

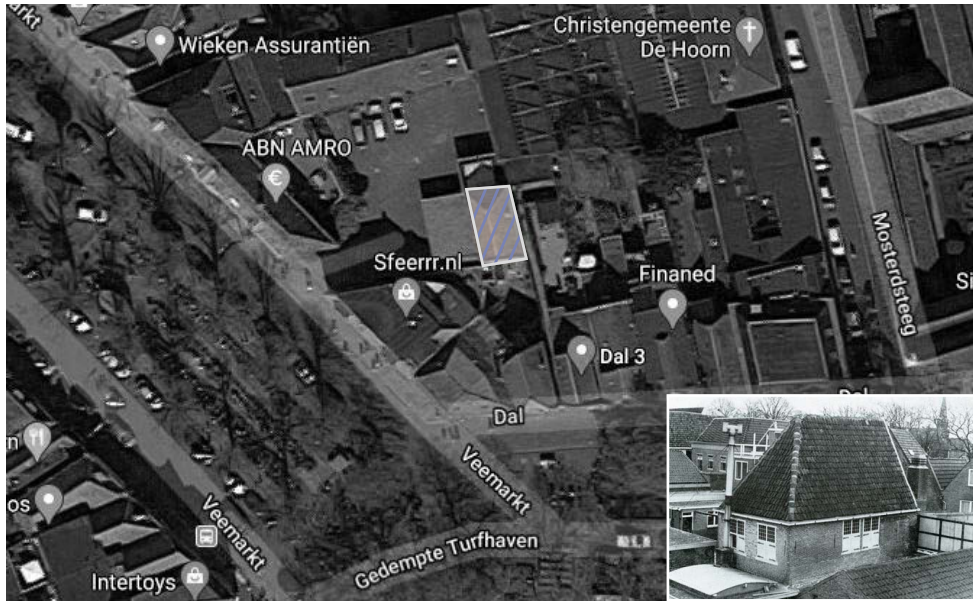
Research booklet

Michiel Baltus

Education research

History

The history of education in woodworking will be explained through analysing educational buildings throughout history. It tells us something about the different levels of education, the typologies and organisation.



Timmermansgildehuis

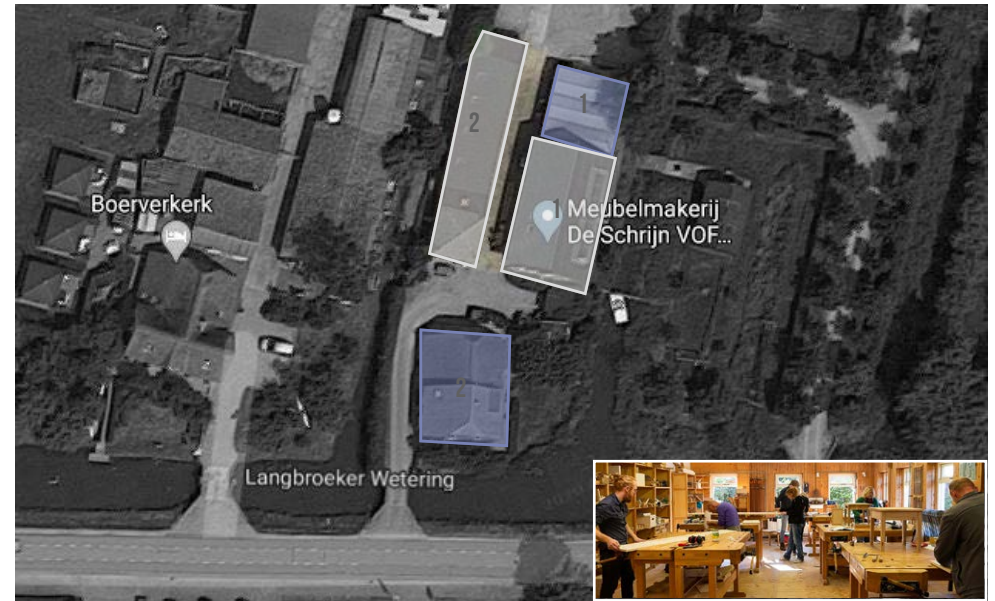
Location: Hoorn, The Netherlands
Context: Historic city centre
Origin: Carpenters guild 1630-1795
Architect: unknown
Year: unknown
Number of students: unknown
Size: ca. 100 m²
Typology: Workshop



No plans available. The building was used for meetings and for students to prove themselves to become a master.

First floor
 - Meeting space

Ground floor
 - Workshop space



De Schrijn VOF

Location: Langbroek, Utrecht, The Netherlands
Context: Polder
Origin: original
Architect: unknown
Year: unknown
Number of students: unknown
Size: ca. 530 m²
Typology: Farmstead



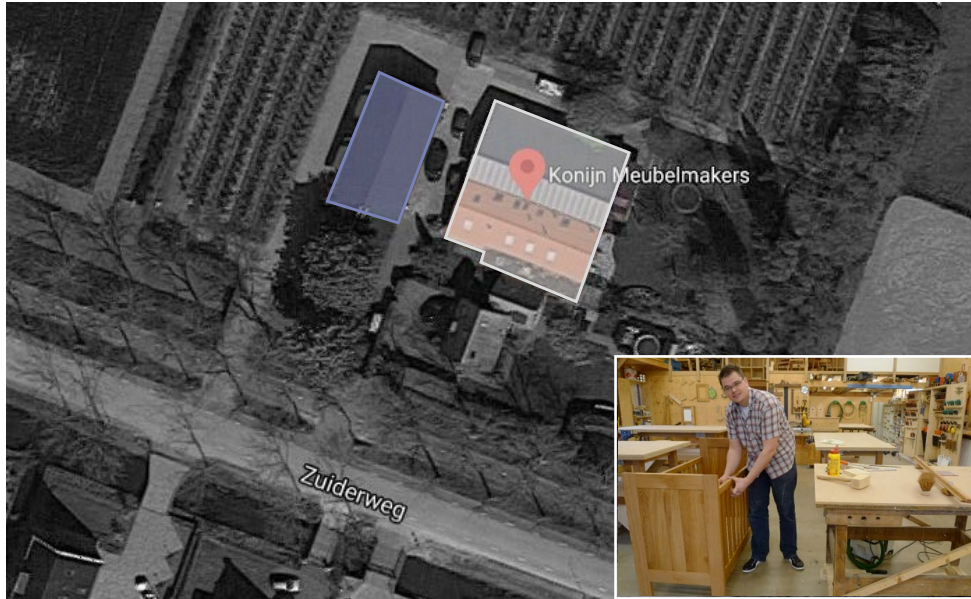
No plans available. The company offers classes, workshops and education on MBO level. These kind of workshops follow more traditional forms of education. Small workplaces with a limited amount of students. The modern guild workshop.

Workshop 1
 - Workshop spaces (bench)

Workshop 2
 - Workshop spaces (machine)

Others 1
 - Storage

Others 2
 - Private residence



Beemster school voor Meubelmaken

Location: Zuidoostbeemster, The Netherlands
Context: Polder
Origin: original
Architect: unknown
Year: unknown
Number of students: unknown
Size: ca. 570 m²
Typology: Farmstead

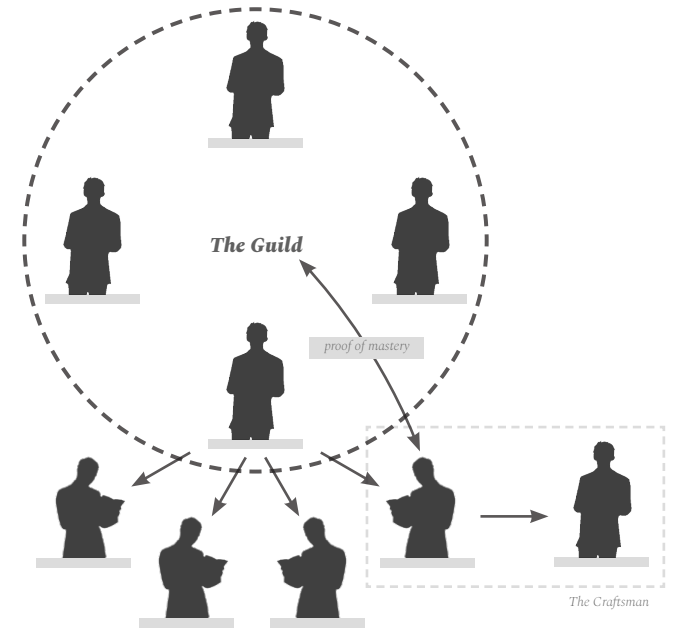


No plans available. The company offers classes, workshops and education on MBO level. They also offer classes for Sketch Up, designing and drafting and calculating structures. These smaller schools are often attended by an older demographic

Workshop
 - Workshop space (bench)
 - Workshop space (machine)
 - Tool storage

Storage
 - Storage

Theory
 - Computer room



Focus on craftsmanship

Guilds

Groups of craftsmen were united in guilds. The guild proposed rules that members needed to follow. Within the guilds was a strong hierarchy of authority present, in which a limited number of students could climb the ranks toward master. Once they reached master level, they could start their own workshop. Guilds had a monopoly on the craft they were exploiting. By creating the guild they eliminated competition, kept prices high and maintain a level of quality. This had some flaws, though. Checking quality was not always possible and the lack of competition could reduce the quality of products



Ambachtsschool en Middelbare Technische School Leeuwarden

Location: Leeuwarden, The Netherlands
Context: Residential
Origin: Ambachtsschool Leeuwarden (1880)
Architect: S. Koldijk, D. Meintema, H. Kramer
Year: 1905/1915 - 1973 (destroyed by fire)
Number of students: Unknown
Oppervlakte: Unknown - up to 30 different crafts
Typology: Monastery



Students between the ages of 12-16 were taught on these school. Currently that would be LTO (lower technical education)

Crafts school

- Principal
- Janitor
- Storage
- Timber shop
- Masonry workshop
- Drawing rooms
- Forge

Middle school

- Drawing rooms
- Entrance
- Wood workshop (machines)
- Wood workshop (bench)
- Electrical engineering
- Foundry
- Metal workshop
- Forge
- Foundry

Outdoor

- Patio



Ambachtsschool Weteringschans

Location: Amsterdam, The Netherlands
Context: Residential
Origin: Maatschappij voor den Werkende Stand (1861)
Architect: G.B. Salm
Year: 1868
Number of students: Unknown
Oppervlakte: Unknown
Typology: Monastery



Students between the ages of 12-16 were taught on these school. Currently that would be LTO (lower technical education)

Crafts school

- Cloakroom
- Workshop woodworking and carving
- Workshop turning
- Workshop sculpting
- Workshop forging
- Model room
- Storeroom

Outdoor

- Patio



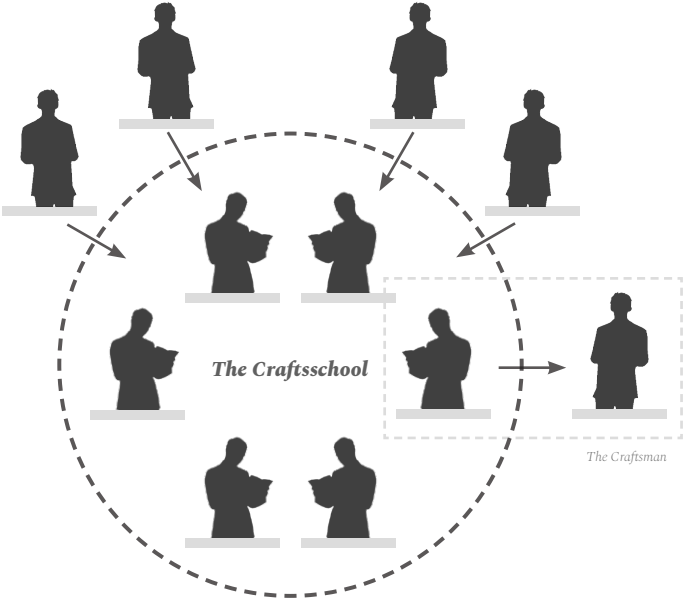
Vierde Ambachtsschool

Location:	Amsterdam, The Netherlands
Context:	Residential
Origin:	original
Architect:	A.J. Westerman, A.J. Hulshoff
Year:	1924
Number of students:	500-600
Oppervlakte:	Unknown
Typology:	Monastery



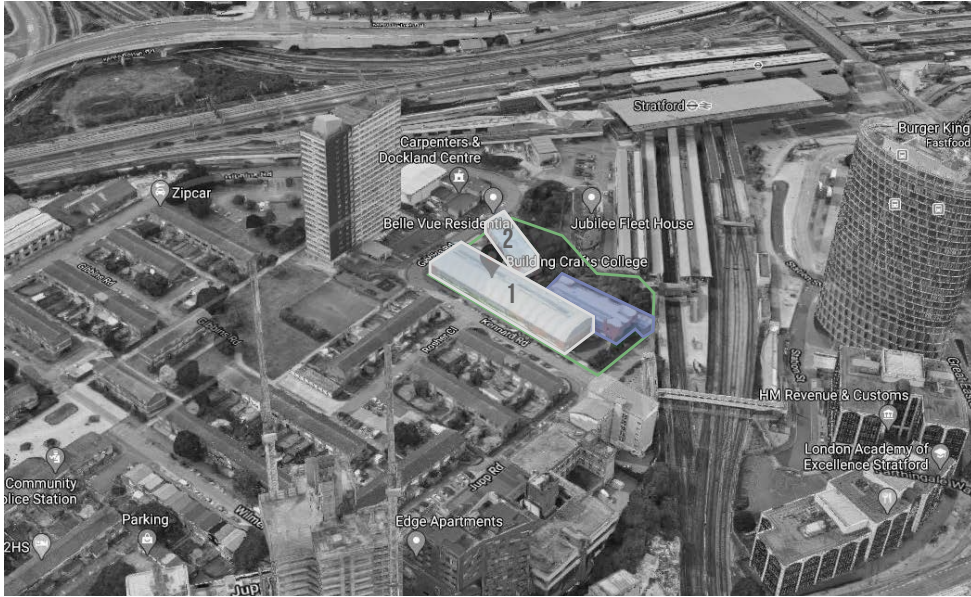
Students between the ages of 12-16 were taught on these school. Currently that would be LTO (lower technical education)

Crafts school - Janitor - Consulting room - Showroom students work - Cloakroom - Dining room - Wood workshop - Storage room - Workshop forging - Metal workshop - Storage room metal - Classroom - Administration	Outdoor - Patio - Schoolyard
---	--



Focus on general skills in craft

Craftsschools
 ‘Ambachtsscholen’ (craftsschools) originated in the industrial revolution to educate students for crafts and diligence. ‘De Maatschappij voor de Werkende Stand’ (The Corporation for the Working Class) founded the first craftsschool in 1861 in the Netherlands. This was a technical school where students were educated into smith, carpenter, painter, instrument maker or electrician. In 1968 the ‘Mammoetwet’ took effect, which made it mandatory for children to attend a high school after elementary school. This changed the name of the crafts schools to lower technical schools (LTS), and is since 1999 part of the VMBO, the lower level of high school in the Netherlands.



Building Crafts College

Location:	London, United Kingdom
Context:	Residential city centre (Stratford)
Origin:	Worshipful Company of Carpenters (1893)
Architect:	Tectus Architecture
Year:	2001
Number of students:	-
Size:	-
Typology:	Farmstead

The ROC / MTS
Vocational level
Practice focussed with theory

Administrative

- Offices
- Meeting rooms
- Cafeteria
- Entrance
- Reception

Outdoor spaces

- Parking
- Entrance for goods
- Storage
- Park

Workshop building 1

- Wood workshop
- Workshop class spaces
- Storage
- Stonemason workshop

Workshop building 1

- Carpentry workshop
- Wood machinery



HMC Rotterdam

Location:	Rotterdam, The Netherlands
Context:	Mixed (residential, sports and businesses) outskirts
Origin:	Vakschool voor de Meubilerings- en Houtbedrijven te Rotterdam
Architect:	RoosRos Architecten
Year:	2016 (new + renovation)
No. of students:	1600
Size:	6.500 m ² (education centre) + 4.500 m ² (workshop spaces)
Typology:	Palace

School Building

- Library
- Study rooms and spaces
- Computer lab
- Repro services
- Showcase and samples
- Entrance and reception
- Lecture rooms
- Offices
- Cafeteria

Workshop spaces

- Main workshop space
- Workshop class spaces
- Warehouse
- Student project storage

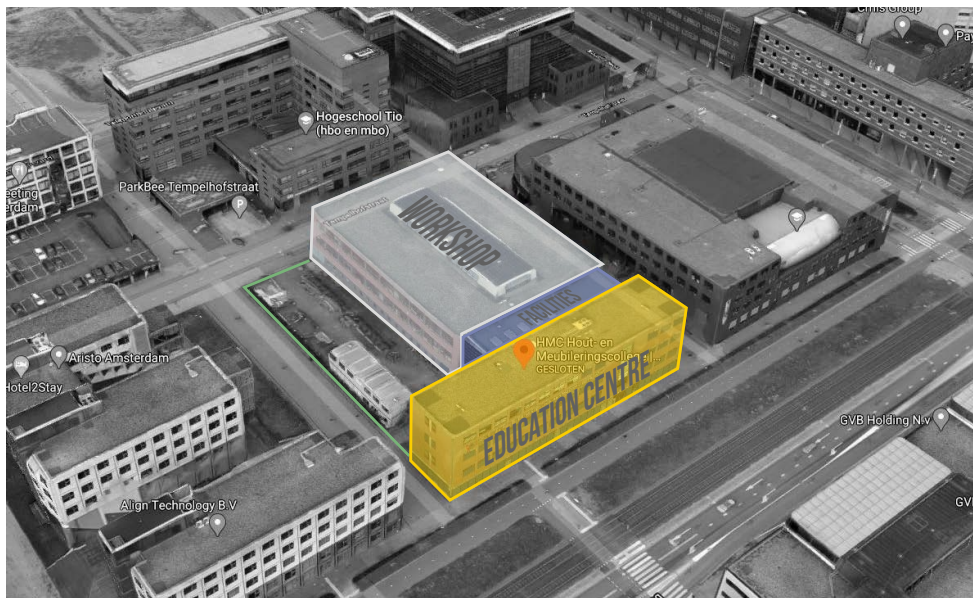
Lab

- 3D printing
- Laser cutting
- Mechanical weaving
- CNC milling

Outdoor spaces

- Parking
- Entrance for goods

The ROC / MTS
Vocational level
Practice focussed with theory



HMC Amsterdam

Location: Amsterdam, The Netherlands
Context: Office park Sloterdijk
Origin: Nieuwe vakschool te Amsterdam
Architect: Unknown
Year: Unknown
Number of students: Unknown
Size: ca. 3.200 m² (school building) + 6.120 m² (workshop spaces)
Typology: Palace

The ROC / MTS
 Vocational level
 Practise focussed with theory

School Building

- Library
- Study rooms and spaces
- Computer lab
- Repro services
- Showcase and samples
- Entrance and reception
- Lecture rooms
- Offices

Workshop spaces

- Main workshop space
- Workshop class spaces
- Warehouse
- Student project storage

These spaces cover parts of the ground floor in the other masses

Facilities

- Cafeteria
- Lecture hall

Outdoor spaces

- Parking
- Storage



Techniekhuis

Location: Veldhoven, The Netherlands
Context: Business park
Origin: original
Architect: KDV Architectuur
Year: 2011
Number of students: unknown
Size: 23.550 m²
Typology: Campus / Machine (wood crafts school) / Palace

The ROC / MTS
 Vocational level
 Practise focussed with theory

Museum

- Auditorium
- Exhibition spaces
- Restaurant
- Meeting spaces
- Offices

School

- Workshop spaces (machine)
- Workshop spaces (bench)
- Storage
- Canteen
- Study places
- Classrooms

Others 1

- Infra Brabant

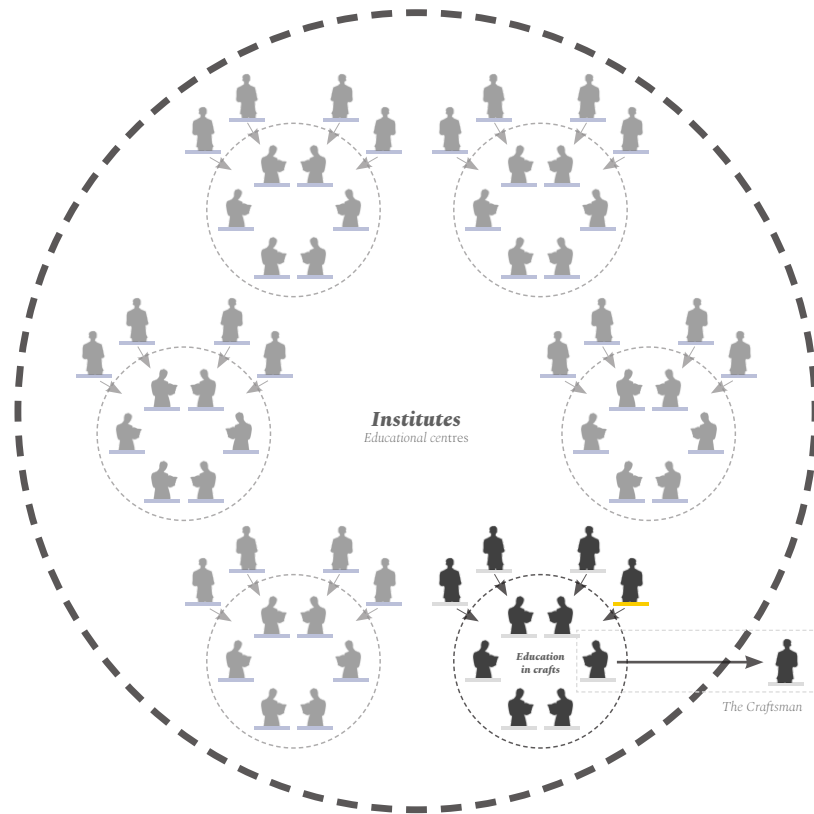
Others 2

- Installation workshops

Outdoor spaces

- Outdoor area
- Parking
- Storage

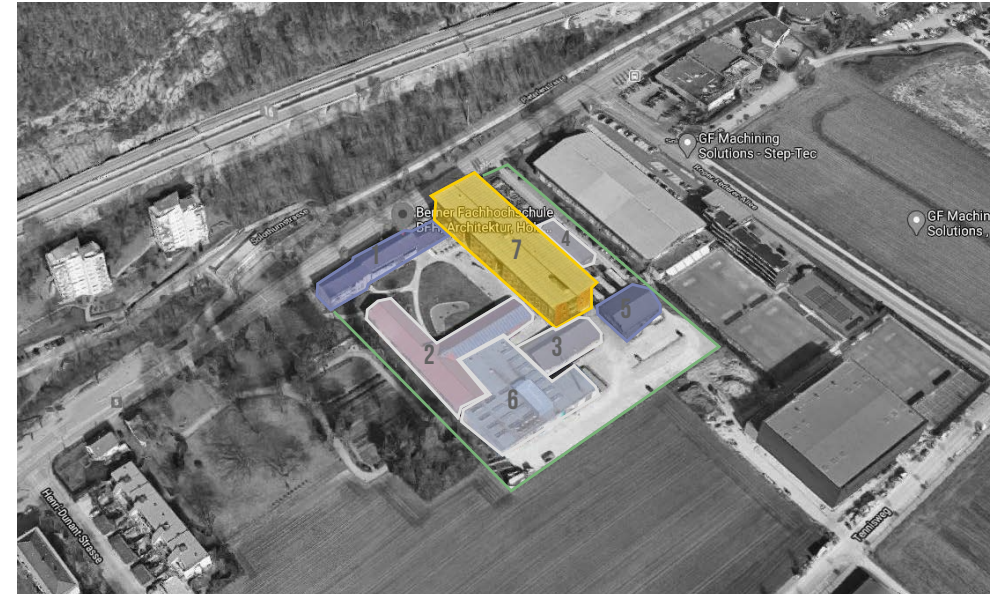
General: Theory is separated from practise. Maybe because of sound, but measures can be taken to improve upon that. For example the building crafts college has a traffic space in between meeting rooms and practise. - Some student continue after they get the diploma on HBO level (HTS), in education in building technology that does not focus on the woodworking craft anymore.



Focus on skills in industry

Educational centres

Halfway into the 1990's many institutes that offered education on a vocational level fused together in the Netherlands to form ROC schools (regional vocational schools). These fusions happened partly mandatory by government for financial reasons. Some ROC's focussed on one sector, where others were combined with other sectors into one big organisation. For education focussed on crafts it meant that they would become of a bigger institute. These institute would have a general focus across multiple education programmes, instead of being specialized on one, causing a disconnect between craft and institute. This meant that the technical vocational schools would become the MTS (middle technical school). On a bachelor degree level, which is more theory focussed these schools would become the HTS (higher technical school). On masters degree level, students are taught on universities, which is focussed on research and theory.



Swiss School of Engineering for the Wood Industry Bienne

Location:	Biel, Switzerland
Context:	Mixed (residential, sports and businesses) outskirts
Origin:	original
Architect:	Meili Peter Architekten
Year:	1999 (new + renovation)
Number of students:	Unknown
Oppervlakte:	
Typology:	Campus

7 New Building

- Foyer
- Assembly hall
- Computer rooms
- Classrooms
- Study rooms
- Workshop class spaces

2 Existing building

- Wood workshop
- Laboratories

3 Existing building

- Laboratories

4 Existing building

- Wood workshop

6 New Building

- Testing and certification

1 existing Building

- Cafeteria
- Offices
- Administrative

5 Existing building

- Timber Storage

Outdoor spaces

- Storage
- Courtyard with pond



Timberlands Center for Design and Materials Innovation

Location:	Fayetteville, Arkansas, USA
Context:	University campus
Origin:	University of Arkansas
Architect:	Grafton Architects and Modus Studio
Year:	2020
Number of students:	Unknown
Size:	5.150 m ²
Typology:	Palace

Architects description:

Timber is both the structural bones and the enclosing skin. Responding to the local climate, we propose a Canopy of Light and Air - a cascading roof with glulam rain-water gutters - covering the open-air yard, the Fabrication Shop and connecting all the layered teaching spaces of this new facility, upper galleries form educational and social vantage points. The new building sits on the corner of Martin Luther King Junior Boulevard and Government Avenue, acting as a beacon to the city of Fayetteville.



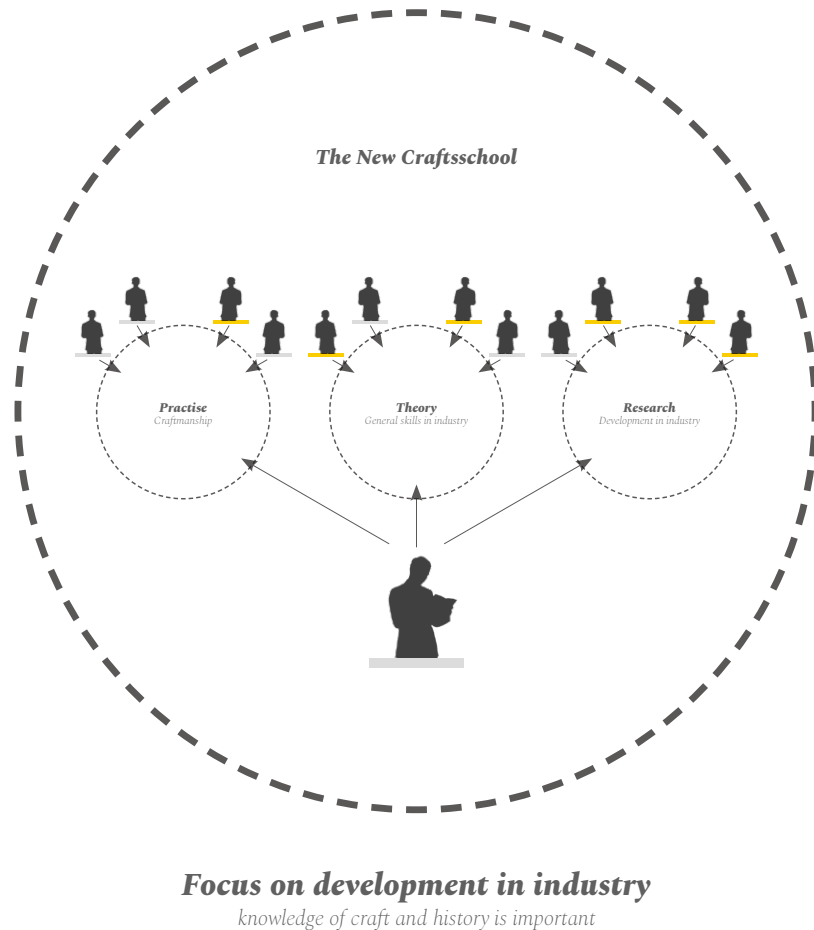
FCBA Technological institute

Location:	Champs-sur-Marne, France
Context:	Office park/university campus
Origin:	unknown.
Architect:	ATELIER 4+
Year:	2015
Number of students:	Unknown
Size:	Unknown
Typology:	Palace

Description:

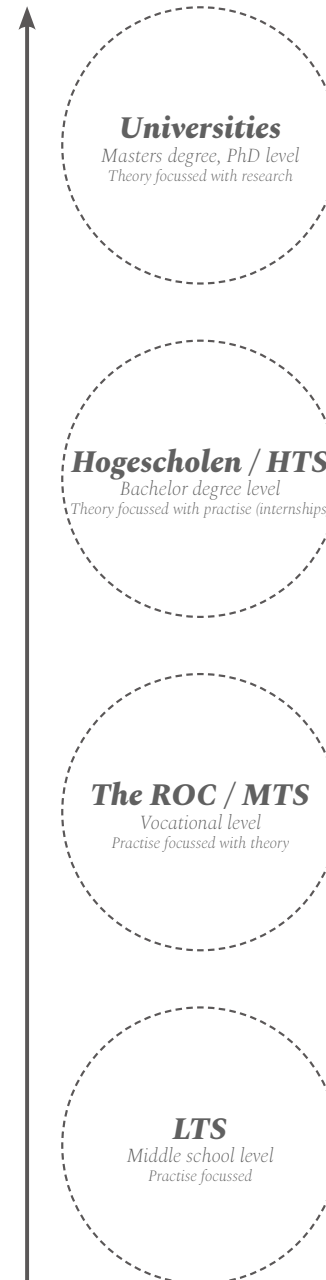
The mission of the FCBA, an industrial technical centre, is to promote technical progress and contribute to improving performance and guaranteeing quality within the industry. Its scope includes all of the industries related to forests, pulp, wood and furniture: forestry, pulp, logging/forest exploitation, sawmills, carpentry, woodworking, framework, wood panelling, furniture, packaging and various products. It also works with suppliers in these sectors. Its activities are based on three major areas:

- Providing know-how and recognised skills to enterprises: consultancy, technical assistance, tests, training, information, etc.
- Supporting the professions in becoming leaders on national, European and international markets: standardisation, quality and advanced technologies.
- Acquiring, centralising, managing and disseminating scientific and technical information: research and development, business intelligence, monitoring technology and regulations, documentation.



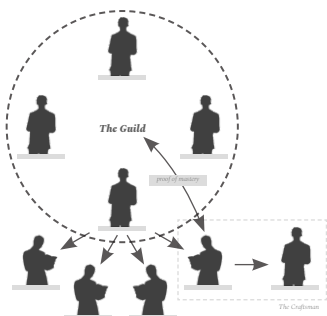
Research centres

Almost simultaneously with the creating of the ROC's in the Netherlands, other countries in Europe that have a big wood industry started with research centres in this industry. These research centres combine the craft of woodworking with the development of the industry, creating a full spectrum in education.



Hierarchy

A hierarchy in education level became more and more clear. Because crafts are a practise it automatically became linked to the vocational level of education. The vocational level has a lower place in this hierarchy, which doesn't contribute to the appreciation of craftsmanship, hurting the image of a craft in the process. On top of that there is a gap between the MTS and the universities because there is little education on HTS level that particularly focusses on the woodworking craft. Instead the HTS level focusses more on the general building design and building technology level, which is closer linked to the research that universities conduct.



Focus on craftsmanship

Guilds

Groups of craftsmen were united in guilds. The guild proposed rules that members needed to follow. Within the guilds was a strong hierarchy of authority present, in which a limited number of students could climb the ranks toward master. Once they reached master level, they could start their own workshop. Guilds had a monopoly on the craft they were exploiting. By creating the guild they eliminated competition, kept prices high and maintain a level of quality. This had some flaws, though. Checking quality was not always possible and the lack of competition could reduce the quality of products

Guilds

1400 A.D.

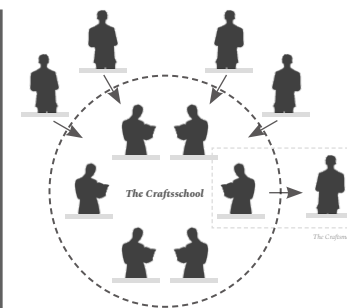
1500 A.D.

1600 A.D.

1700 A.D.

1800 A.D.

1850 A.D.



Focus on general skills in craft

Ambachtsscholen

Guilds were banned in 1798 during the French ruling of the Netherlands. Instead, a new law was introduced in 1808 that allowed corporations to form. These corporations got some authority to create rules within a craft. In 1818 guilds were definitively banned. Authorities thought that guild formed a barrier against further expansion of the industries, because of their monopoly and exclusive privileges. The bill on corporation passed in 1818 with the argument: 'in an unitary state everybody should have equal rights, and with that equal economic freedom for everyone'. The idea of guilds didn't fit this so they were banned

Wet op Corporatie

Trade U

Een brancheorganisatie, vaak een stichting of een vereniging, kan verschillende doelen nastreven: de behartiging van de collectieve belangen van de aangesloten leden, de behartiging van deelbelangen van groepen leden en de behartiging van individuele belangen van leden. Daartoe verrichten zij activiteiten als lobby, CAO-onderhandeling, het opzetten van innovatieprojecten, het geven van juridisch advies, het organiseren van bijeenkomsten, collectieve inkoop, etc. - The first forms of trade union's near the Netherlands were formed in 1886 in Belgium, in the Anti-socialist Cotton Workers Union

Unions / Branche organisaties

1900 A.D.

1920 A.D.

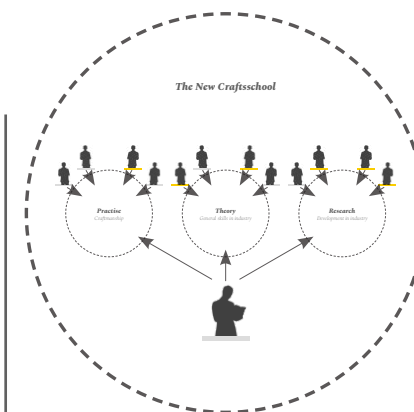
1940 A.D.

1960 A.D.

1980 A.D.

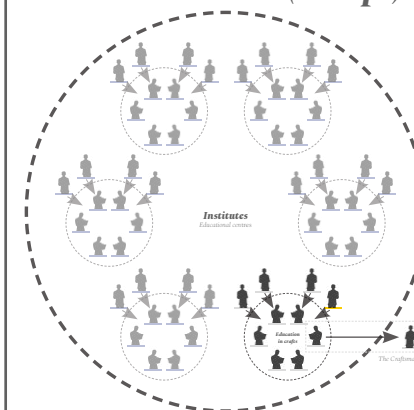
2000 A.D.

2020 A.D.



Focus on development in industry
knowledge of craft and history is important

Research centres (Europe)



Focus on skills in industry

ROC's (NL)

Programme and Mass Studies

Programme

The programme arises from the analysis of the different woodworking schools. For the project all levels of education, starting from vocational level should have a part in the building to create a setting where different levels of education can work together to a development. In the Netherlands there are some schools focussing on woodworking, but just the practise of it. The new school should contain research on higher education levels to stimulate the development of the industry in the Netherlands.

Mass studies

The programme creates a number of volumes based on spaces that have a relation to each other. Combined with existing typologies from different educational buildings and the site it forms a series of mass studies that help to develop the final proposal.

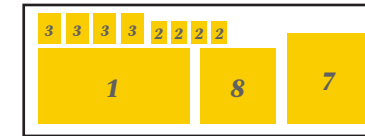
Theory

Dimensions

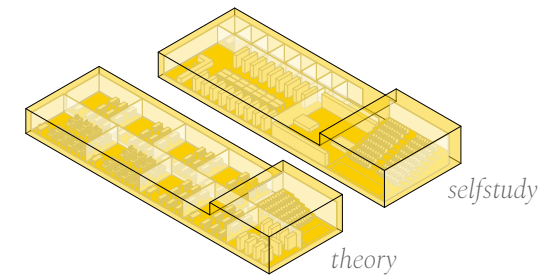
nr.	Name	Size	Height	Volume	Amount
1:	Library	200 m ²	3 m.	600 m ³	1
2:	Study room small	6 m ²	3 m.	18 m ³	4
3:	Study room large	10 m ²	3 m.	30 m ³	4
4:	Classroom	50 m ²	3 m.	150 m ³	6
5:	PC / drawing room	60 m ²	3 m.	180 m ³	2
6:	Auditorium small	65 m ²	5 m.	325 m ³	1
7:	Auditorium large	132 m ²	6 m.	792 m ³	1
8:	Exhibition	100 m ²	3 m.	300 m ³	1
9:	Sample room	50 m ²	3 m.	150 m ³	1
total (incl. amount)		1.031 m ²		3.619 m ³	

Scale 1:1000

selfstudy



theory

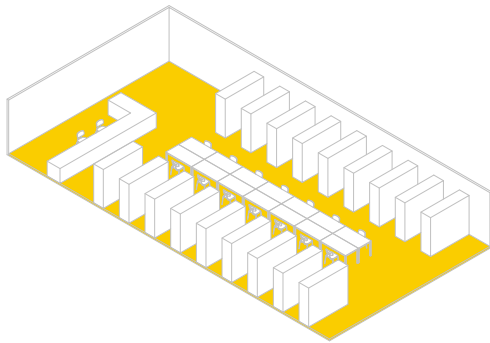


Description

nr.	Name	No. of students	Noise
1:	Library	16	Quiet (ca. 30-40 dB) - Closed space
2:	Study room small	2	Semi-quiet (ca. 40-60 dB) - Closed space
3:	Study room large	4	Semi-quiet (ca. 40-60 dB) - Open space
4:	Classroom	16	Semi-quiet / normal (ca. 40-80 dB) - Closed space
5:	PC / drawing room	16	Semi-quiet / normal (ca. 40-80 dB) - Closed space
6:	Auditorium small	60	Normal (ca. 60-80 dB) - Closed space
7:	Auditorium large	128	Normal (ca. 60-80 dB) - Closed space
8:	Exhibition	0-16	Normal (ca. 60-80 dB) - Open space
9:	Sample room	0-4	Quiet (ca. 30-40 dB) - Closed space

nr.	Name	Setting
1:	Library	1-2 students studying together
2:	Study room small	1-2 students studying together
3:	Study room large	1-4 students studying together
4:	Classroom	Students listening to teacher / discussing
5:	PC / drawing room	Students listening to teacher / discussing
6:	Auditorium small	Students listening to speaker / discussing
7:	Auditorium large	Students listening to speaker / discussing
8:	Exhibition	Students listening to teacher / discussing
9:	Sample room	Teacher collecting samples for classes / students discussing

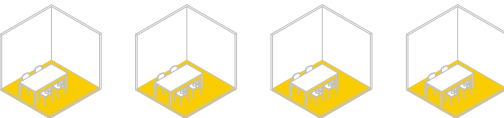
nr.	Name	Room decor
1:	Library	Bookshelves, desks, reception
2:	Study room small	Meeting tables
3:	Study room large	Meeting tables
4:	Classroom	Desks, blackboard, presentation screen
5:	PC / drawing room	Desks with computers, presentation screen
6:	Auditorium small	Podium, rows of seats with small desks
7:	Auditorium large	Podium, rows of seats with small desks
8:	Exhibition	Showcases, pedestals
9:	Sample room	Shelves, drawers, study table, trolleys



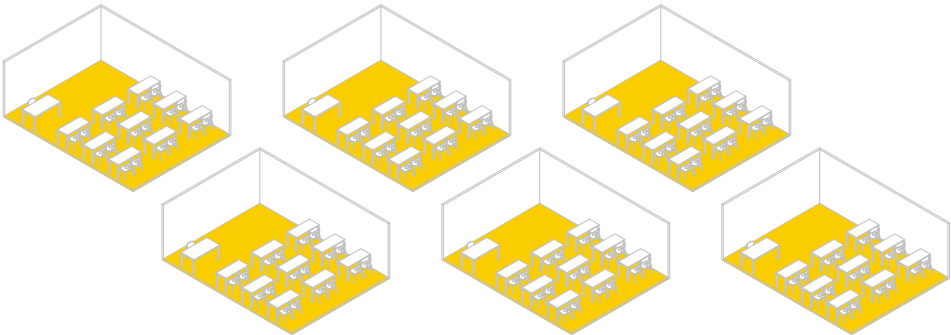
1: | Library | ceiling at 3 m. / 200 m² / 600 m³



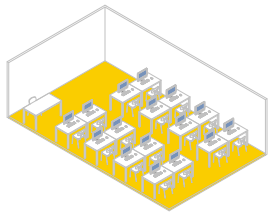
2: | Study rooms | ceiling at 3 m., 6 m², 18 m³



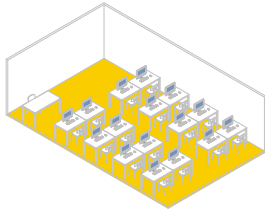
3: | Study rooms | ceiling at 3 m., 10 m², 30 m³



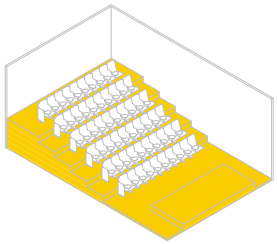
4: | Classrooms | ceiling at 3 m., 50 m², 150 m³



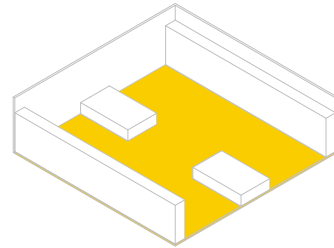
5: | PC/Drawing room | ceiling at 3 m., 60 m², 180 m³



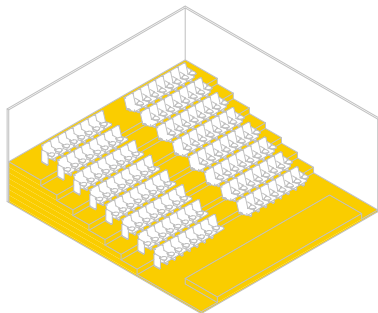
8: | Sample room | ceiling at 3 m. / 50 m² / 150 m³



6: | Auditorium | ceiling at 5 m., 65², 325 m³



9: | Exhibition | ceiling at 3 m. / 100 m² / 300 m³



7: | Auditorium | ceiling at 6 m., 132², 792 m³

Practise

Dimensions

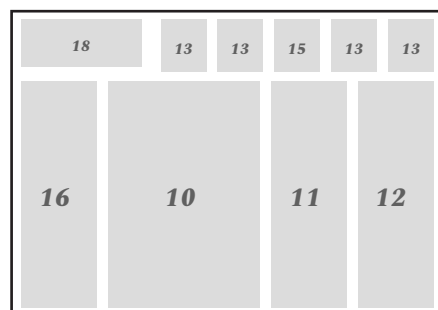
nr.	Name	Size	Height	Volume	Amount
10:	Machine hall	600 m ²	6 m.	3.600 m ³	1
11:	Workshop hall	300 m ²	6 m.	1.800 m ³	1
12:	Assembly hall	300 m ²	6 m.	1.800 m ³	1
13:	Machine room	40 m ²	3 m.	120 m ³	4
14:	Workshop room	60 m ²	3 m.	180 m ³	6
15:	Paint shop	40 m ²	3 m.	120 m ³	1
16:	Material storage	300 m ²	6 m.	1.800 m ³	1
17:	Project storage	300 m ²	3 m.	900 m ³	1
18:	Tool storage	100 m ²	3 m.	300 m ³	1
19:	Lockers	50 m ²	3 m.	150 m ³	1
20:	Showers	20 m ²	3 m.	60 m ³	2
21:	Woodworking lab	200 m ²	3 m.	600 m ³	1
22:	Research lab	100 m ²	3 m.	300 m ³	4
23:	Testing hall	300 m ²	6 m.	1800 m ³	1
total (incl. amount)		3.450 m²		15.750 m³	

Scale 1:1000

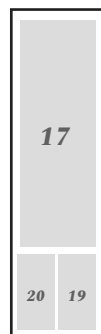
workshop / guild



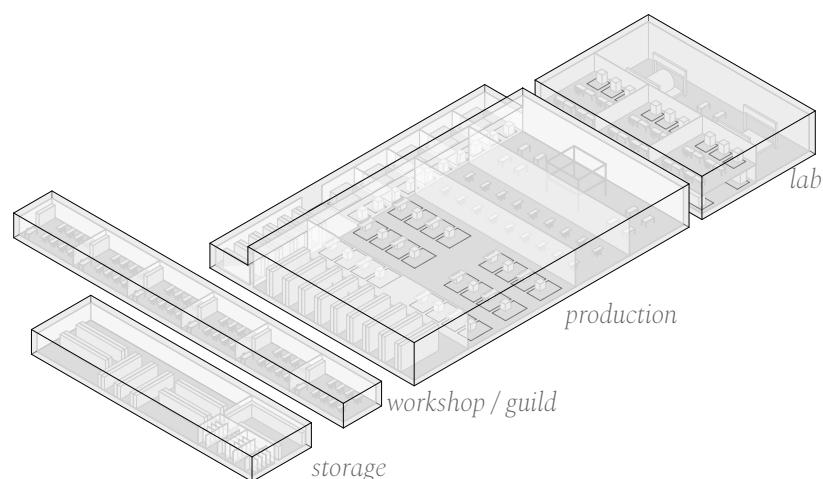
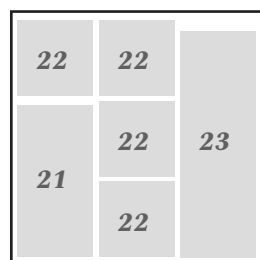
production



storage



lab



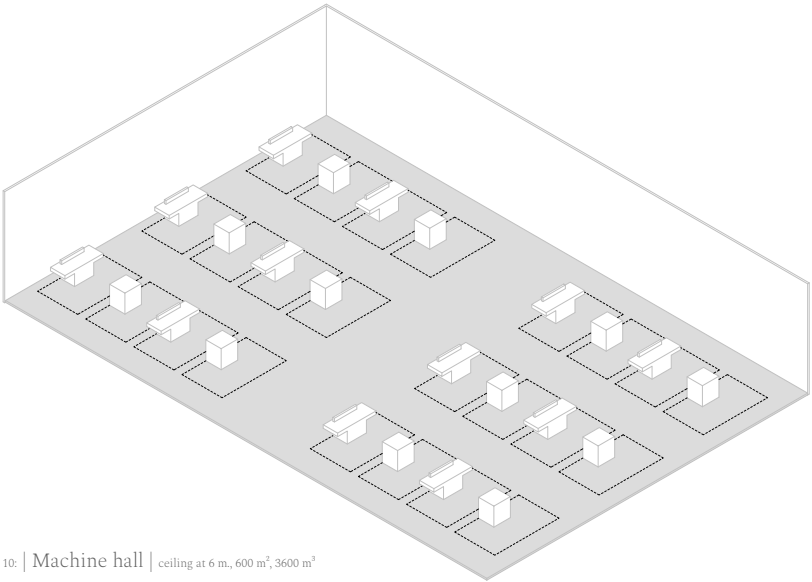
Description

nr.	Name	No. of students	Noise
10:	Machine hall	32	Loud (ca. 95+ dB) - Open space
11:	Workshop hall	32	Loud (ca. 95+ dB) - Open space
12:	Assembly hall	32	Loud (ca. 95+ dB) - Open space
13:	Machine room	4	Loud (ca. 95+ dB) - Open and closed space
14:	Workshop room	8	Normal / Semi loud (ca. 60-95 dB) - Closed space
15:	Paint shop	4	Normal (ca. 60-80 dB) - Closed space
16:	Material storage	0-4	Normal (ca. 60-80 dB) - Open and closed space
17:	Project storage	0-8	Semi-quiet / normal (ca. 40-80 dB) - Closed space
18:	Tool storage	0-8	Semi-quiet / normal (ca. 40-80 dB) - Closed space
19:	Lockers	0-16	Semi-quiet / normal (ca. 40-80 dB) - Closed space
20:	Showers	4-8	Normal (ca. 60-80 dB) - Closed space
21:	Woodworking lab	4-8	Normal / Semi loud (ca. 60-95 dB) - Closed space
22:	Research lab	4-8	Semi-quiet / normal (ca. 40-80 dB) - Closed space
23:	Testing hall	8-16	Normal / Semi loud (ca. 60-95 dB) - Open space

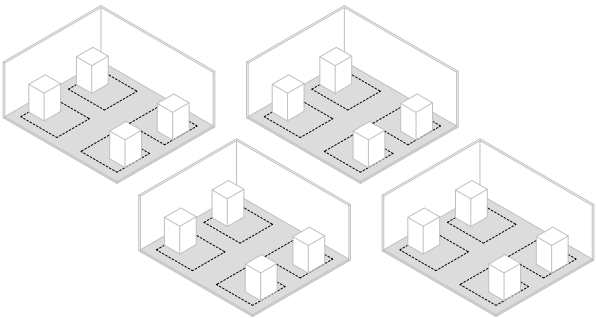
nr.	Name	Setting
10:	Machine hall	Students working on projects
11:	Workshop hall	Students working on projects
12:	Assembly hall	Students working on projects
13:	Machine room	Students working on projects, supervising teacher
14:	Workshop room	Students working on projects, supervising teacher
15:	Paint shop	Students finishing wood
16:	Material storage	Students collecting and material
17:	Project storage	Students collecting and storing projects
18:	Tool storage	Students collecting and storing tools
19:	Lockers	Students collecting and storing projects and own tools
20:	Showers	Personal hygiene after practise work
21:	Woodworking lab	Students working on projects
22:	Research lab	Students doing research and experiments, supervising teacher
23:	Testing hall	Students doing experiments, supervising teacher

Description

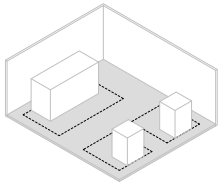
nr.	Name	Room decor
10:	Machine hall	Big machines, ventilation ducts, tool racks
11:	Workshop hall	Workbenches, tool racks
12:	Assembly hall	Open space, project showcase
13:	Machine room	Small machines, ventilation ducts, tool racks
14:	Workshop room	Workbenches, tool racks
15:	Paint shop	Spray cabin, equipment storage, paint storage
16:	Material storage	Shelves and racks
17:	Project storage	Shelves
18:	Tool storage	Shelves, racks, counter
19:	Lockers	Lockers
20:	Showers	Lockers, showers, benches
21:	Woodworking lab	Modern woodworking machinery, computers
22:	Research lab	Chemistry equipment, workbenches
23:	Testing hall	Heavy duty testing facilities



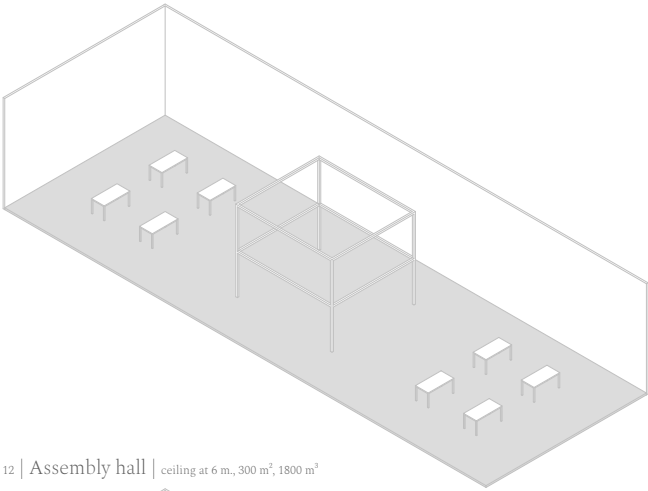
10: | Machine hall | ceiling at 6 m., 600 m², 3600 m³



13: | Machine room | ceiling at 3 m., 40 m², 120 m³



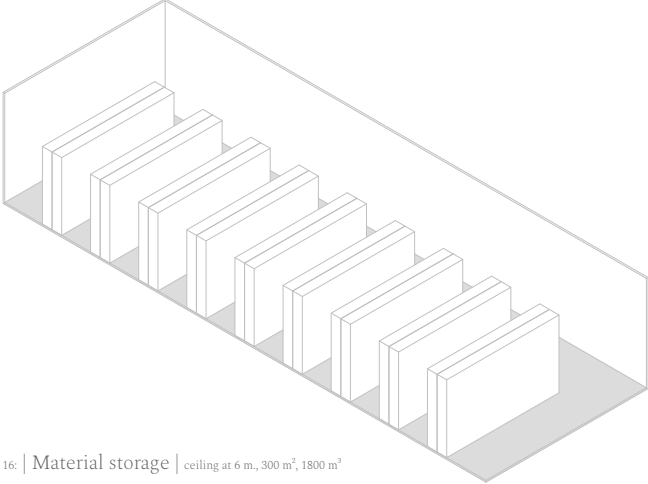
15: | Paint shop | ceiling at 3 m., 40 m², 120 m³



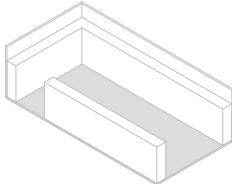
12: | Assembly hall | ceiling at 6 m., 300 m², 1800 m³



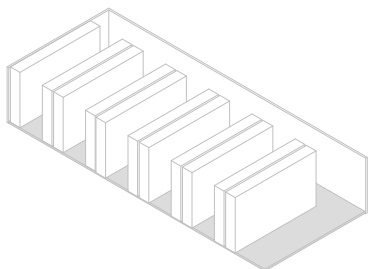
20: | Showers | ceiling at 3 m., 20 m², 60 m³



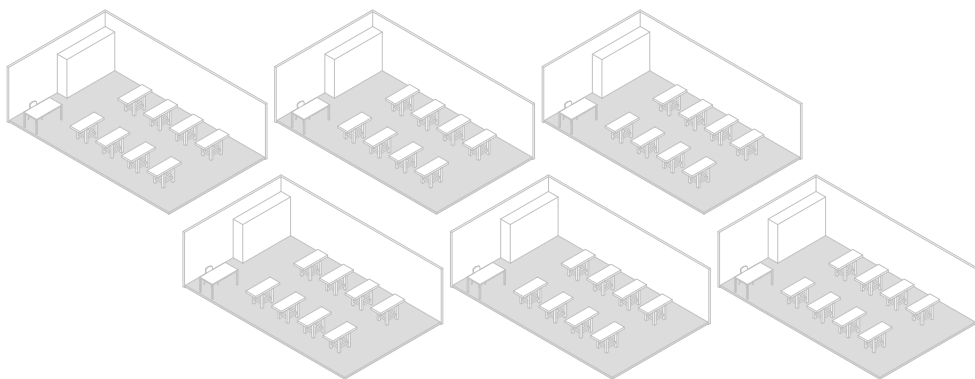
16: | Material storage | ceiling at 6 m., 300 m², 1800 m³



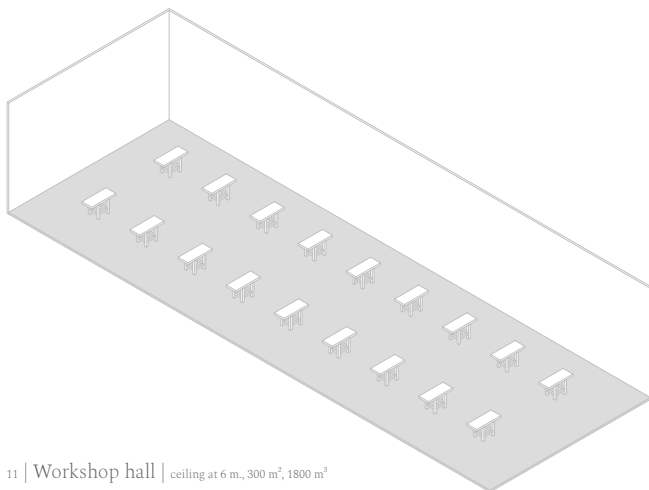
19: | Lockers | ceiling at 3 m., 50 m², 150 m³



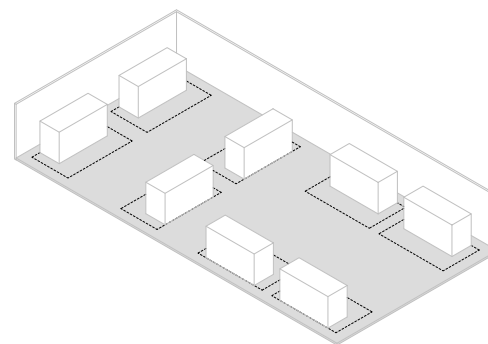
18: | Tool storage | ceiling at 3 m., 100 m², 300 m³



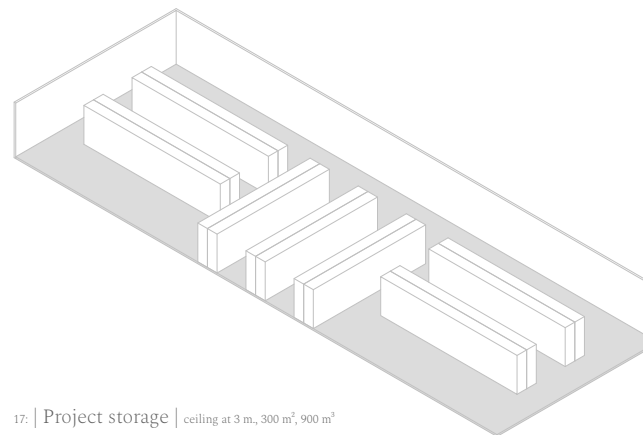
14: | Workshop room | ceiling at 3 m., 60 m², 180 m³



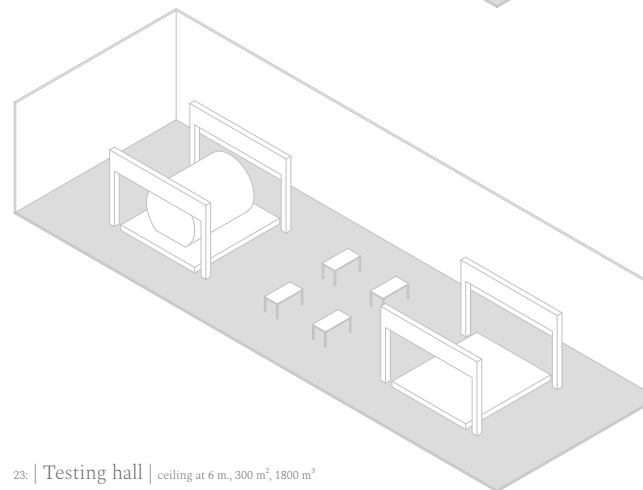
11 | Workshop hall | ceiling at 6 m., 300 m², 1800 m³



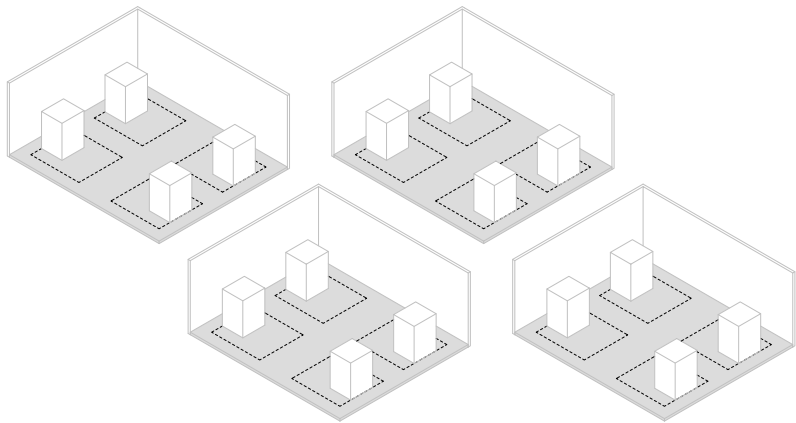
21: | Woodworking lab | ceiling at 3 m., 200 m², 600 m³



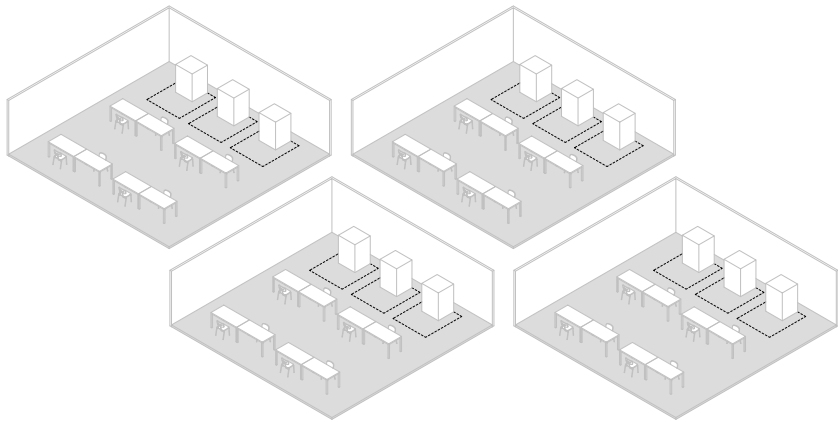
17: | Project storage | ceiling at 3 m., 300 m², 900 m³



23: | Testing hall | ceiling at 6 m., 300 m², 1800 m³



13: | Machine room | ceiling at 3 m., 40 m², 120 m³



22: | Research lab | ceiling at 3 m., 100 m², 600 m³

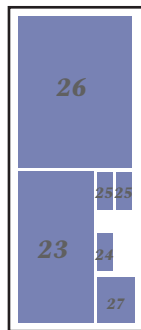
Administration and general

Dimensions

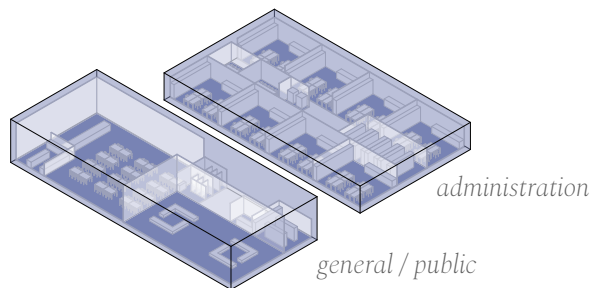
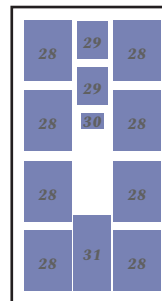
nr.	Name	Size	Height	Volume	Amount
23:	Foyer	200 m ²	6 m.	1.200 m ³	1
24:	Reception	10 m ²	3 m.	30 m ³	1
25:	Public toilets	10 m ²	3 m.	30 m ³	2
26:	Cafeteria	300 m ²	6 m.	1.800 m ³	1
27:	General storage	30 m ²	3 m.	90 m ³	1
28:	Office	50 m ²	3 m.	150 m ³	8
29:	Meeting room	20 m ²	3 m.	60 m ³	2
30:	Repro	6 m ²	3 m.	18 m ³	1
31:	Archive	50 m ²	3 m.	150 m ³	1
total (incl. amount)		1.110 m ²	-	4.668 m ³	

Scale 1:1000

general / public



administration

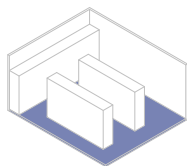


Description

nr.	Name	No. of people	Noise
23:	Foyer	16	Normal / Semi loud (ca. 60-95 dB) - Open space
24:	Reception	2	Normal (ca. 60-80 dB) - Open space
25:	Public toilets	2	Normal (ca. 60-80 dB) - Closed space
26:	Cafeteria	64	Normal / Semi loud (ca. 60-95 dB) - Open space
27:	General storage	0	Semi-quiet / normal (ca. 40-80 dB) - Closed space
28:	Office	2-8	Semi-quiet / normal (ca. 40-80 dB) - Closed space
29:	Meeting room	4-10	Normal (ca. 60-80 dB) - Closed space
30:	Repro	1-2	Semi-quiet / normal (ca. 40-80 dB) - Closed space
31:	Archive	0	Quiet (ca. 30-40 dB) - Closed space

nr.	Name	Setting
23:	Foyer	Main entry to the building
24:	Reception	Service desk at entry
25:	Public toilets	Bathroom
26:	Cafeteria	Space for food
27:	General storage	Cleaning materials etc.
28:	Office	Teachers and employees working
29:	Meeting room	Teachers and employees working discussing
30:	Repro	Printers and copy machines with service desk
31:	Archive	Storage

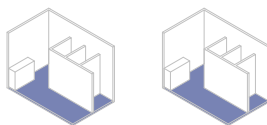
nr.	Name	Room decor
23:	Foyer	Open space, sofa's
24:	Reception	Service desk
25:	Public toilets	Tiled surfaces
26:	Cafeteria	Lunch tables, coffee shop, sandwich shop
27:	General storage	Shelves and racks
28:	Office	Office desks, filing cabinets
29:	Meeting room	Meeting table, presentation screen
30:	Repro	Printers and paper storage
31:	Archive	Filing cabinets



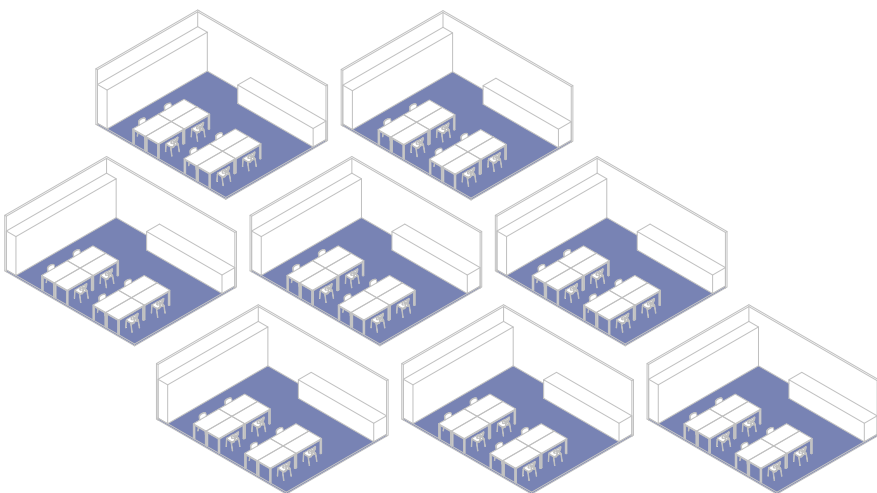
27: | General storage | ceiling at 3 m, 30 m², 90 m³



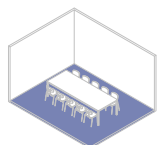
24: | Reception | ceiling at 3 m, 10 m², 30 m³



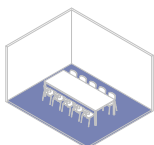
25: | Toilets | ceiling at 3 m, 10 m², 30 m³



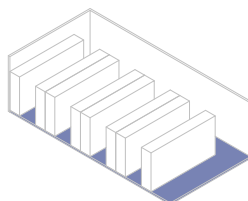
28: | Office | ceiling at 3 m, 50 m², 150 m³



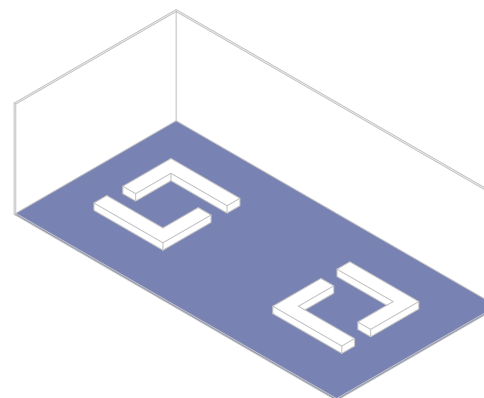
29: | Meeting room | ceiling at 3 m, 20 m², 60 m³



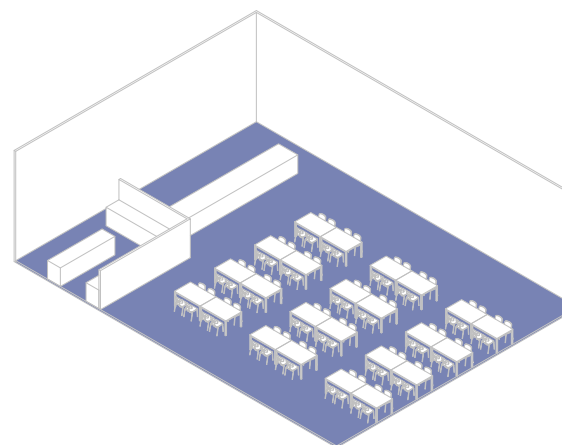
30: | Repro | ceiling at 3 m, 6 m², 18 m³



31: | Archive | ceiling at 3 m, 50 m², 150 m³



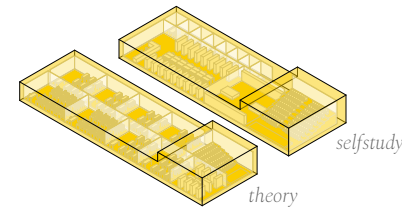
23: | Foyer | ceiling at 6 m, 200 m², 1200 m³



26: | Cafeteria | ceiling at 6 m, 300 m², 1800 m³

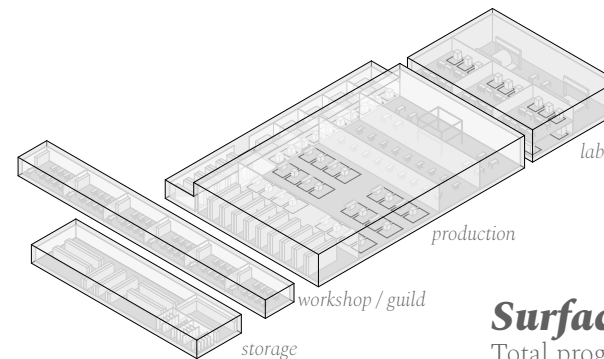
Theory

nr.	Name	Size
1:	Library	200 m ²
2:	Study room small	6 m ²
3:	Study room large	10 m ²
4:	Classroom	50 m ²
5:	PC / drawing room	60 m ²
6:	Auditorium small	65 m ²
7:	Auditorium large	132 m ²
8:	Exhibition	100 m ²
9:	Sample room	50 m ²
total (incl. amount)		1.031 m²



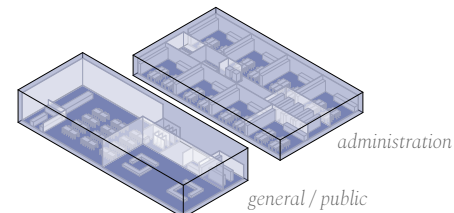
Practise

nr.	Name	Size
10:	Machine hall	600 m ²
11:	Workshop hall	300 m ²
12:	Assembly hall	300 m ²
13:	Machine room	40 m ²
14:	Workshop room	60 m ²
15:	Paint shop	40 m ²
16:	Material storage	300 m ²
17:	Project storage	300 m ²
18:	Tool storage	100 m ²
19:	Lockers	50 m ²
20:	Showers	20 m ²
21:	Woodworking lab	200 m ²
22:	Research lab	100 m ²
23:	Testing hall	300 m ²
total (incl. amount)		3.450 m²



Administration and general

nr.	Name	Size
23:	Foyer	200 m ²
24:	Reception	10 m ²
25:	Public toilets	10 m ²
26:	Cafeteria	300 m ²
27:	General storage	30 m ²
28:	Office	50 m ²
29:	Meeting room	20 m ²
30:	Repro	6 m ²
31:	Archive	50 m ²
total (incl. amount)		1.110 m²



Surface area

Total program ca. 5.591 m² excluding services and traffic spaces. Account for approximately 30-40% traffic spaces and services makes a total of c.a. 7.300 m² BVO.

Volume

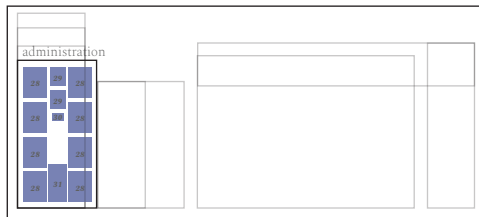
Total program ca. 20.627 m³ excluding services and traffic spaces. Services and traffic spaces approximately 1629 m² x 3 m. or 4887 m³. Total: c.a. 25.364 m³

Note

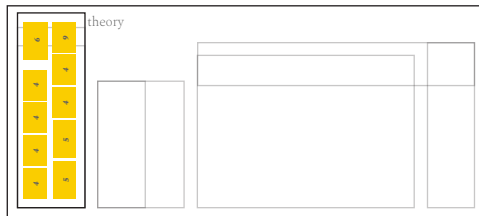
These are the minimum requirements for the crafts school. Spaces can be made bigger for better functionality and public functions can be added to the programme.

Palace

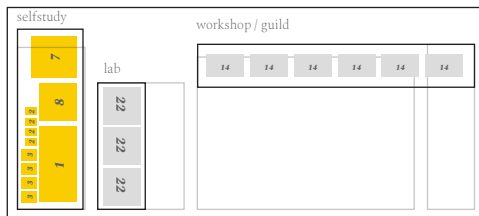
Functions organized into compact blocks with one dominant one directed at public. It shows a strong division between practise and theory. This typology fits well into the urban fabric has more structures with a dominant volume at the head of a building. This volume can act as a marker for the makers industry in the redeveloping Nieuw-Matthe- nesse On top of that the site offers a big ground floor for the practise spaces, while the other spaces can fit into a condensed volume. Because this typology is compact and centered it connection to its outdoor spaces are naturally outwards towards public ar- ea's around it, which allows for a transition between public and private.



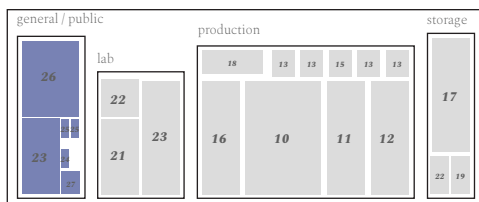
third floor



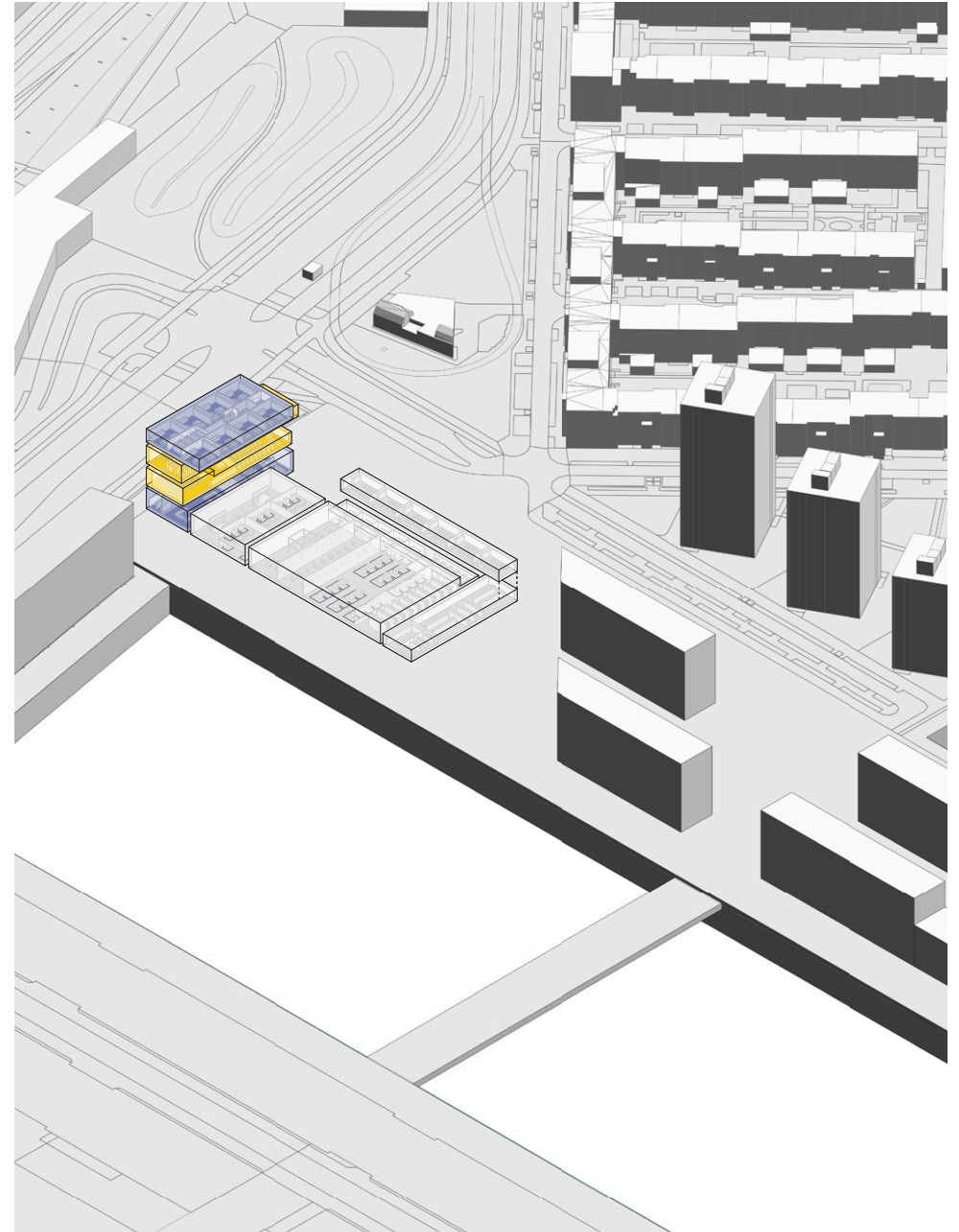
second floor



first floor

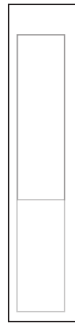
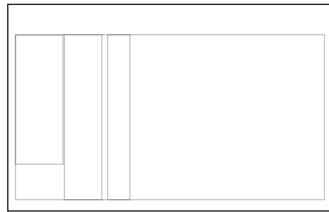
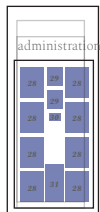


ground floor

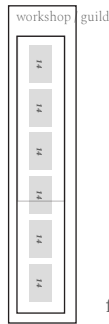


Farmstead

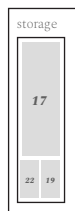
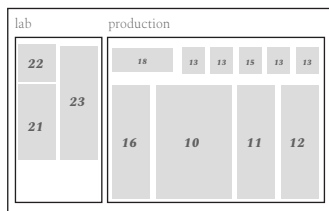
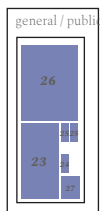
Functions organized into series of buildings. Groups imply a history of education as a didactic way. The typology is similar to the palace typology where a main volume is dominant. In terms of urban planning it shares the same consequences as the palace typology. In the farmstead typology the three buildings can represent a different work environment in the history of the craft of woodworking. The small ateliers represent the guilds before the 19th century, the middle volume represent the diligent workplaces of the factories in the industrial revolution and the head represents the modern vocational schools. However the connection between the buildings can make them feel separate from each other.



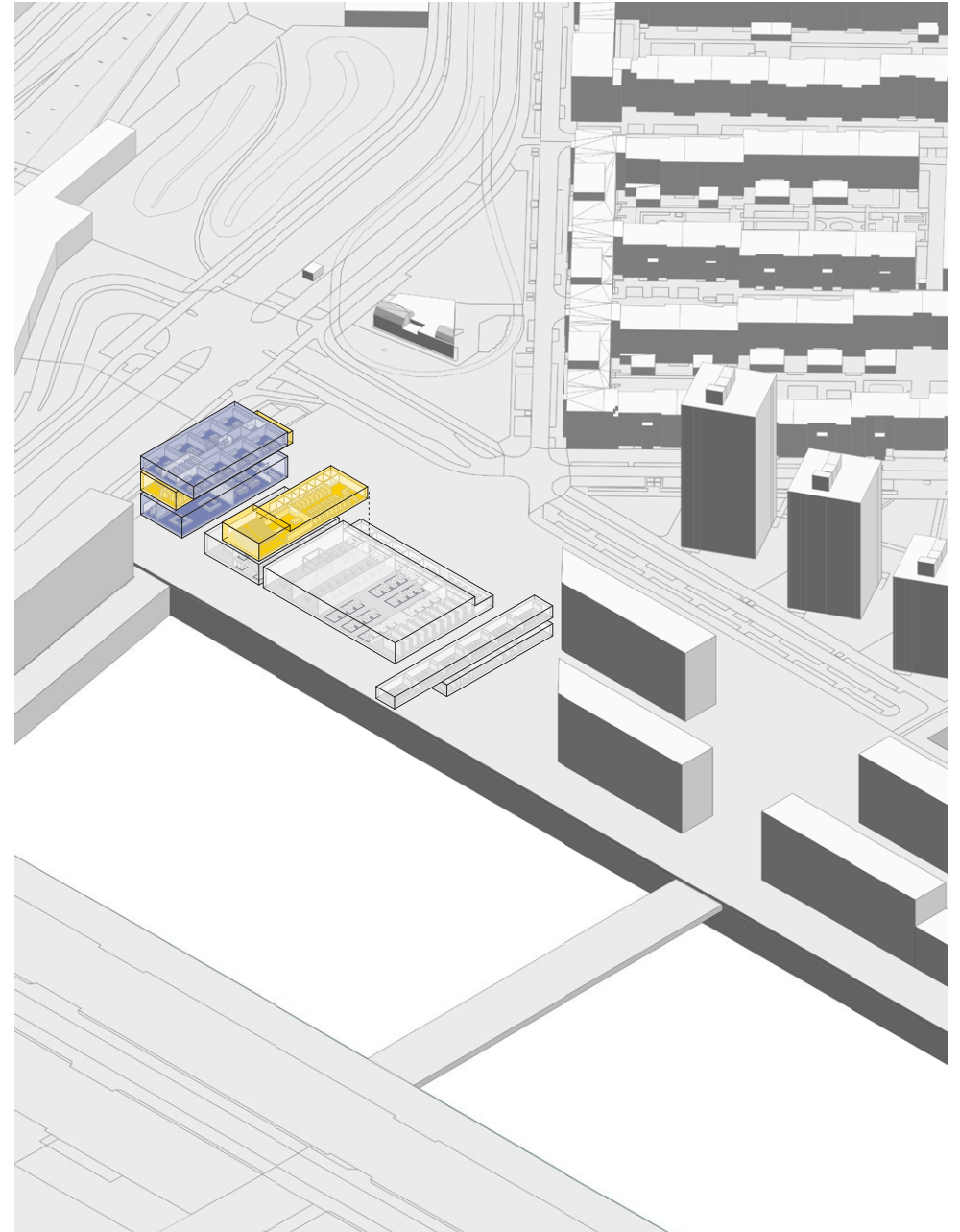
second floor



first floor

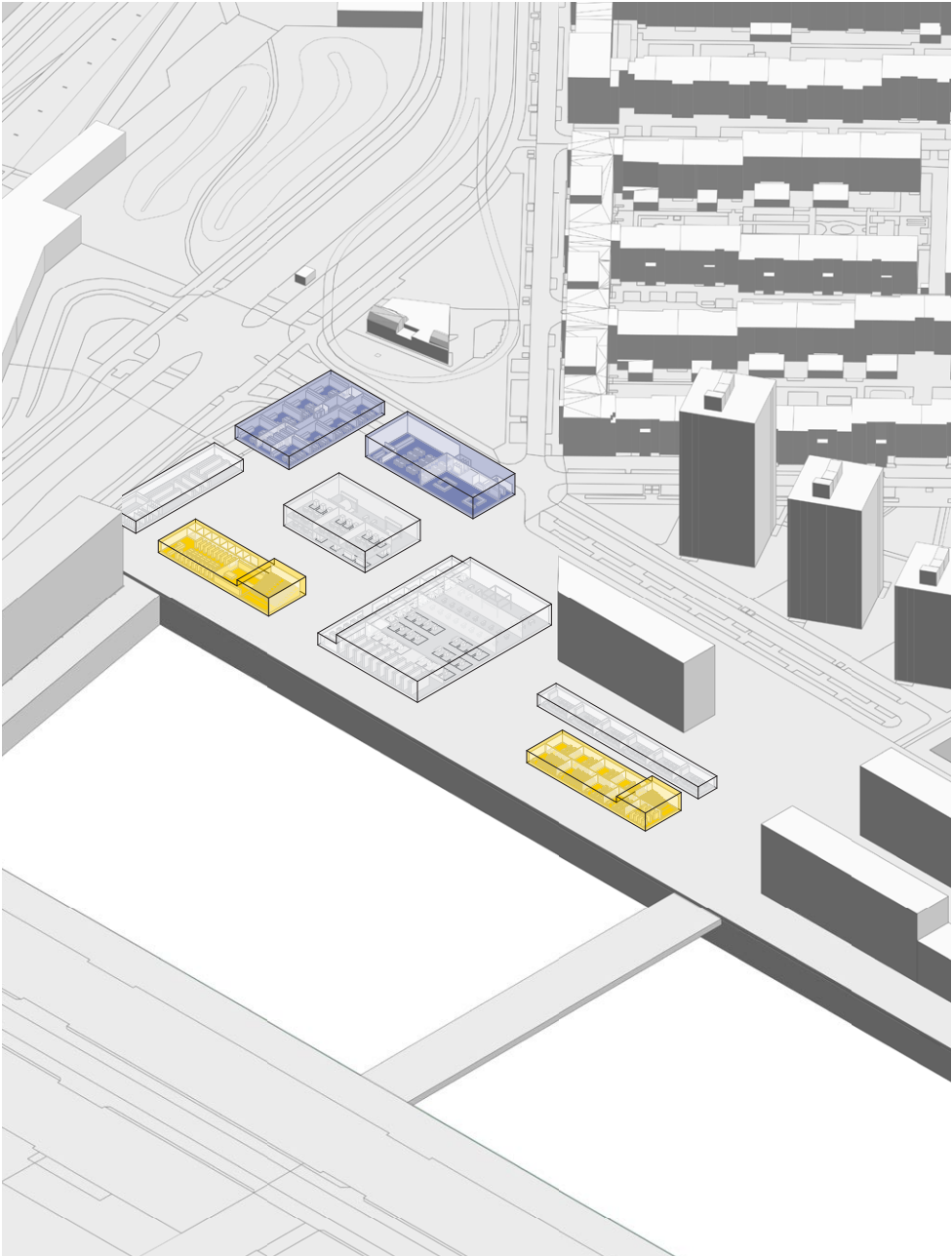
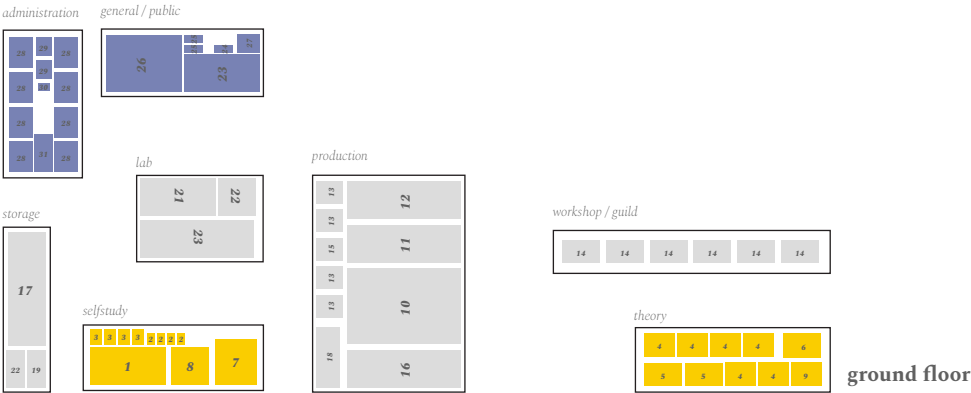
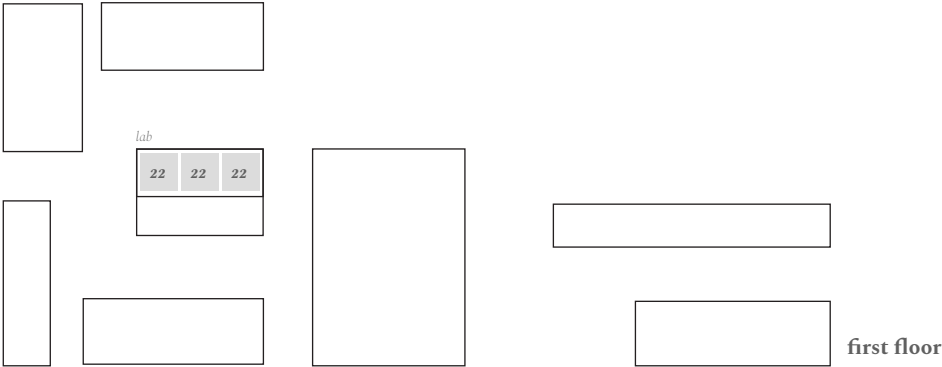


ground floor



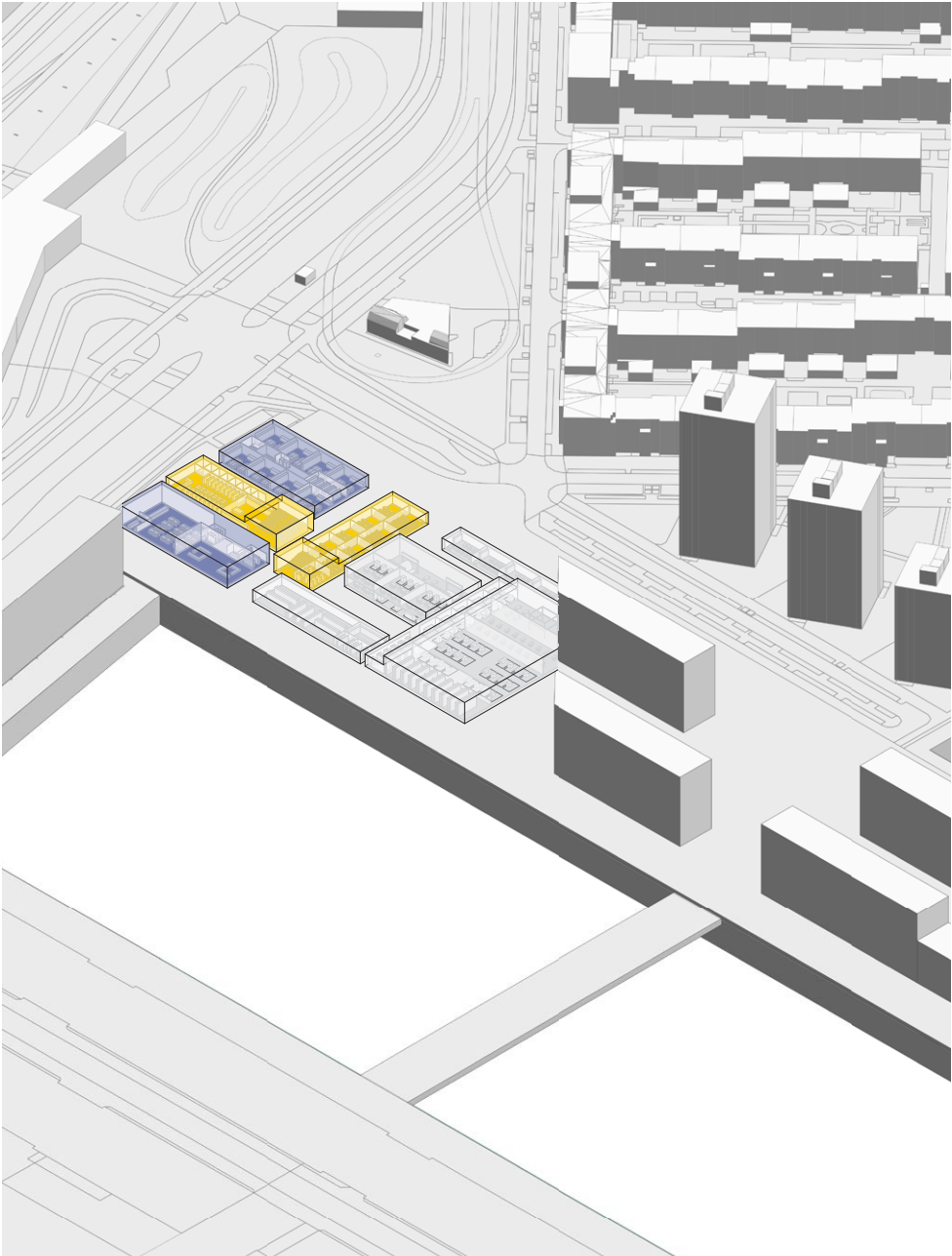
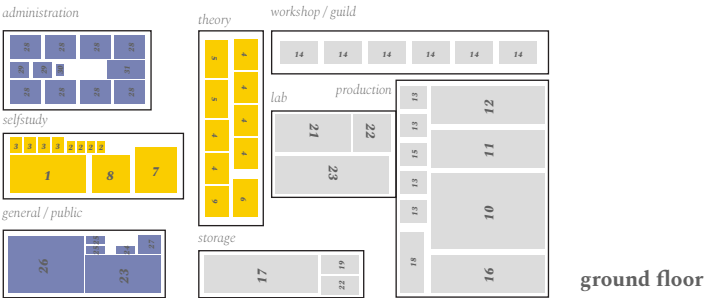
Campus

Functions spread out over a site, creating outdoor spaces. Ground floor focussed creating more opportunities for connections between all function in the outdoor space. Its big open spaces is good for logistics of material between buildings. Because of the many spaces that are bound to the ground floor this typology requires a bigger plot. In terms of urban planning it contributes to the porosity of the boundary between Schiemonde and Nieuw-Mathenesse, and its outdoor spaces are open to the public which can invite locals to come in touch with the craft of woodworking.



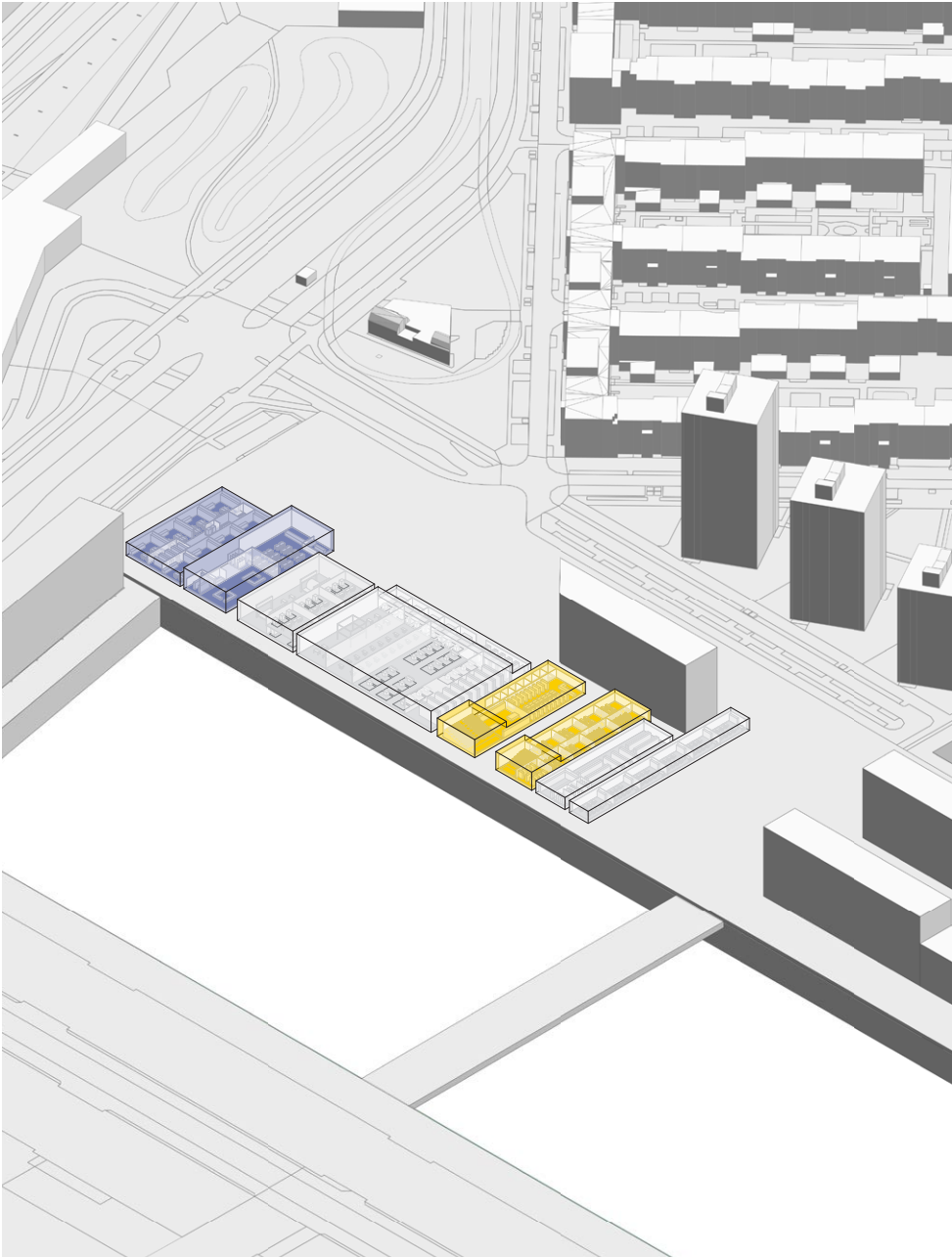
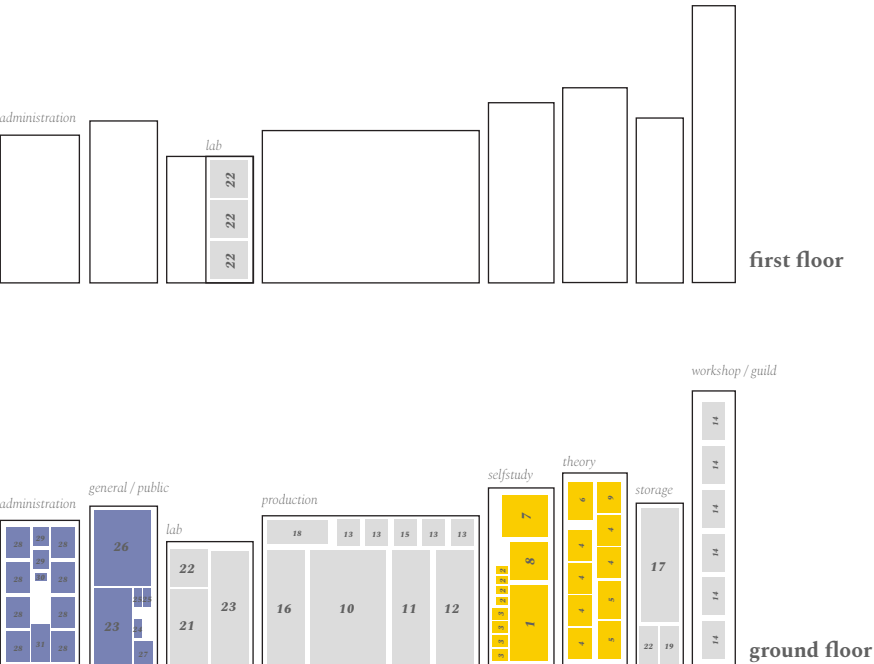
Fabric

Similar to the campus, all the functions are spread out over the ground floor. The traffic spaces weave through the school keeping all the volumes together. Within the fabric there are holes that create intimate outdoor spaces allowing light to enter from all sides of the functions. But this does mean the building is facing inwards, towards these patios. It results in a harder border between the crafts school and surrounding neighbourhood. It can be more porous, though. By extending the left over spaces into the surrounding public space. Although it is compacted it still needs a big plot because most functions are ground bound.



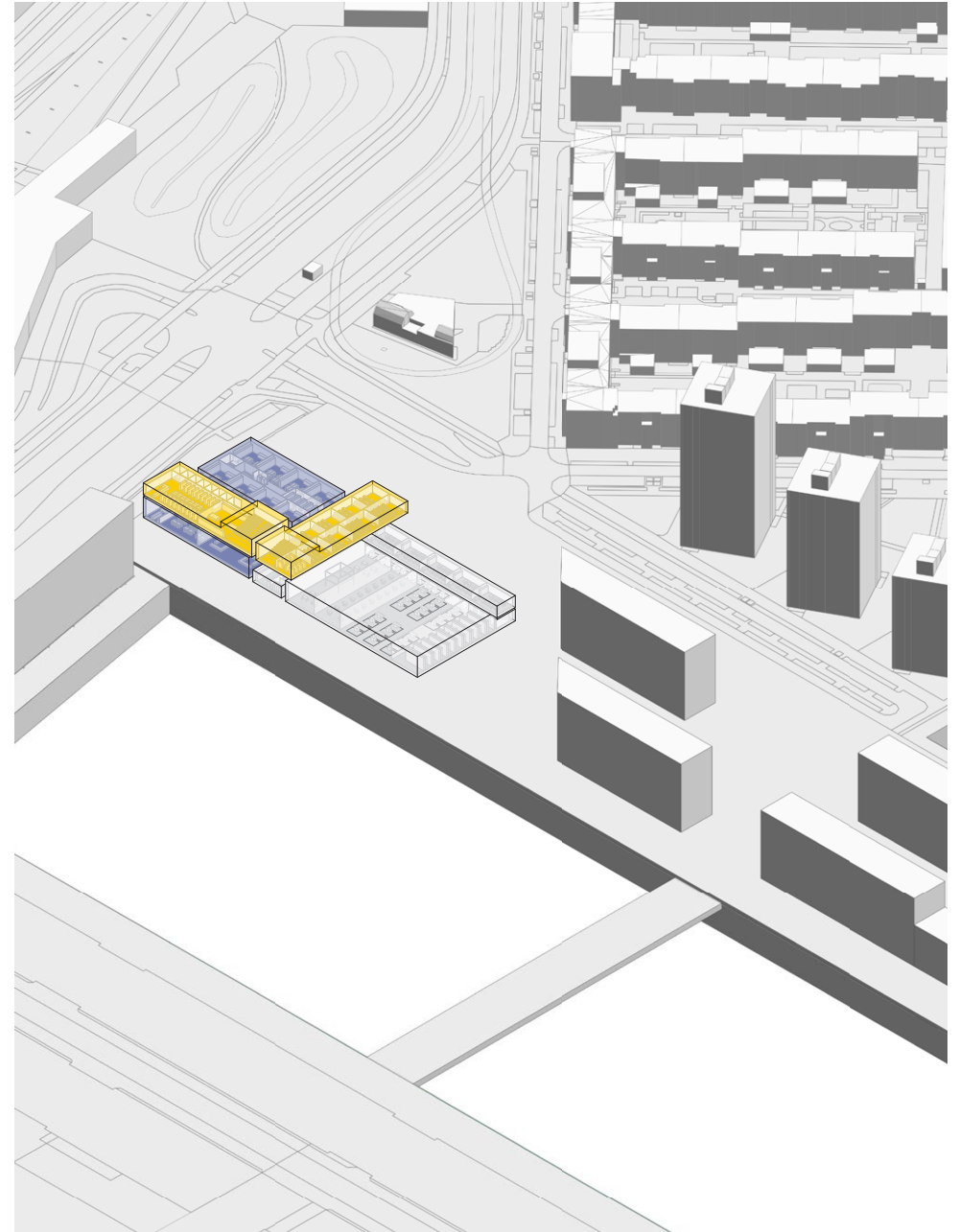
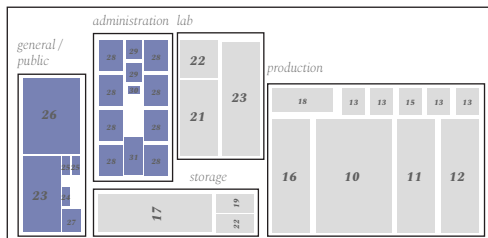
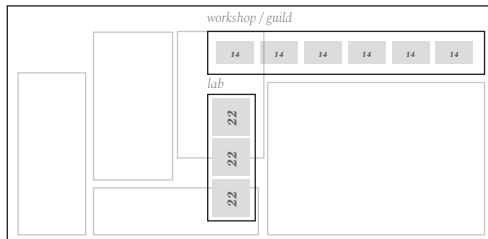
Factory

The factory is ground floor based, and process based. Meaning that each function is part of a series of the entire process. Showing the process is a didactic way of organizing the buildings. The logistics of this typology are straightforward and clear. But like an industrial process it can isolate certain tasks from each other, where in a learning environment students can benefit from being connected to other students in other fields. Therefore, it is not a very suitable typology for a woodworking crafts school that houses multiple disciplines. From an urban standpoint it needs, like the campus and fabric typologies, a lot of space because most functions are based on the ground floor. And because of that it does not make a very distinct/notable building in the urban fabric. But it does have a clear reference to the historic sawing mills.



Machine

All of the functions are compressed into one big machine. Each part of the machine contributes to the craft in a way. The total volume can be seen as an embodiment of wood as a craft. Although it is compact, it also means that the organisation in the building is quite limited because it all has to fit into one volume. This can result in left over space, which can be nice for the spatial qualities inside the building, but it can also result in an organisation that is not optimal for the crafts school. In terms of urban planning it is similar to the palace typology except the entire volume is making the building distinct. Compared to other buildings only the dakpark has a similar mass, which might make this building feel out of place in the fabric.



Monastery

All functions are centred around a courtyard. The courtyard acts as a didactic space that shows everything involved in the craft of wood. It is where everything comes together. This means that the building becomes inward facing, resulting in a harder transition between the crafts school and the public spaces surrounding it. The building organisation fits into the urban fabric because along the Pelgrimstraat it creates a higher and long volume. It does narrow the entrance to the neighbourhood of Schiemonnd which closes it off to the north.

