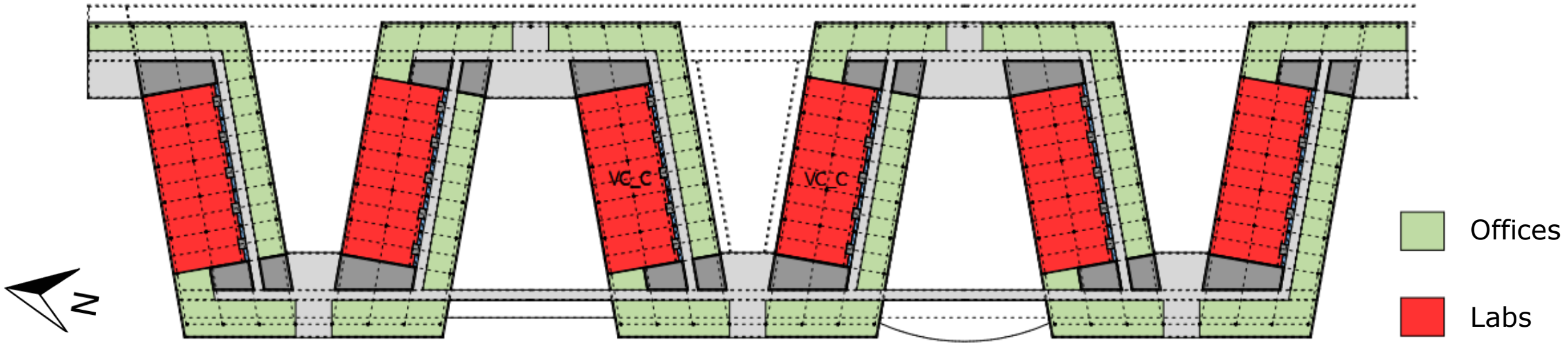
(2nd, 3rd and 4th floors)





Laboratories (facing north) **and offices**

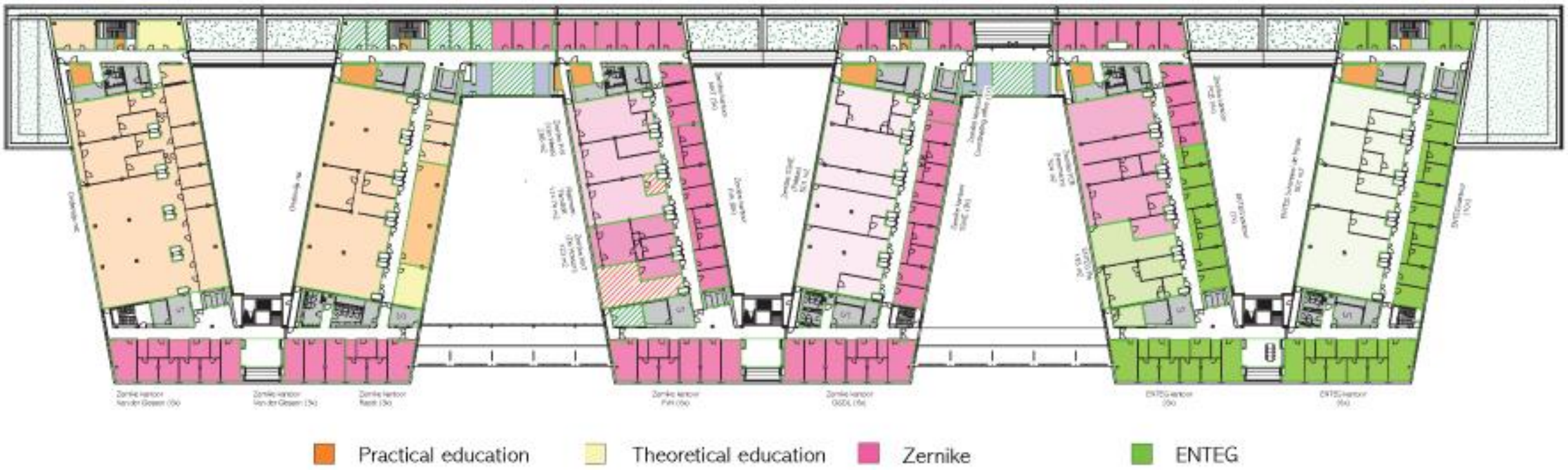
All the laboratories are built on the north side of each wing, keeping the impact of sunlight to a minimum. The chemical, biochemical and physics laboratories are flexible and interchangeable as each one can be connected separately to the ventilation, power and gas supply networks.





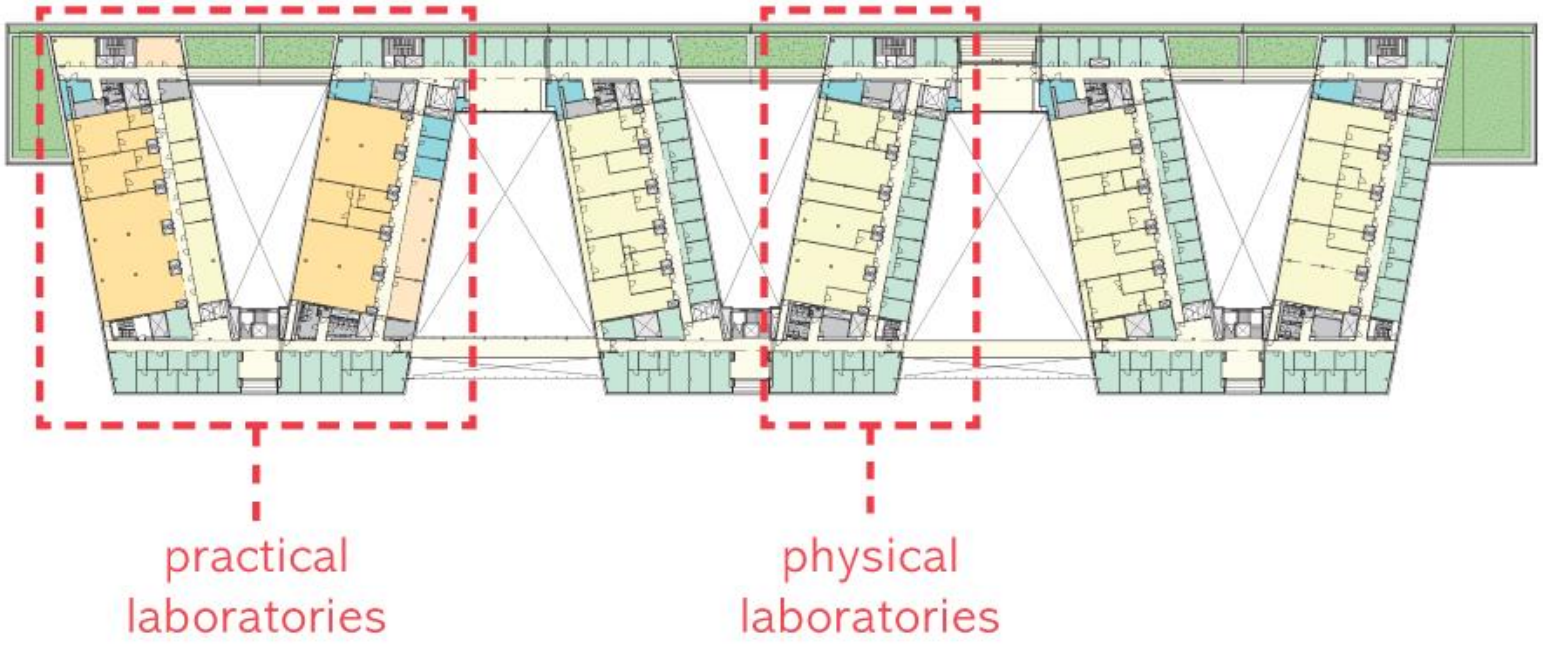


Lay-out of second floor



second floor

Practical and physics laboratories





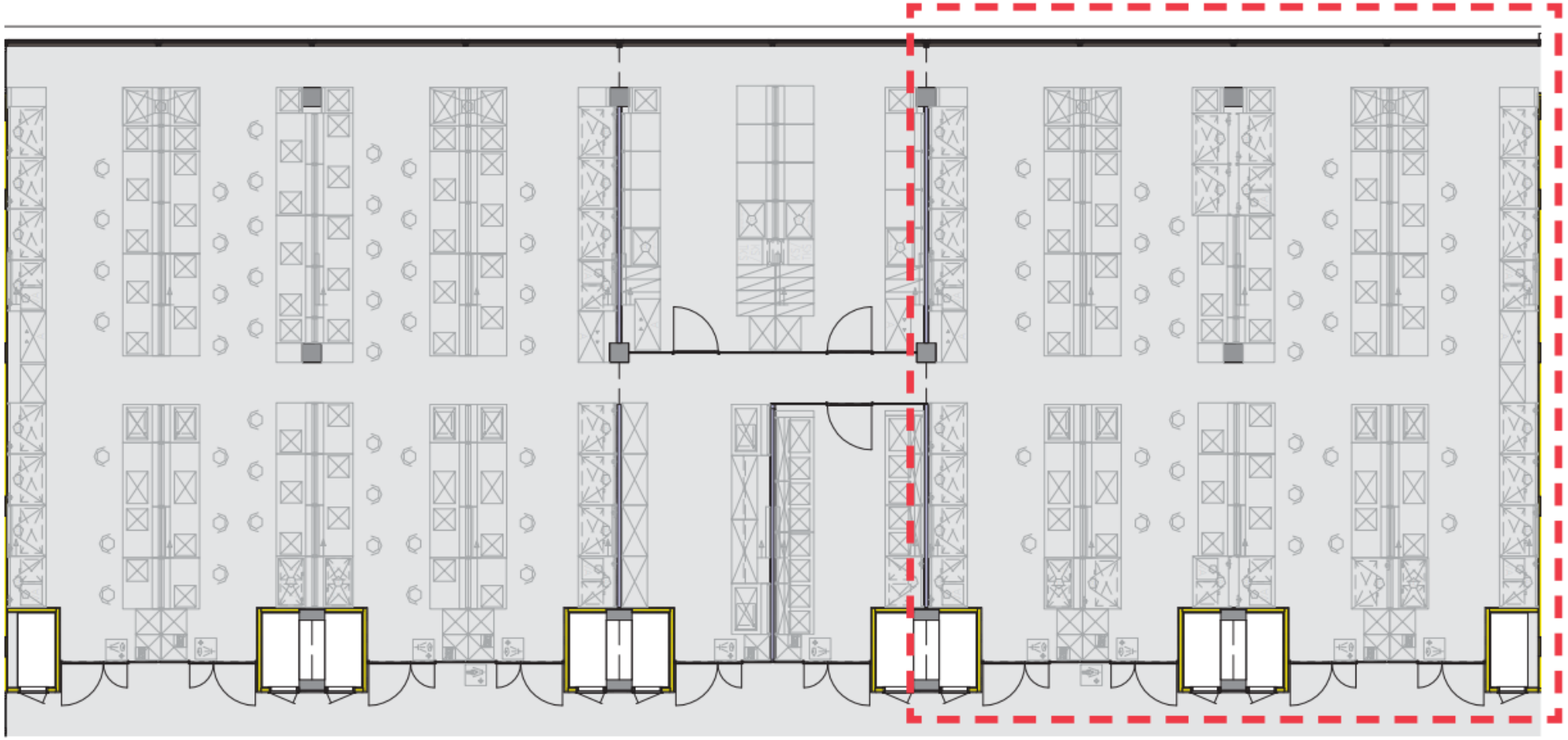


second floor

Practical laboratories

Chemistry

many fume hoods



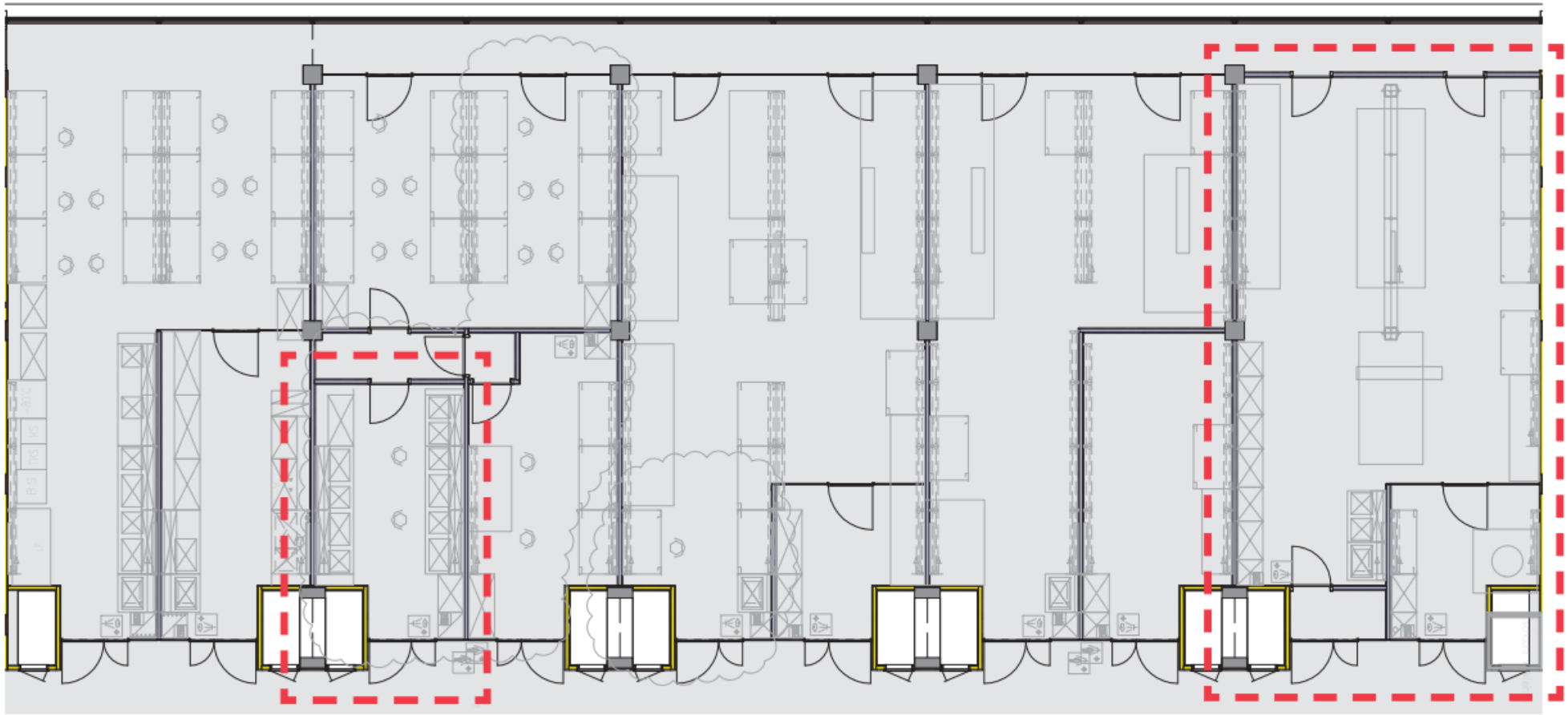
many benches

16x per 14,4m

second floor

Physics laboratories

many benches

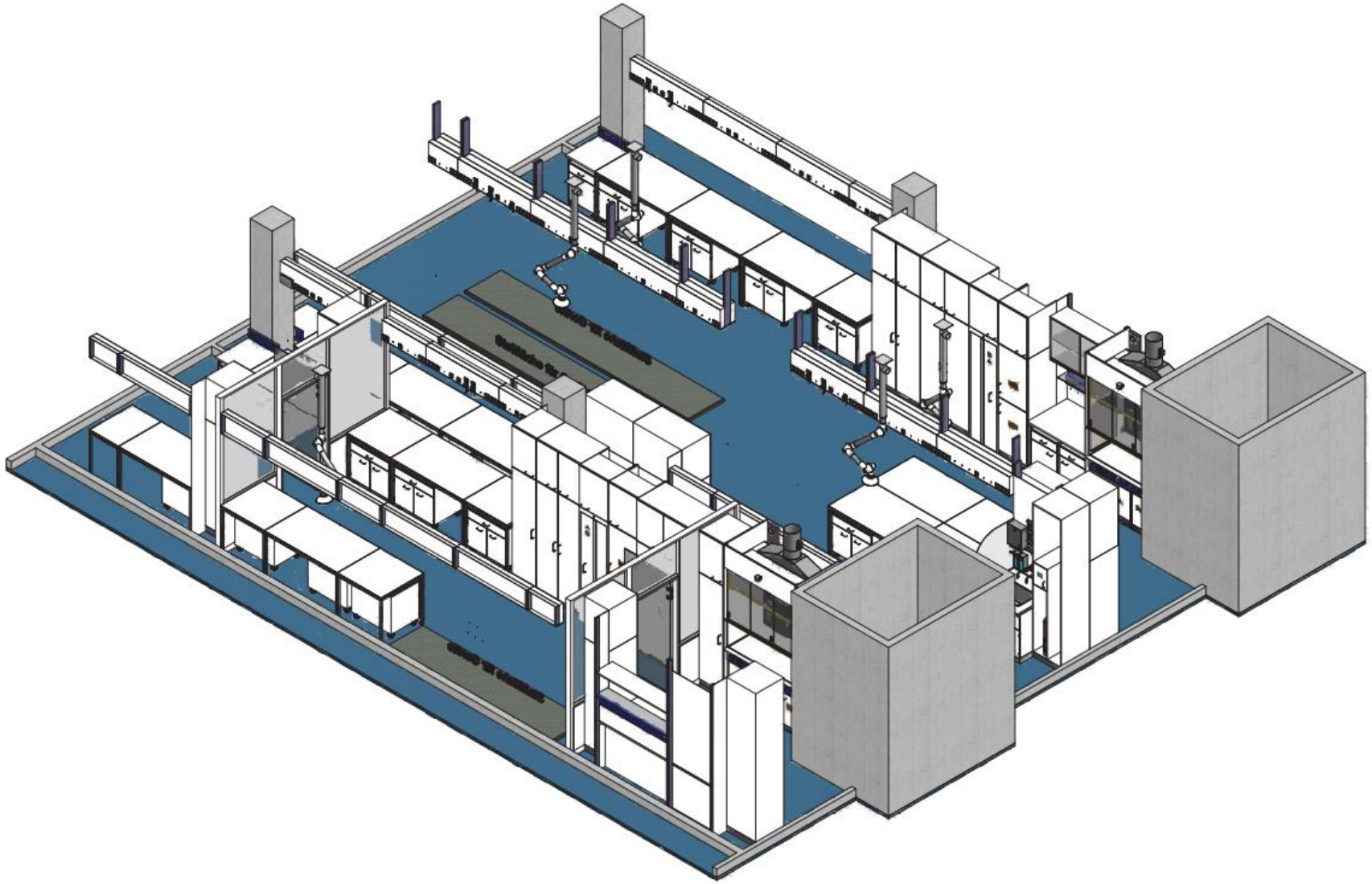


microscopes

laserlabs

second floor

Physics laboratories



second floor

Lay-out of third floor



detailed like 2nd & 4th floor

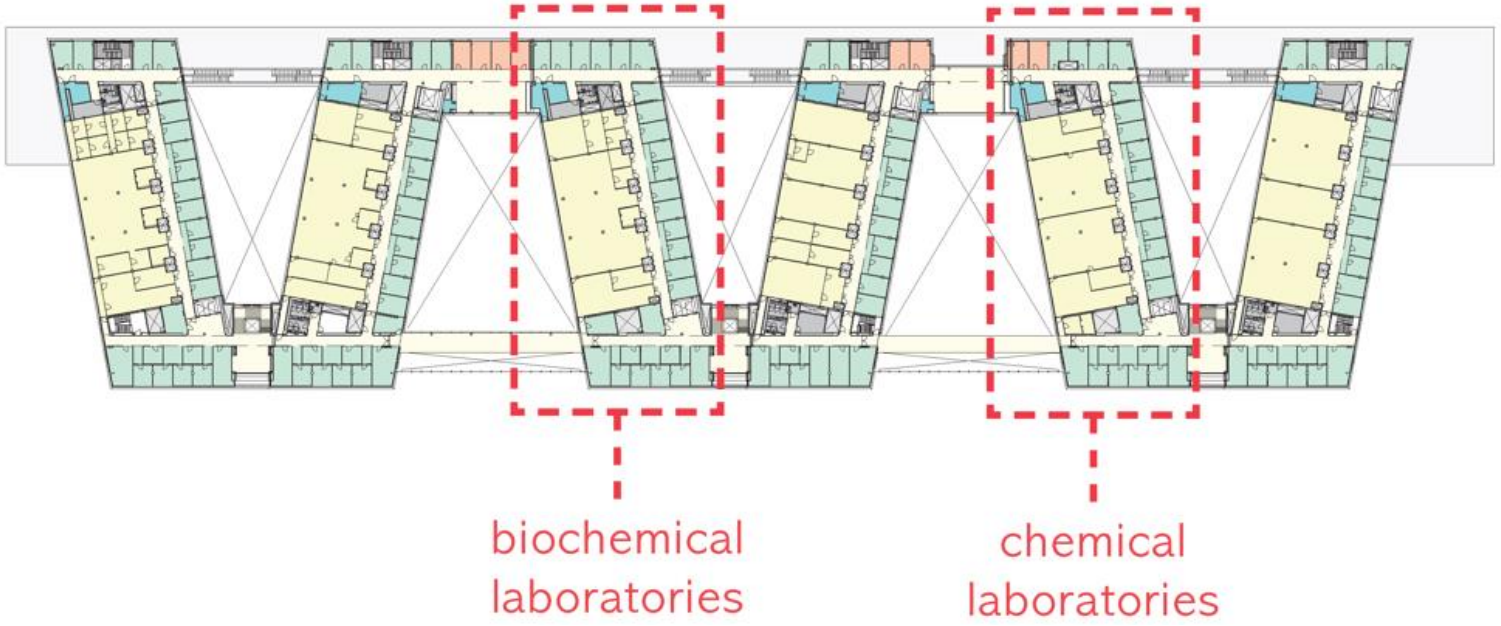
third floor

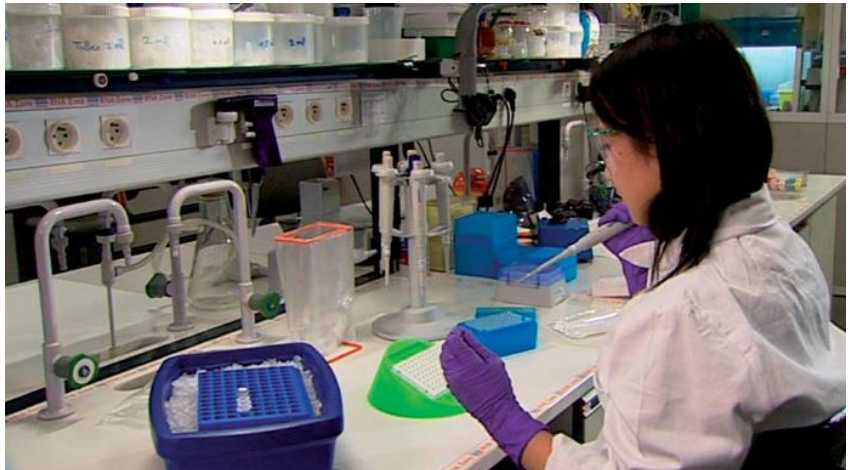
Lay-out of fourth floor



fourth floor

Biochemical and chemical laboratories





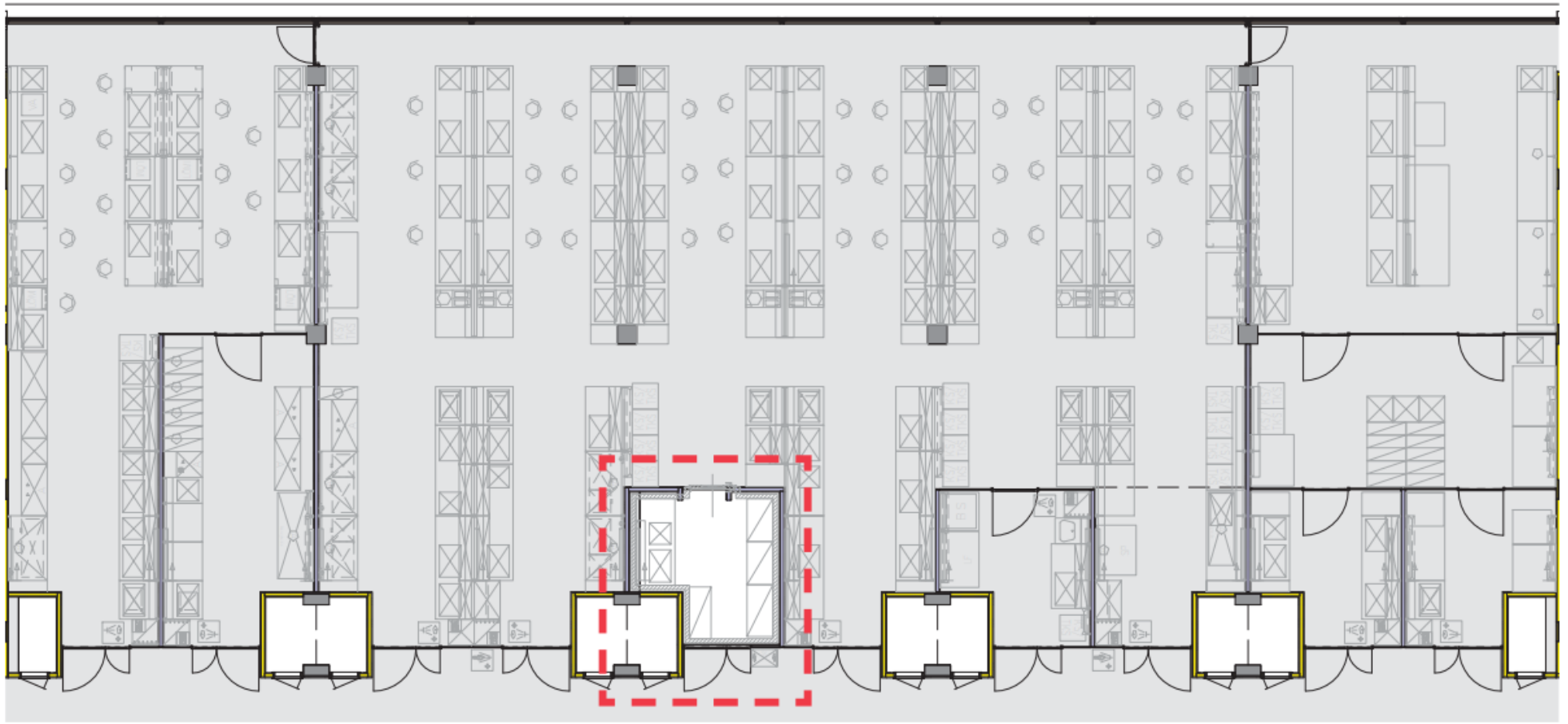


fourth floor

Biochemical laboratories

point extraction

many wet benches

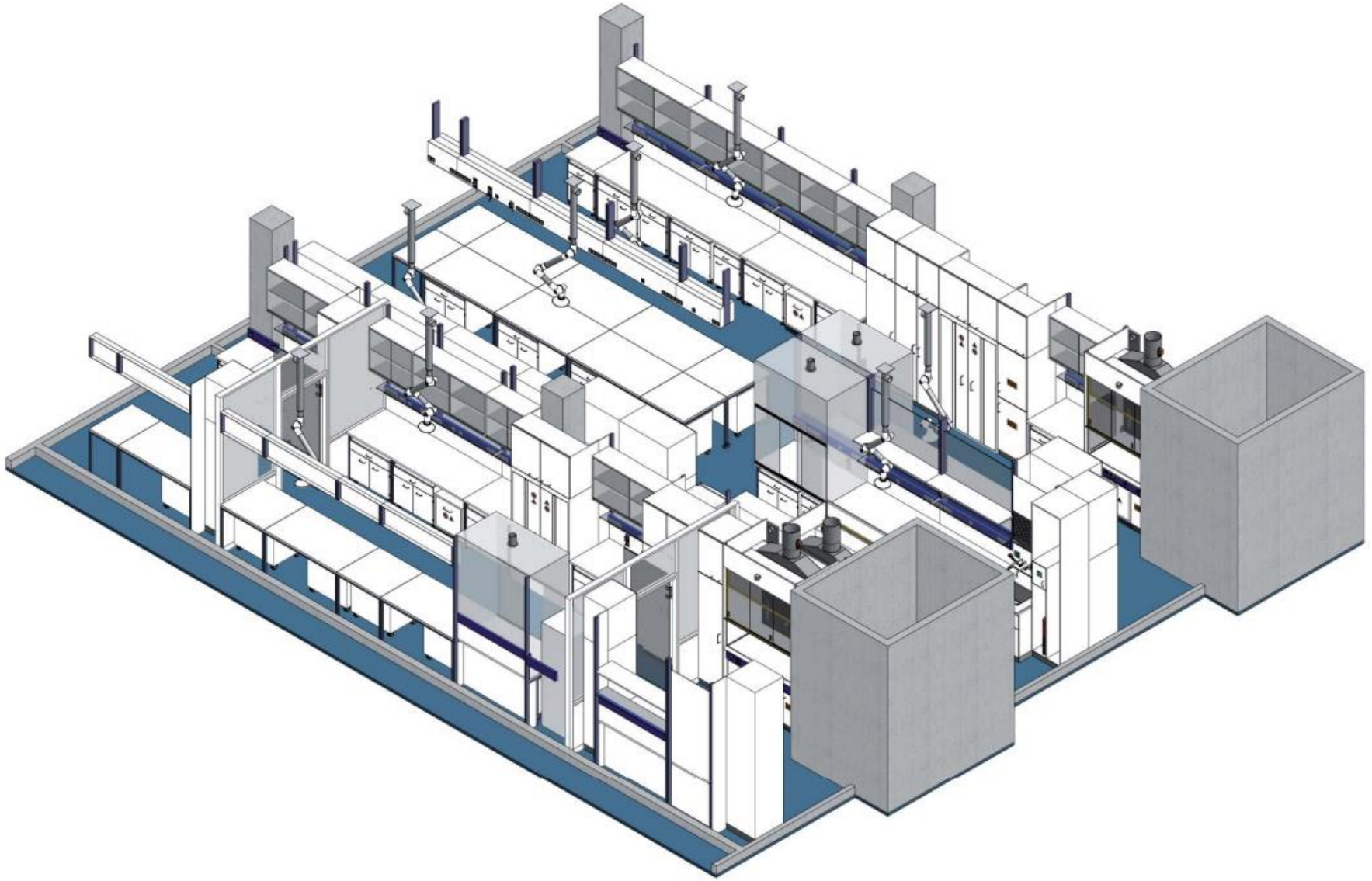


cold chamber

fourth floor

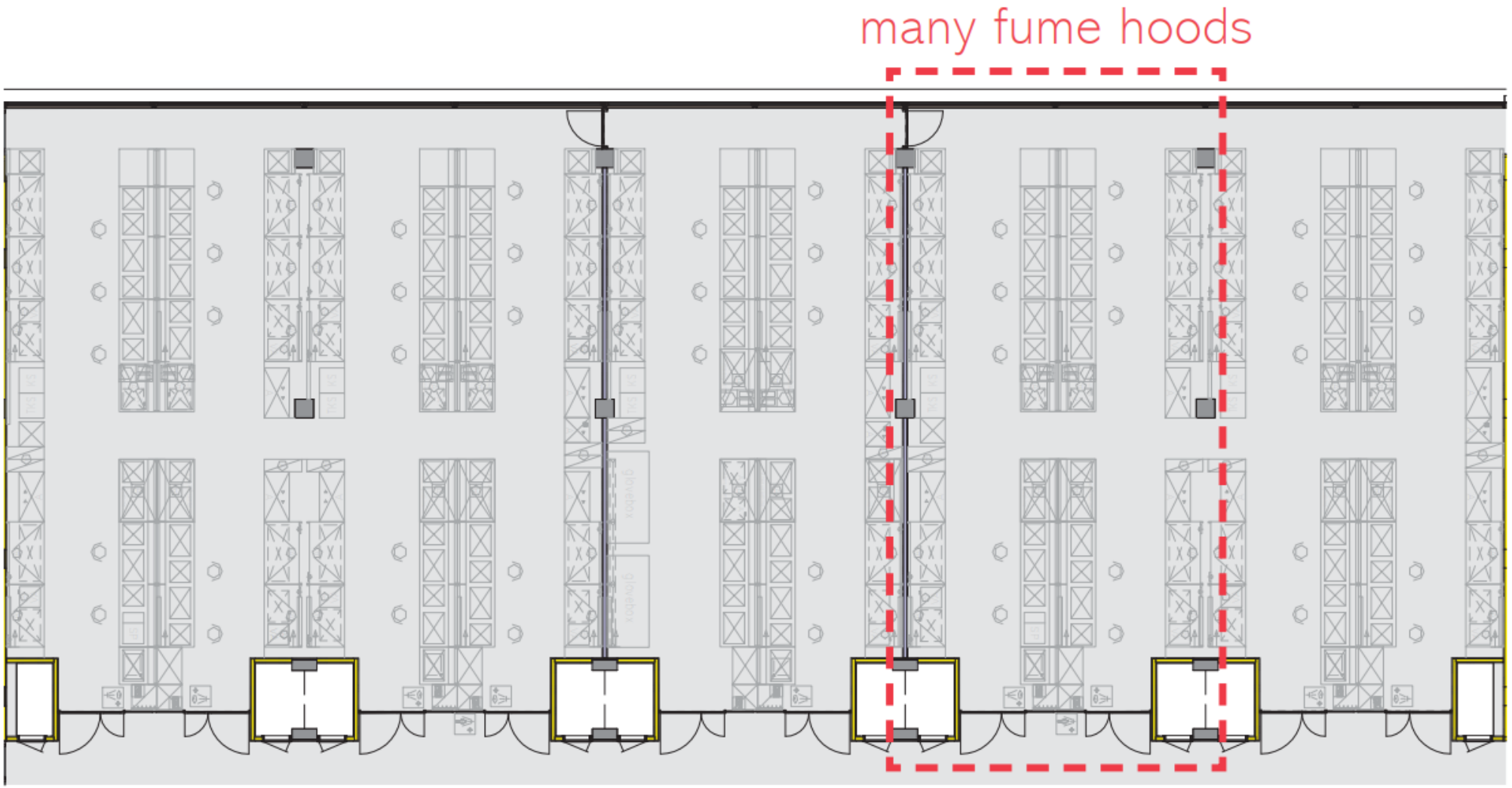
university of groningen

Biochemical laboratories



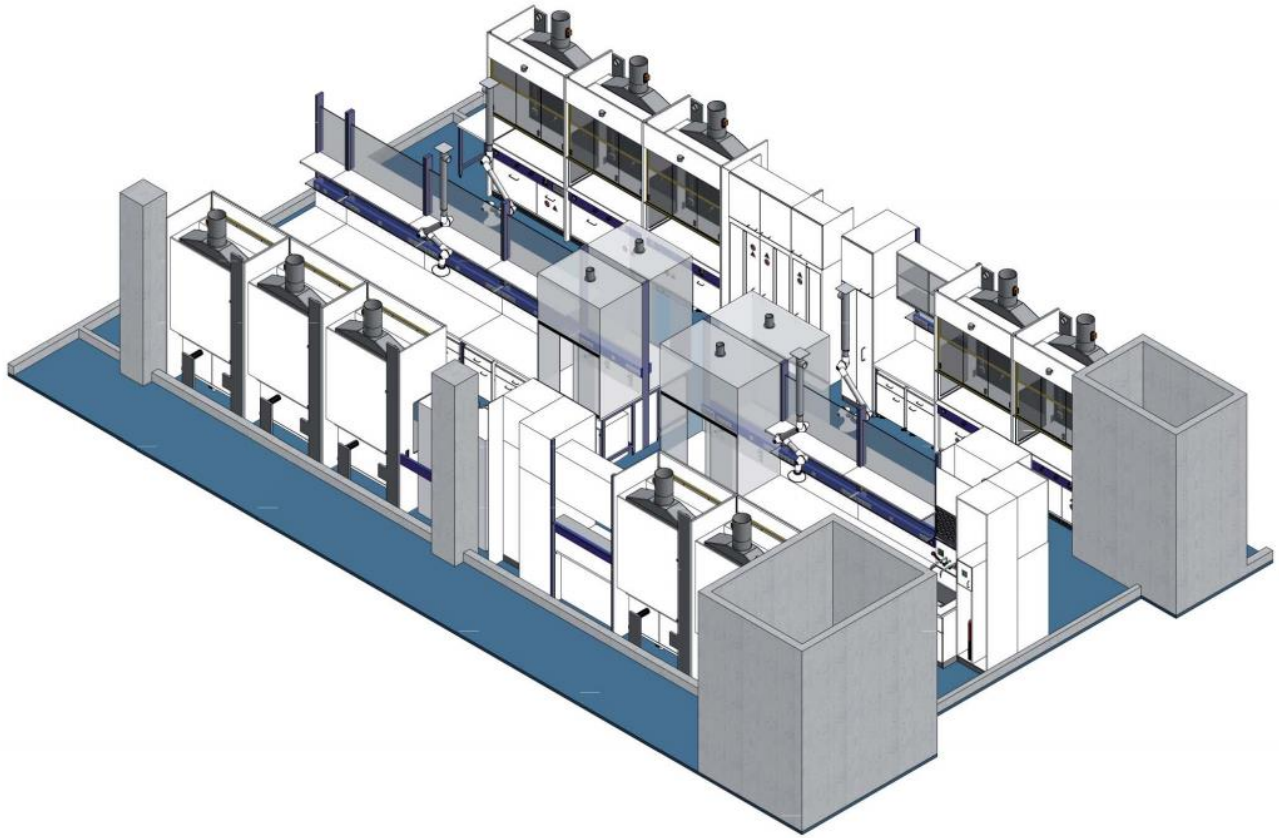
fourth floor

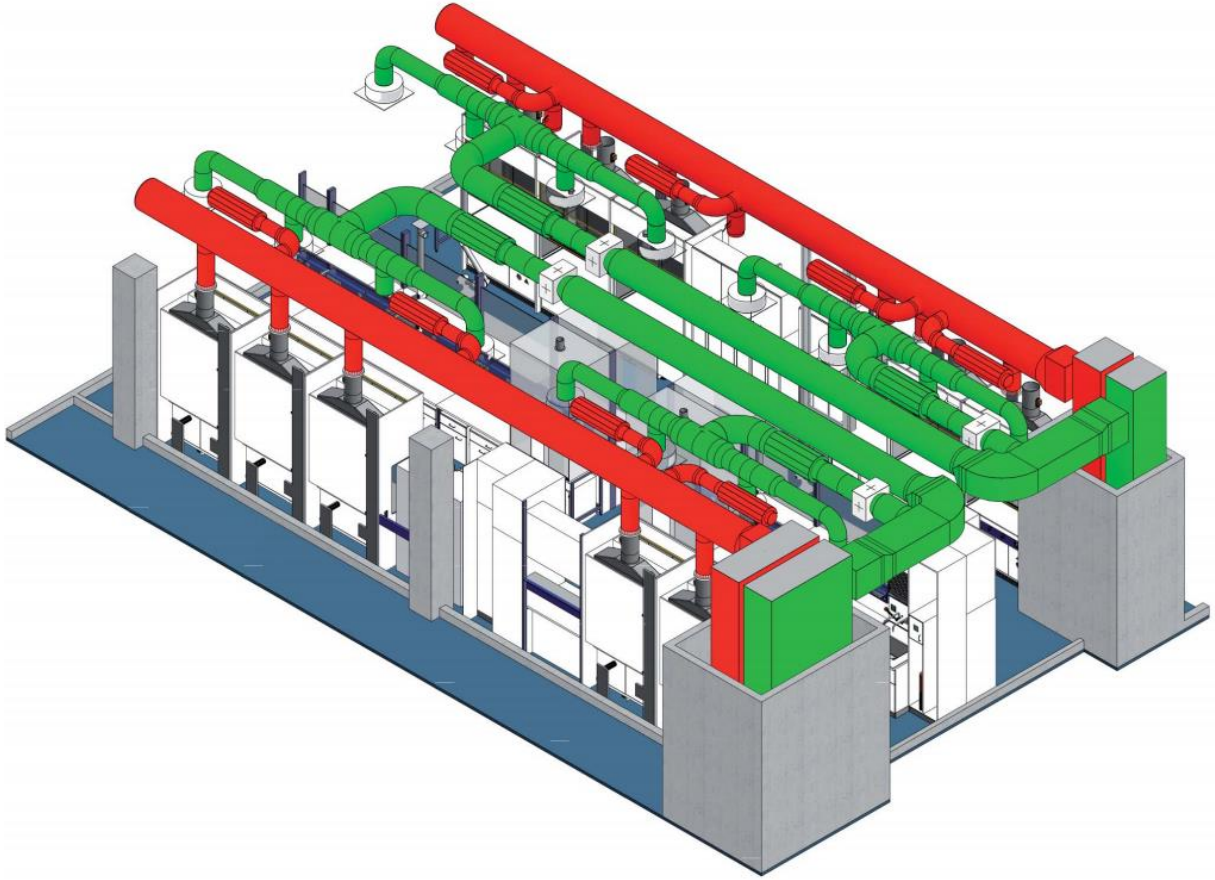
Chemical laboratories



fourth floor

Chemical laboratories

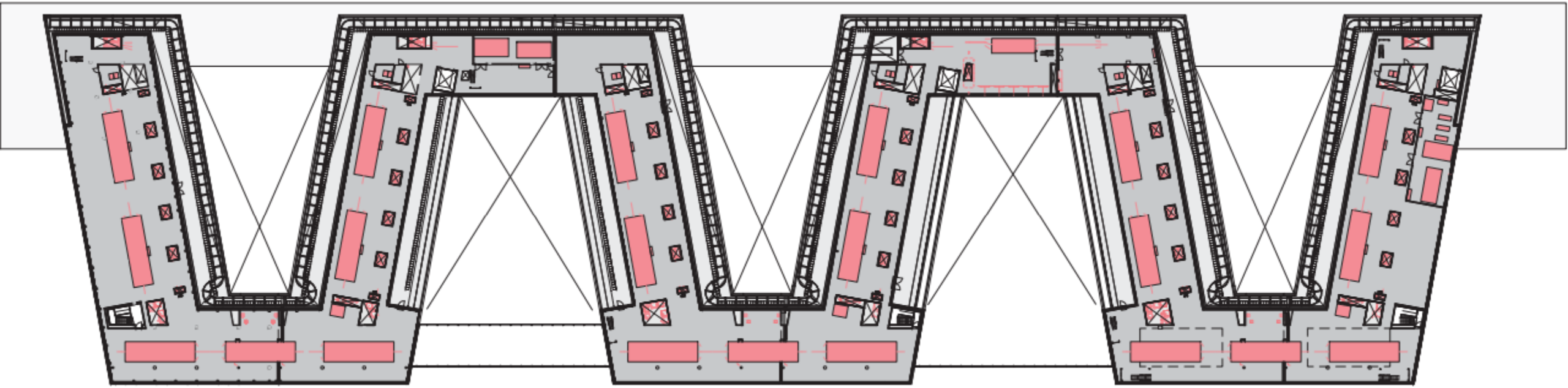




fourth floor

university of groningen

Lay-out of fifth floor (for installations)



fifth floor

Design made possible by:

Ector Hoogstad Architecten

dGmR

ARCADIS Design & Consultancy for natural and built assets

abtWassenaar

dr. heinekamp
Lab Engineering Benelux

KARRES BRANDS

stevensvandijck
bouwmanagers en adviseurs

Construction made possible by:

Construction



Installations



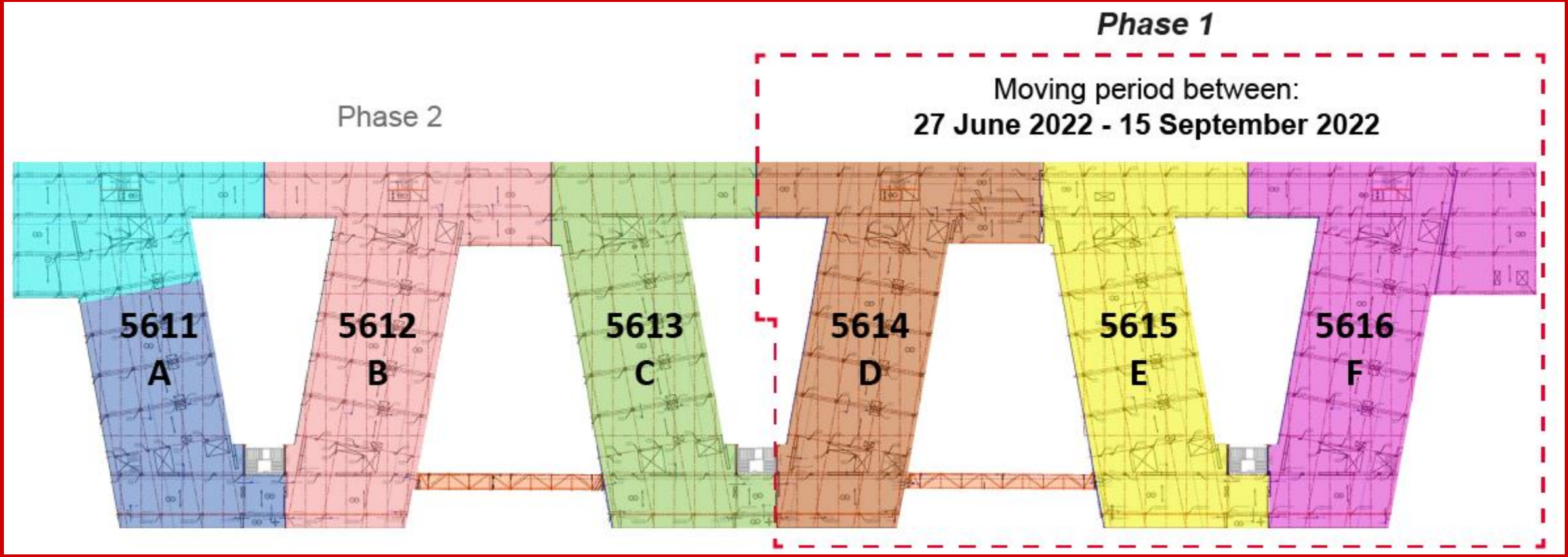
Laboratory furnisher



Cleanrooms



Schedule


Phase 1
Moving period between:
27 June 2022 - 15 September 2022
Phase 2
5611
A
5612
B
5613
C
5614
D
5615
E
5616
F

Schedule

1) Phase 1 *(buildings 5614, 5616 and 5616)*

Construction of **Phase 1** of the Feringa Building (**completed mid-2022**)

- *Moving to Phase 1*
  Staff of buildings 17 and 18 move into Phase 1 of the Feringa Building
- *Demolition*
  Demolition of buildings 17 and 18 of Nijenborgh 4 (end of 2022)

2) Phase 2 *(buildings 5611, 5612 and 5613)*

Construction of **Phase 2** of the Feringa Building (medio 2024)

3) As of 2024

- Staff move into Feringa Building
- Final demolition of Nijenborgh 4
- Landscaping around new Feringa Building

More information

www.rug.nl/fse/feringa-building

www.rug.nl/GroundbreakingWork



