

Lernräume für Eingeborene im digitalen Dschungel

eBazar der Wiener Schulen, 8.3.2018

Vortrag Christian Kühn
Technische Universität Wien



Dorfschule, Niederlande (Gemälde von Jan Steen, 1670)



Alreest den esle toe scholen om leeren — Tot eenen esle hy en sal gheen peert vander heeren

Pieter Breughel. Der Esel in der Schule, 1556



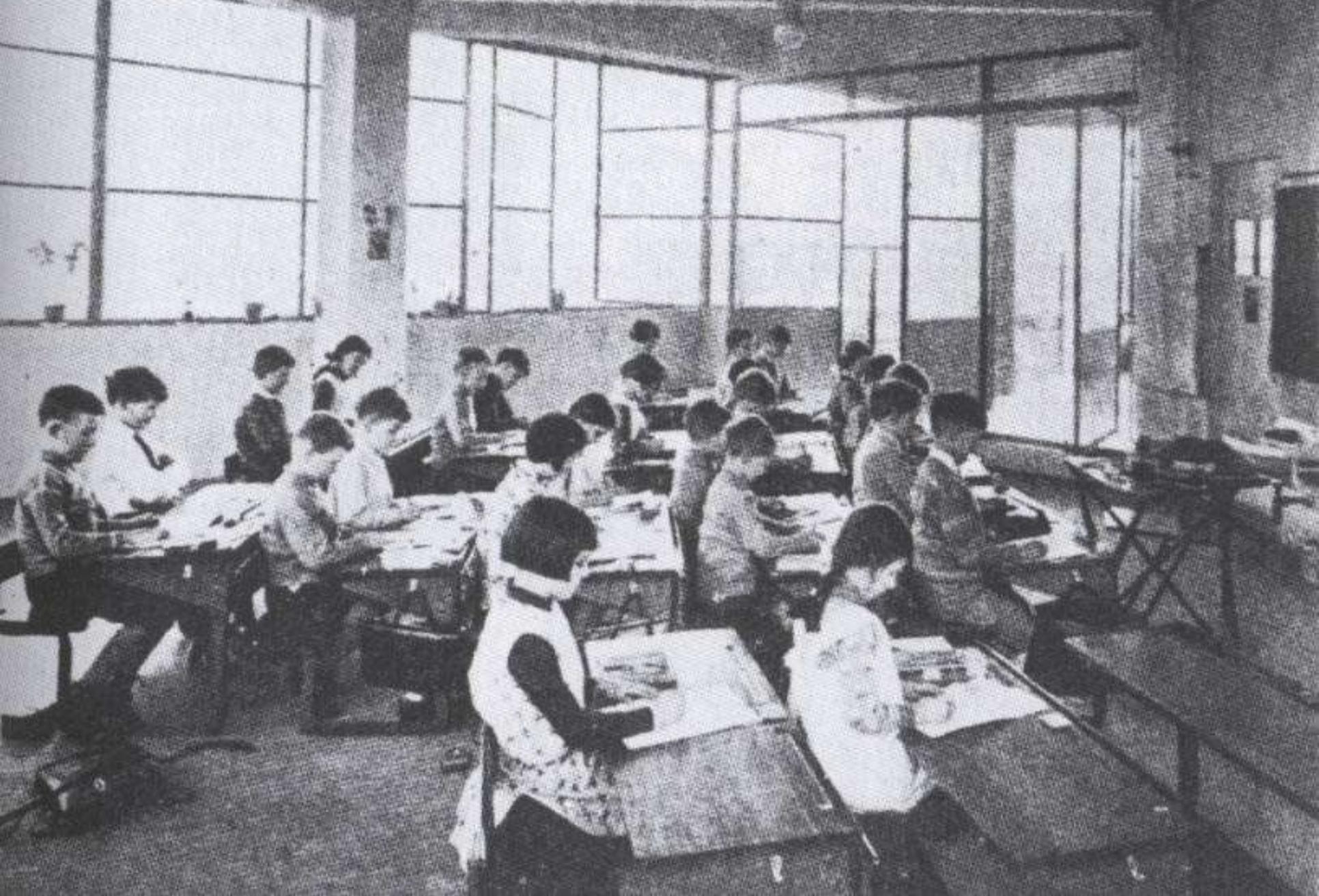
Klassenraum, aus:
Jan Comenius, Orbis
Sensualium Pictus;
1658/1746

Jan Steen,
Der strenge Lehrer,
Holland 1668





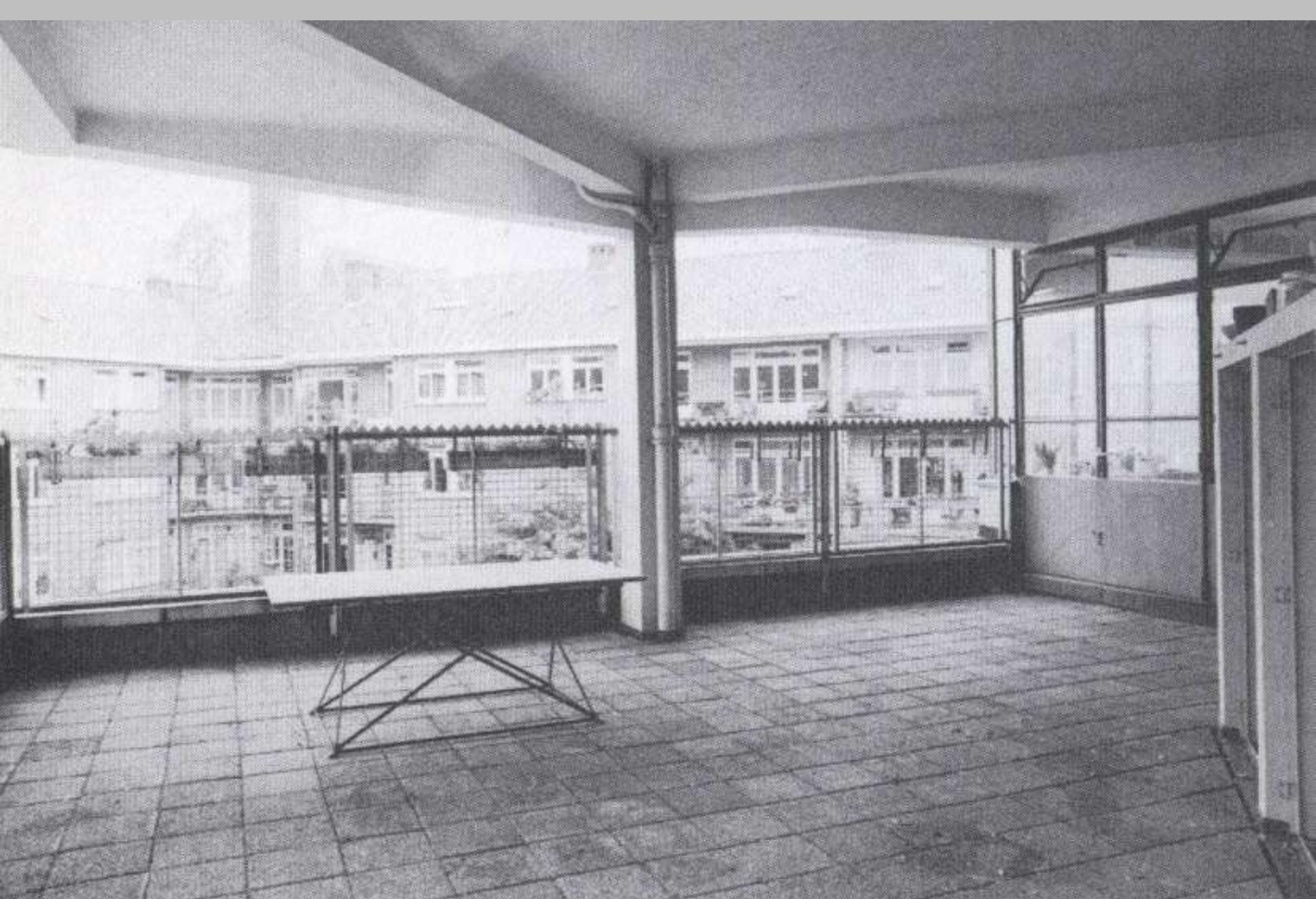
Dorfschule von 1848 (Gemälde von Albert Anker, 1893)



Freiluftschule, Holland, Jan Duiker, 1927



Freiluftschule, Amsterdam, Jan Duiker, 1927



Freiluft Klassenzimmer



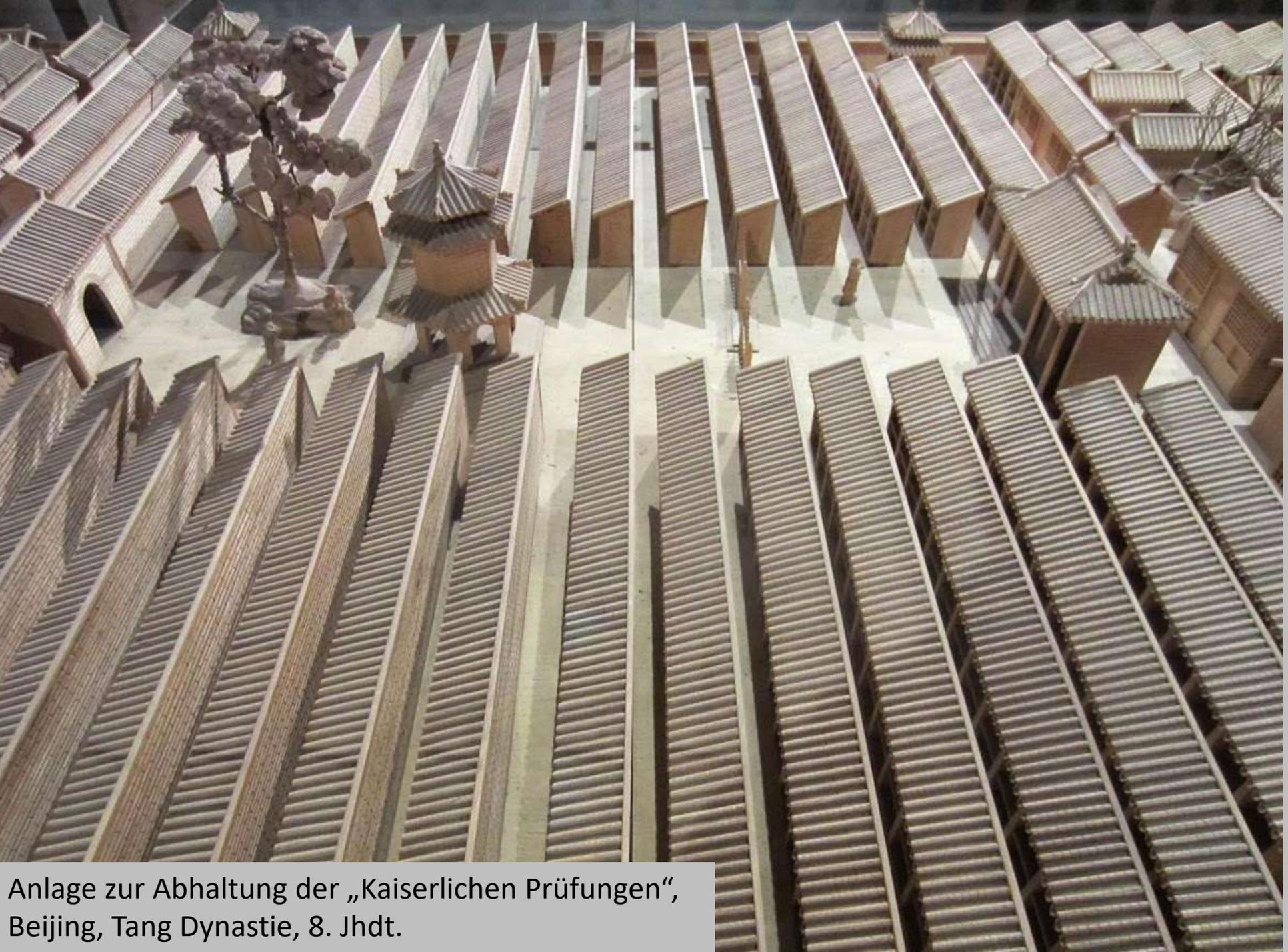




THE GREAT WALL OF CHINA
THE GREAT WALL OF CHINA
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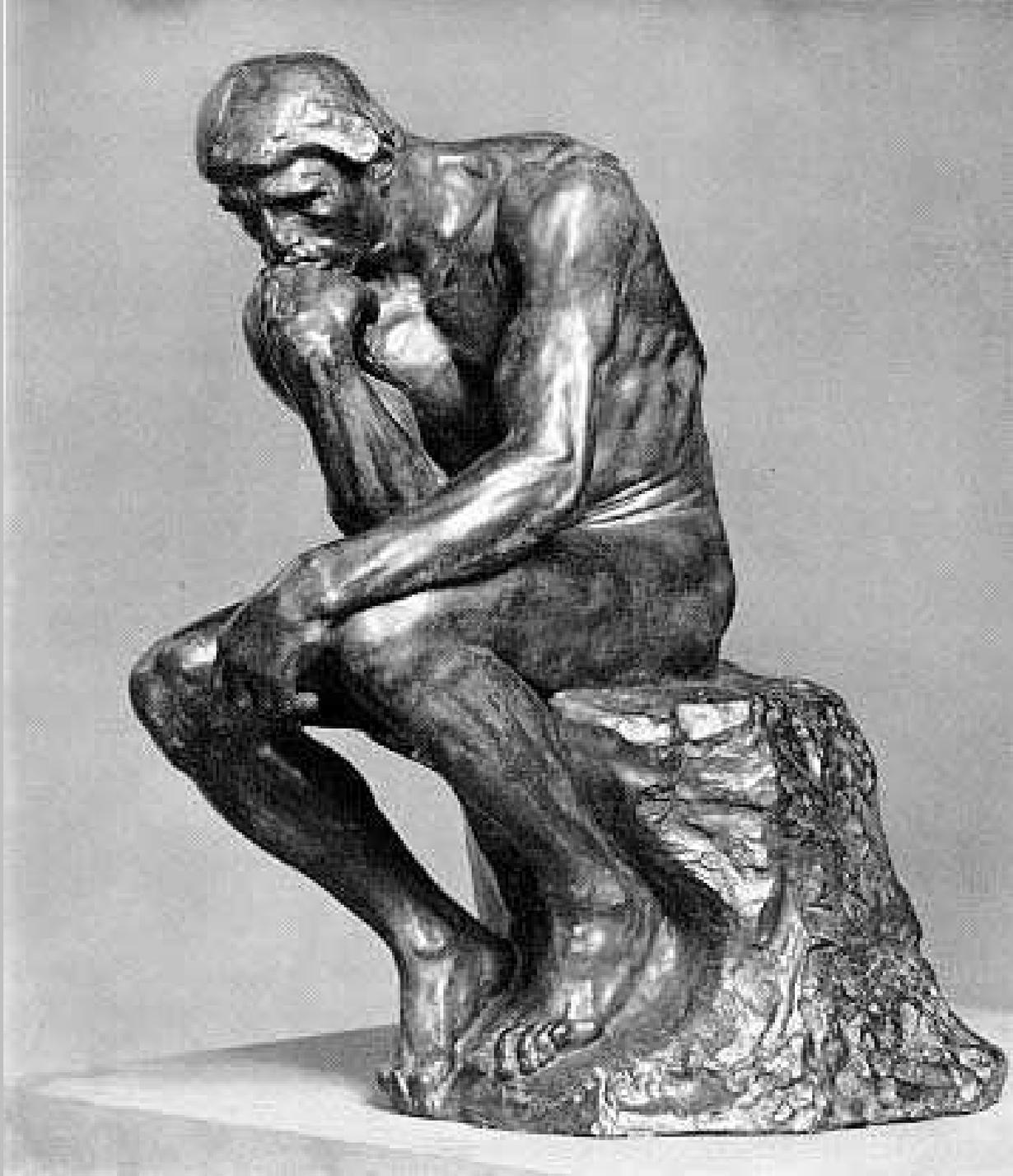
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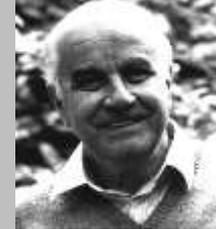
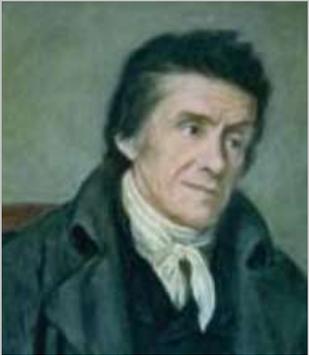
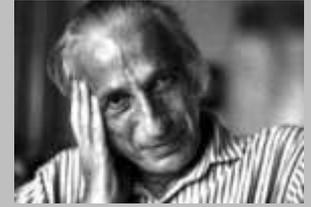
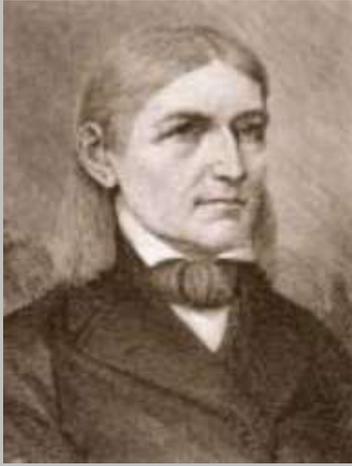


Anlage zur Abhaltung der „Kaiserlichen Prüfungen“,
Beijing, Tang Dynastie, 8. Jhdt.









Jean-Jacques Rousseau J. Heinrich Pestalozzi Friedrich Fröbel Wilhelm von Humboldt
Maria Montessori Rudolf Steiner John Dewey Loris Malaguzzi Ivan Illich Hartmut von Hentig

OECD Study on Key Qualifications for a Successful Life and a Well-Functioning Society

(Rychen and Salganik 2003)

- use tools interactively
- act autonomously
- interact in heterogenous groups

Hartmut von Hentig, „Bildung - Ein Essay“ (1996)

Aufgabe der Schule: Die Menschen stärken und die Sachen klären.

Kriterien von Bildung:

- Abscheu und Abwehr von Unmenschlichkeiten
- Wahrnehmung von Glück
- Fähigkeit und Willen, sich zu verständigen
- Bewusstsein von der Geschichtlichkeit der eigenen Existenz
- Wachheit für letzte Fragen
- Bereitschaft zur Selbstverantwortung und zur Verantwortung in der res publica





Die Schule ist ein
Raum für Teams



Die Schularchitektur des 21. Jahrhunderts ist charakterisiert durch:

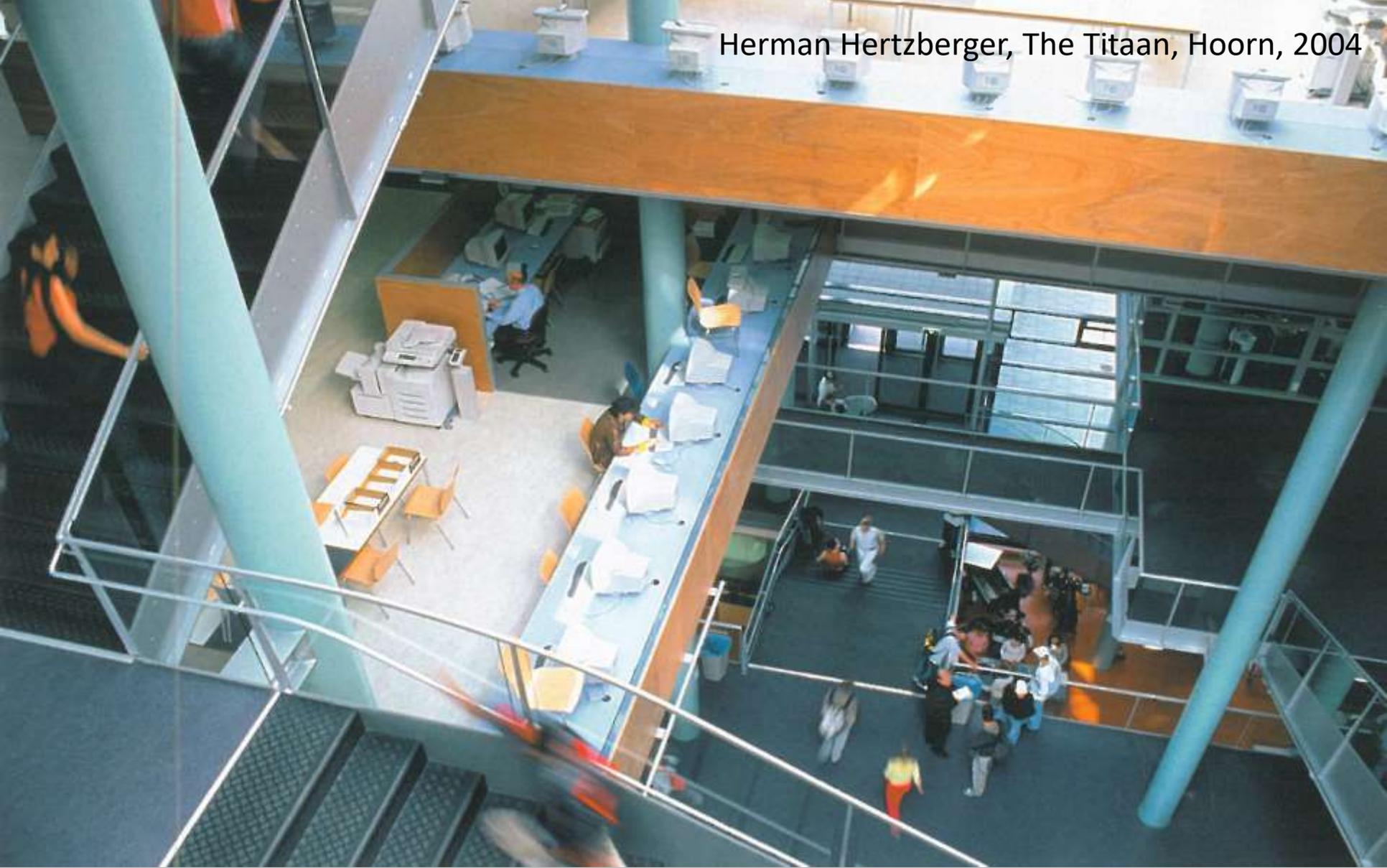
- Flexibilität
- Inklusion
- Core
- Cluster
- Vernetzung



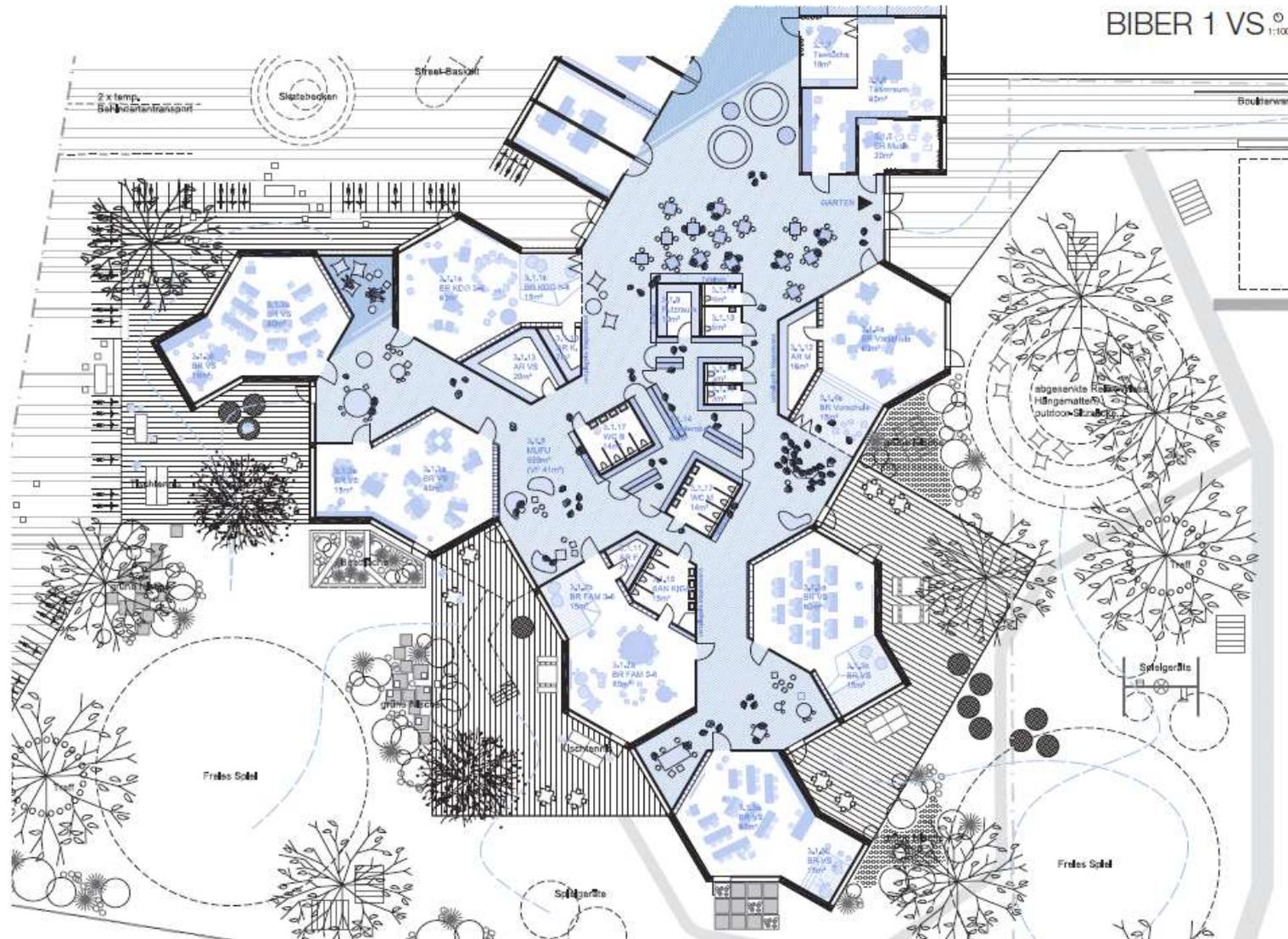
Flexibilität: Die Möglichkeit, sich für unterschiedliche Lernarrangements zu entscheiden



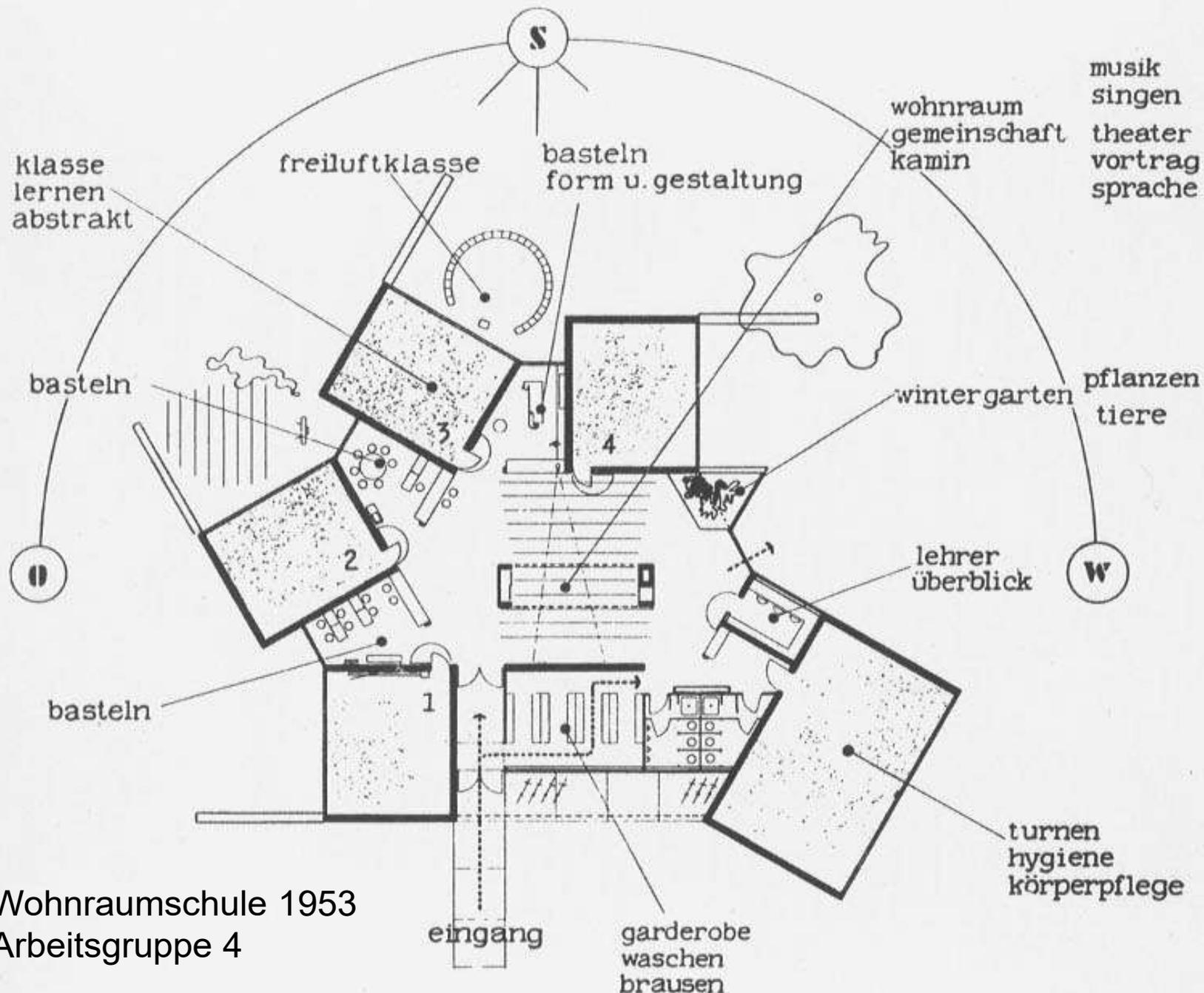
Inklusion: Die heterogene Gruppe als neuer Standard.



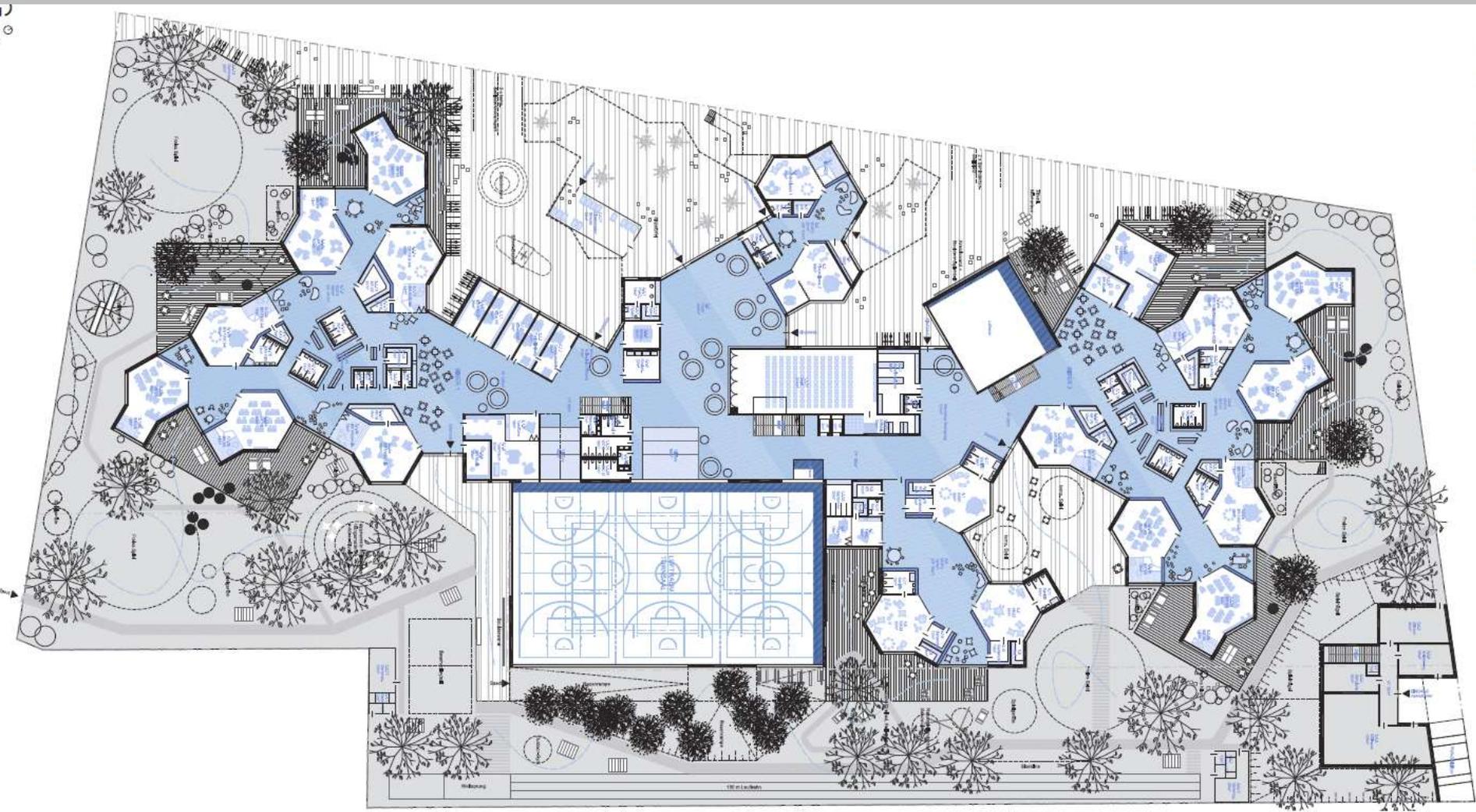
Core: Treffpunkt in der Mitte



Cluster: Ein System von Mitten



Wohnraumschule 1953
Arbeitsgruppe 4



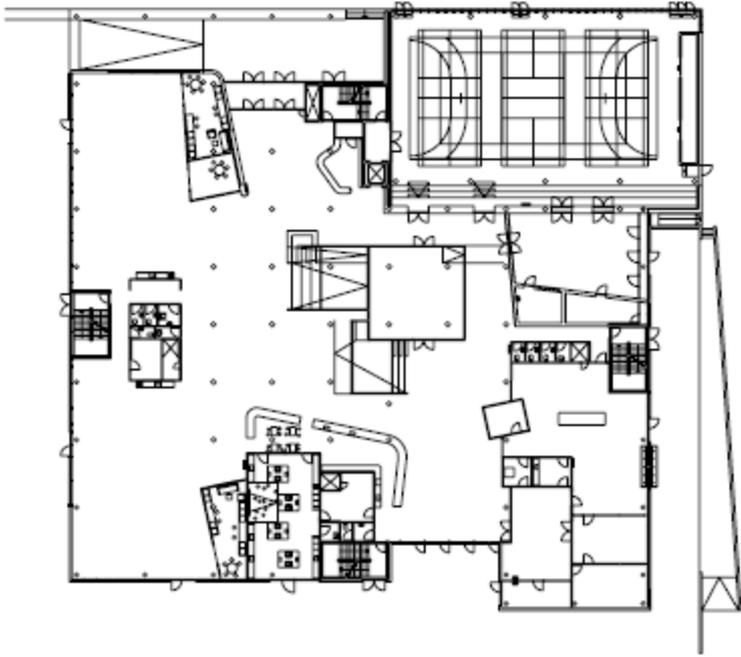


Vernetzung: Die Schule als Teil eines Netzwerks von Lernorten

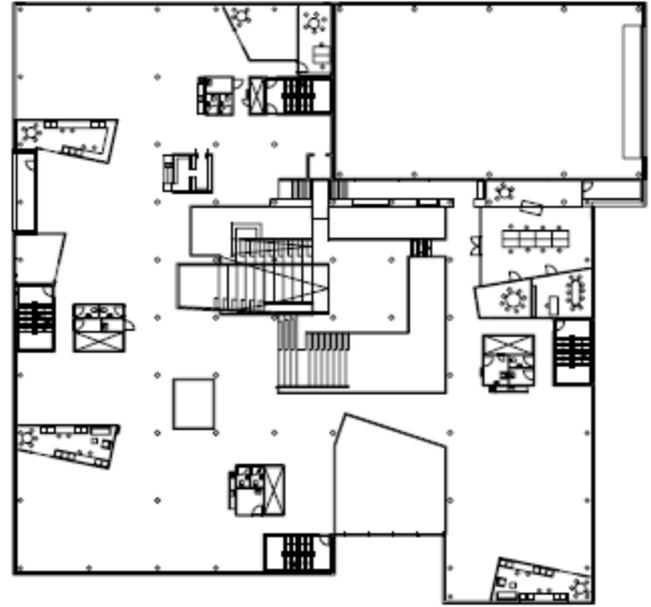


Hellerup Schule, Gesamtschule für 6 – 15 jährige Kinder, Kopenhagen, DK, 2003
Arkitema Architekten

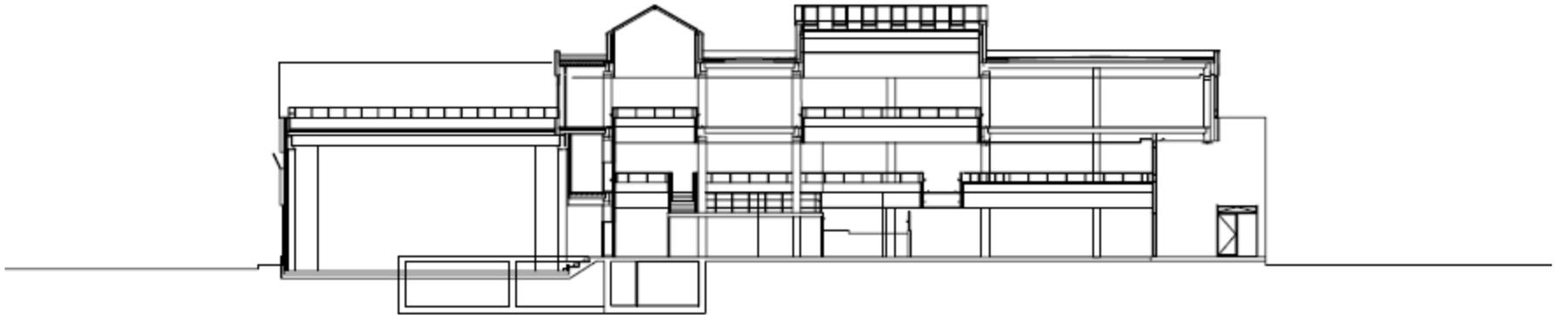




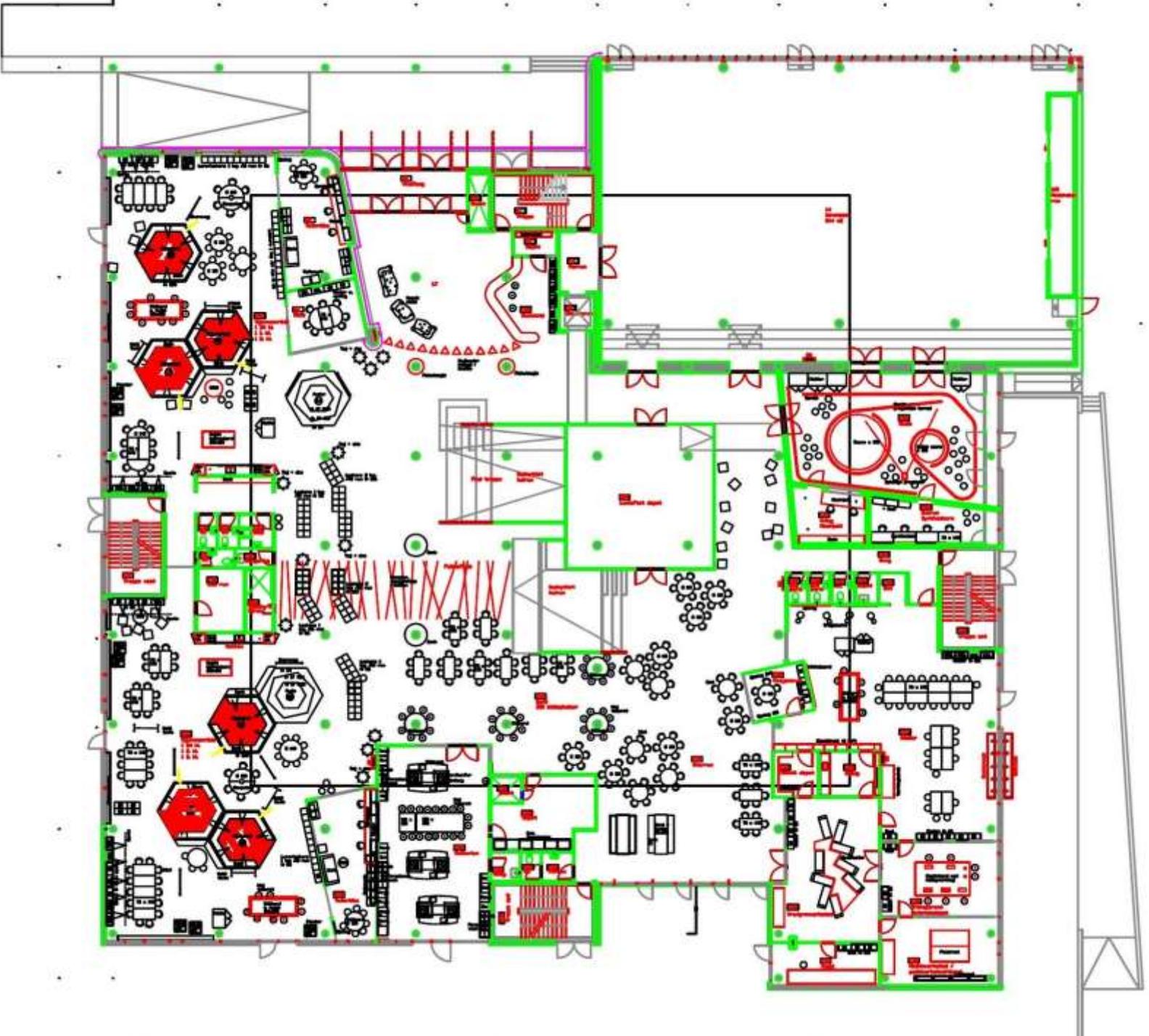
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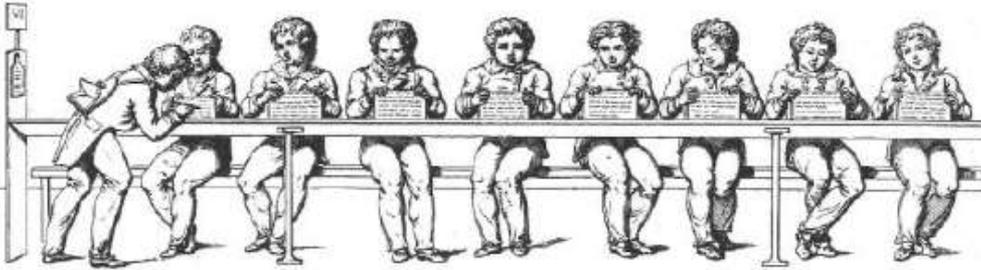


Abb. 14: Unterricht in der Bankreihe

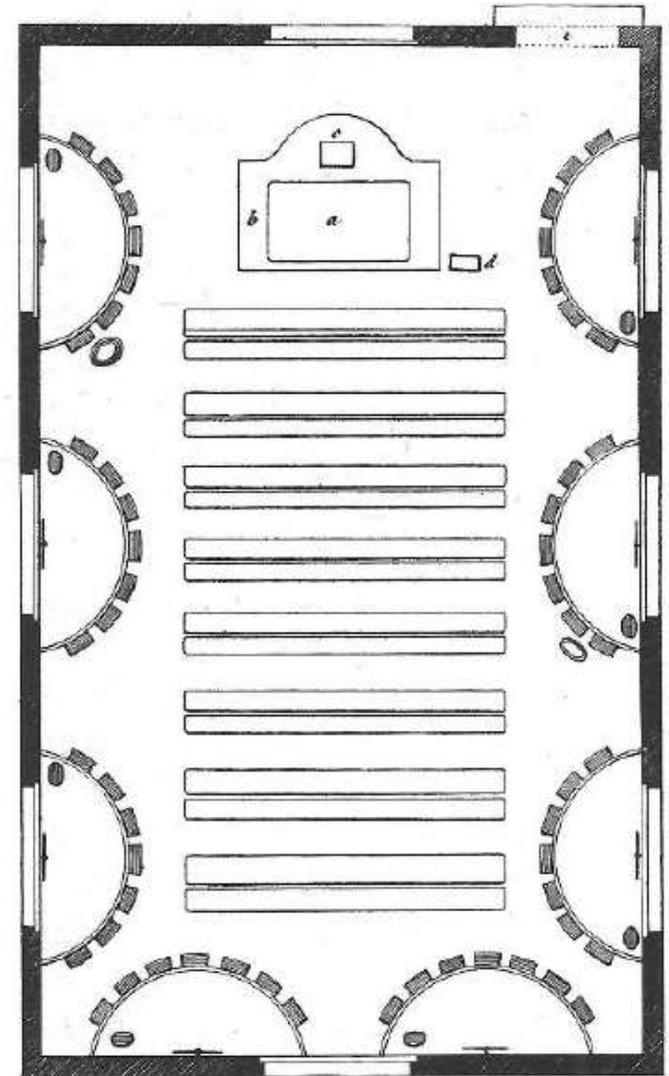


Abb. 16: GR einer Lancaster-Schule

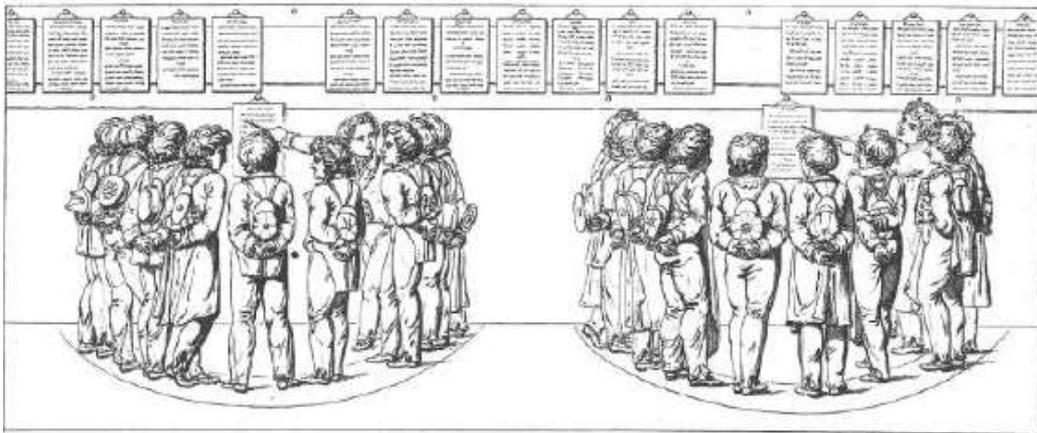
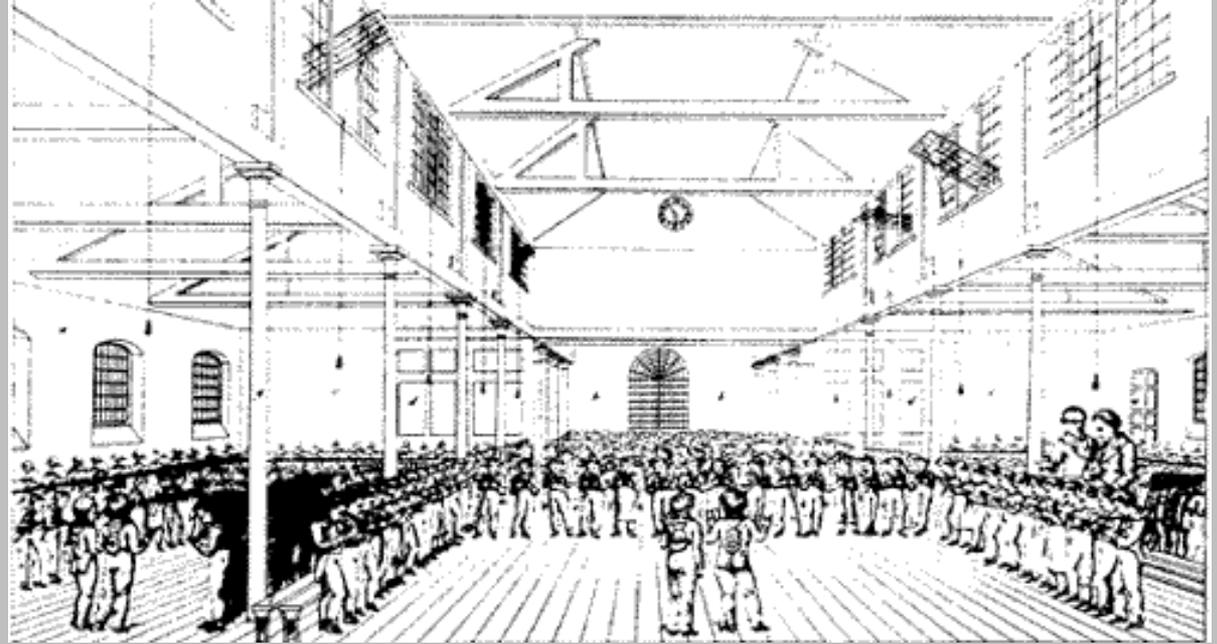
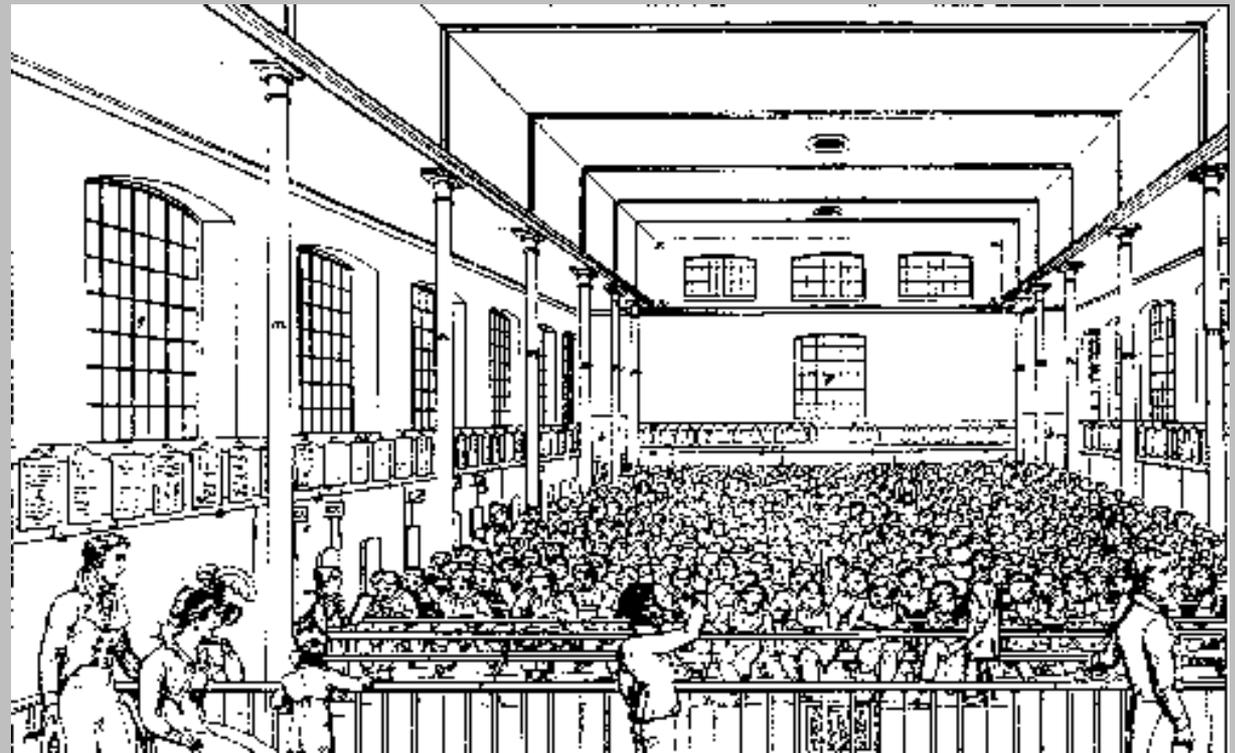


Abb. 15: Unterricht im Halbkreis



Großschulräume,
England, 1818

(nach den Prinzipien
von Bell und Lancaster:
Qui docet, discit)









Instruction



Construction



Socialisation









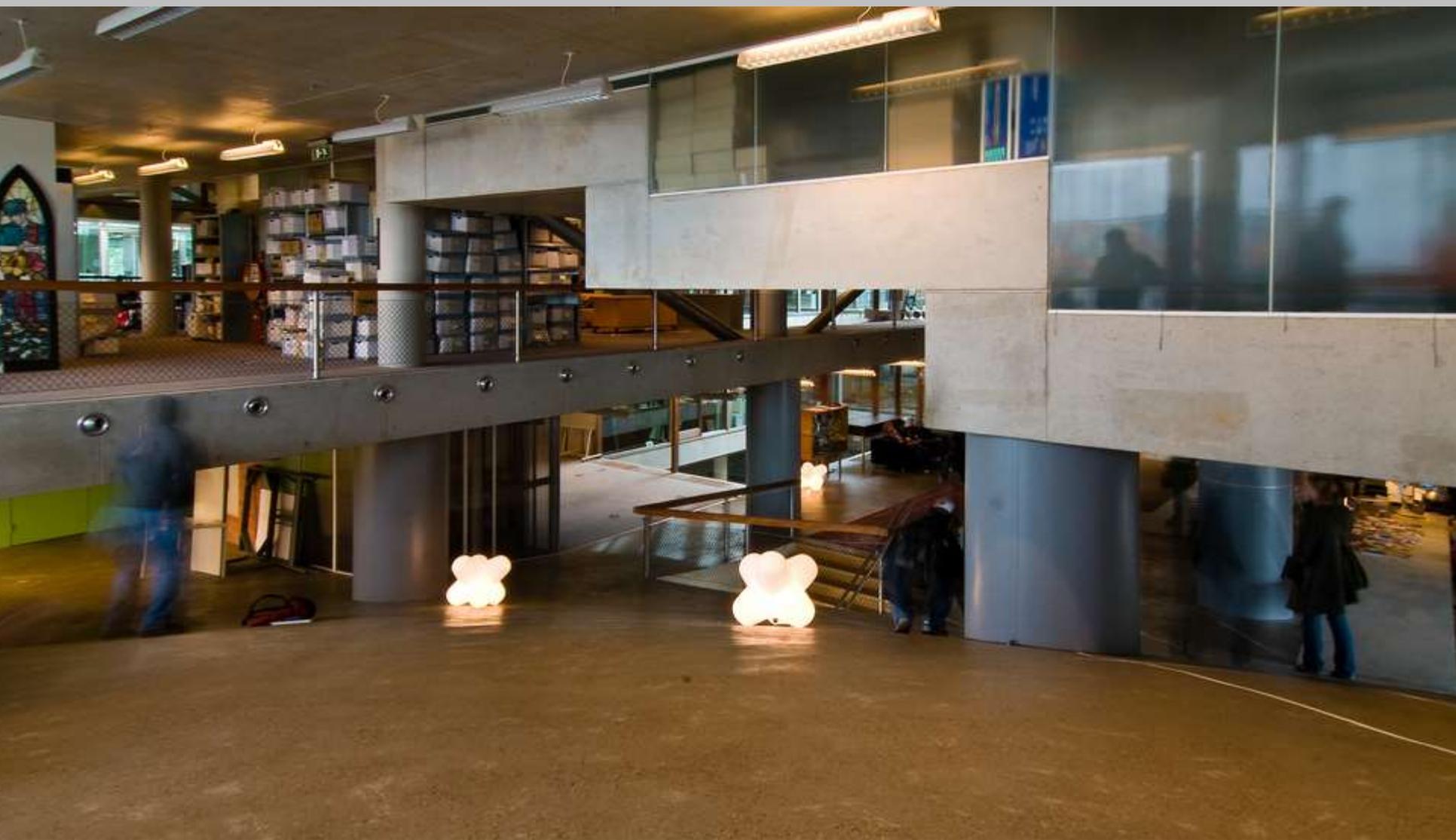
Arkitema

Hellerup Schule,
2003



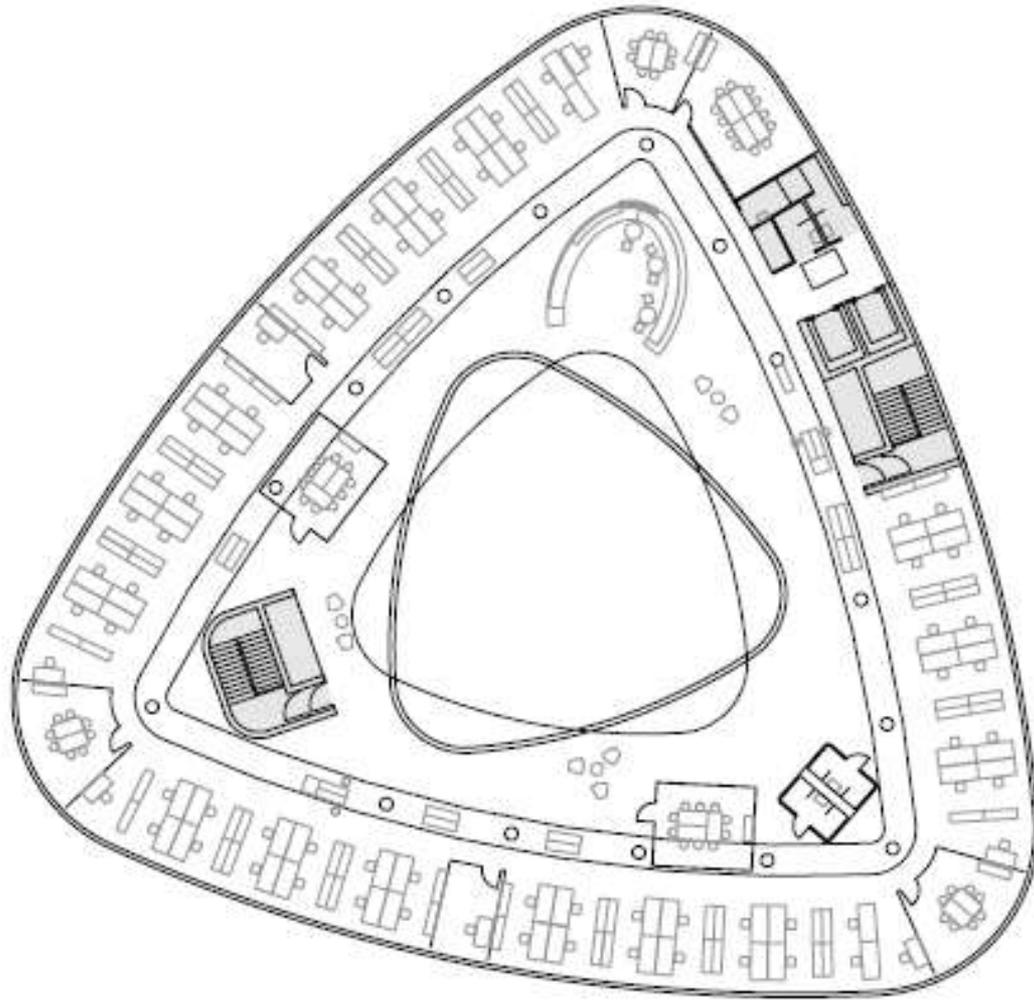
MVRDV

Villa VPRO,
1993 - 96

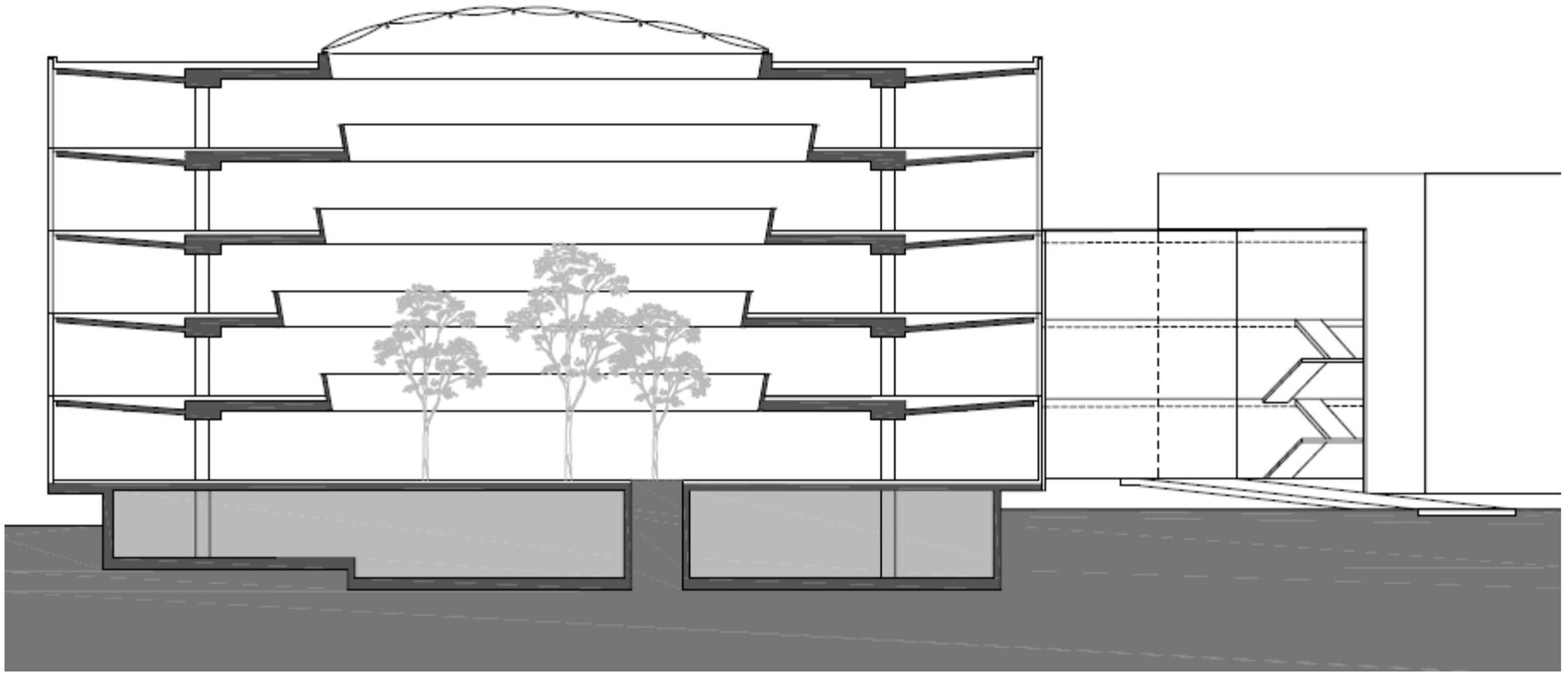




Borealis Innovation Headquarters, Linz
Henke und Schrieck, 2009



4.0G
M 1:33 0 1 5







Thorsten's Communication STATUS:

- Done work
- Urgent status work
- Left job





Ordrup Schule, Sanierung und Erweiterung, Kopenhagen, DK, 2003
CEBRA Architekten, Bosch & Fjord







Campus Sonnenwendviertel, Wien
PPAG architects ZT GmbH, 2014

Image: Hertha Hurnaus

MASTERPLAN - HAUPTBAHNHOF WIEN

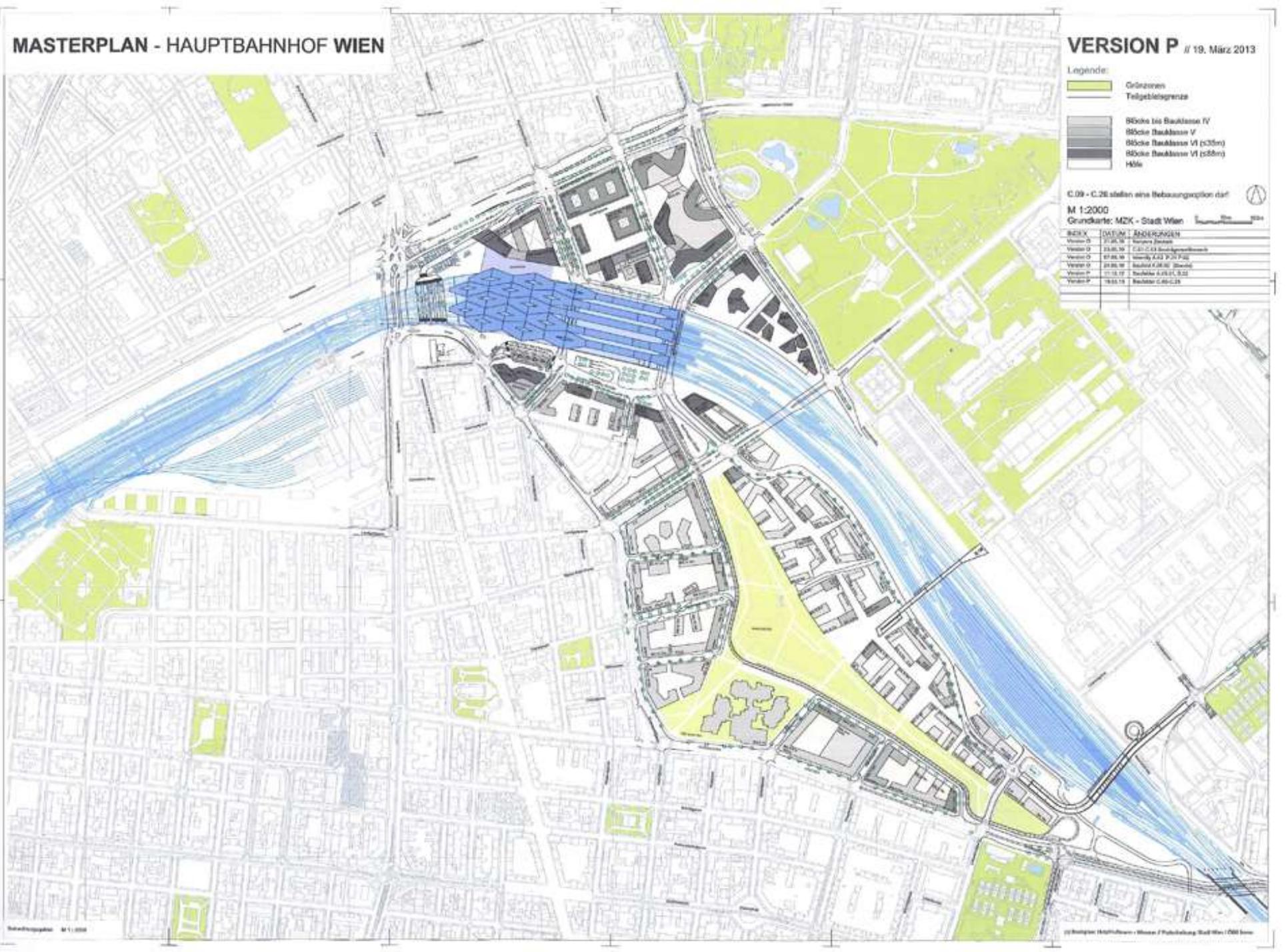
VERSION P // 19. März 2013

Legende:
 Grünzonen
 Teilgebietsgrenze

Blöcke Bauklasse IV
 Blöcke Bauklasse V
 Blöcke Bauklasse VI (≤35m)
 Blöcke Bauklasse VI (≤55m)
 Höhe

C.09 - C.26 stellen eine Bebauungsoption dar
 M 1:2000
 Grundkarte: MZK - Stadt Wien

BZL N	DATUM	ÄNDERUNGEN
Version 0	17.05.09	Erstentwurf
Version 0	23.05.09	Ein- und Zweigeschossig
Version 0	07.06.09	Wiedertrag 9,20 Pkg
Version 0	23.06.09	Rechtliche Einträge
Version P	17.03.13	Rechtliche Einträge, B.22
Version P	19.03.13	Rechtliche Einträge



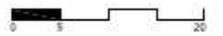
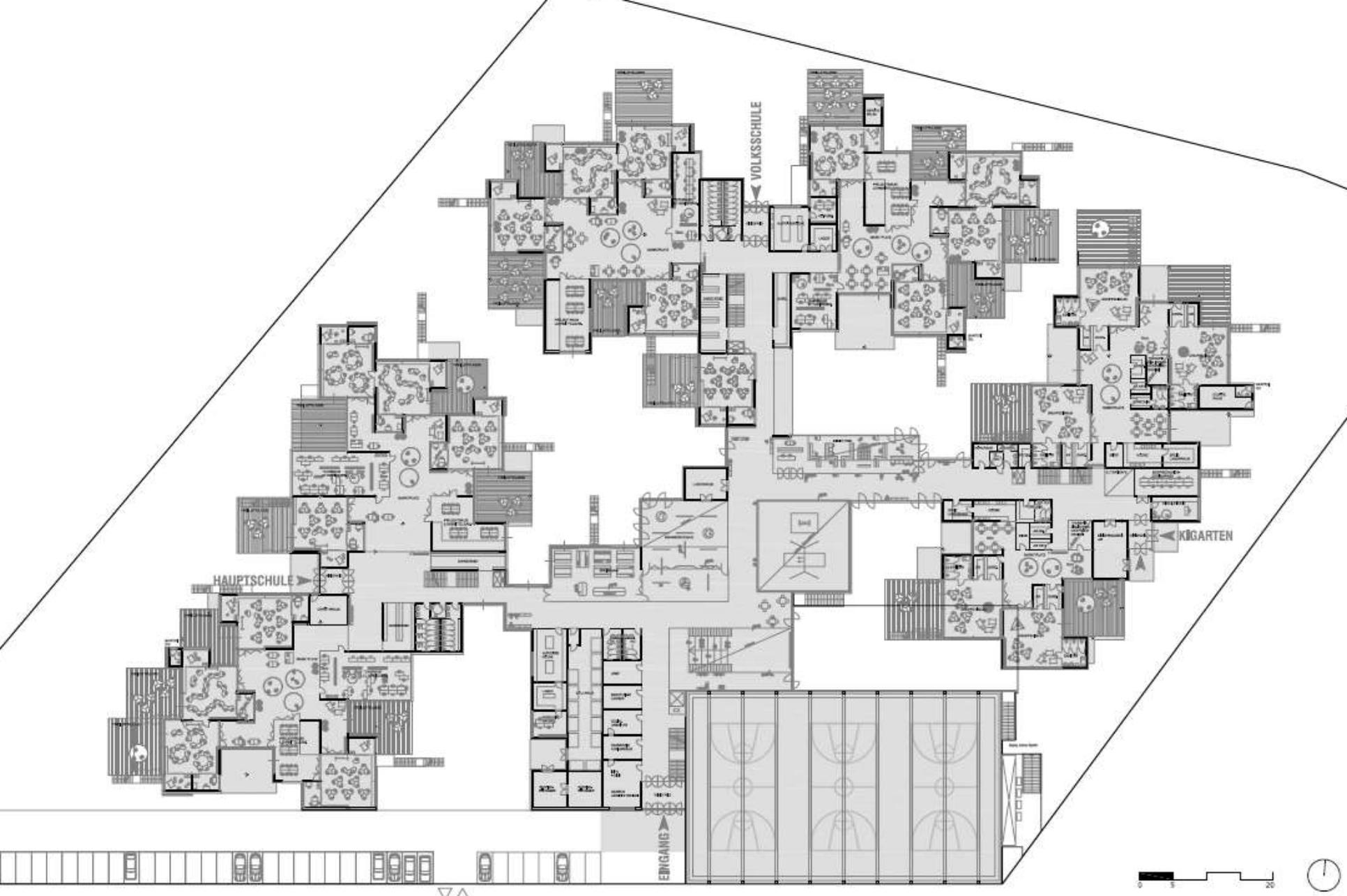




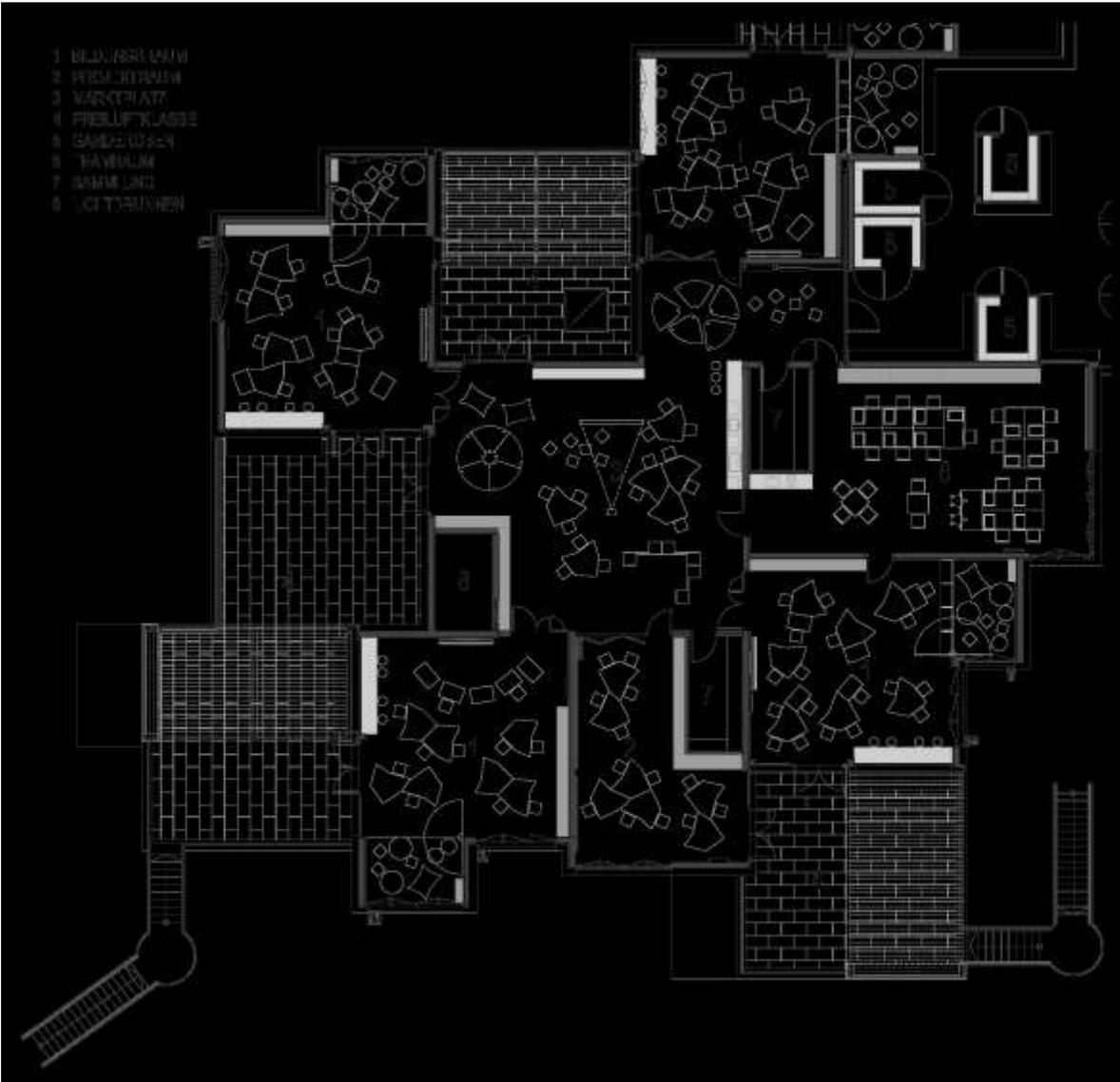


Image: Hertha Hurnaus



Image: Hertha Hurnaus

- 1 BELEHRUNGSAUM
- 2 FREIZEITRAUM
- 3 MARKTPLATZ
- 4 FREILUFTKLASSE
- 5 SAHLHOLZDECKE
- 6 TRAVELAUM
- 7 SAMMELHOF
- 8 LICHTBRUNNEN

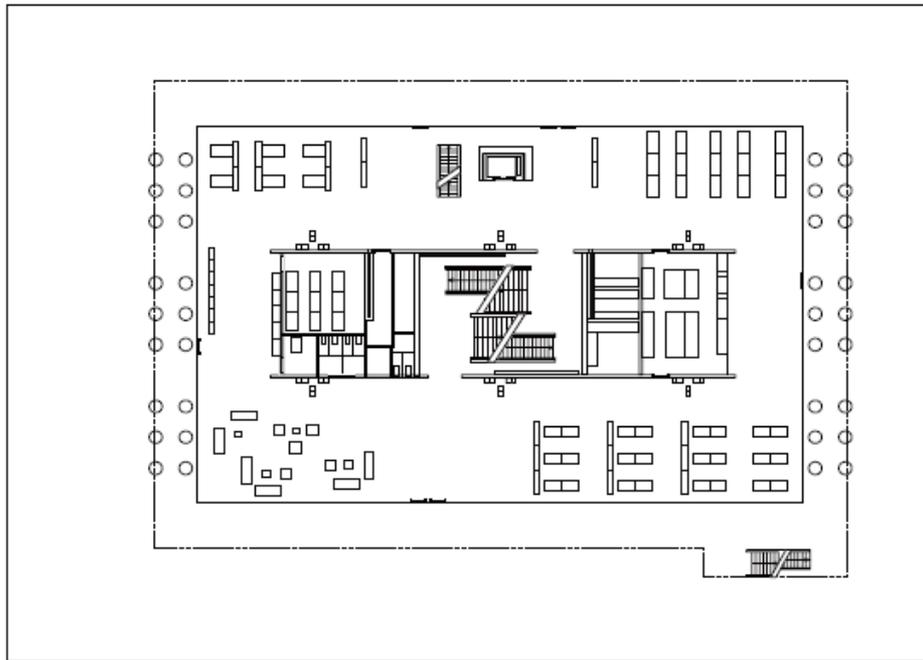




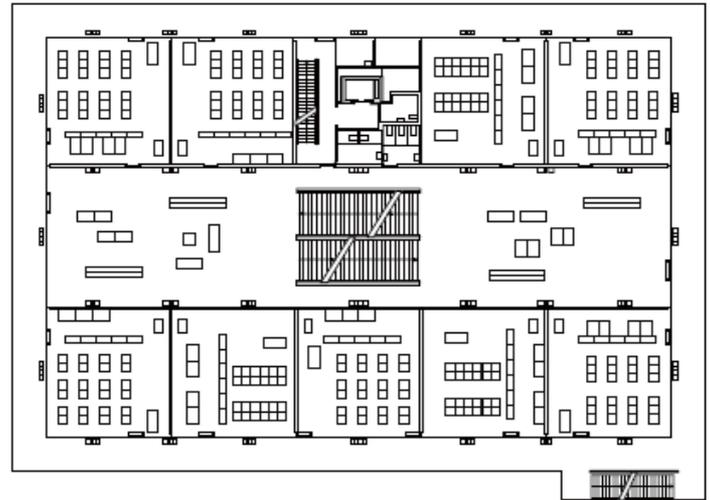
Christian Kerez,
Schulhaus
Leutschenbach,
Zürich, 2002 - 09



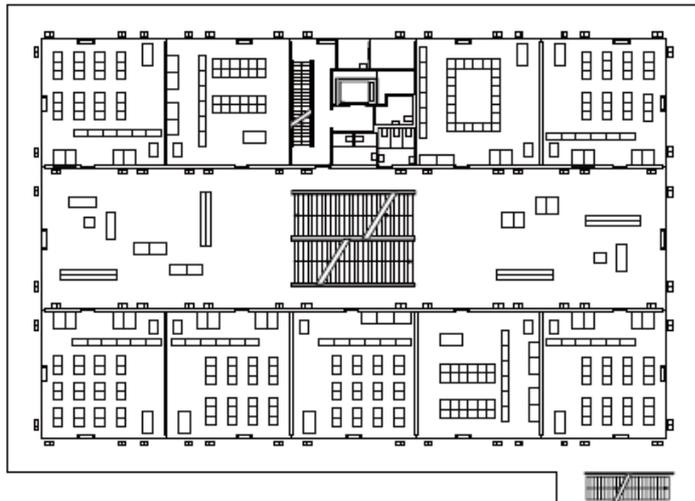




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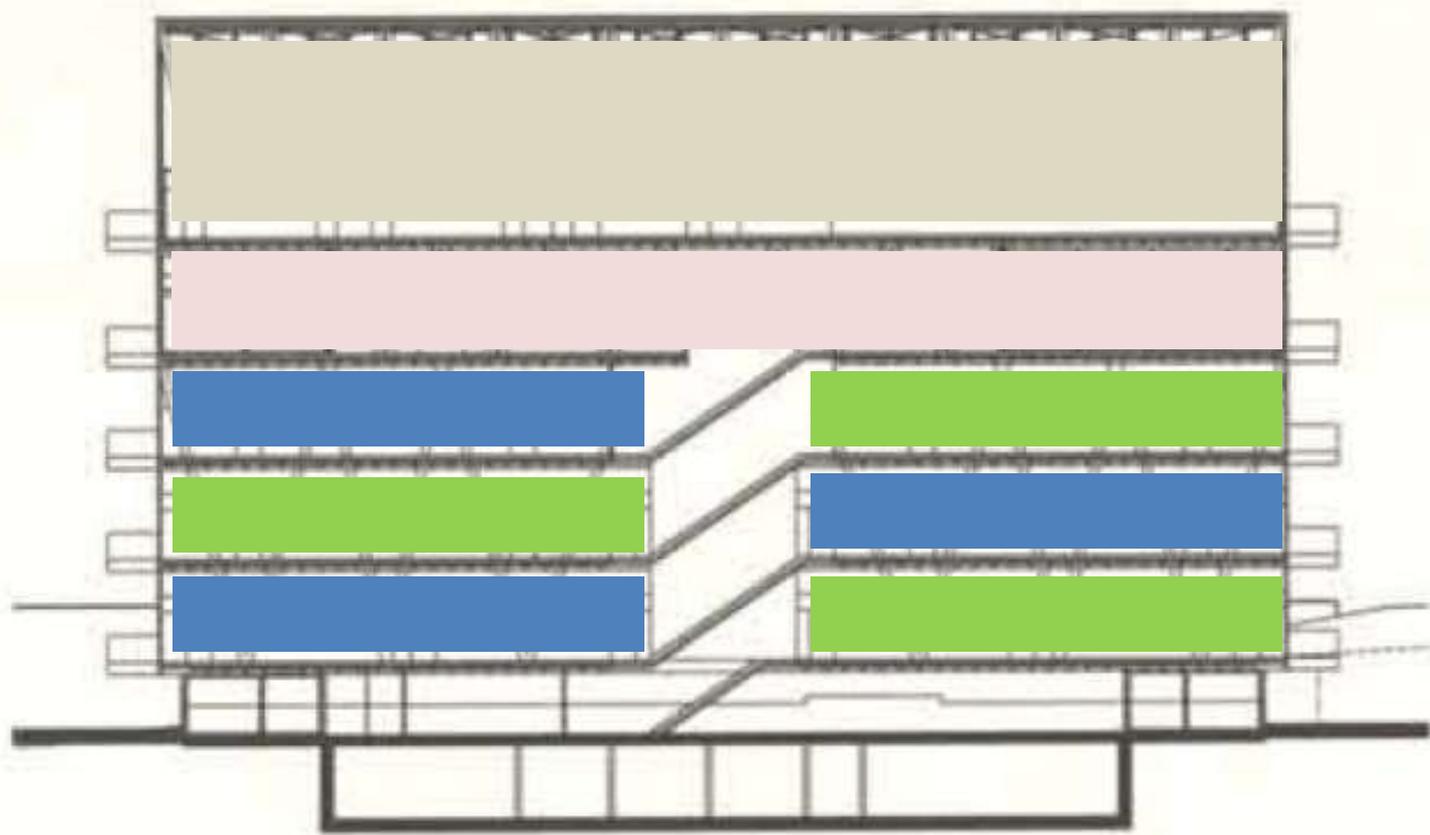
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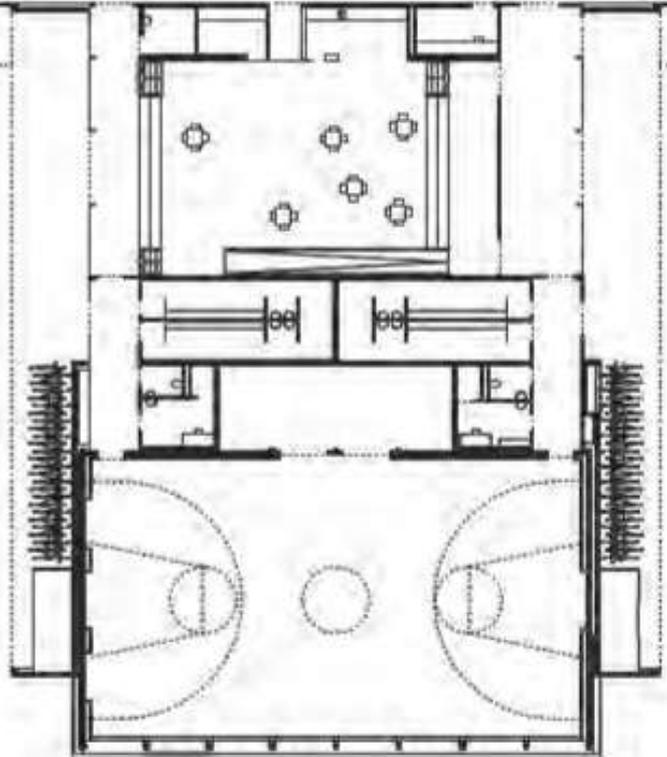
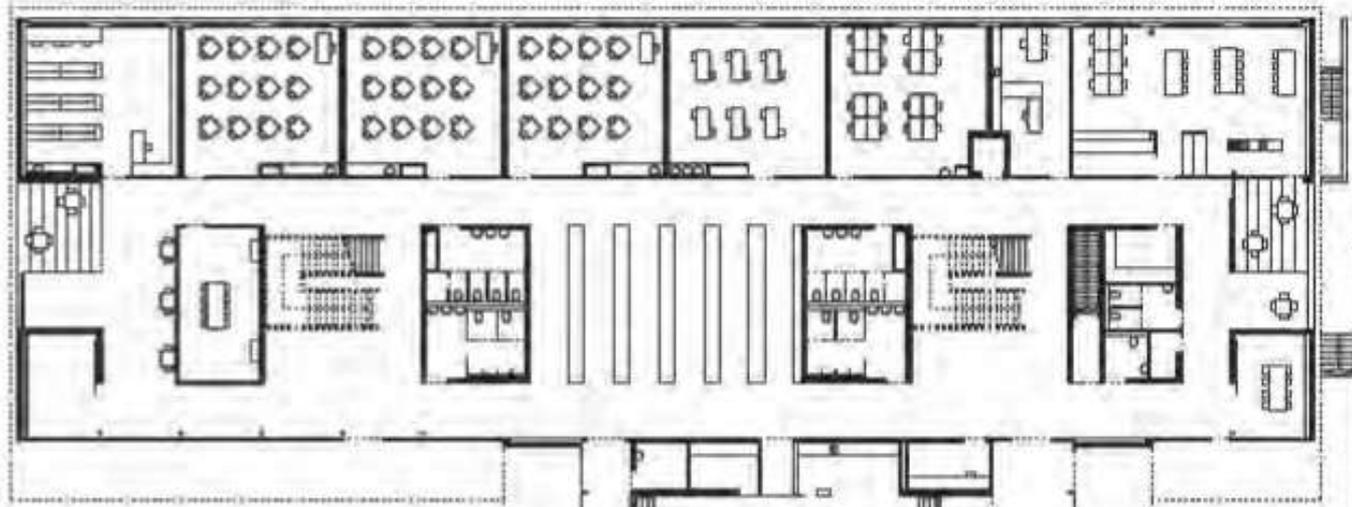


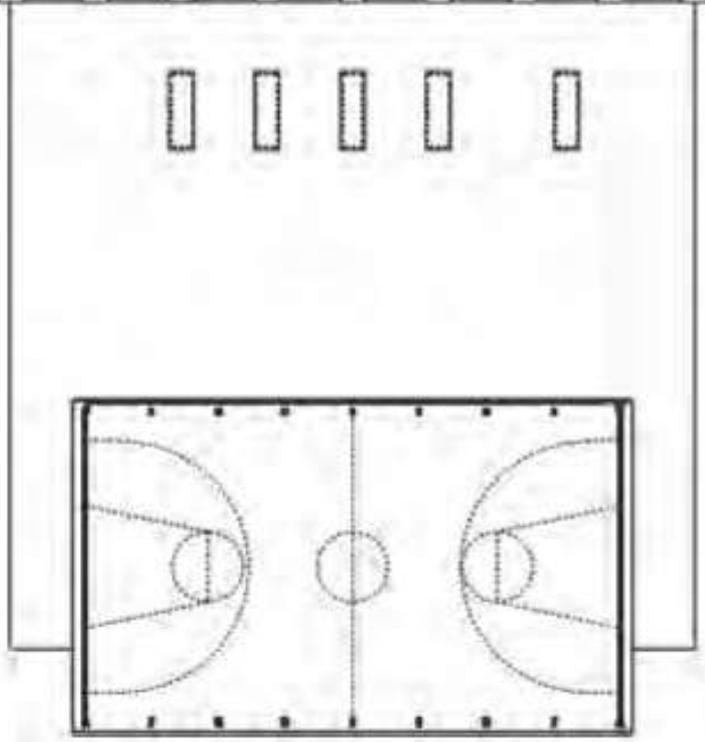
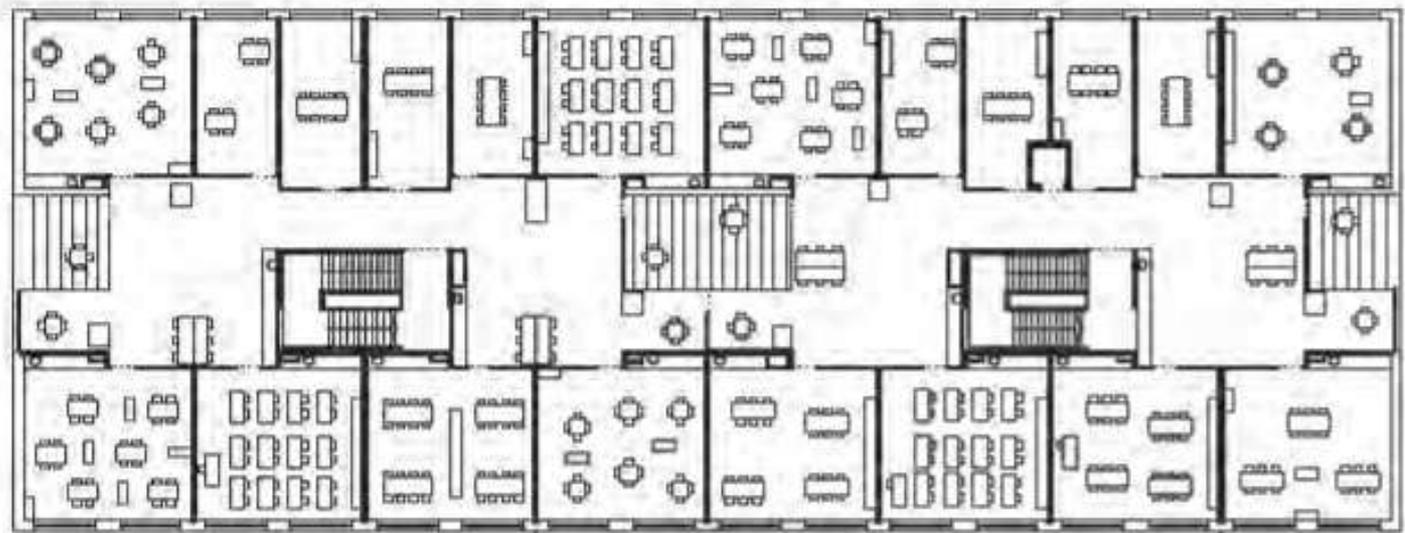
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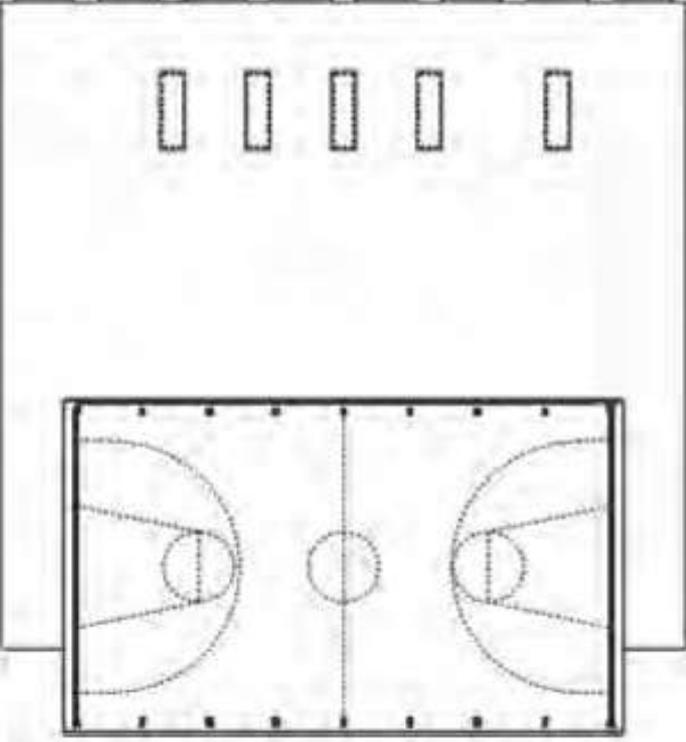
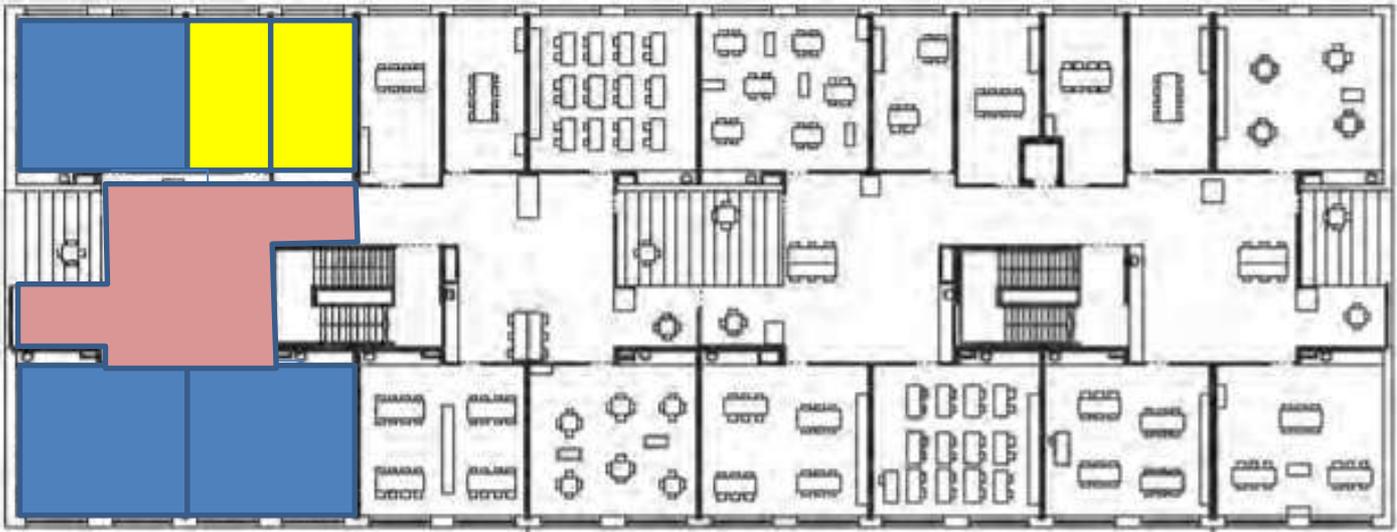




Dietrich Untertrifaller, Volksschule Dornbirn/Edlach
2012 - 2016







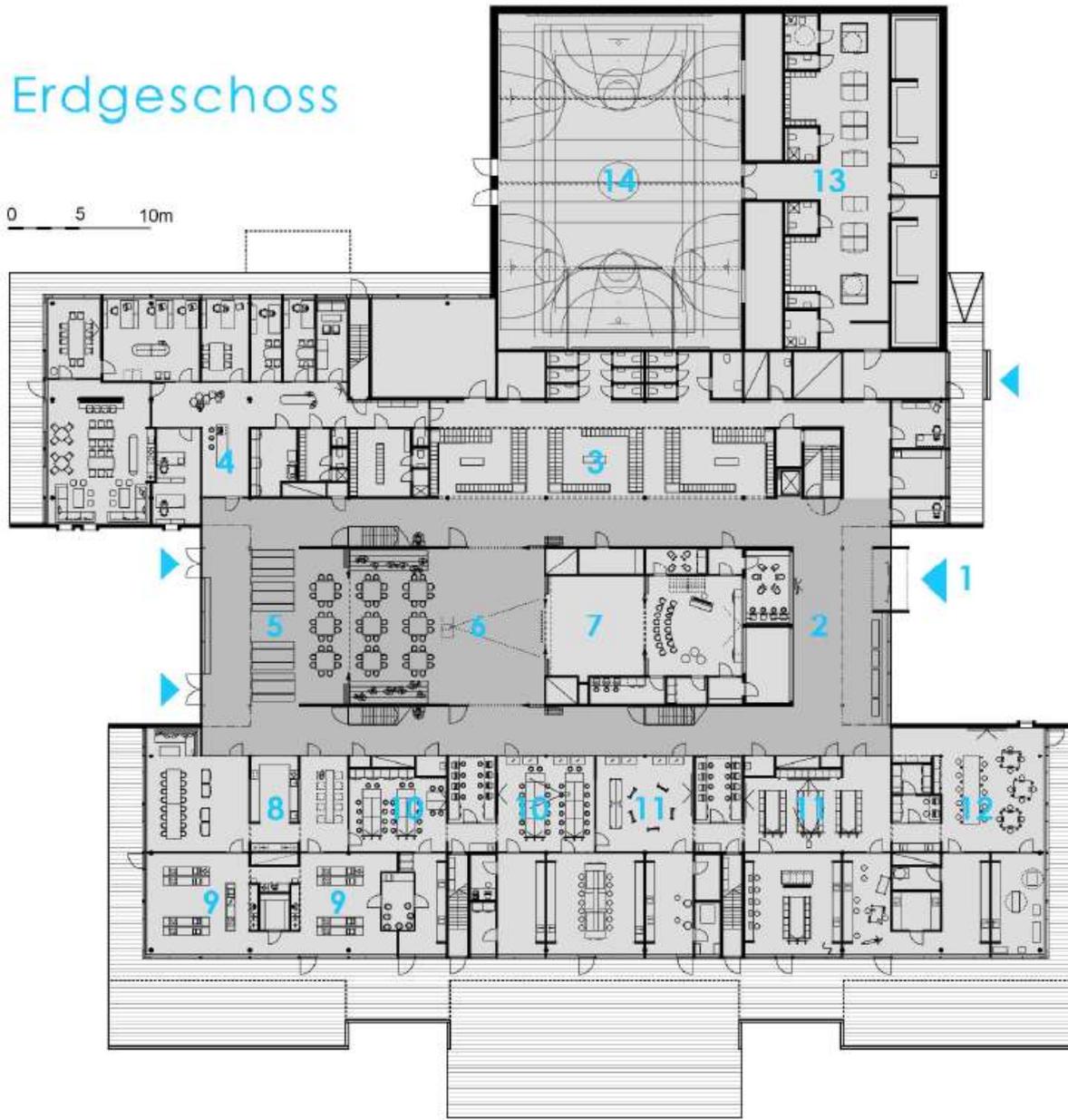




div.A arkitekter, RingstabeKK Schule, Bærum /Oslo , Norwegen, 2005

Erdgeschoss

0 5 10m



1 Haupteingang

2 Foyer

3 Schülergard.

4 Verwaltung

5 Café

6 Campus

7 Bühne / Musik

8 Essensausgabe

9 Küche

10 Natur & Umwelt

11 Design

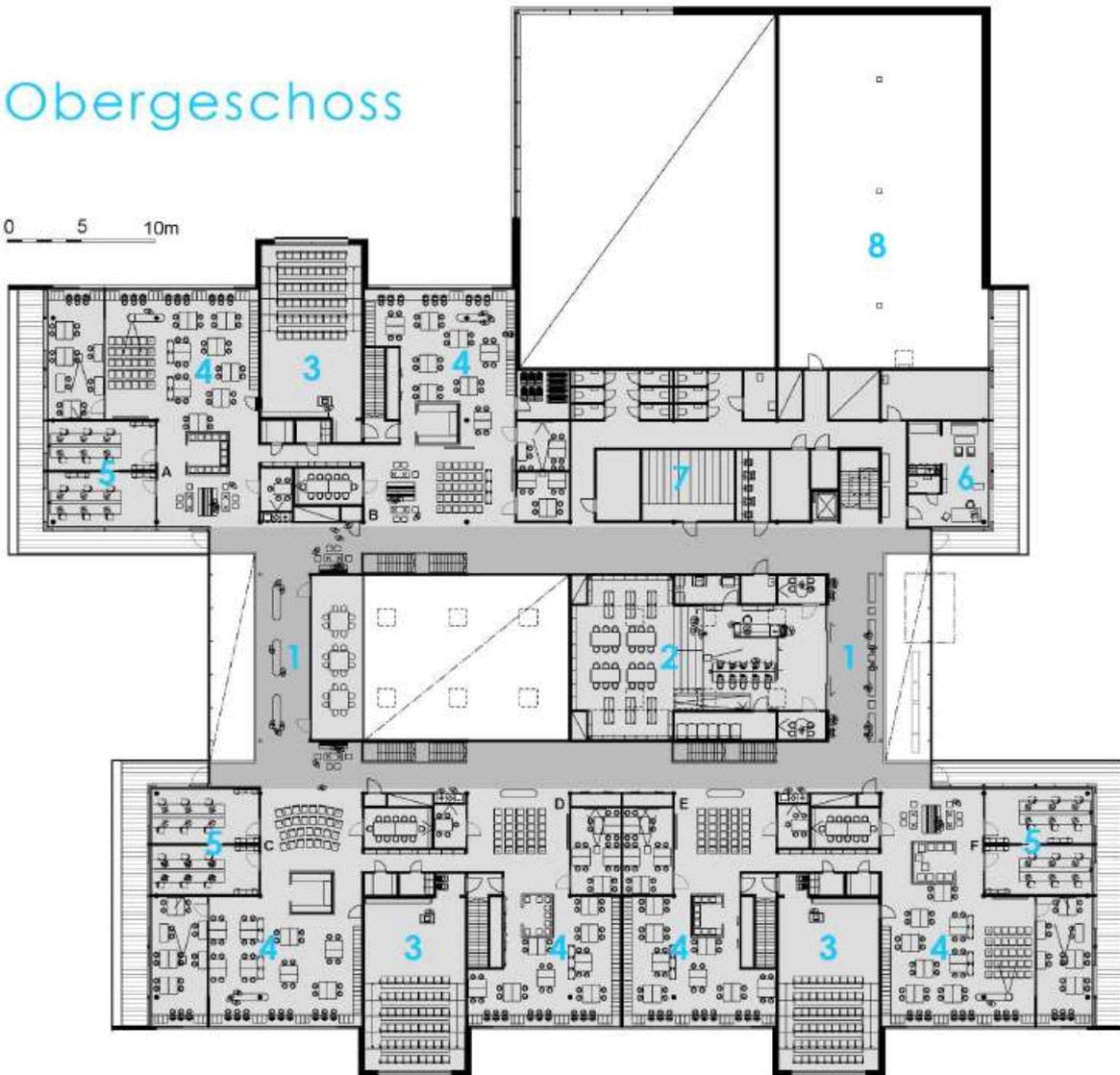
12 Holz / Metall

13 Garderobe Sport

14 Sporthalle

Obergeschoss

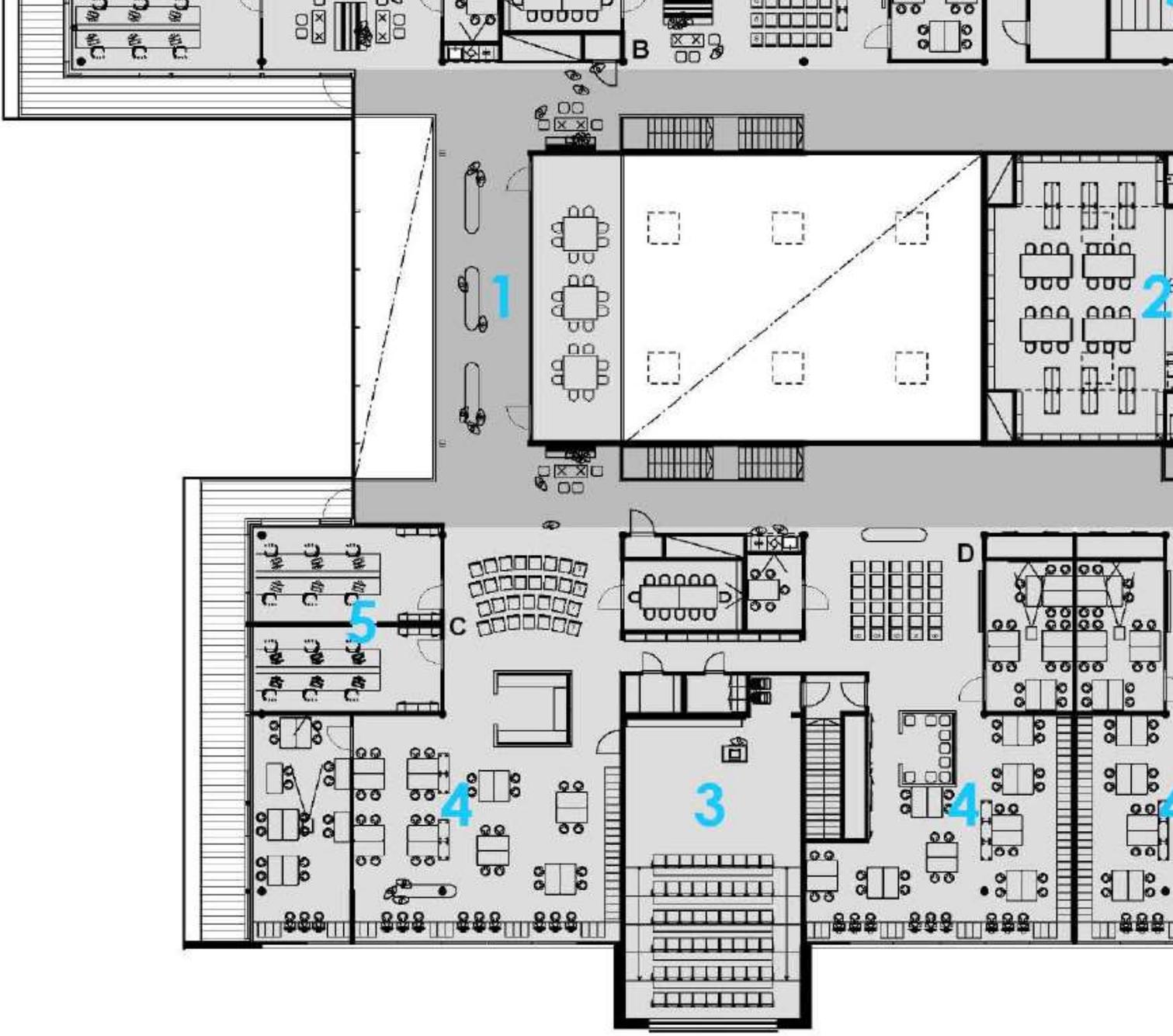
0 5 10m



- 1 Galerie
- 2 Bibliothek
- 3 Auditorium
- 4 Lernlandschaften A bis F

- 5 Lehrerarbeitsplätze
- 6 Krankenzimmer
- 7 Archiv
- 8 Ventilation / Technik





Bibliothek Kopenhagen, 2011
COBE arkitekter
Dan Stubbergaard / Vanessa Miriam Carlow





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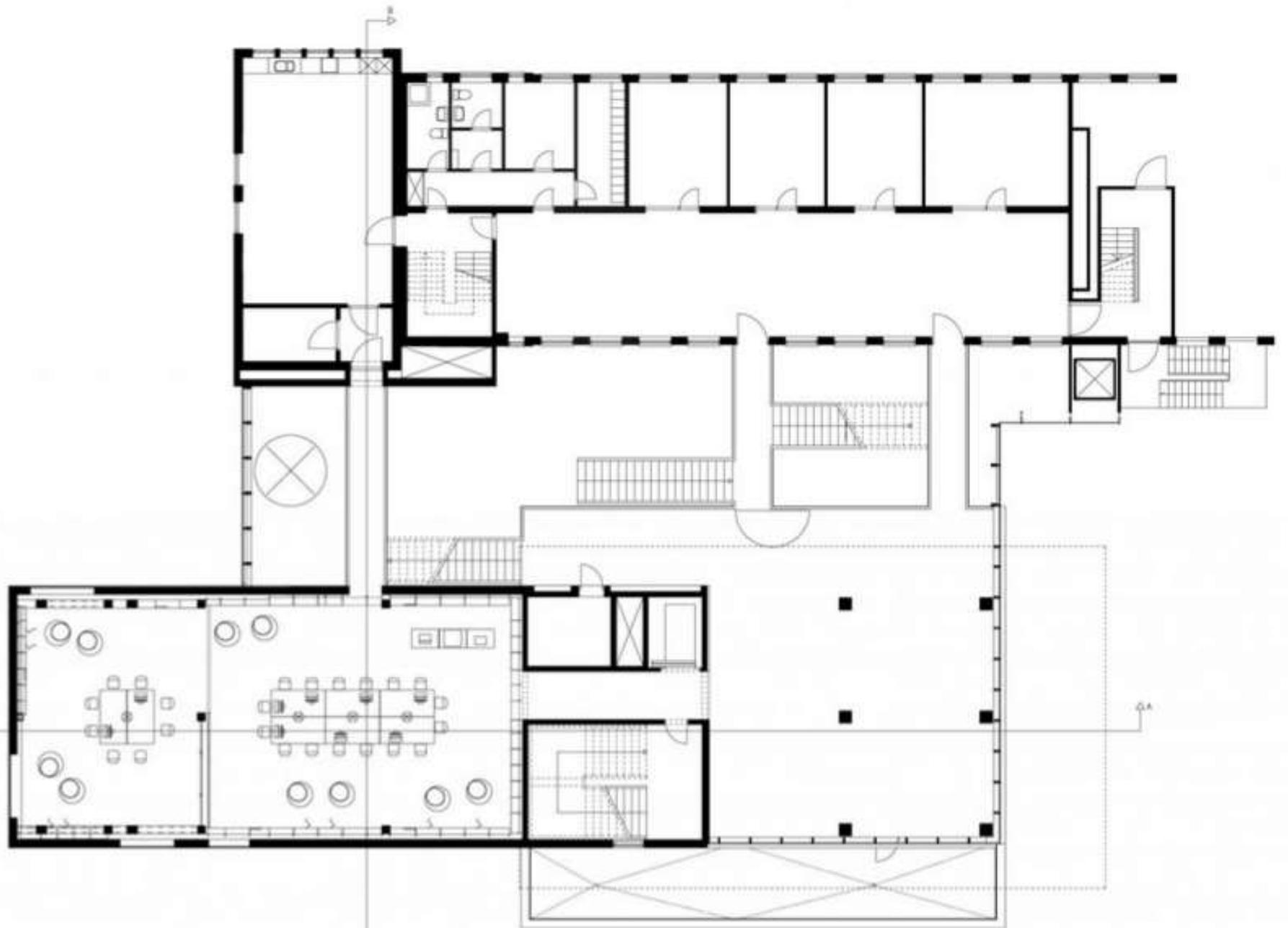
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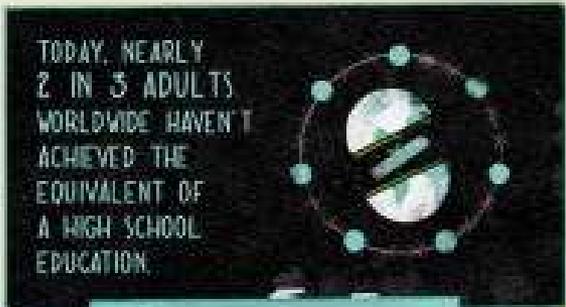
Stoll-Labor



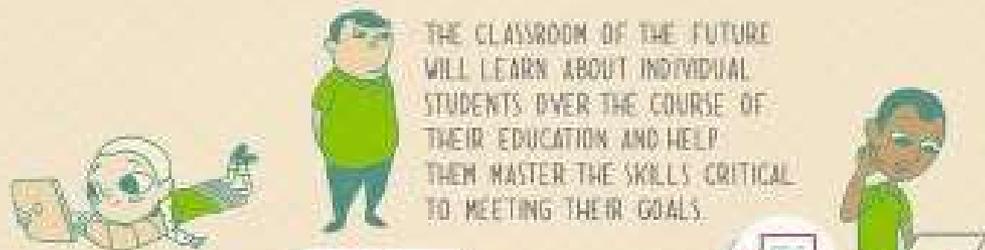


15

In five years, the classroom will learn you.



TODAY, NEARLY 2 IN 3 ADULTS WORLDWIDE HAVEN'T ACHIEVED THE EQUIVALENT OF A HIGH SCHOOL EDUCATION.



THE CLASSROOM OF THE FUTURE WILL LEARN ABOUT INDIVIDUAL STUDENTS OVER THE COURSE OF THEIR EDUCATION AND HELP THEM MASTER THE SKILLS CRITICAL TO MEETING THEIR GOALS.

THE CLASSROOM WILL CREATE A SYLLABUS BASED ON INDIVIDUAL LEARNING STYLE AND PACE NOT ON AN ARBITRARY TEACHING SCHEDULE



THIS SYSTEM WILL LEVEL THE PLAYING FIELD BY ENSURING THAT BARRIERS TO EDUCATION BECOME LESS OF A FACTOR FOR SUCCESS.



A SYSTEM FUELED BY SOPHISTICATED ANALYTICS OVER THE CLOUD WILL HELP TEACHERS IDENTIFY STUDENTS WHO ARE MOST AT RISK, PREDICT THEIR ROADBLOCKS AND THEN SUGGEST MEASURES TO HELP THEM OVERCOME THEIR CHALLENGES

"IN FIVE YEARS, THE CLASSROOM WILL LEARN ABOUT EACH INDIVIDUAL STUDENT AND PROVIDE A TAILORED CURRICULUM FROM KINDERGARTEN THROUGH HIGH SCHOOL AND TOWARD EMPLOYMENT."

DR. KATHARINE FRASE
CTO EDUCATION, IBM



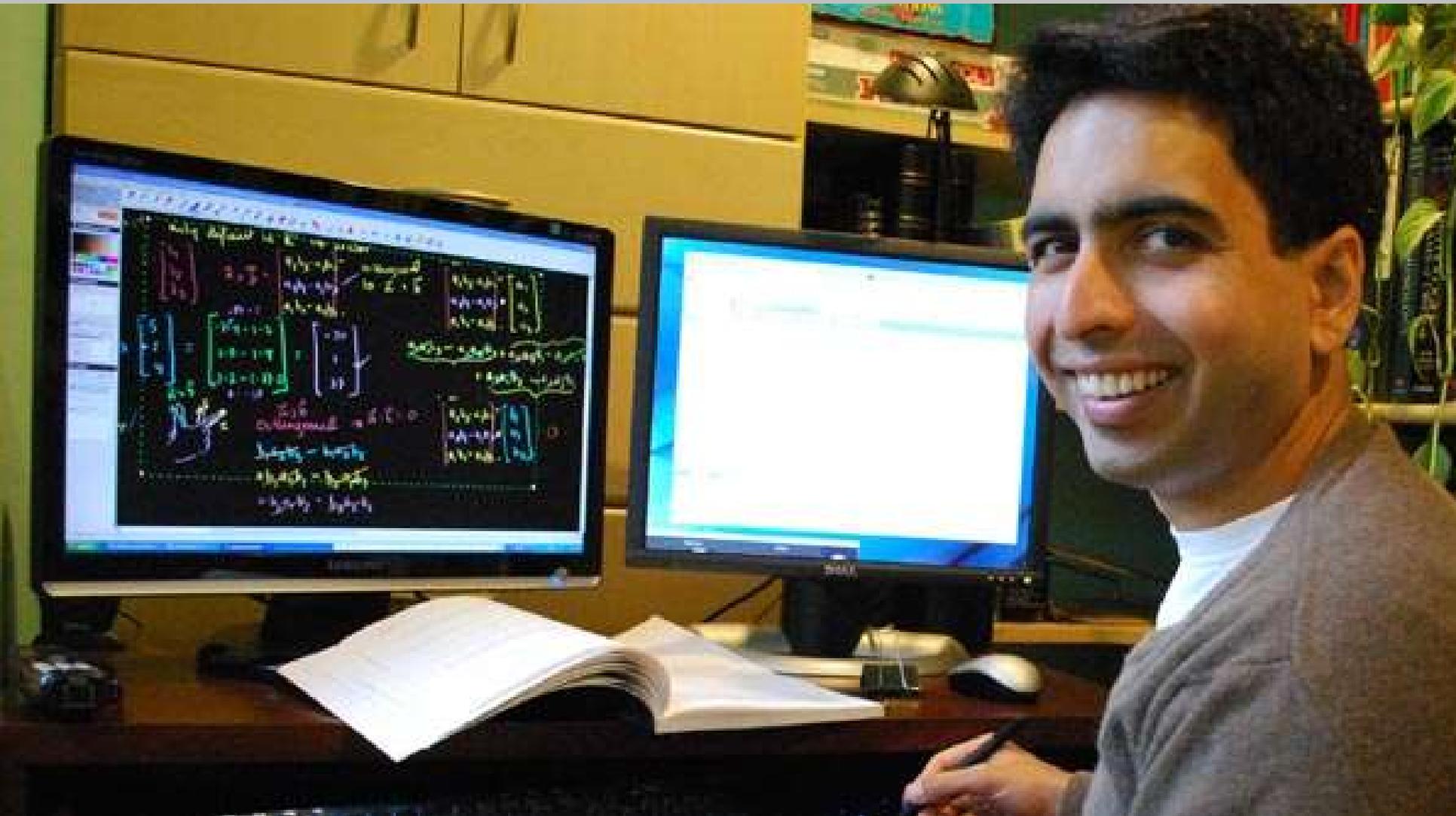
Philips-Automat für die
Darbringung von Unter-
richtsprogrammen,
aus: werk 7/1967



Sprachlabor in Zürich
aus: werk 7/1967







Salman Khan, Khan Academy Founder
„Flipping the Classroom“

You can learn anything.

For free. For everyone. Forever.

Learners, start here

Teachers, start here

Parents, start here

Sugata Mitra
SOLE (Self Organized Learning Environments)
A Hole in the Wall Project









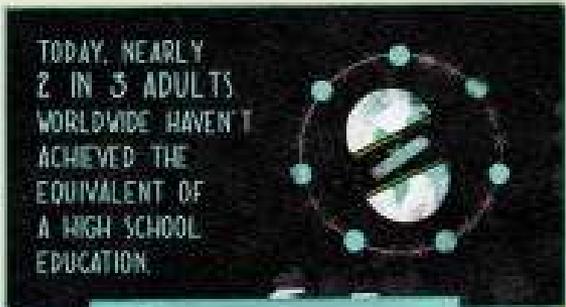




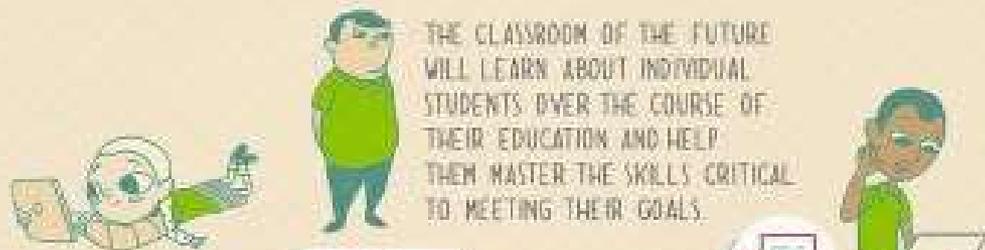


15 YEARS

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DR. KATHARINE FRASE
CTO EDUCATION, IBM





Foto: Hertha Hurnaus

Bundsgymnasium Aspern, Wien, fasch & fuchs architekten, 2017



Image: Hertha Humaus

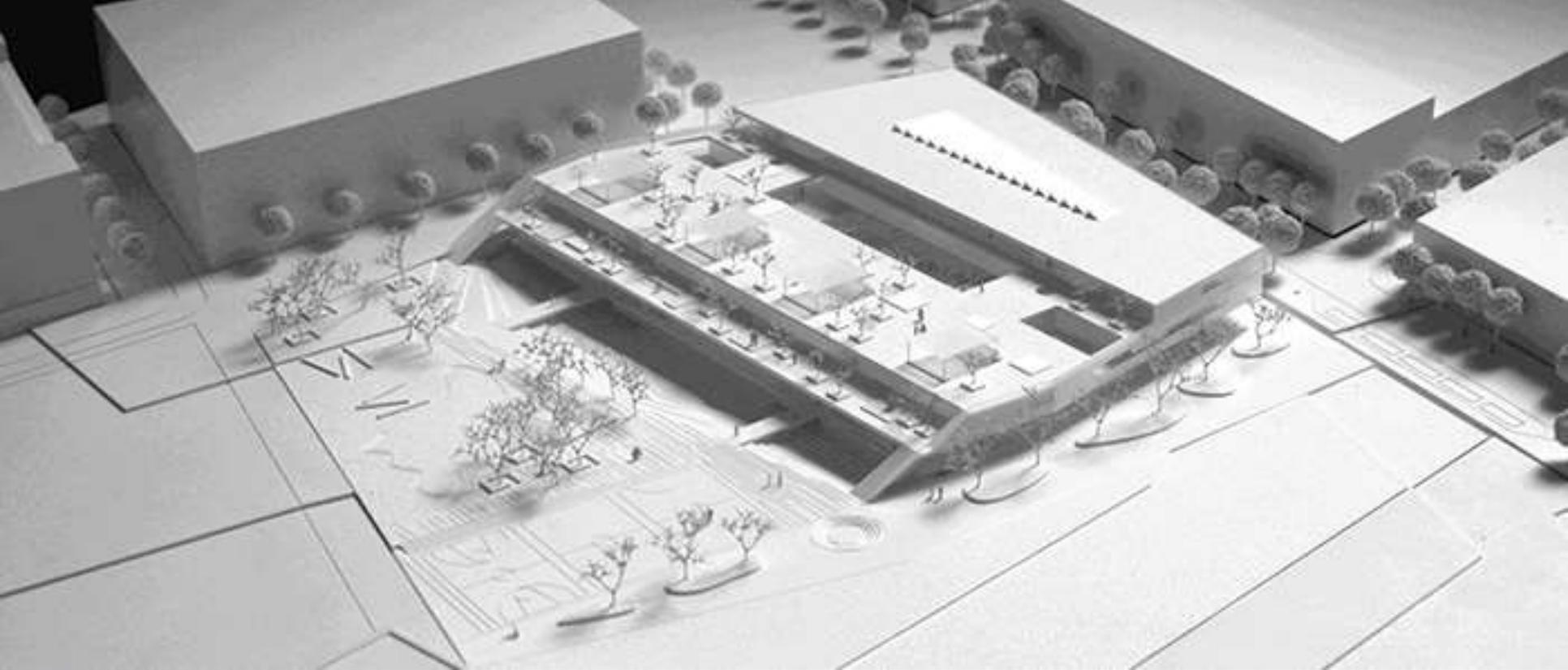




Image: Paul Ott



- 1 aula
- 2 sprachen
- 3 homebases
- 4 terrasse
- 5 freiklasse



- 1 aula
- 2 naturwissenschaften
- 3 cluster
- 4 verwaltung
- 5 lehrer_innen_bereich
- 6 terrassen





- 1 indoorcampus
- 2 geisteswissenschaften
- 3 edv
- 4 speisesaal und cafeteria
- 5 bibliothek
- 6 mehrzweckraum
- 7 betriebswirtschaftliches zentrum
- 8 musik
- 9 zeichnen | bildnerische erziehung
- 10 bewegungsraum
- 11 schulwäldchen
- 12 sportplatz
- 13 schulgarten
- 14 beachvolleyballplatz
- 15 öffentlicher durchgang
- 16 nebengebäude



