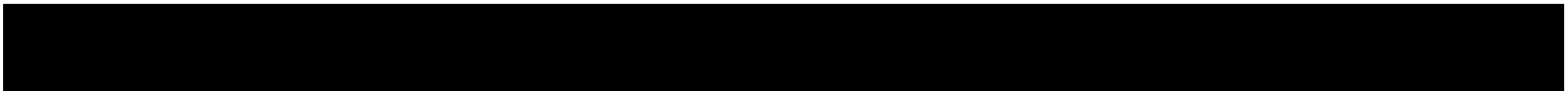


Forum Zukunft 10.11.2016  
Cluster Energie , Innovation Bauen

# Beitrag der Architektur Nachhaltiges Bauen

H2M Architekten und Stadtplaner GmbH  
Kulmbach , München





**HM**  
Architekten BDA + Stadtplaner GmbH













„ Der Begriff Heimat verweist zumeist auf eine Beziehung zwischen Mensch und Raum... „ Brockhaus



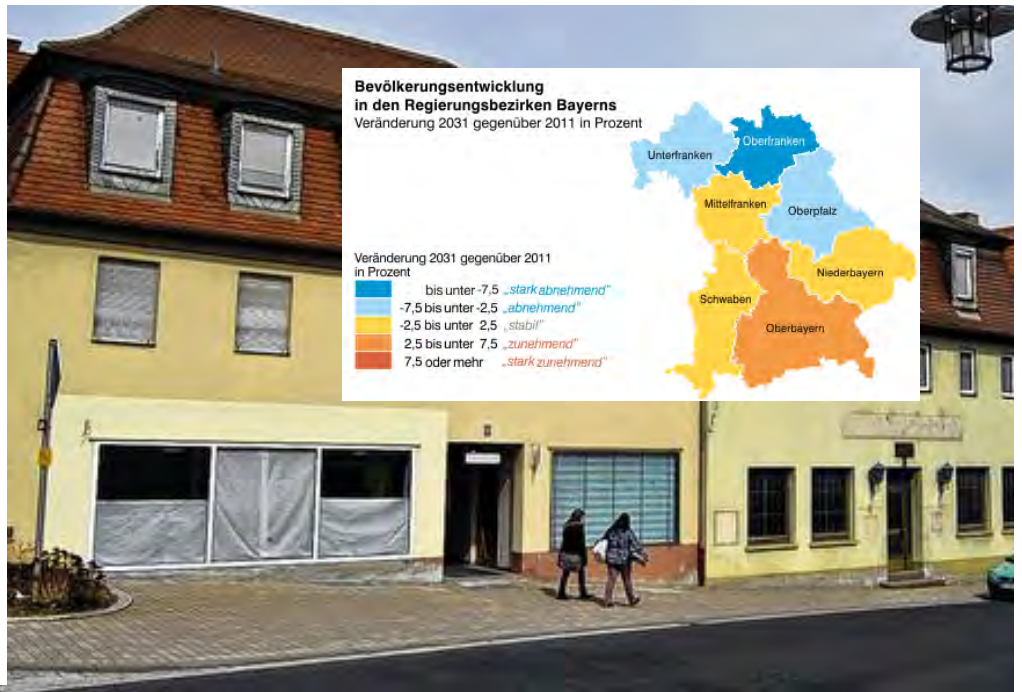




Bauen | Haushalten mit Ressourcen

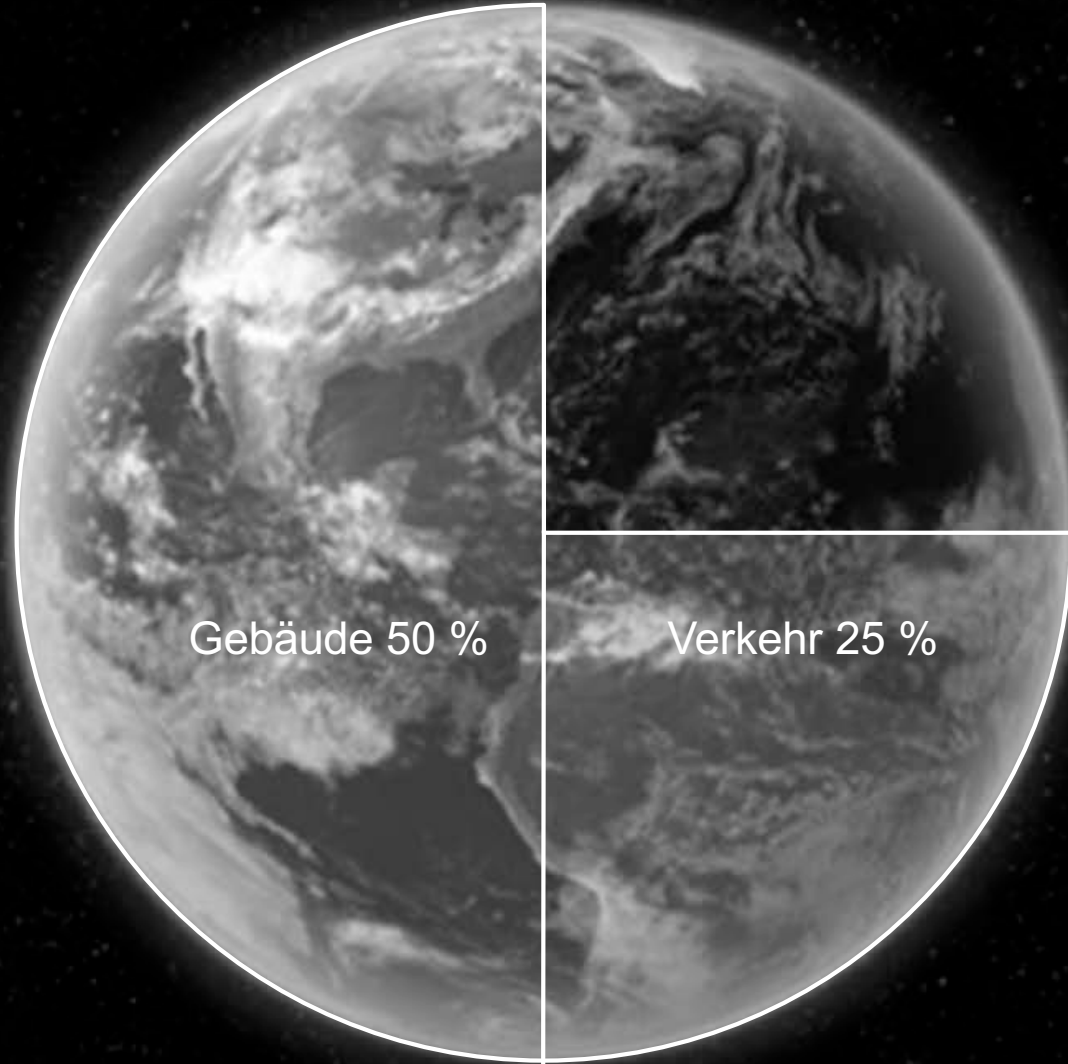


Rohstoff | Energie | Kapital | Mensch

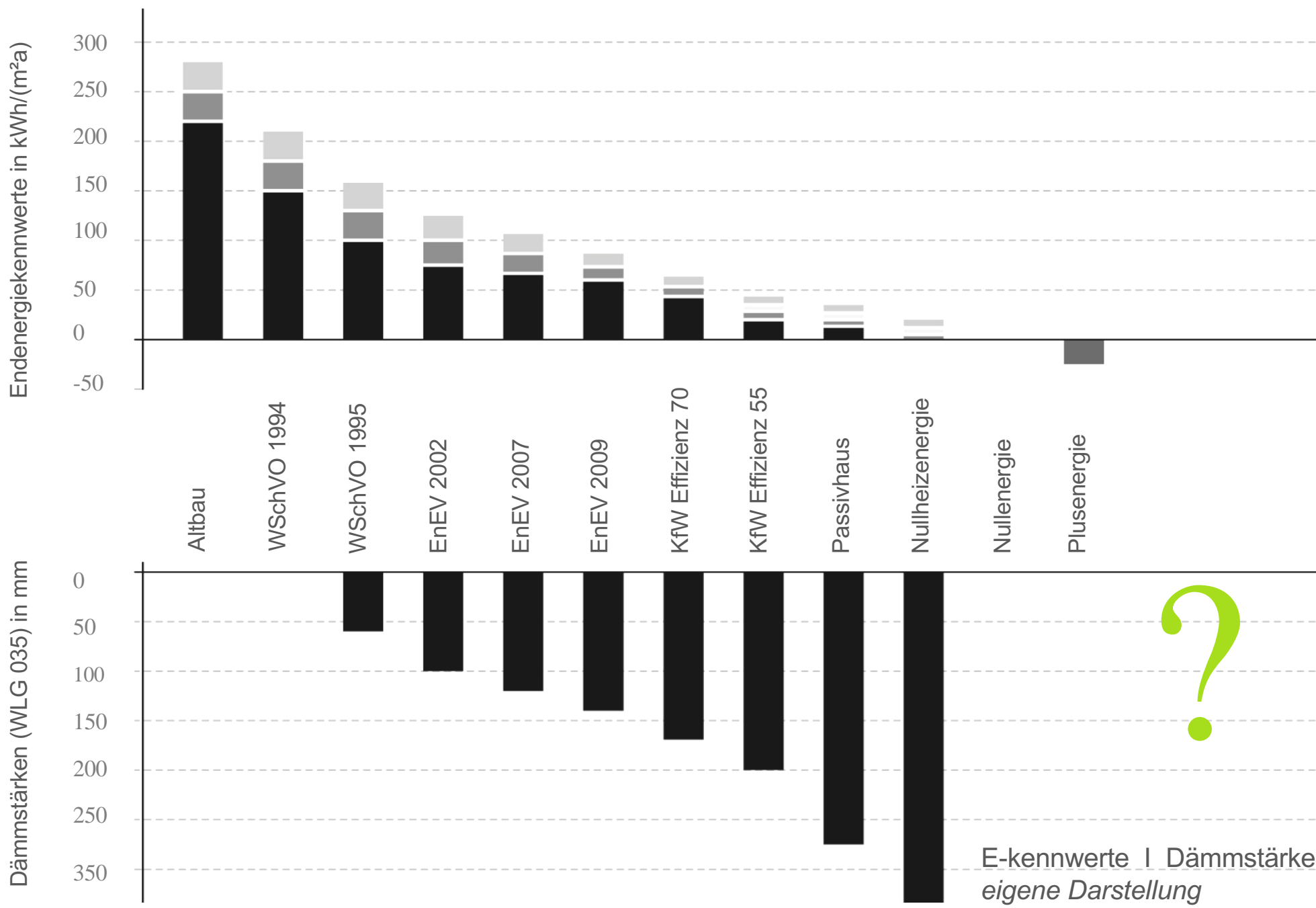




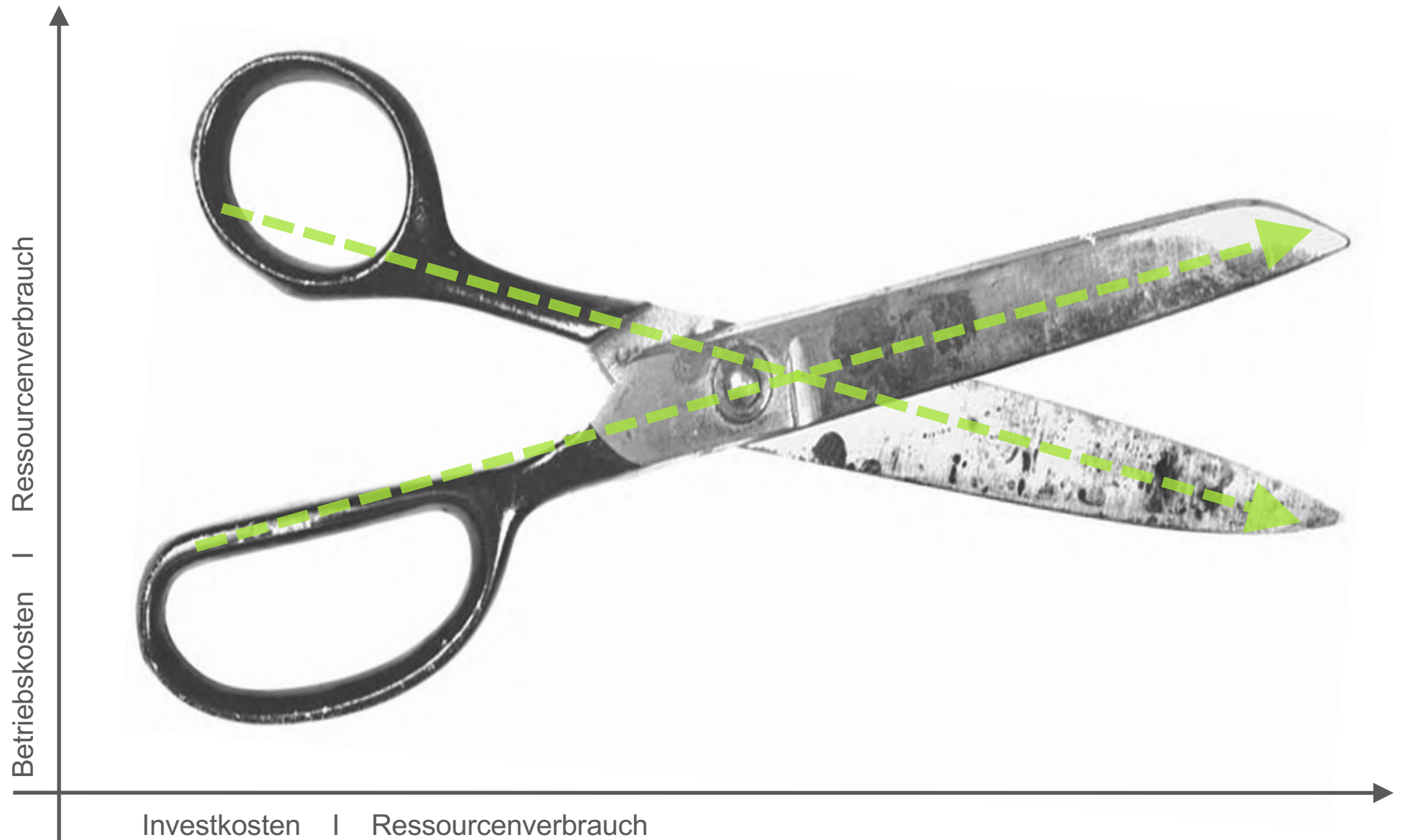
Haushalten | Gleichgewicht  
*Bauernhof, Provinz Herat, Afghanistan*



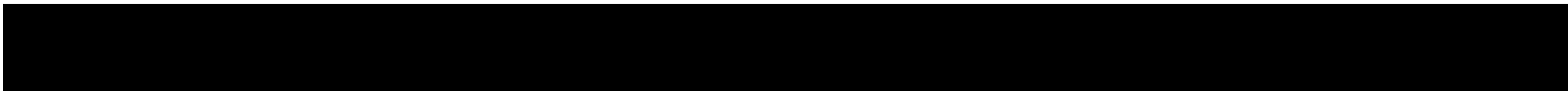
Weltenergieverbrauch



E-kennwerte | Dämmstärke  
eigene Darstellung



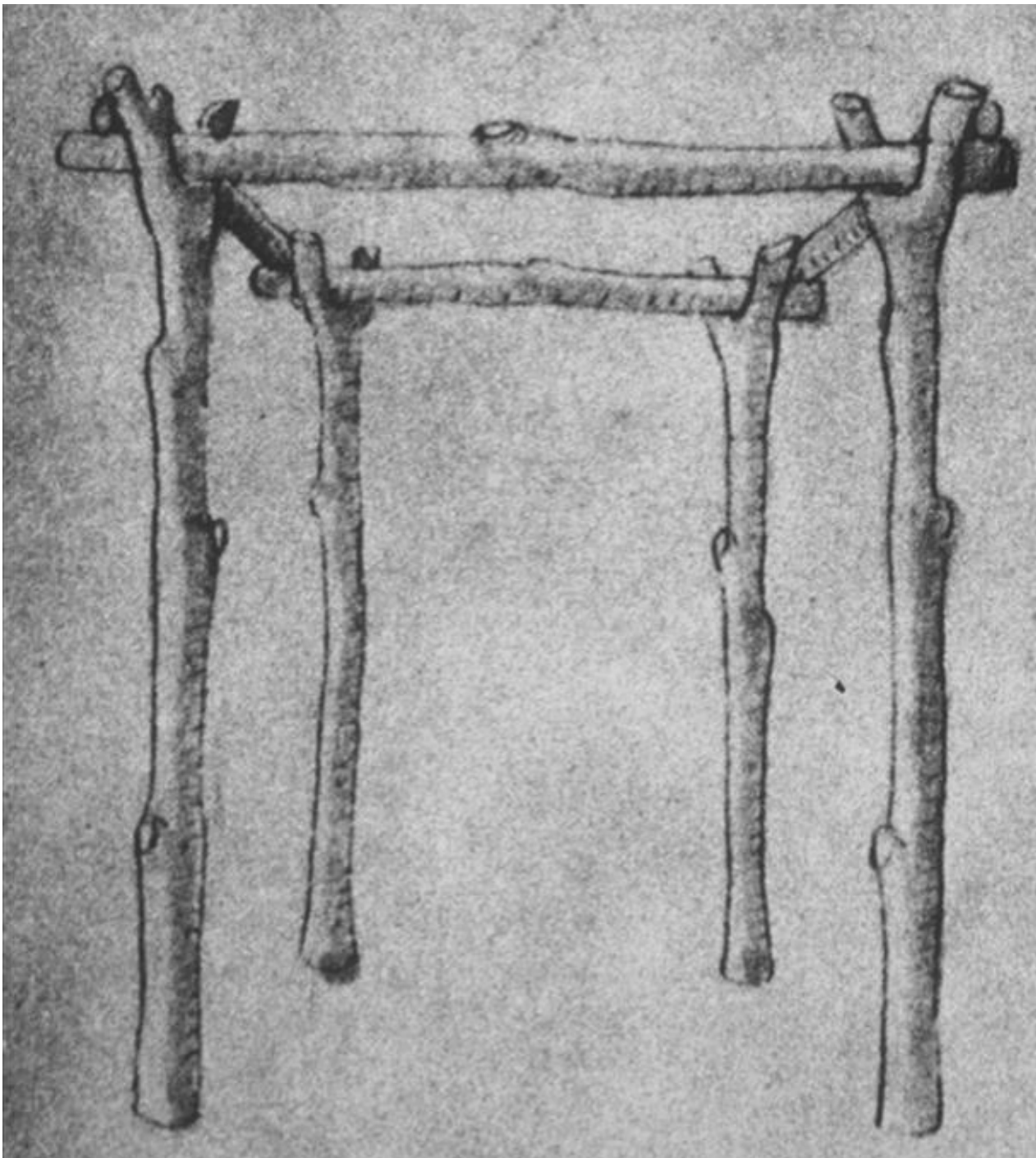
Haushalten | Betrieb - Invest  
*eigene Darstellung*





Haushalten | Nachhaltigkeit  
???





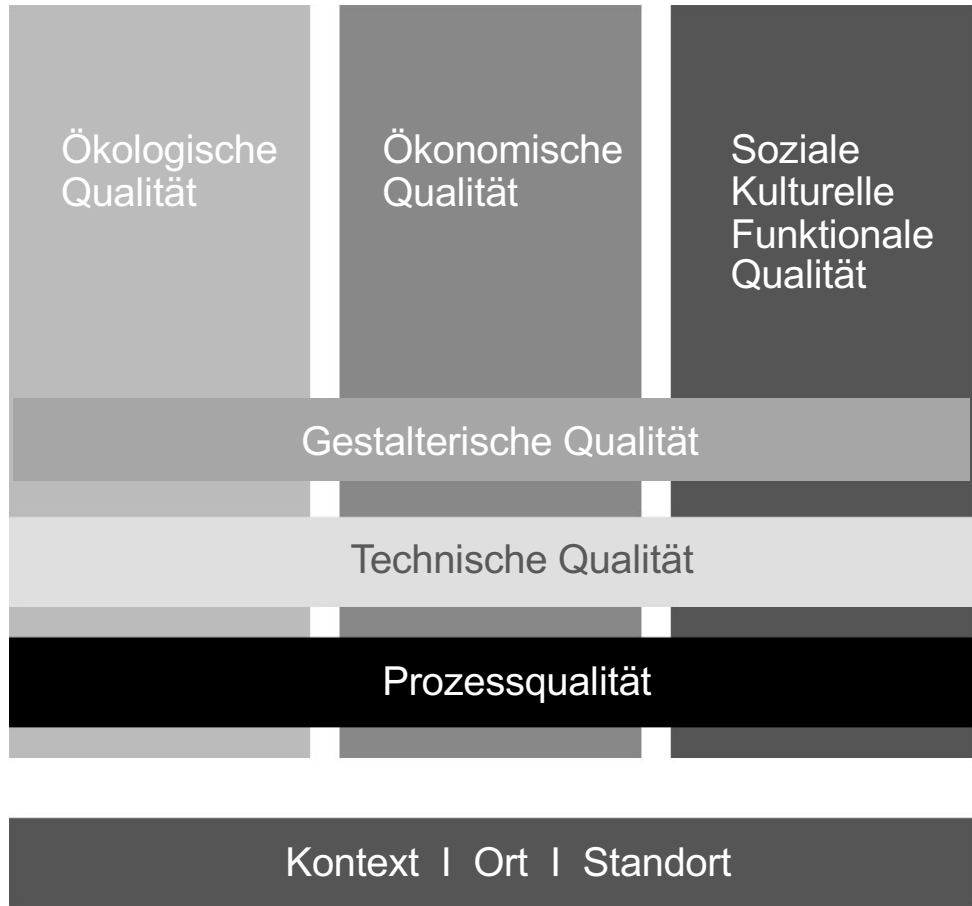
**utilitas** | nutzbarkeit  
| flexibilität  
| geringe kosten

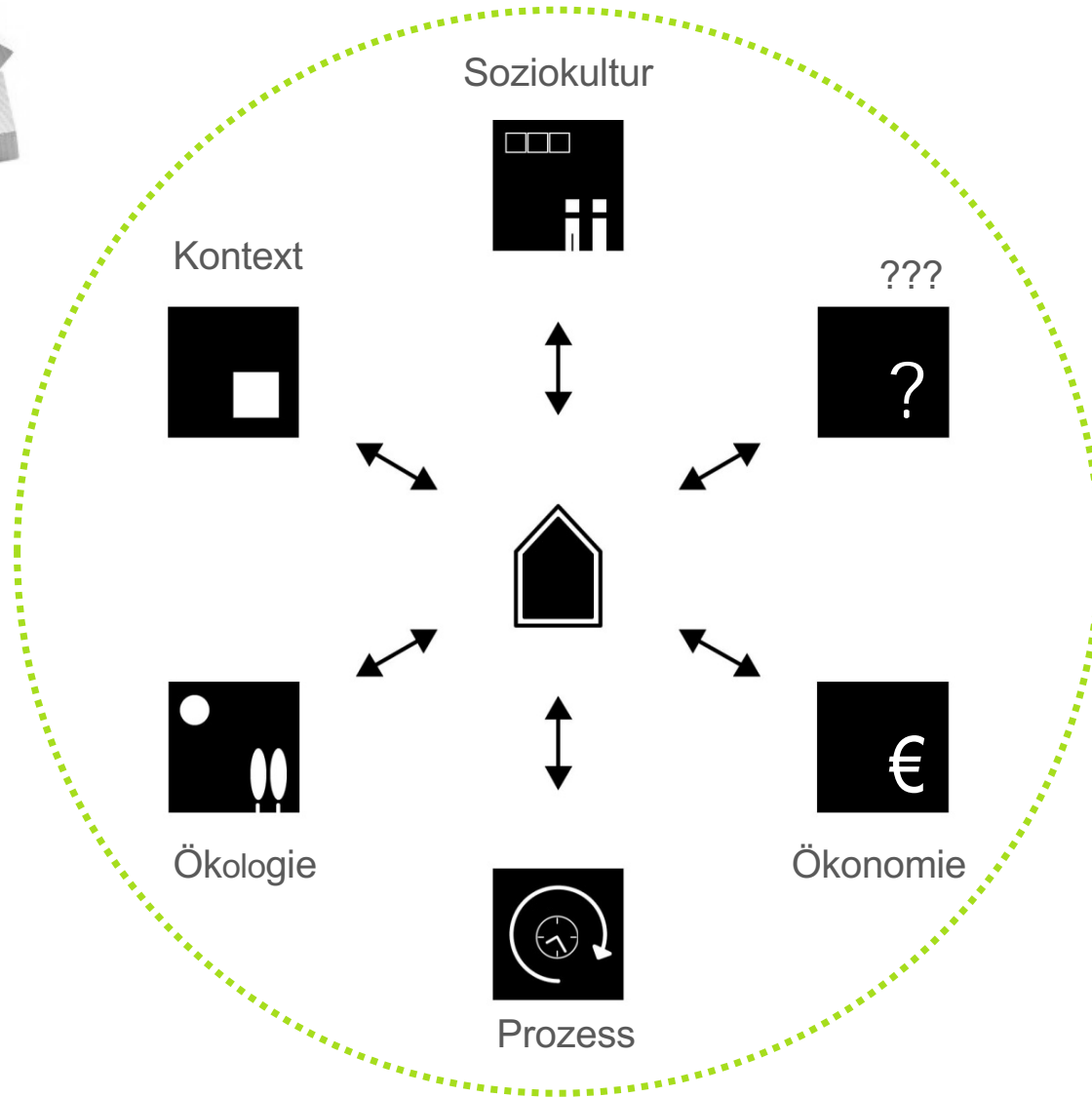
**firmitas** | statik  
| langlebigkeit  
| schutz nutzer

**venustas** | entwurf  
| gestalt  
| wirkung

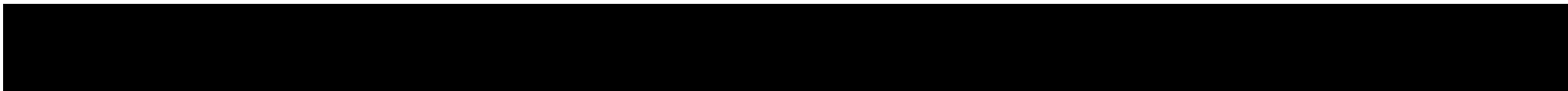
**regio** | kontext  
| gesellschaft

**Vitruv** | Urhütte Vitruv bzw. Laugier





Idee | Konzept

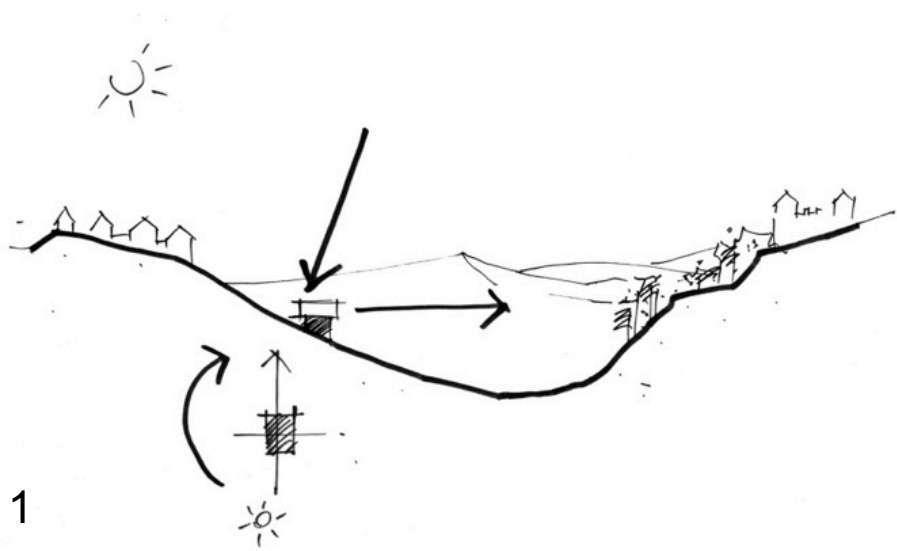




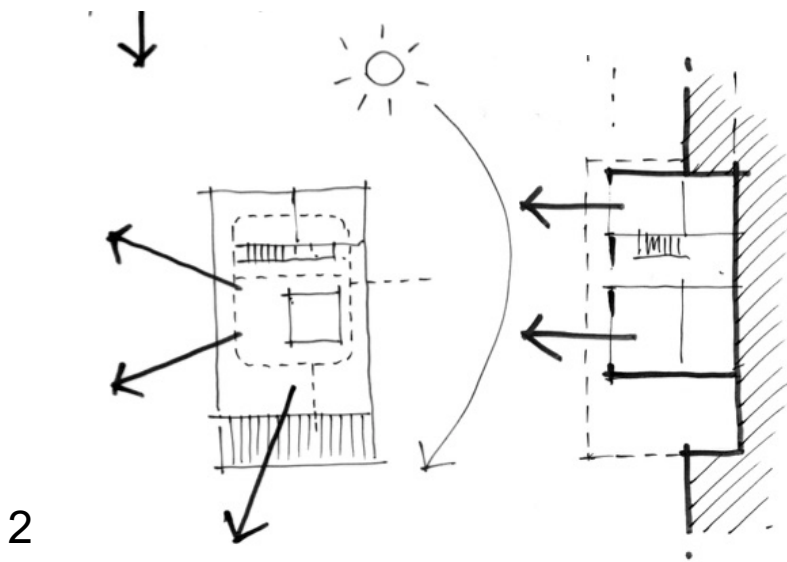
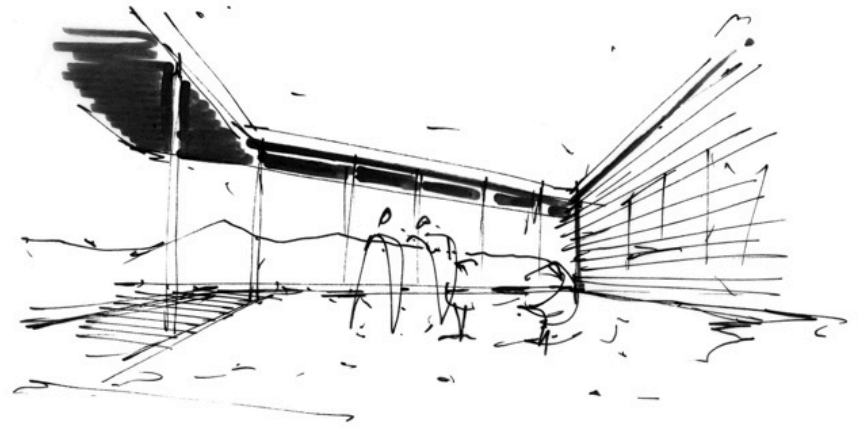




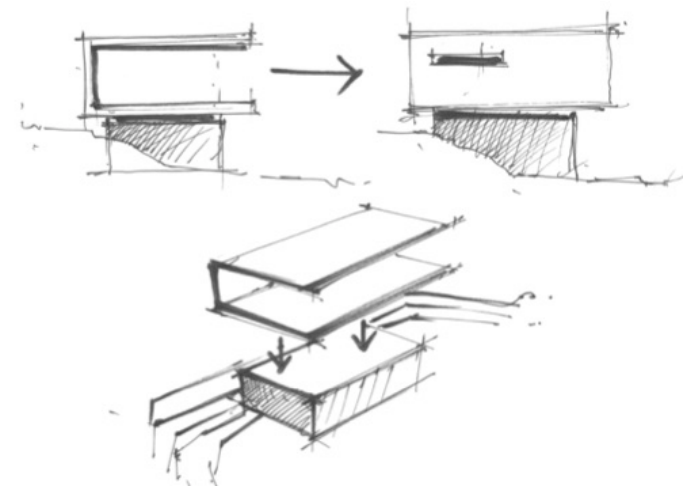
Haus am Hang F1 | 2006



3

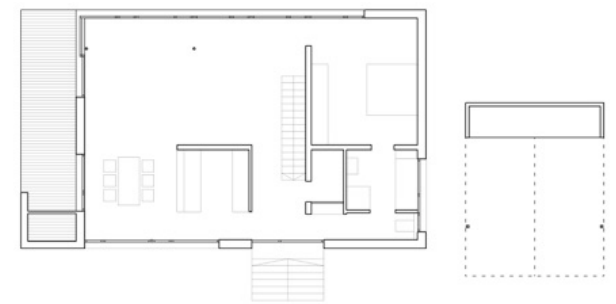
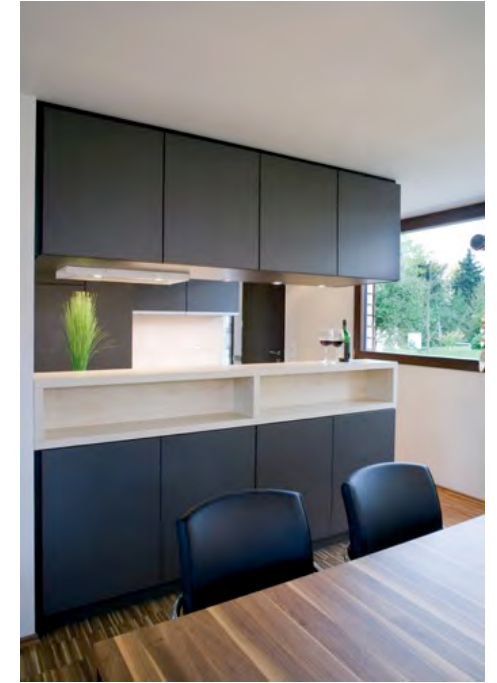


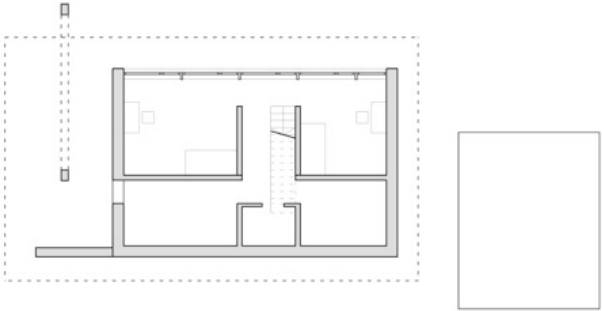
4





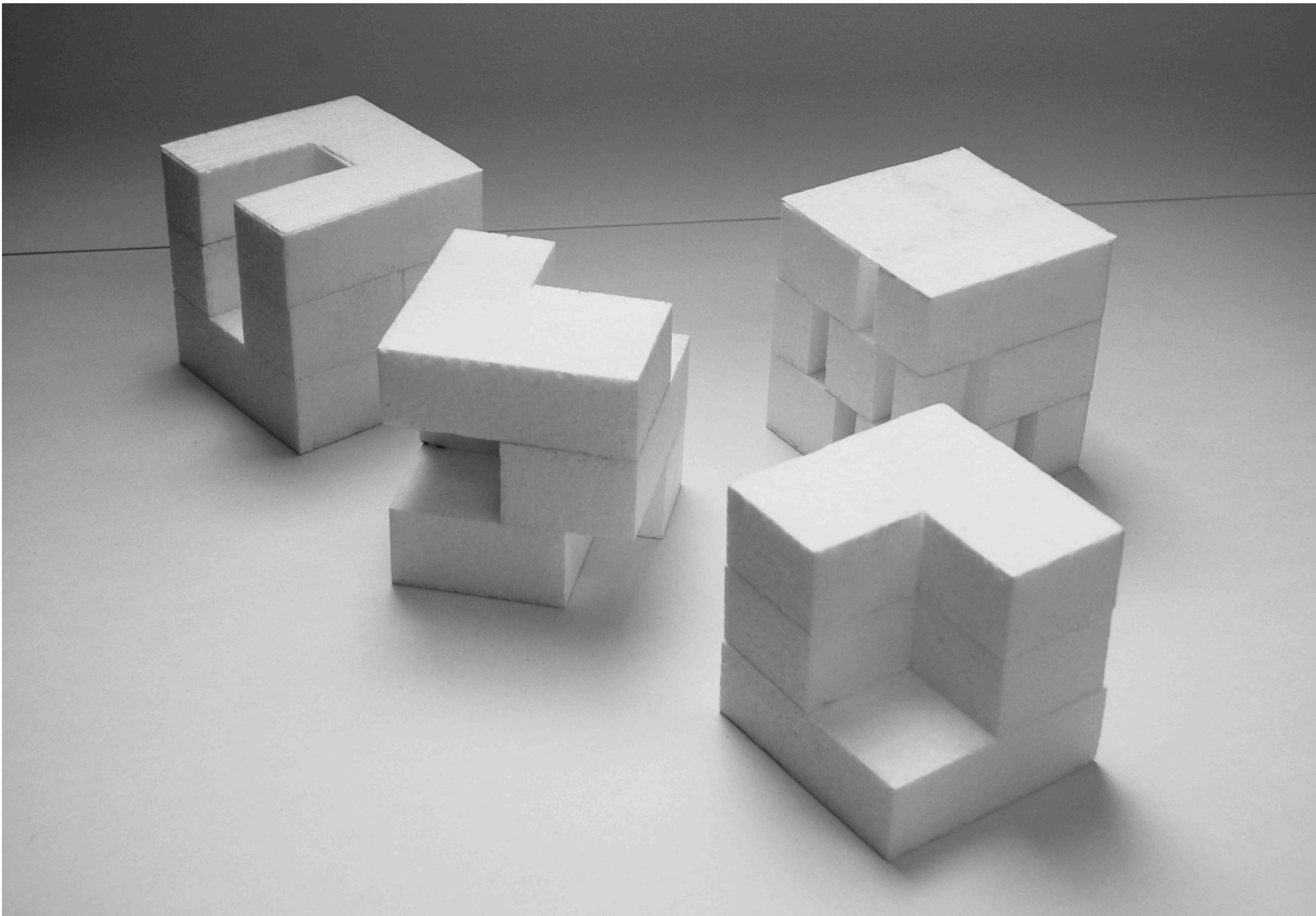


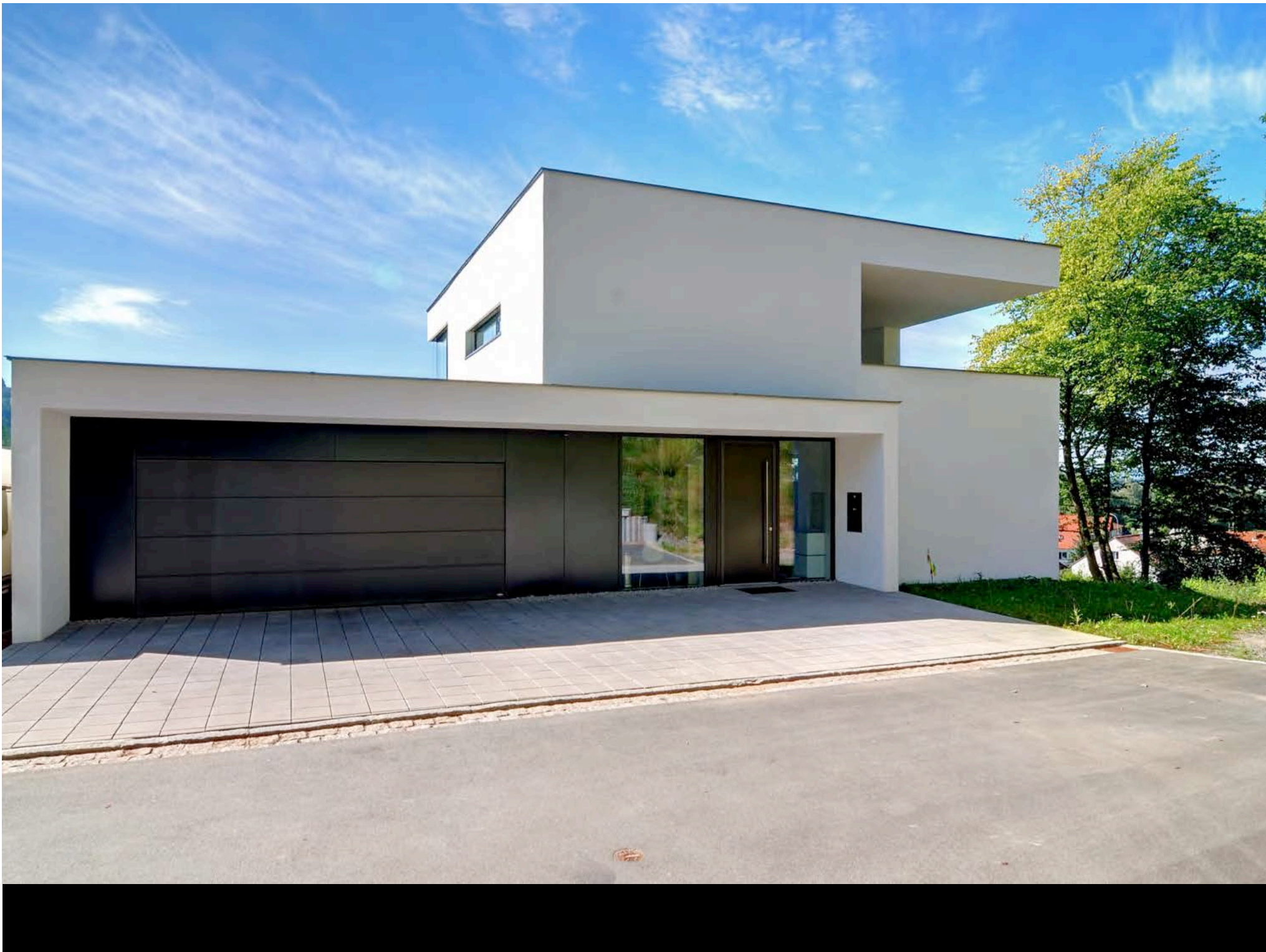


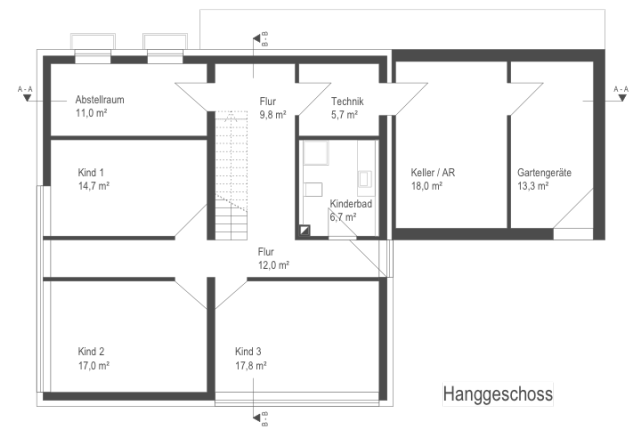
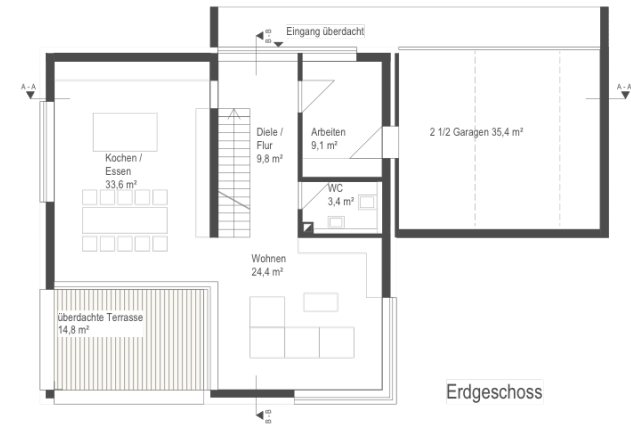
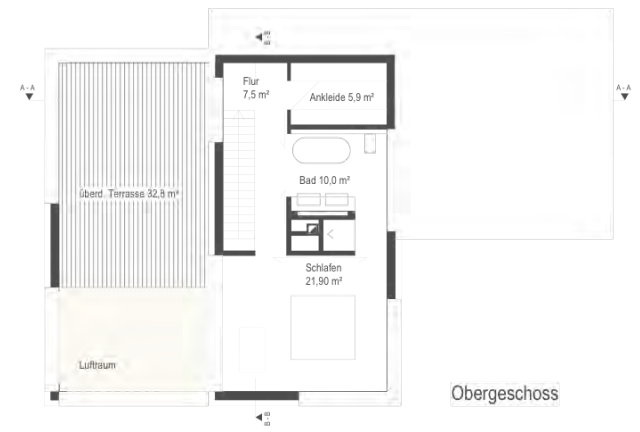
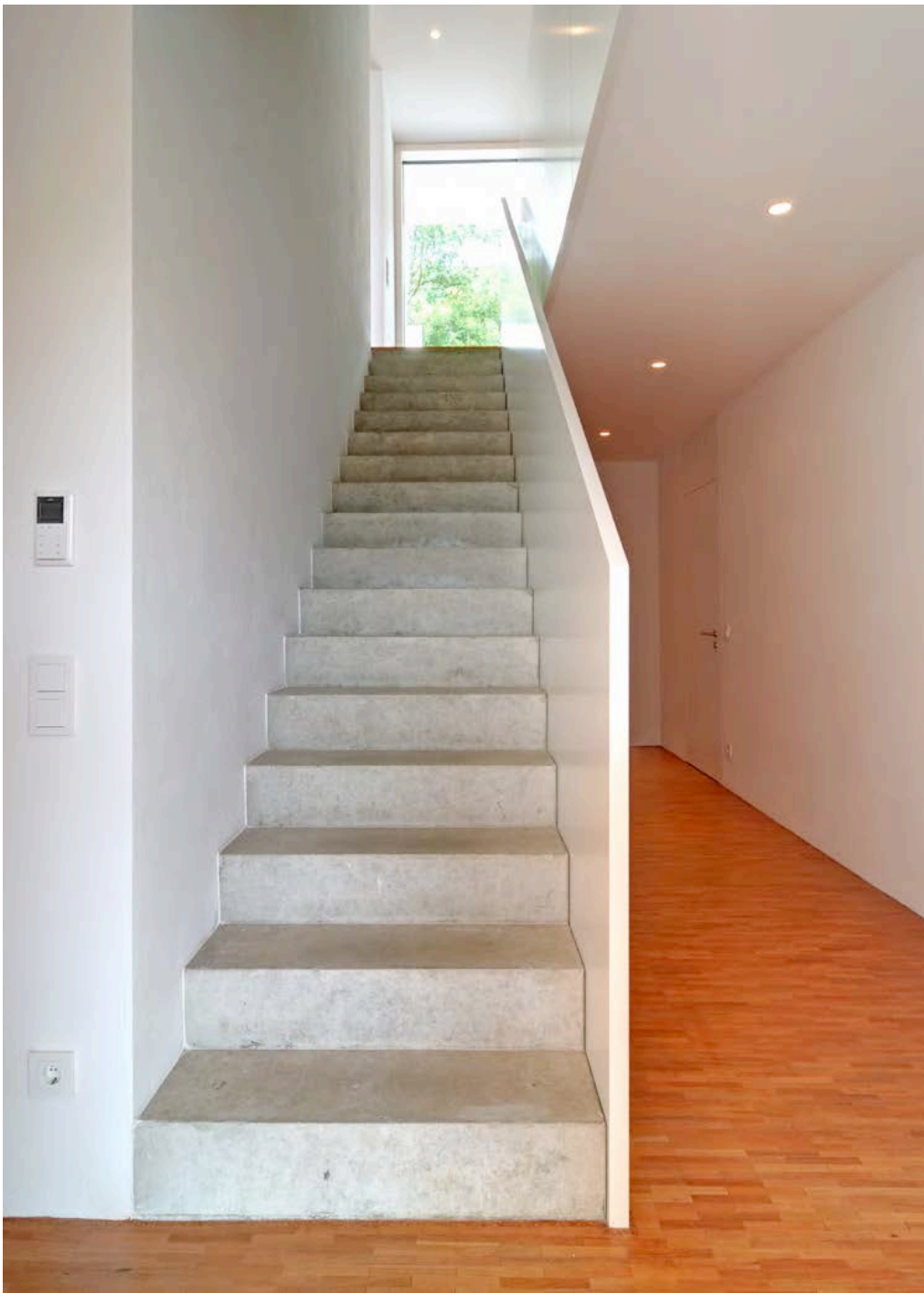




Wohnwürfel B2 | 2011









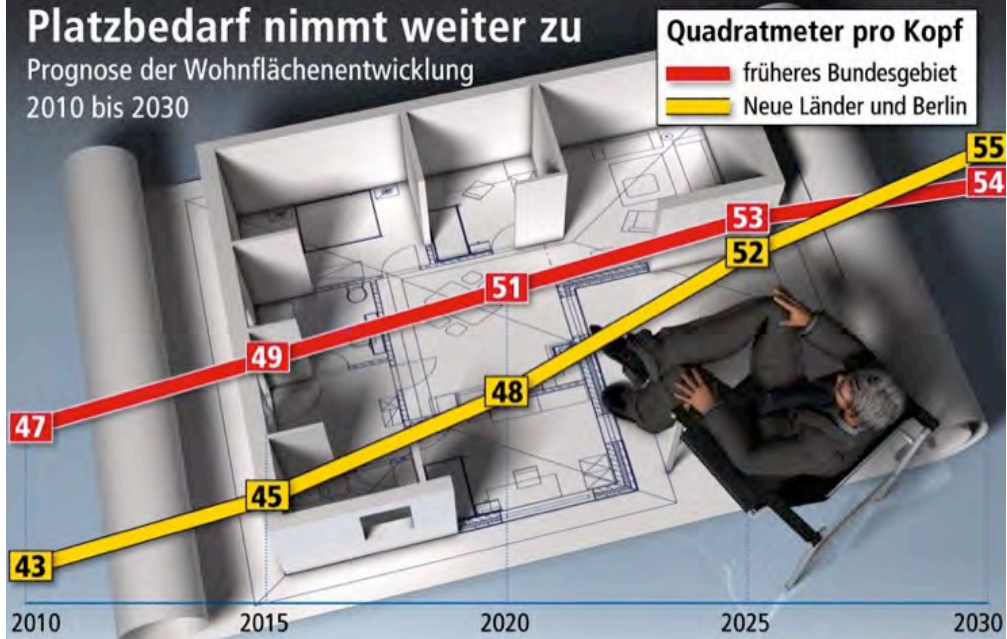






## Platzbedarf nimmt weiter zu

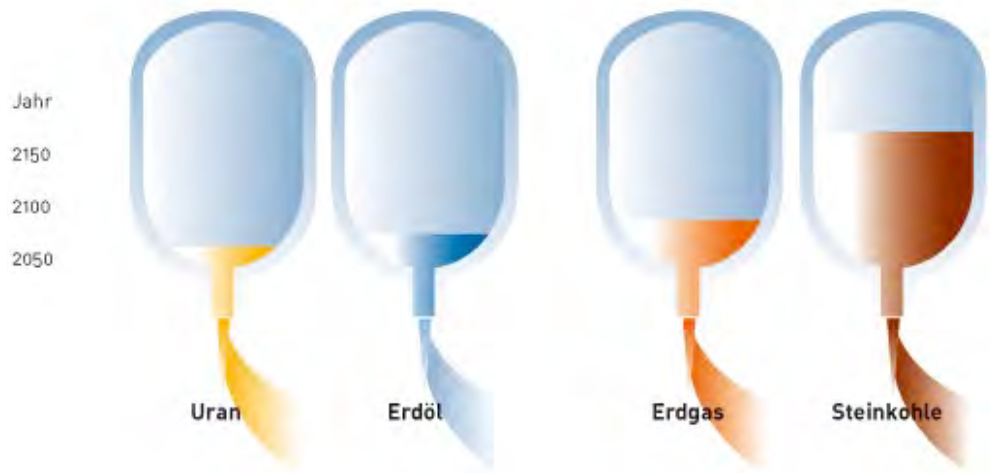
Prognose der Wohnflächenentwicklung  
2010 bis 2030



Quelle: LBS Research/empirica

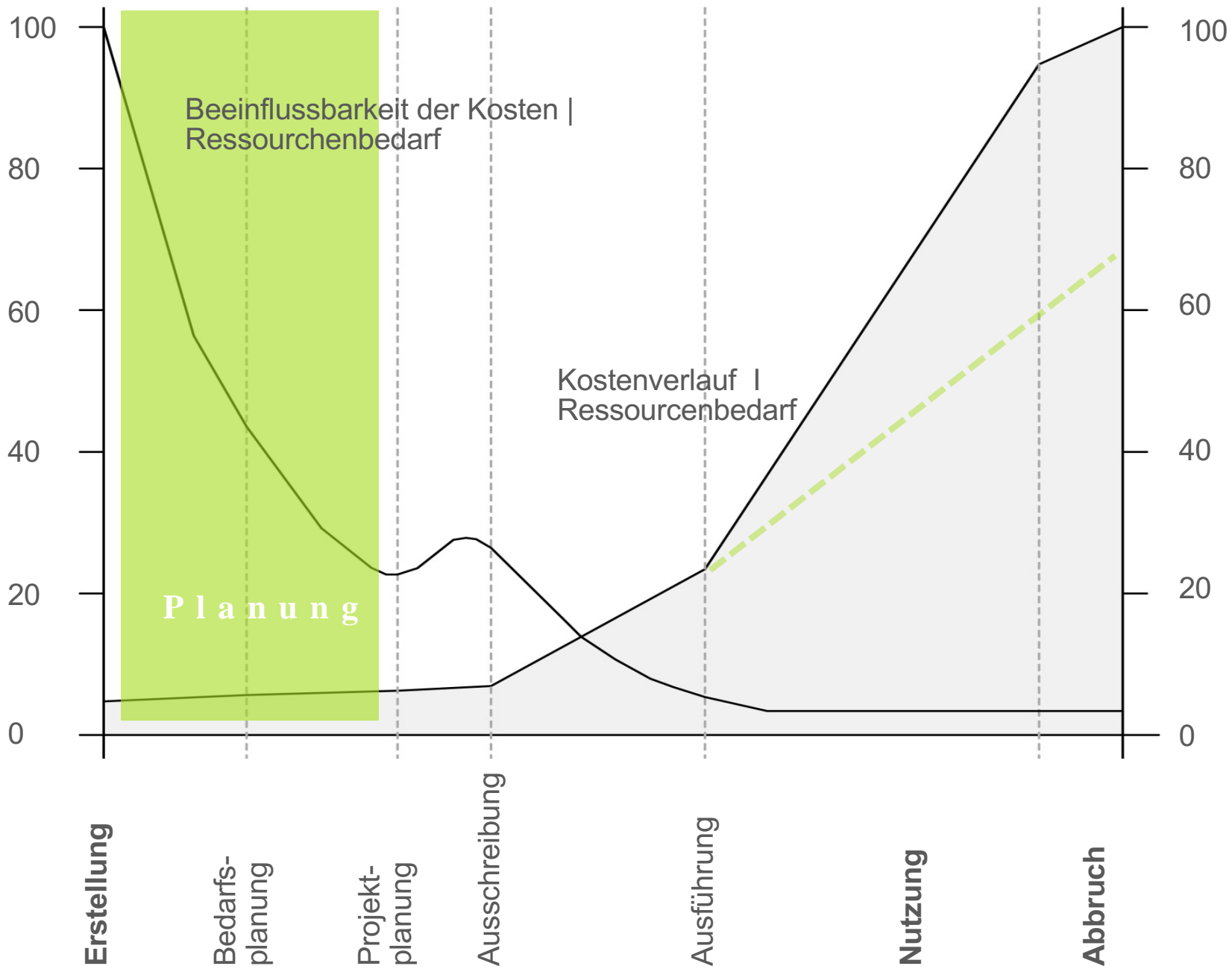
Grafik: [infach@rt.](mailto:infach@rt)

Die Reserven der meisten fossilen Energieträger reichen nur noch wenige Jahrzehnte.





Grad der Beeinflussung der Erst- und Folgekosten [%]



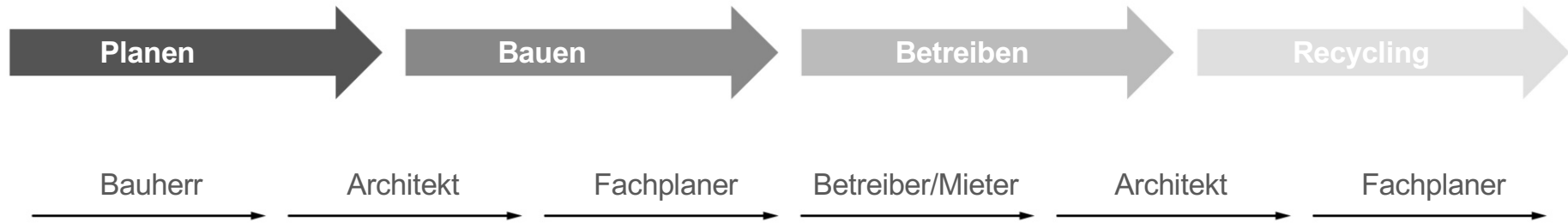
Beeinflussbarkeit der Kosten | Ressourcenbedarf

Planung

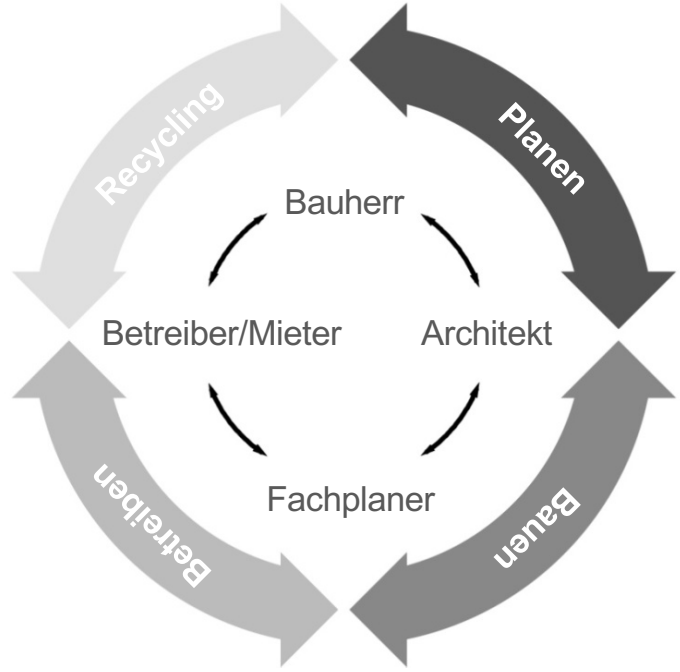
Kostenverlauf | Ressourcenbedarf

Gesamtkosten [%]





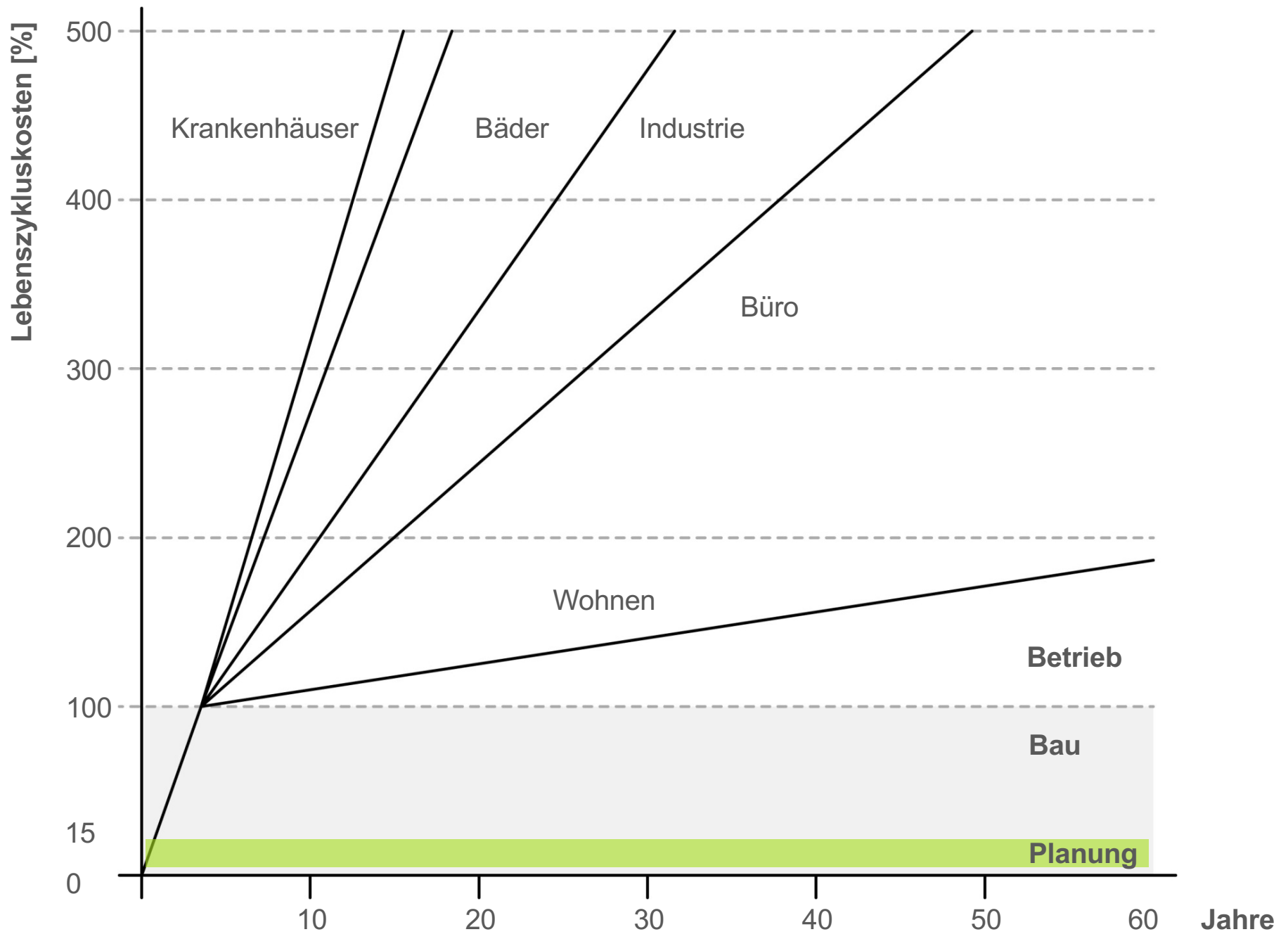
**Risiko** | lineare Planung



**Ziel** | integrale Planung





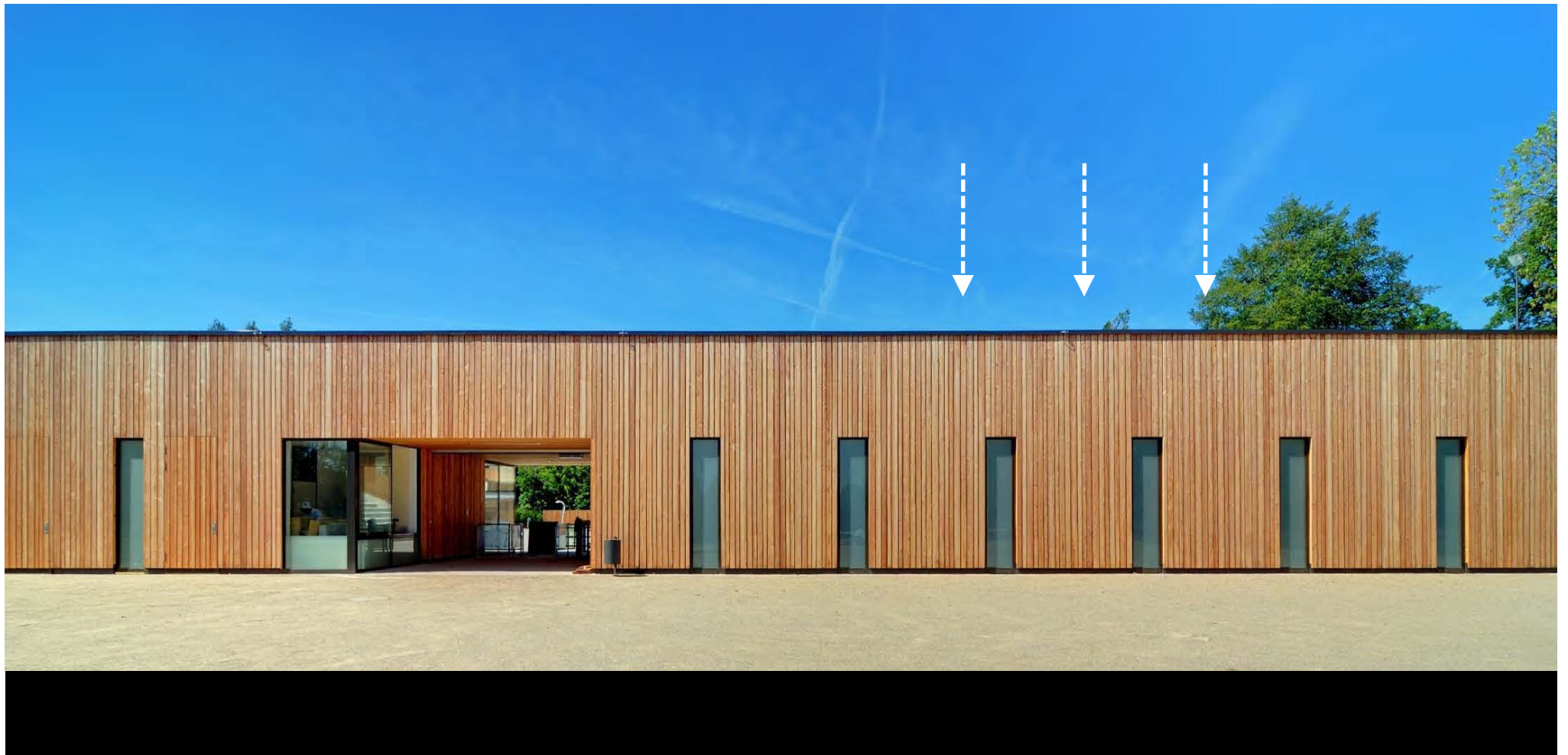






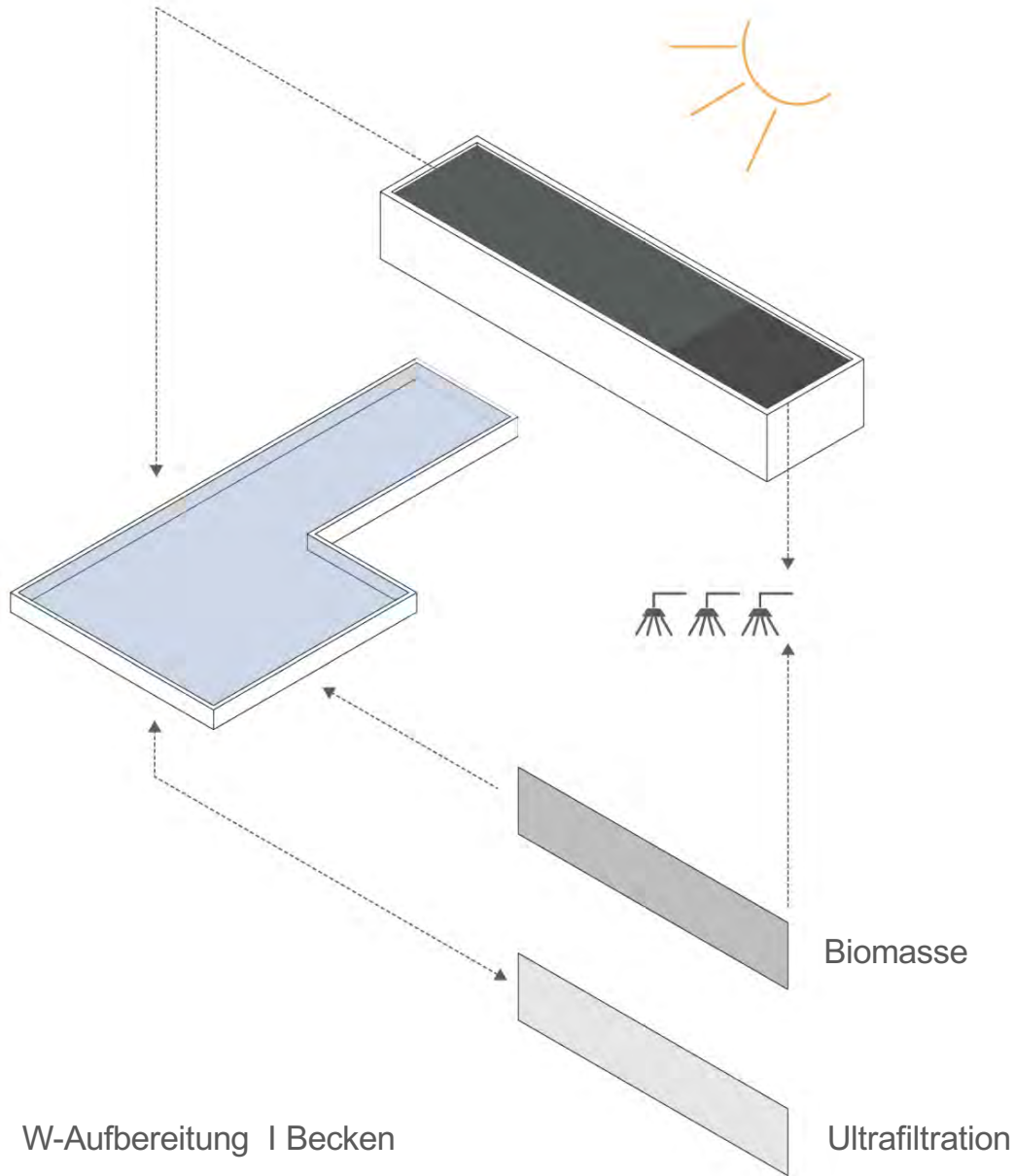
Terrassenfreibad Arzberg I WB I.Preis





Absorbermatten  
Warmwasser | Becken

Solarthermie  
Warmwasser | WC | Dusche

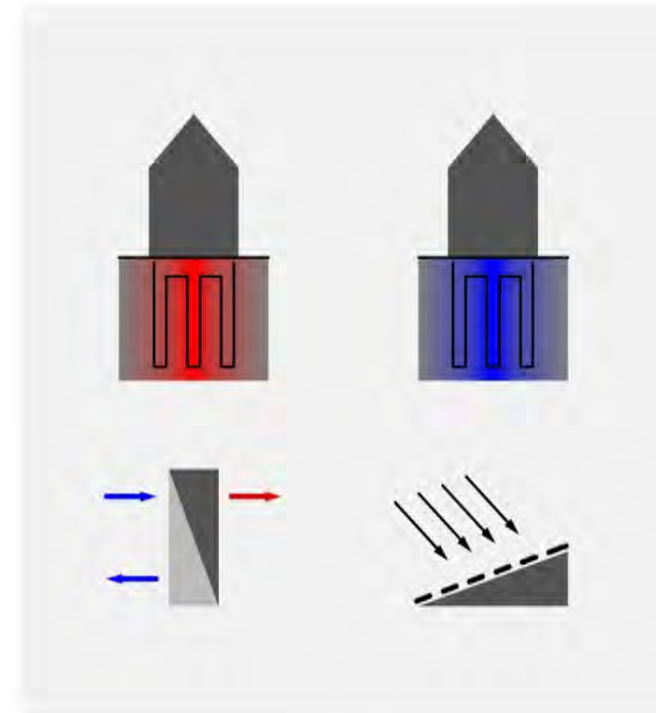
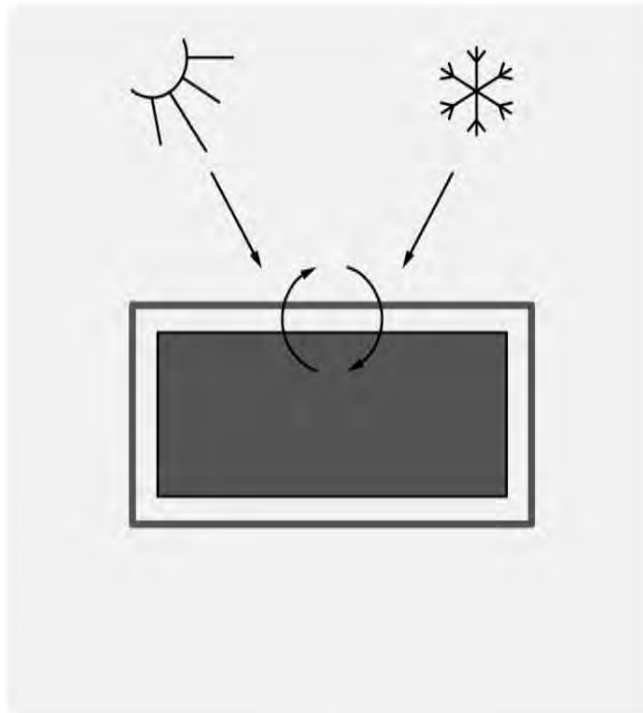
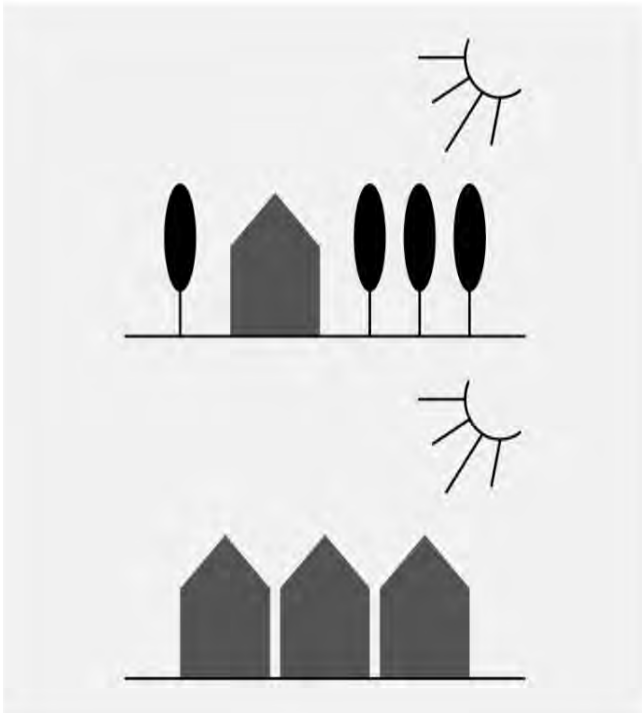




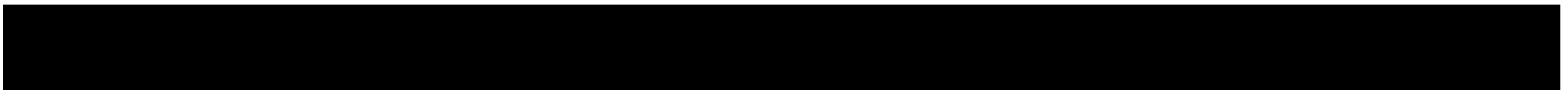
### Standort und Ausrichtung

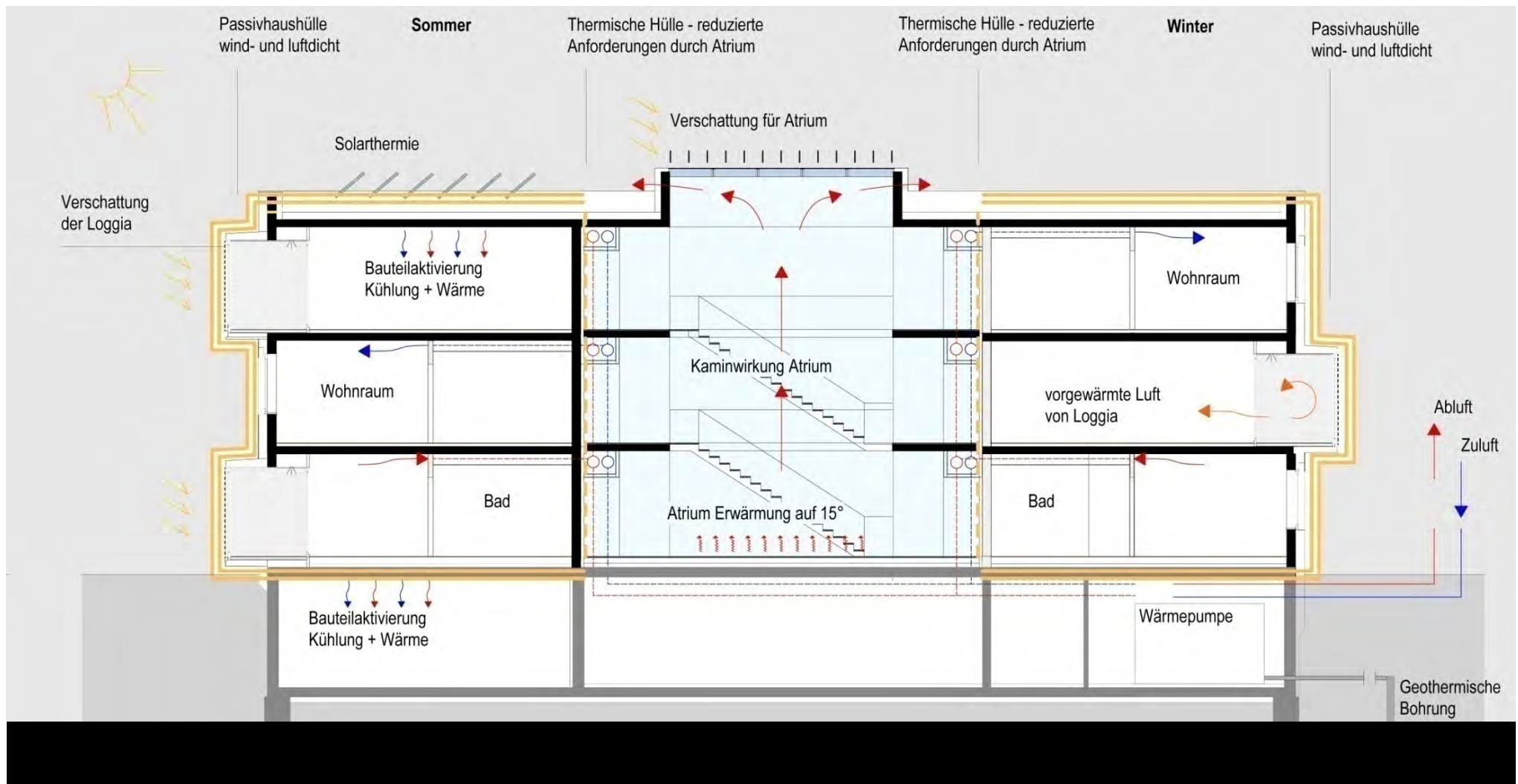
### Gebäudehülle

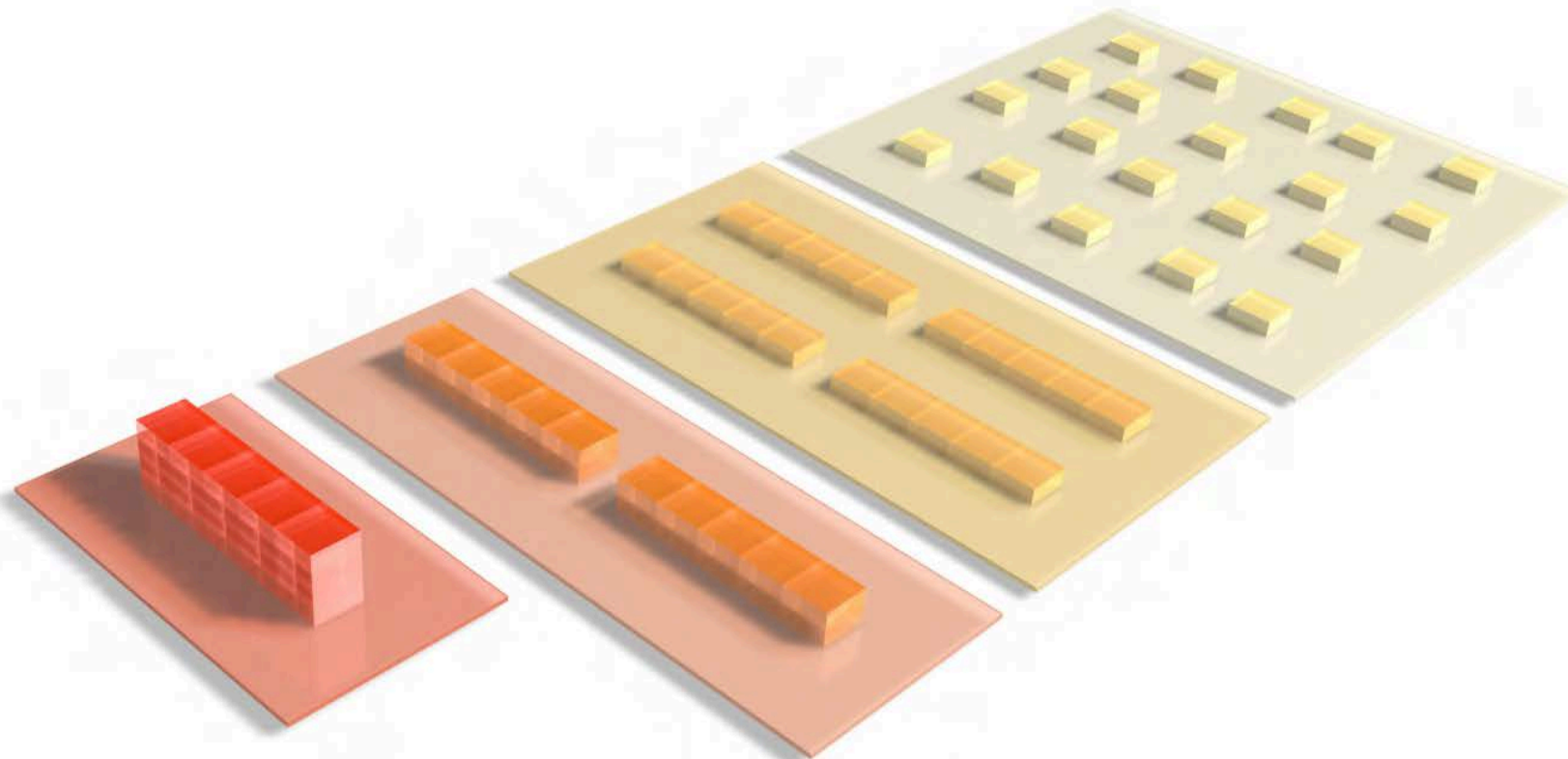
### Haustechnik



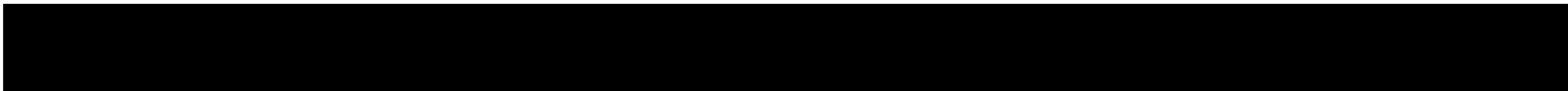
**Ganzheitliches Energiekonzept**







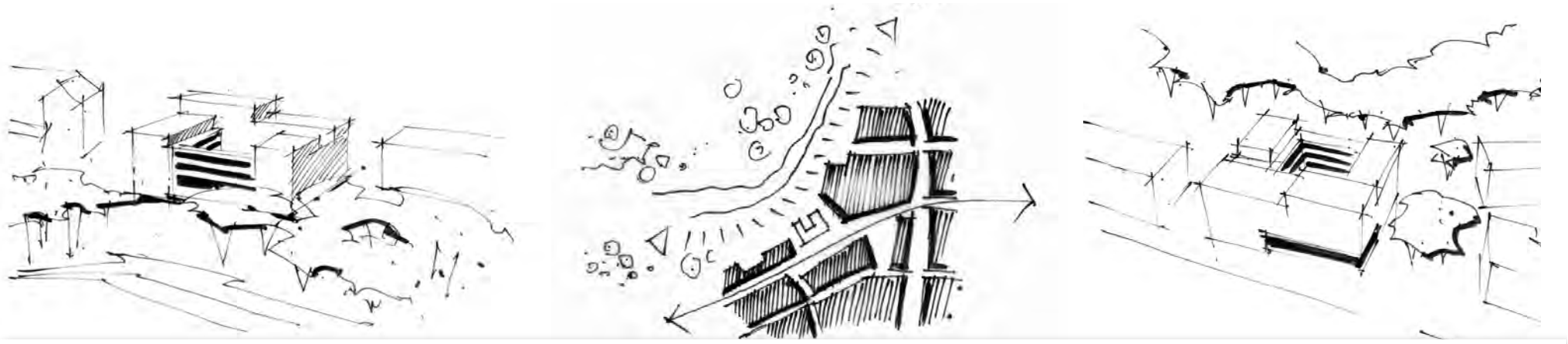
Haushalten | A-V |  
Baulandverbrauch

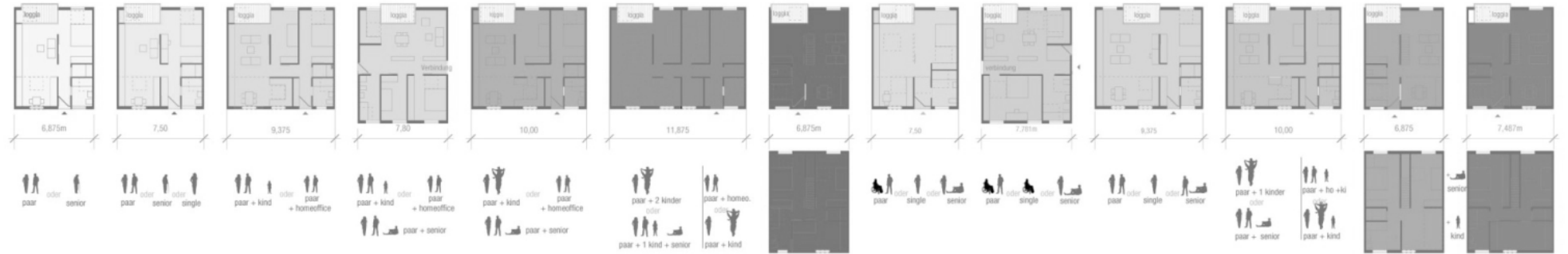
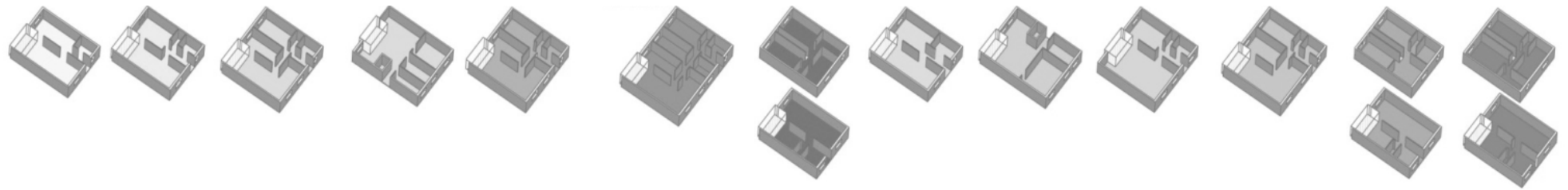




Experimenteller Wohnungsbau | WB 1.Preis







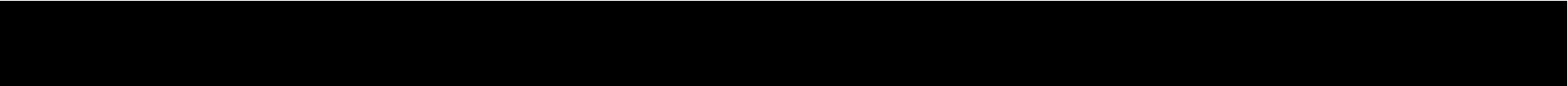
gefördert | barrierefrei | miete

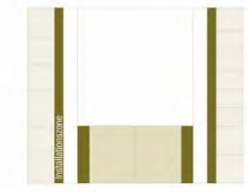
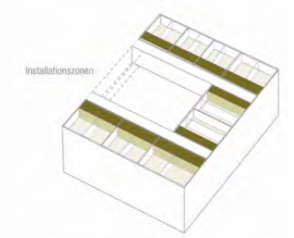
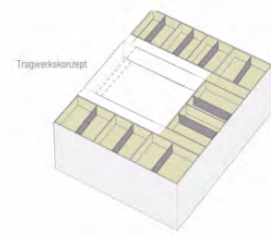
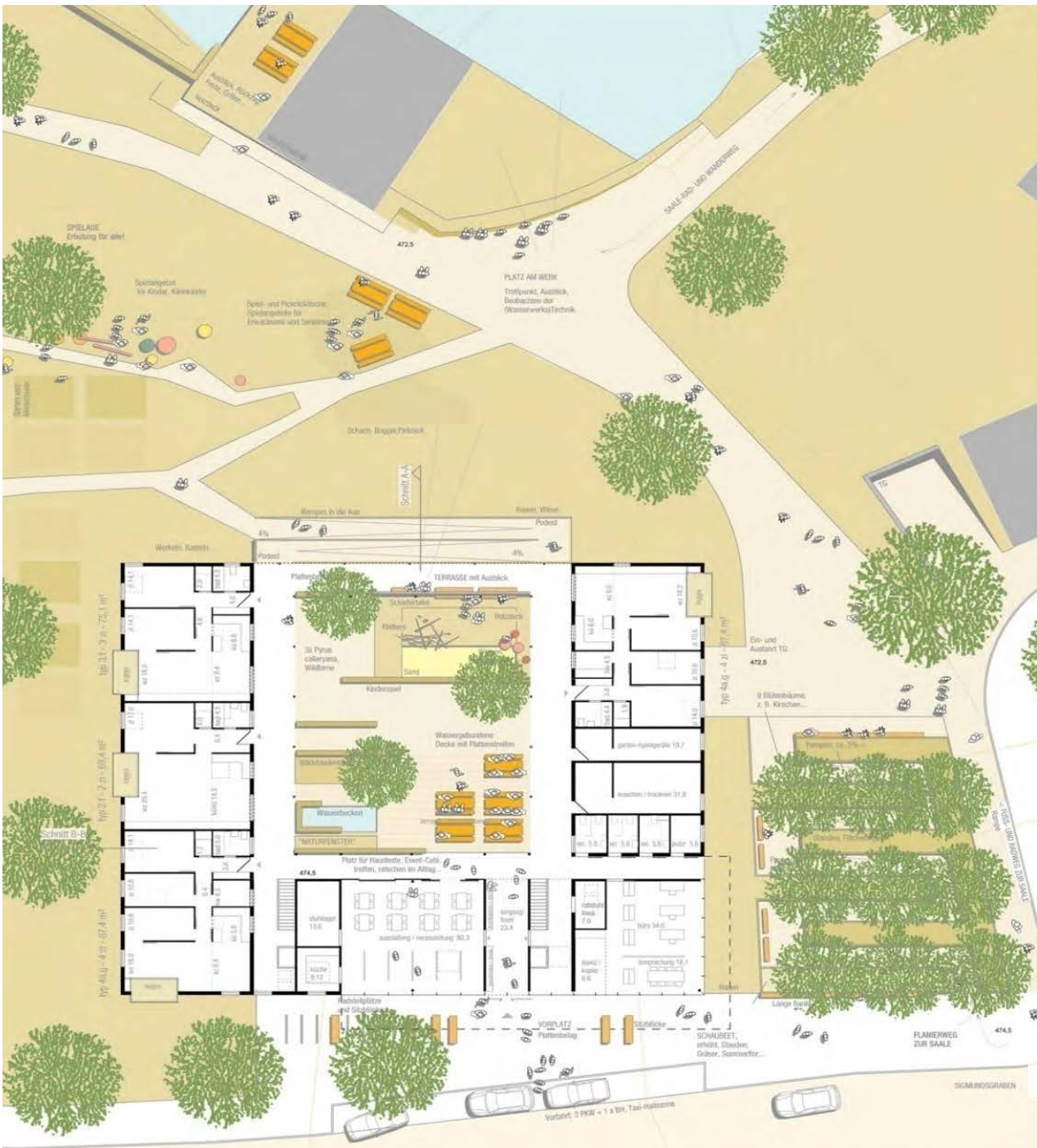
behinderte

freifinanziert | eigentum



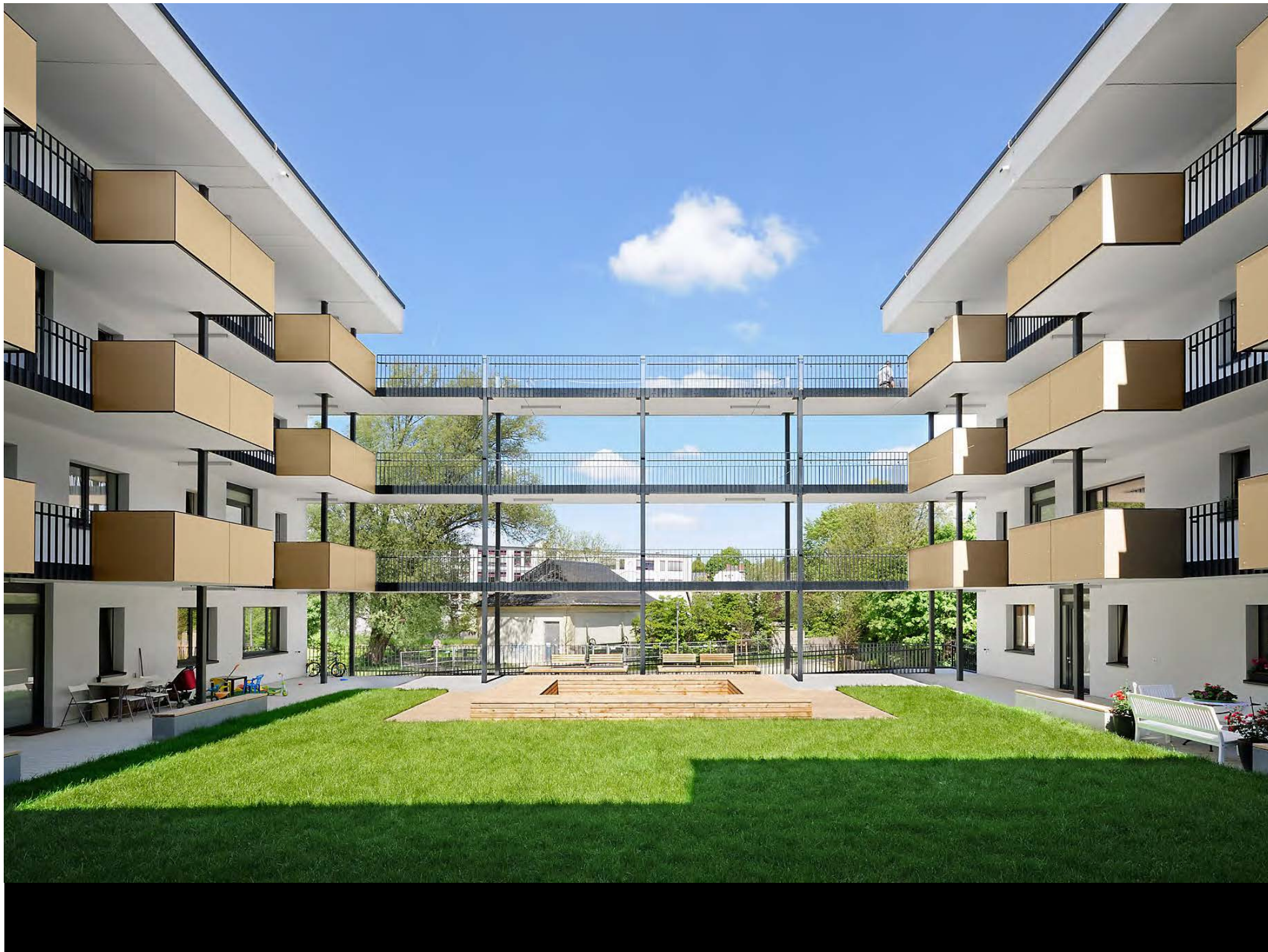
Wohnungsmatrix | Sozialmix | Varianz

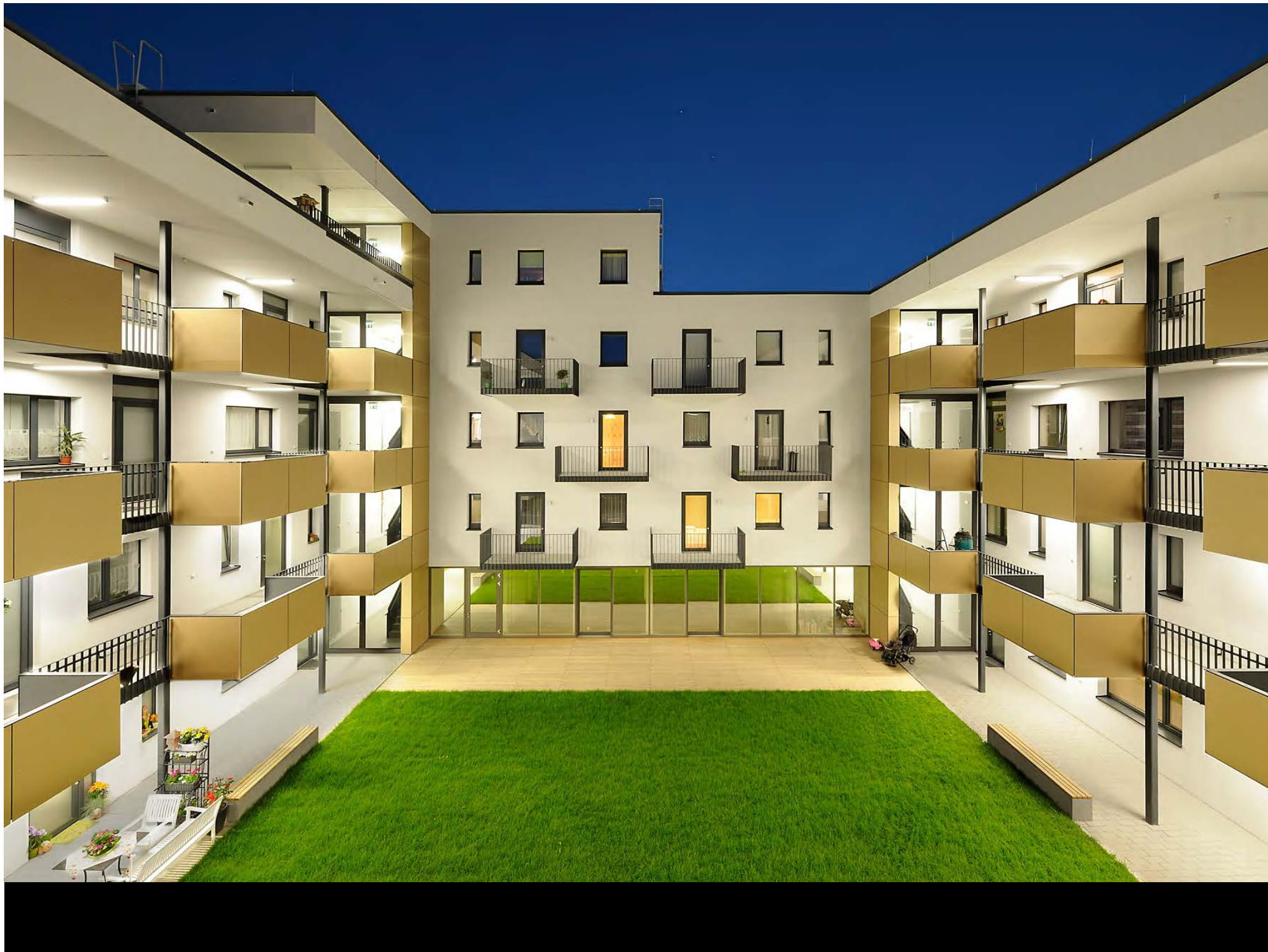




Erdgeschoss | Tragwerk | Zirkulation







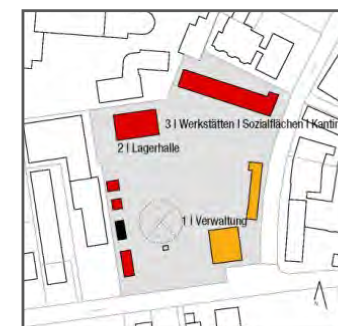
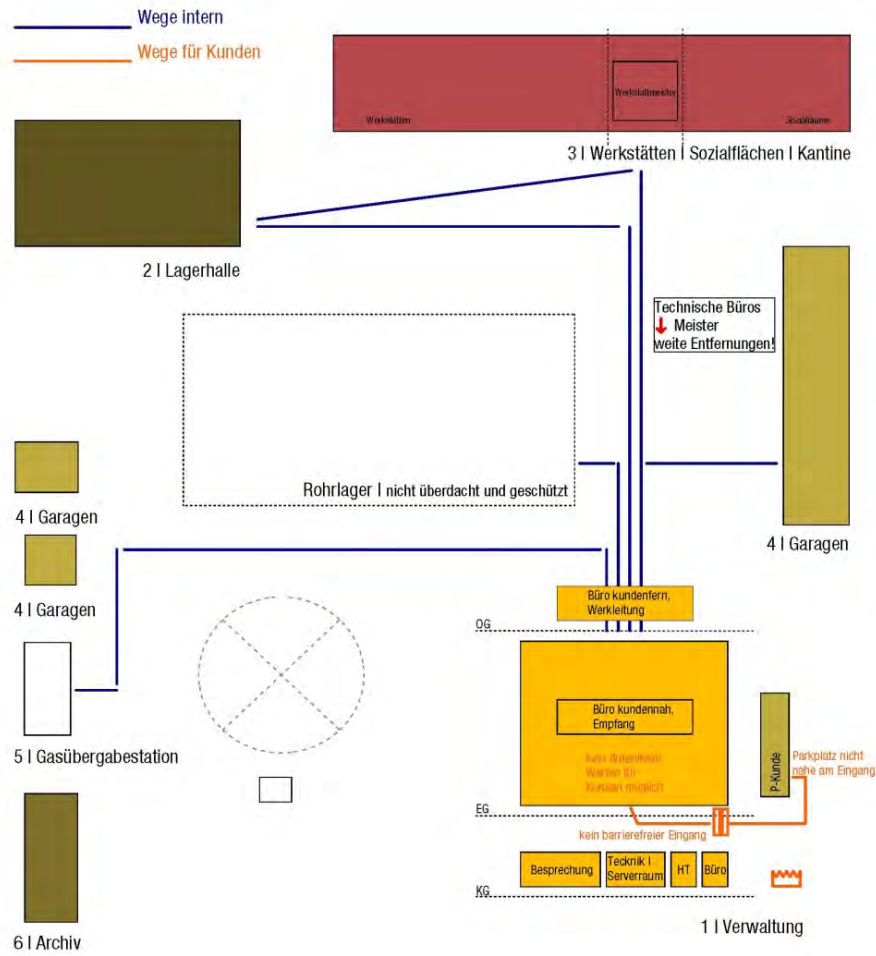
Betriebsstandort Stadtwerke Kulmbach





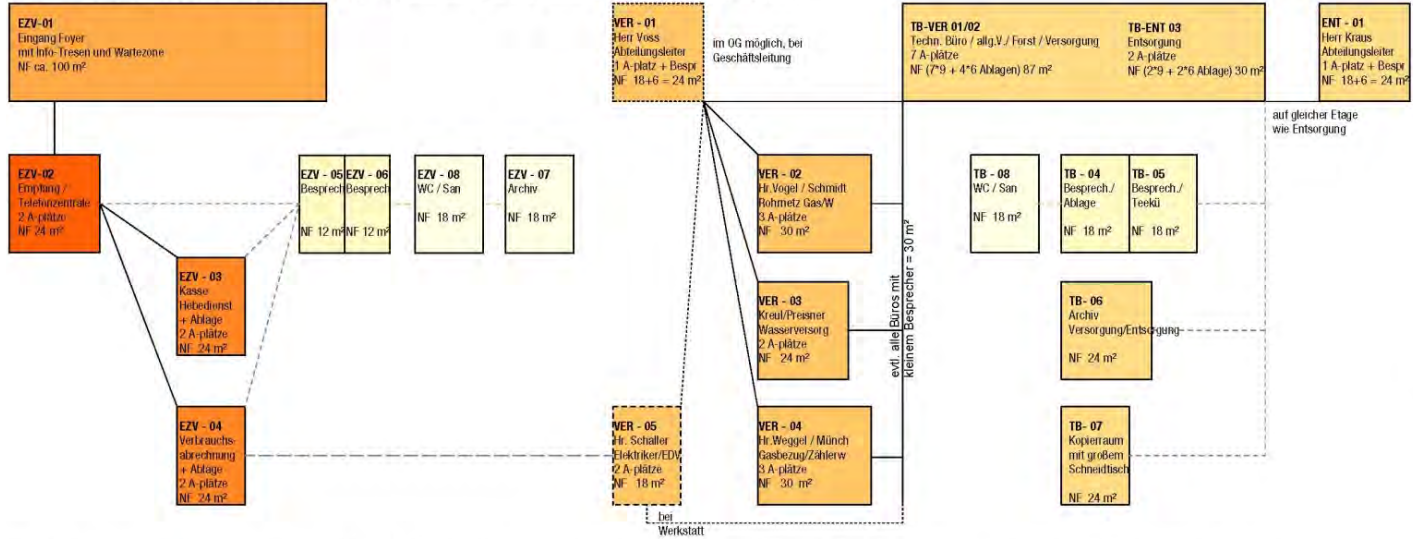
Struktur intern | Wege der Mitarbeiter

Struktur extern | Wege der Kunden

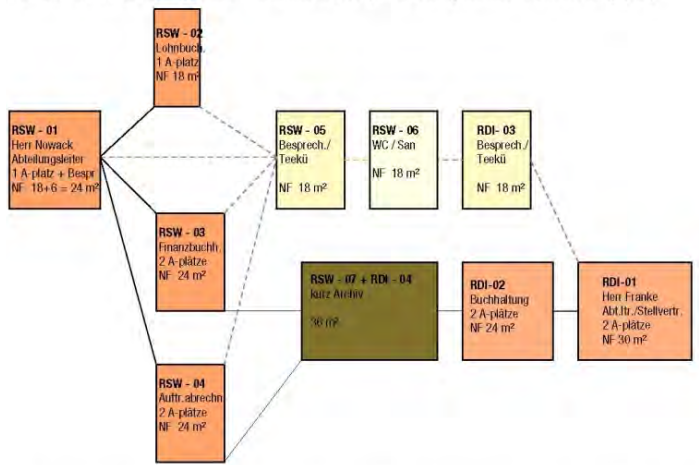


Analyse | Funktionsstruktur Bestand

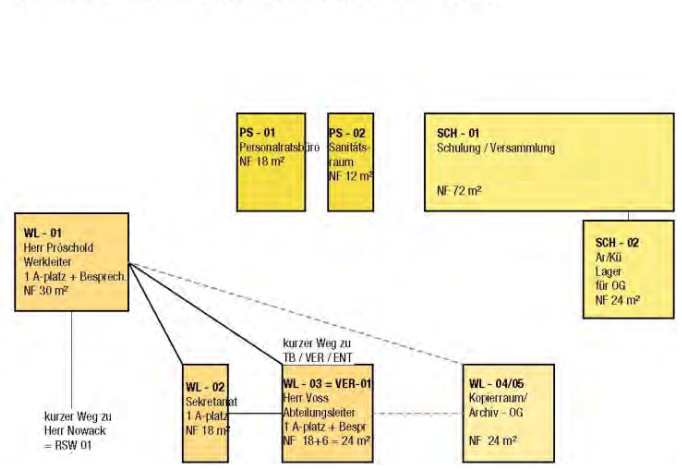
Kundennah | Empfang zentraler Verbrauch (EZV) | Technisches Büro (TB), Versorgung (VER), Entsorgung (ENT)



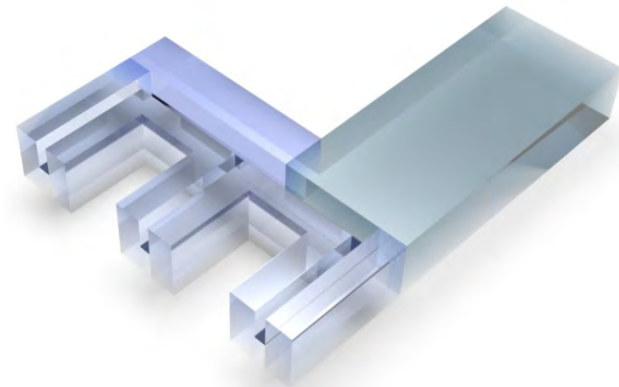
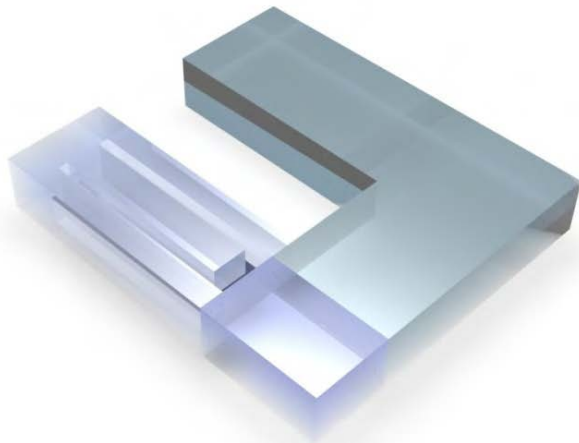
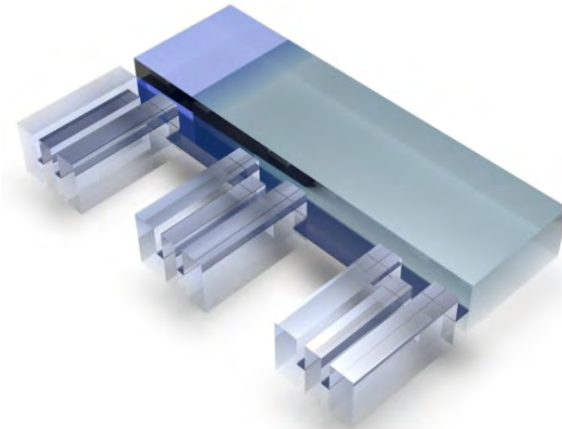
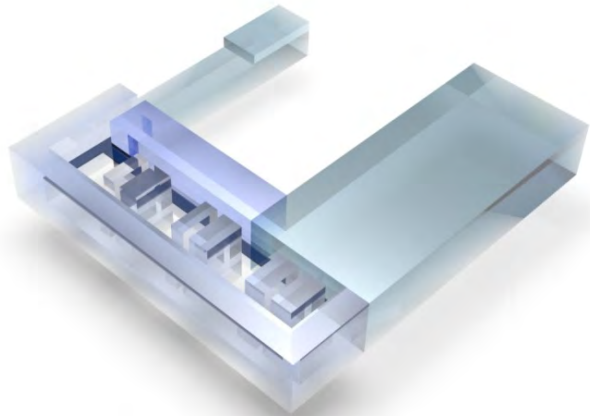
Kundenfern | Rechnungswesen Stadtwerke (RSW) | Rechnungswesen Dienstleistung (RDI)



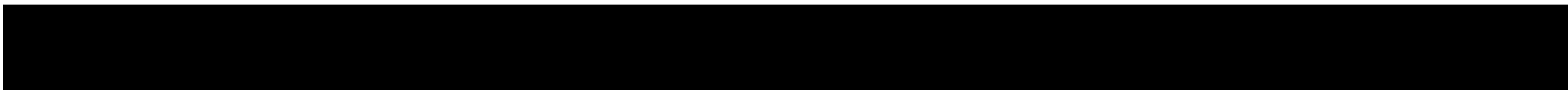
Kundenfern | Werkleitung (WL) | Personalrat (PS) | Schulung (SCH)

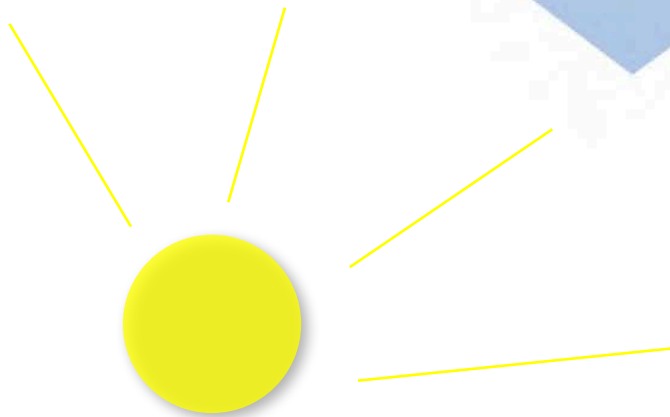
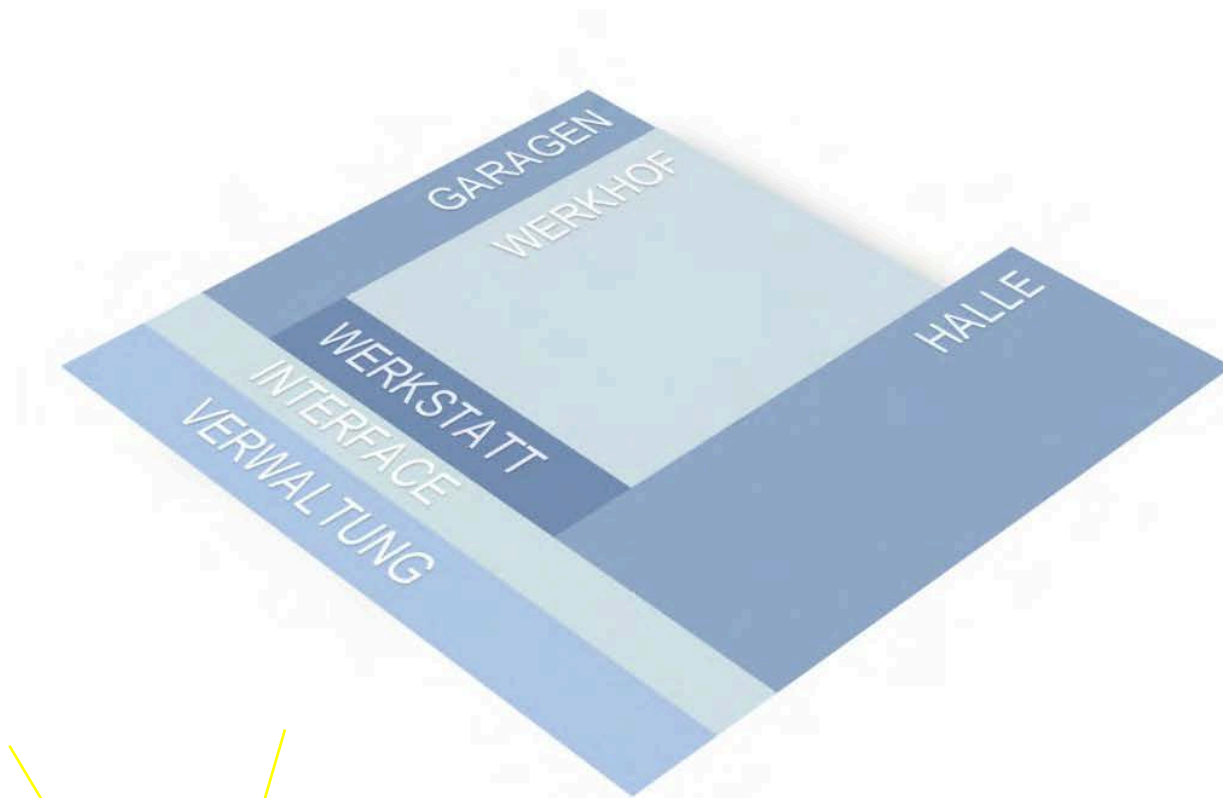


Programming | Funktion | Bezüge  
Programming nach Henn

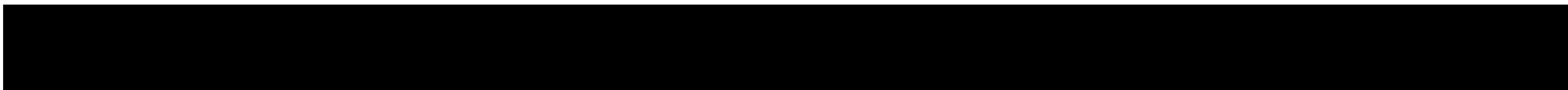


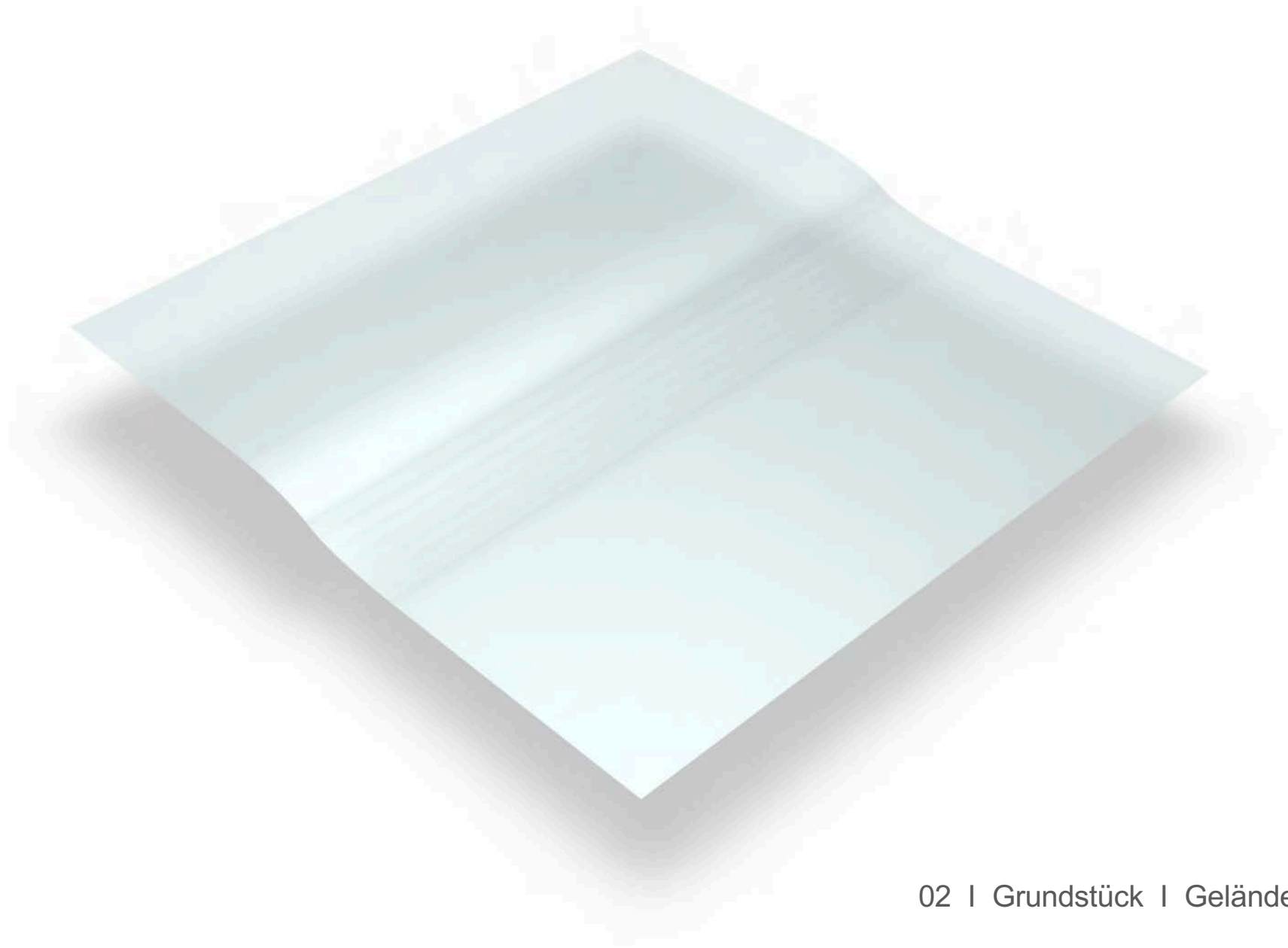
Optimierung | Varianten | A-V



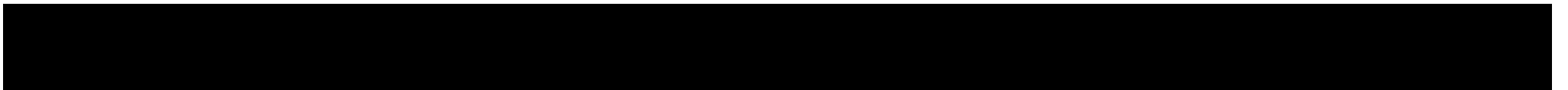


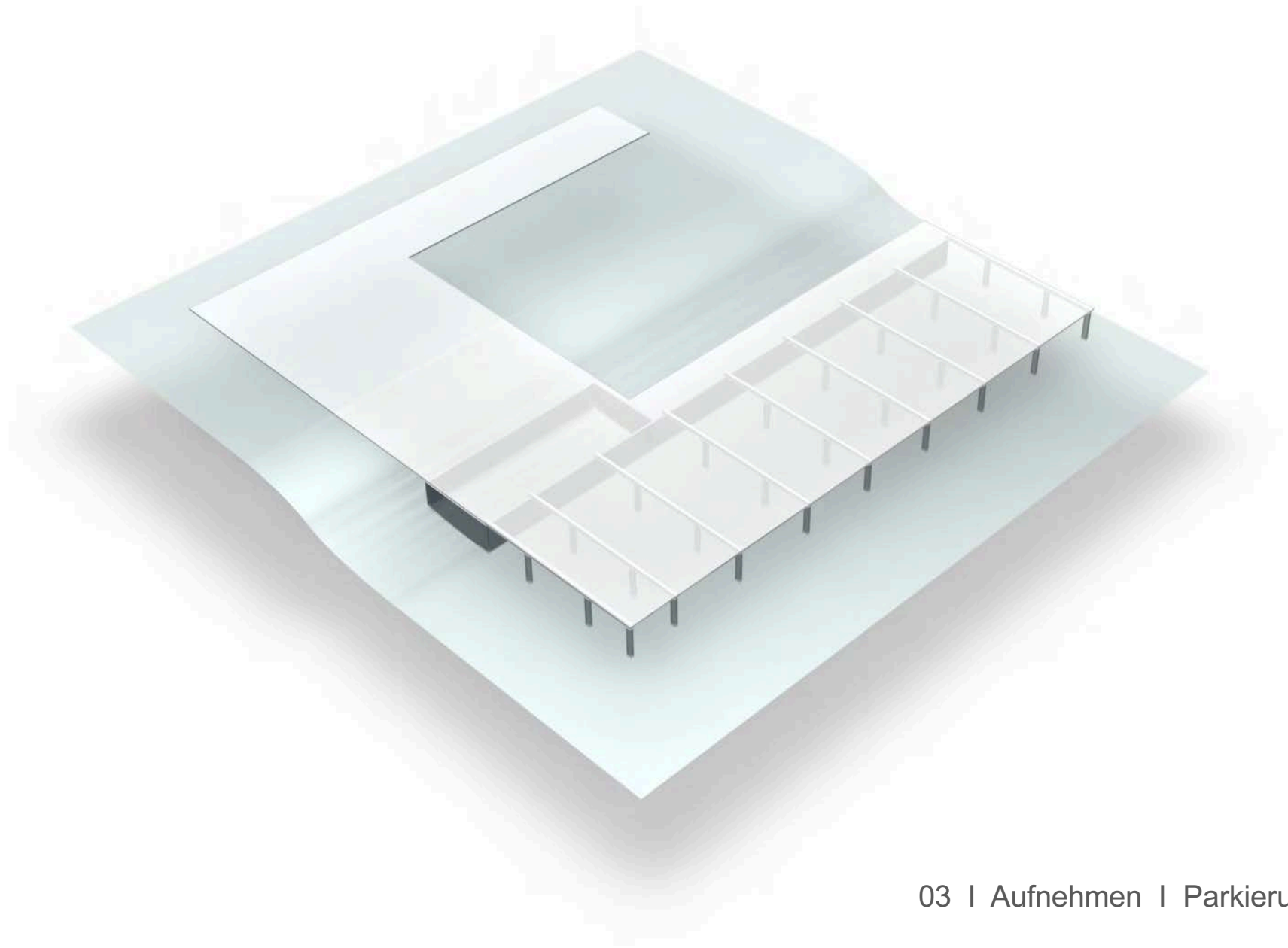
01 | Funktionen



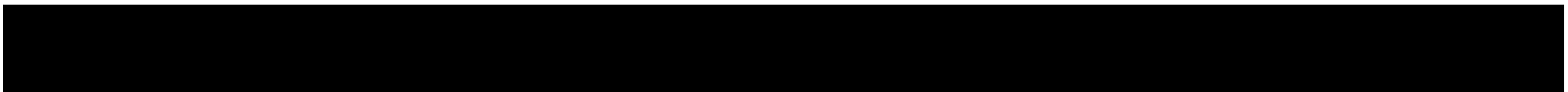


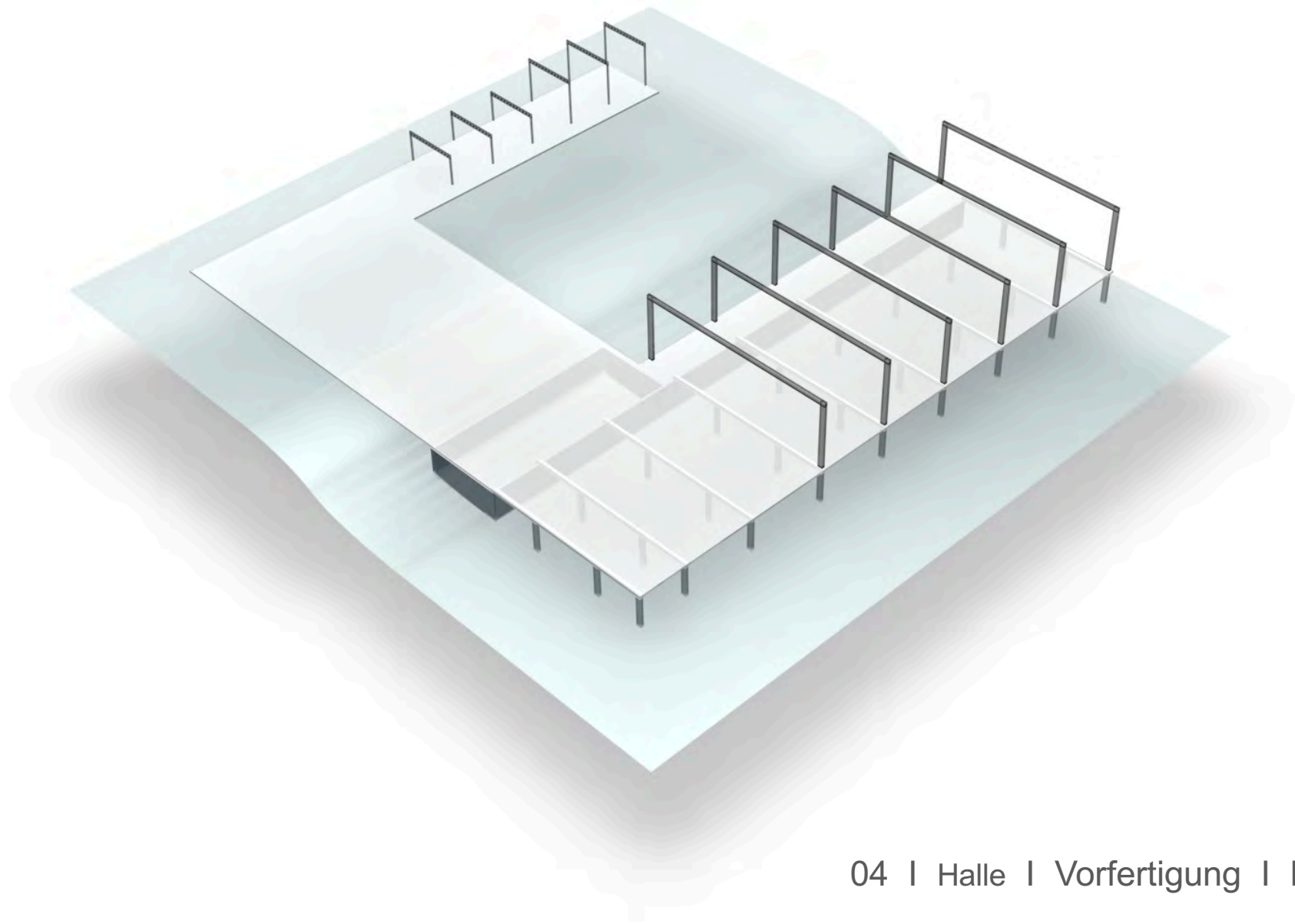
02 | Grundstück | Geländesprung



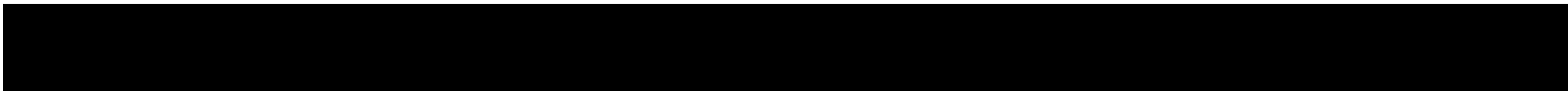


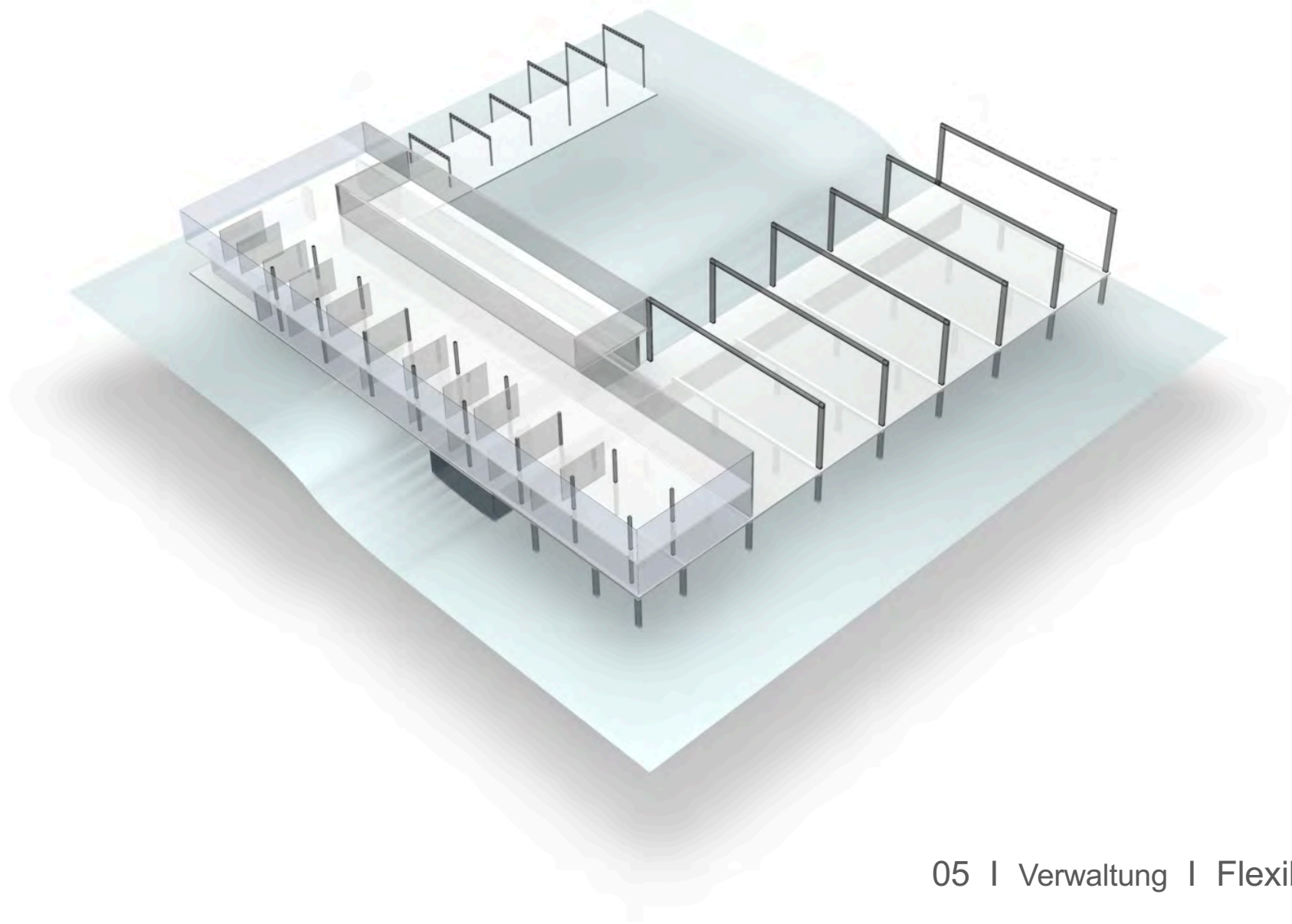
03 | Aufnahmen | Parkierung



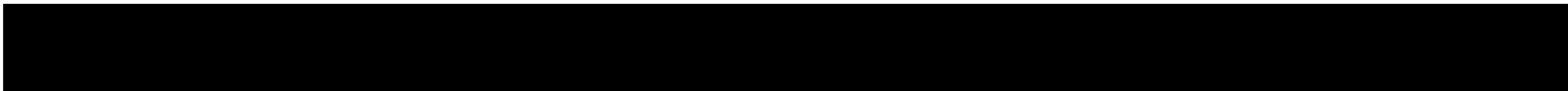


04 | Halle | Vorfertigung | Rahmen

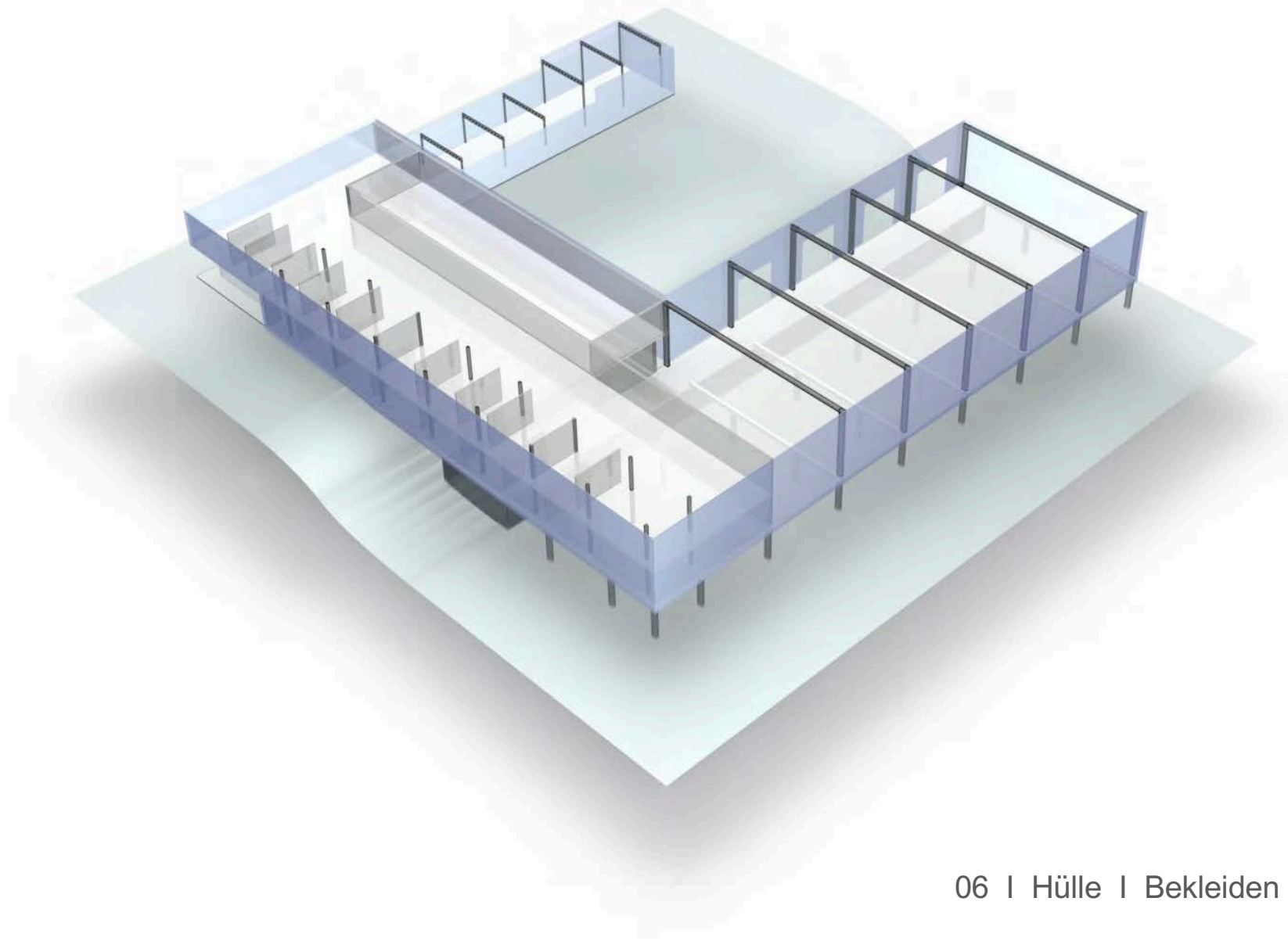




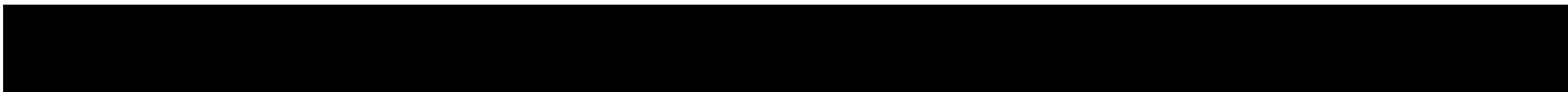
05 | Verwaltung | Flexibilität

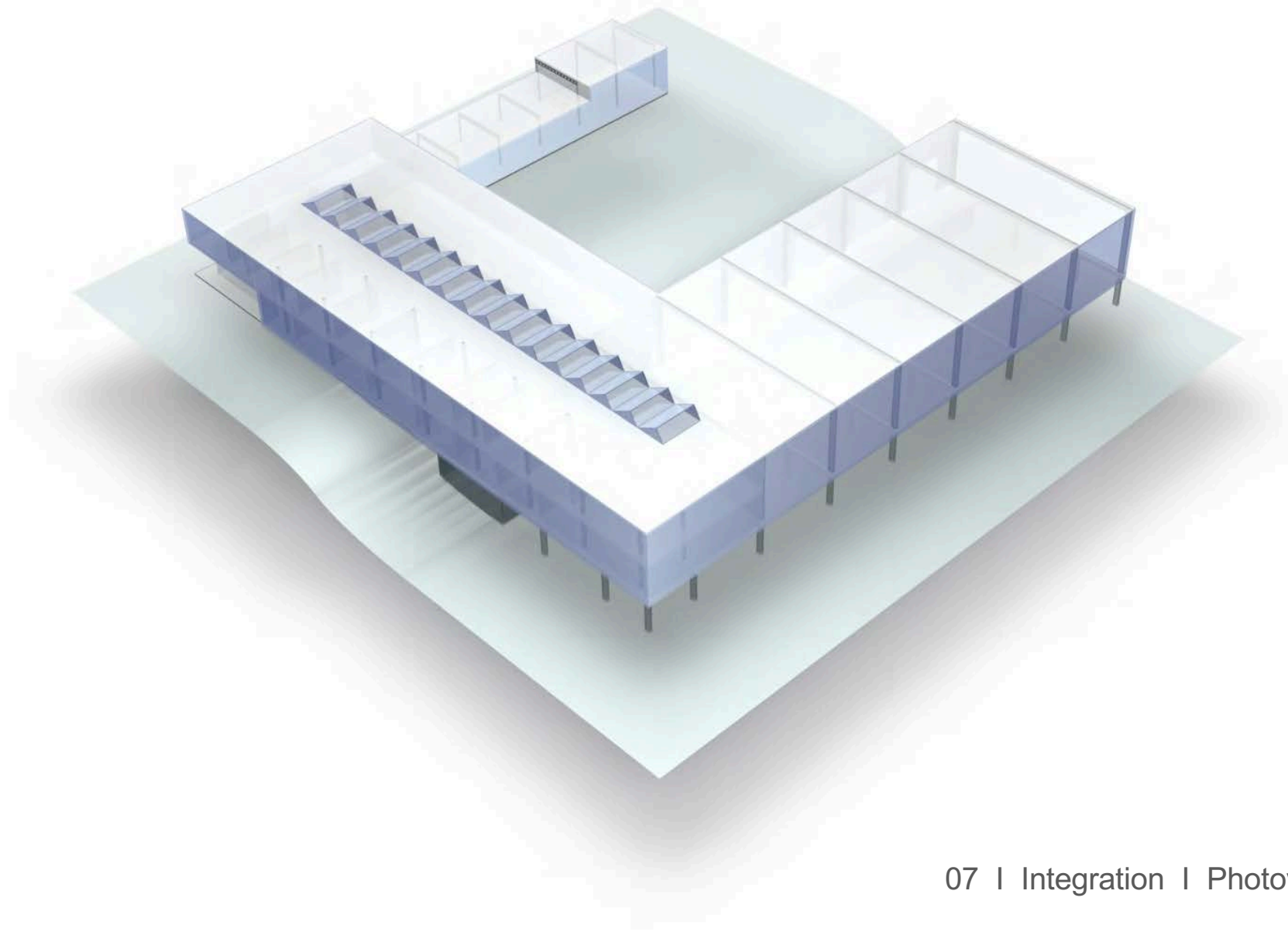




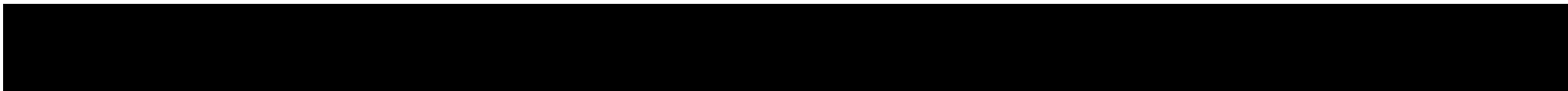


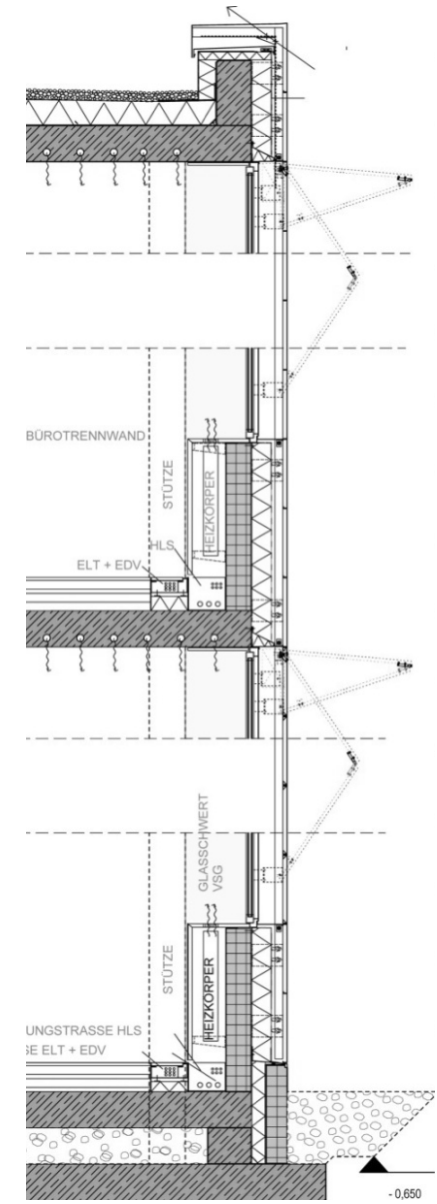
06 | Hülle | Bekleiden

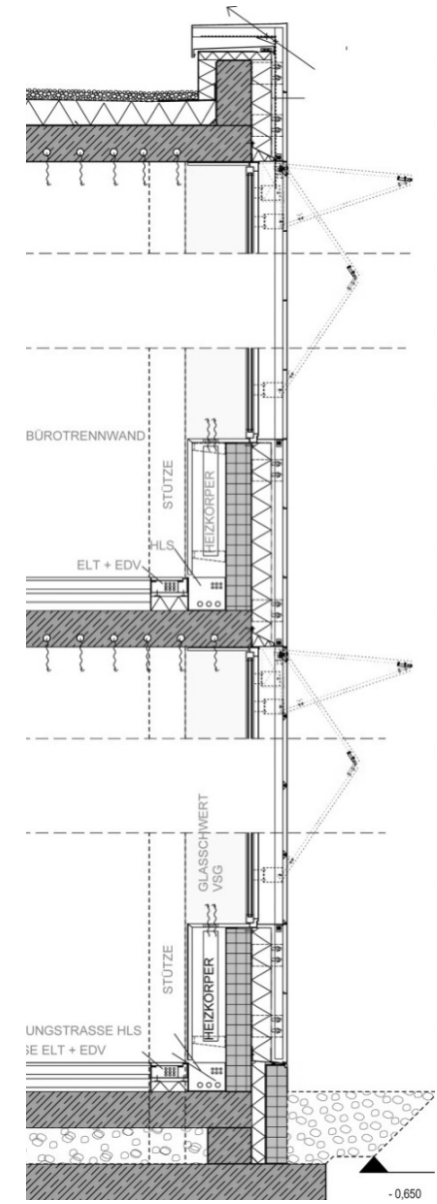


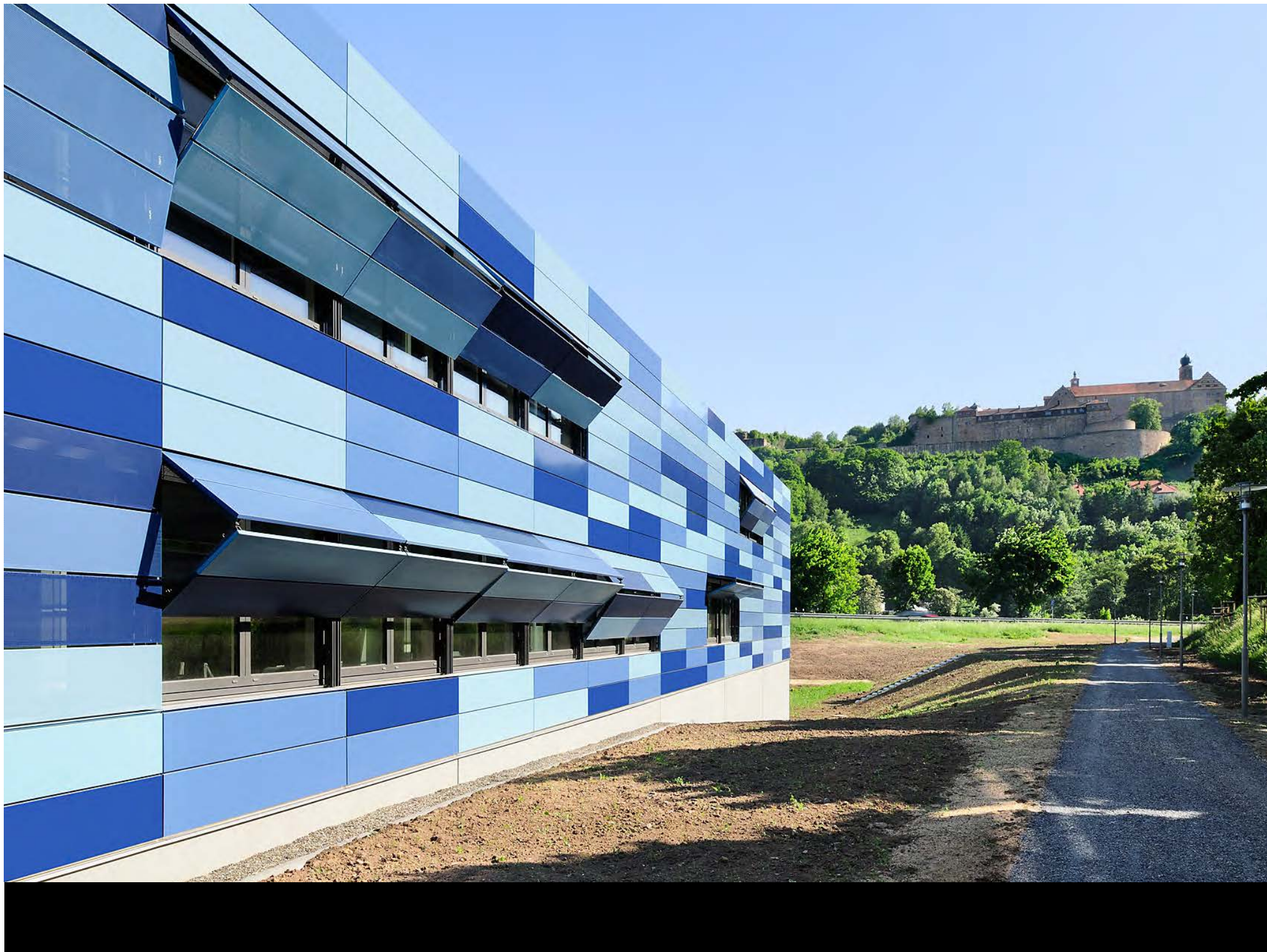


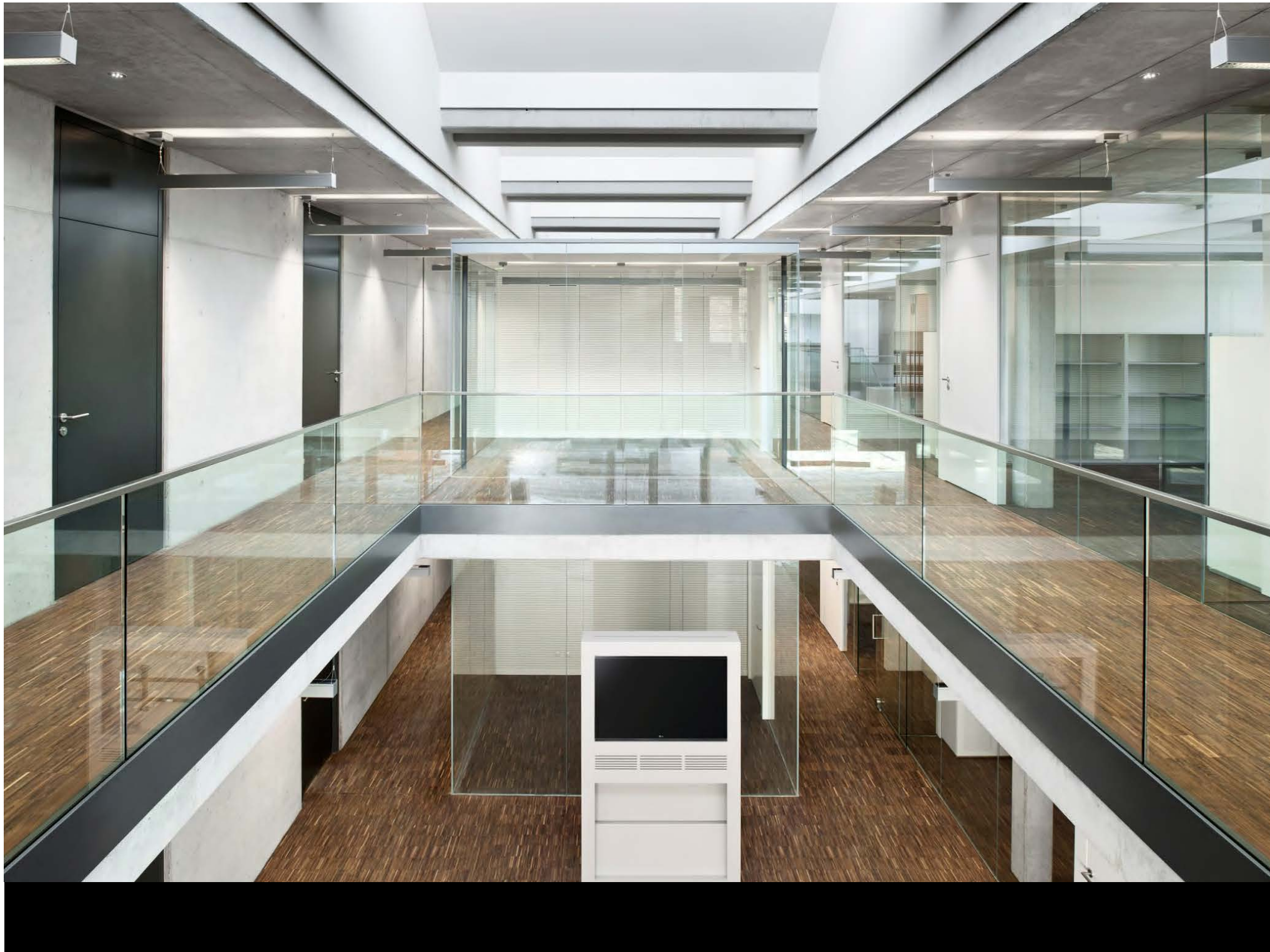
07 | Integration | Photovoltaik



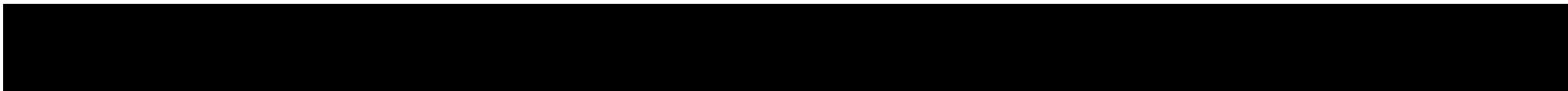
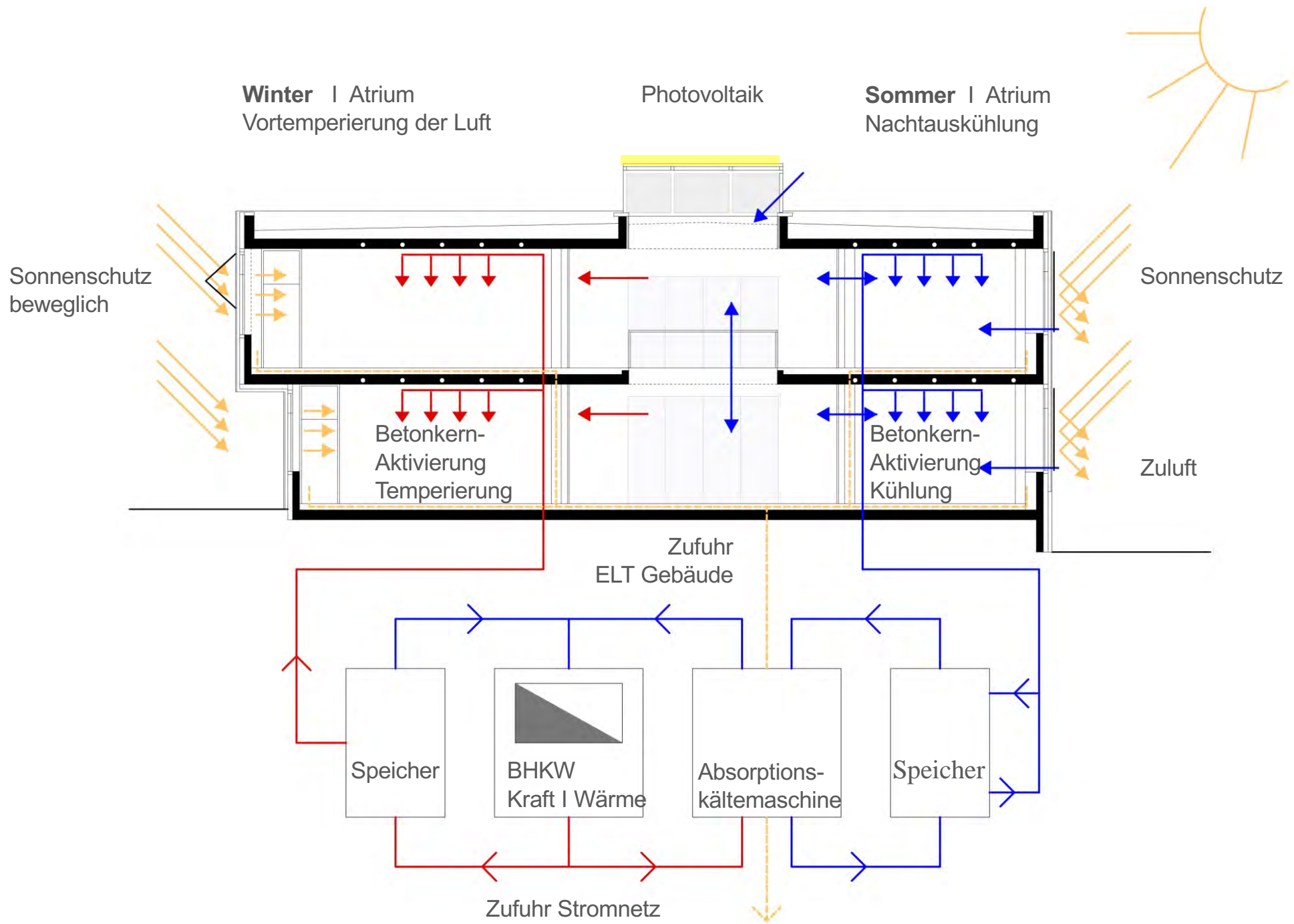












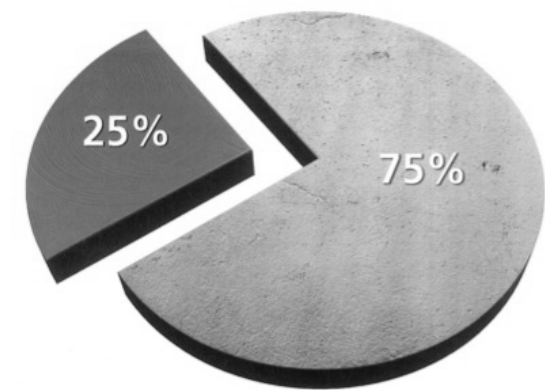






Reduce  
Reuse  
Recycle  
→  
Ressource  
Architektur

● vor 1979 errichtet ● nach 1979 errichtet



Aufstockung



Anbau



Füllung



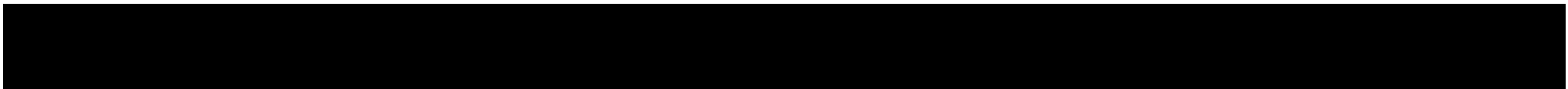
Umnutzung



Hülle



Umgang | Bestand







Identität + Impuls

# Neue Mitte Litzendorf

Sanierung des Bürgerhauses und Neubau einer  
Bücherei  
2010-2012



Neue Mitte Litzendorf

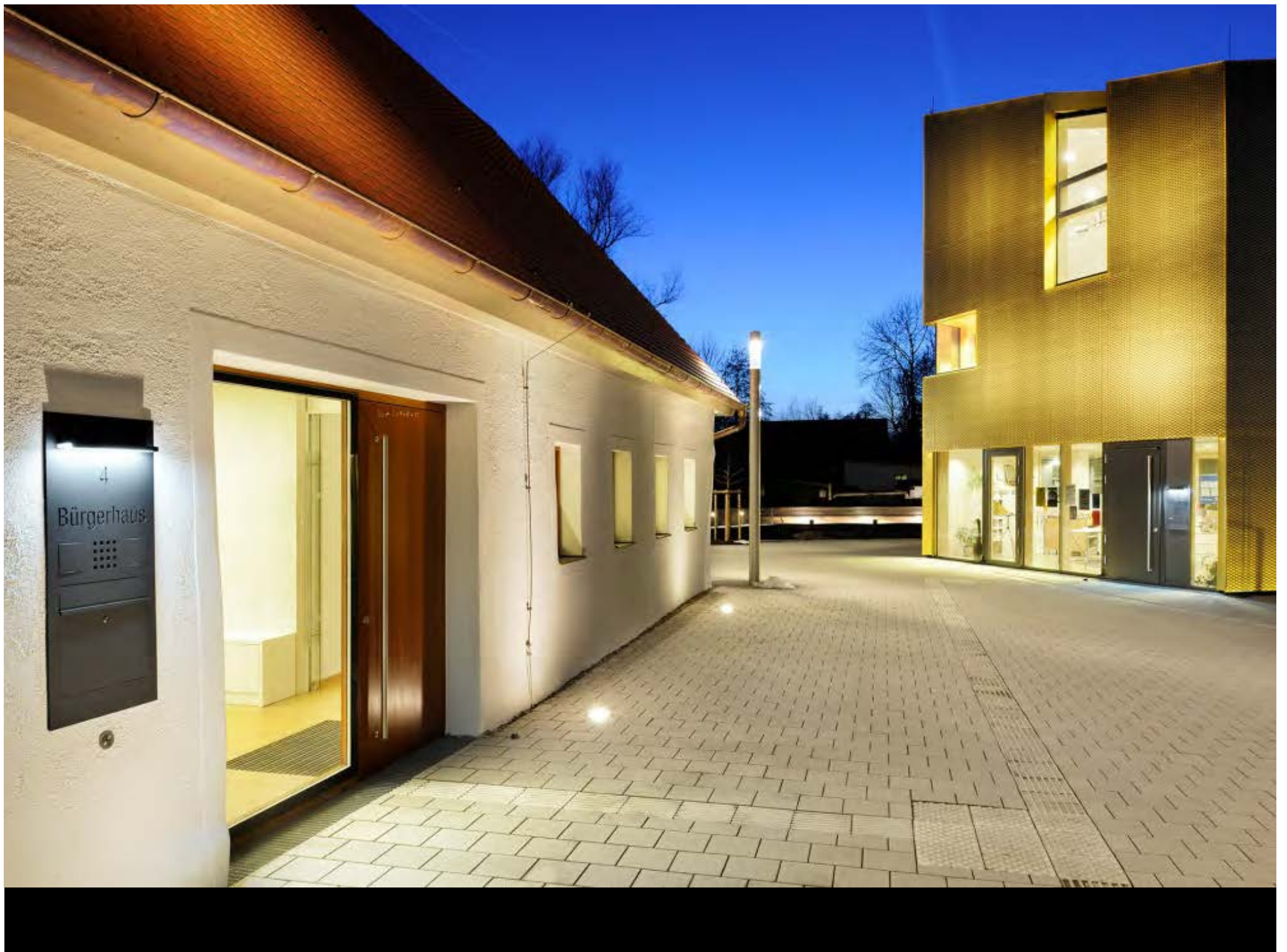


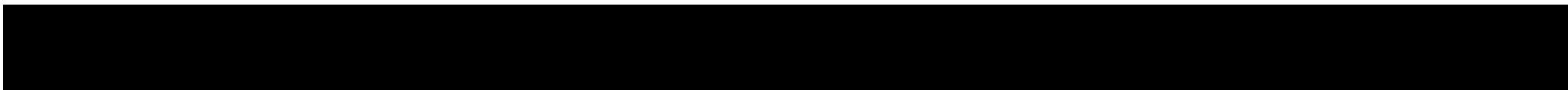
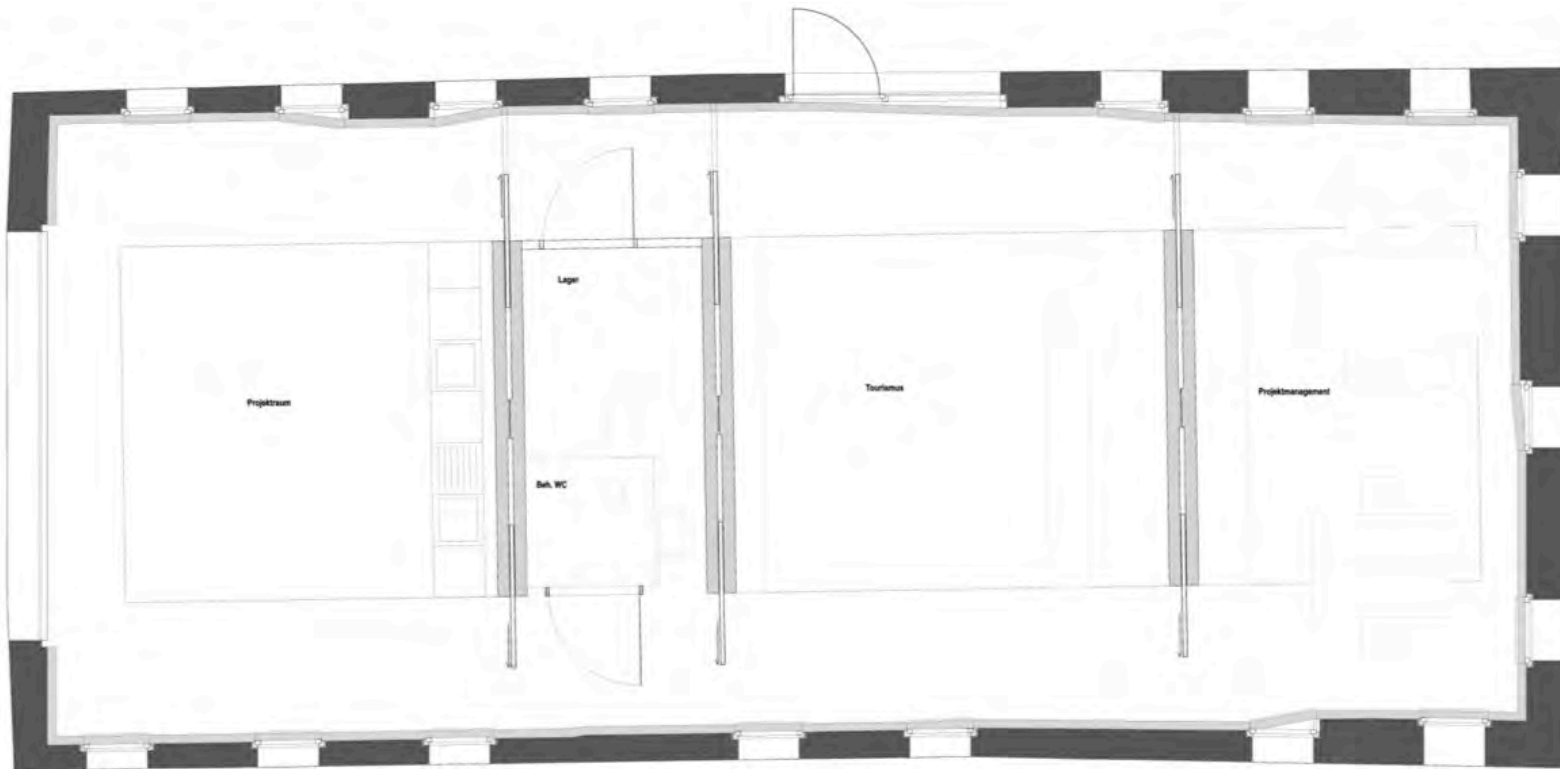
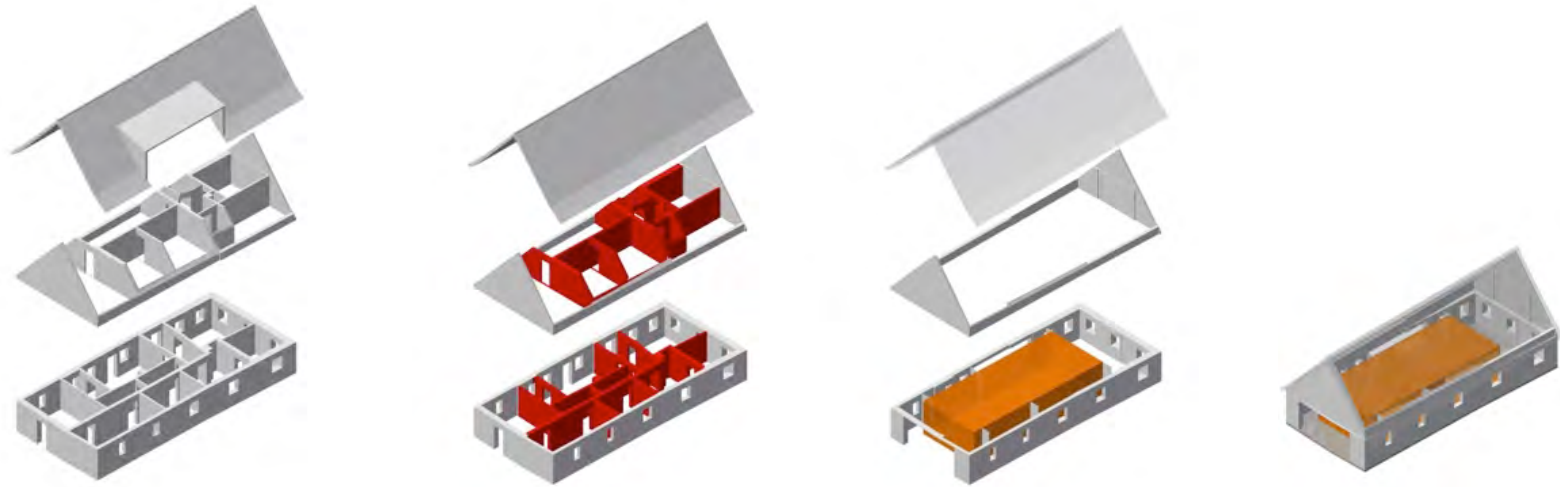


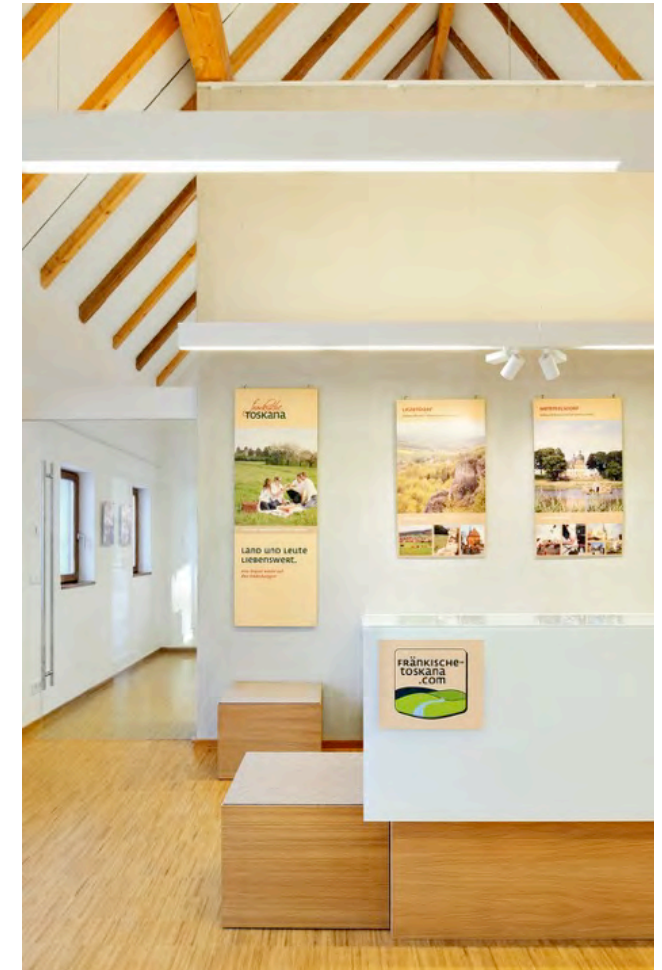














fränkische  
Toskana

Land und Leute  
Liebenswert.

Eine Region, die sich auf  
Ihre Bedürfnisse einstellt.

LIEBENSWEILICH

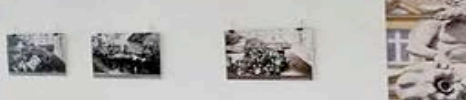
KUNST- UND KULTUR

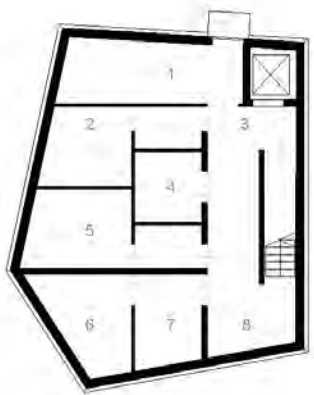
WIRTSCHAFTSLEBEN

fränkische-toskana  
- ein Ort



fränkische-  
toskana  
.com





- 1 5
- Grundriss Kellergeschoss
- 1 Lager | Archiv
  - 2 WC Damen
  - 3 Flur
  - 4 Behinderten WC
  - 5 WC Herren
  - 6 Technik
  - 7 Pulzraum
  - 8 Stuhlzimmer



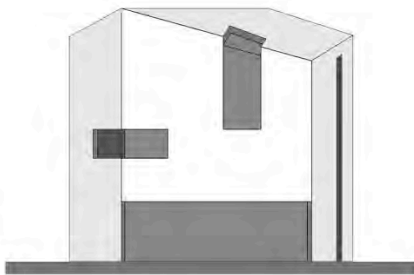
- 1 5
- Grundriss Erdgeschoss
- 1 Veranstaltung
  - 2 Ausgabe



- 1 5
- Grundriss 1. Obergeschoss
- 1 Lesebereich

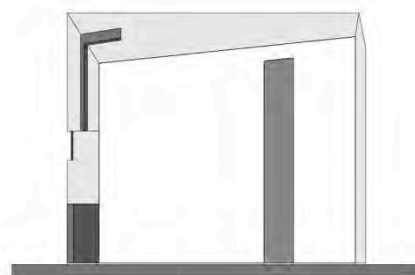


- 1 5
- Grundriss 2. Obergeschoss
- 1 Lesebereich



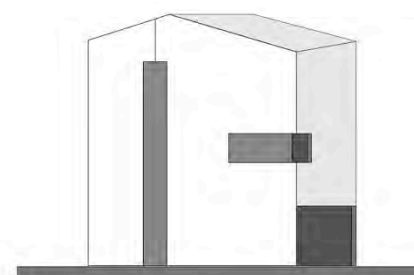
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Ansicht Süd



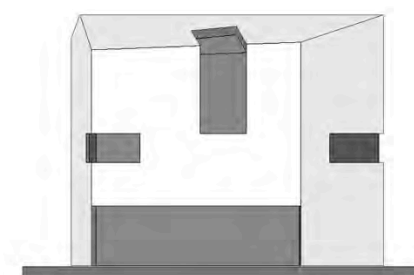
1 5

Ansicht Ost



1 5

Ansicht Nord



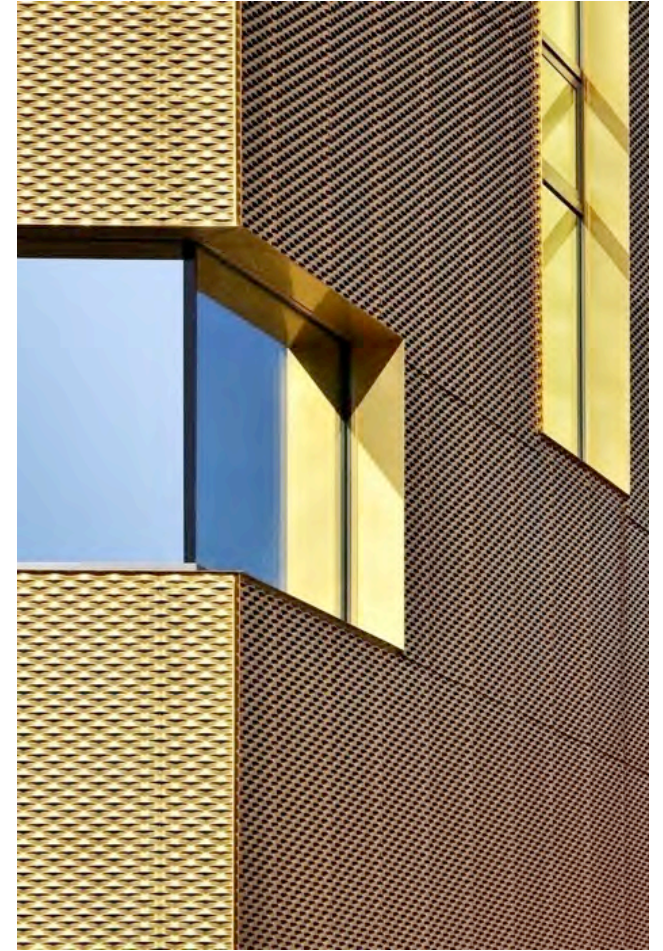
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Ansicht West

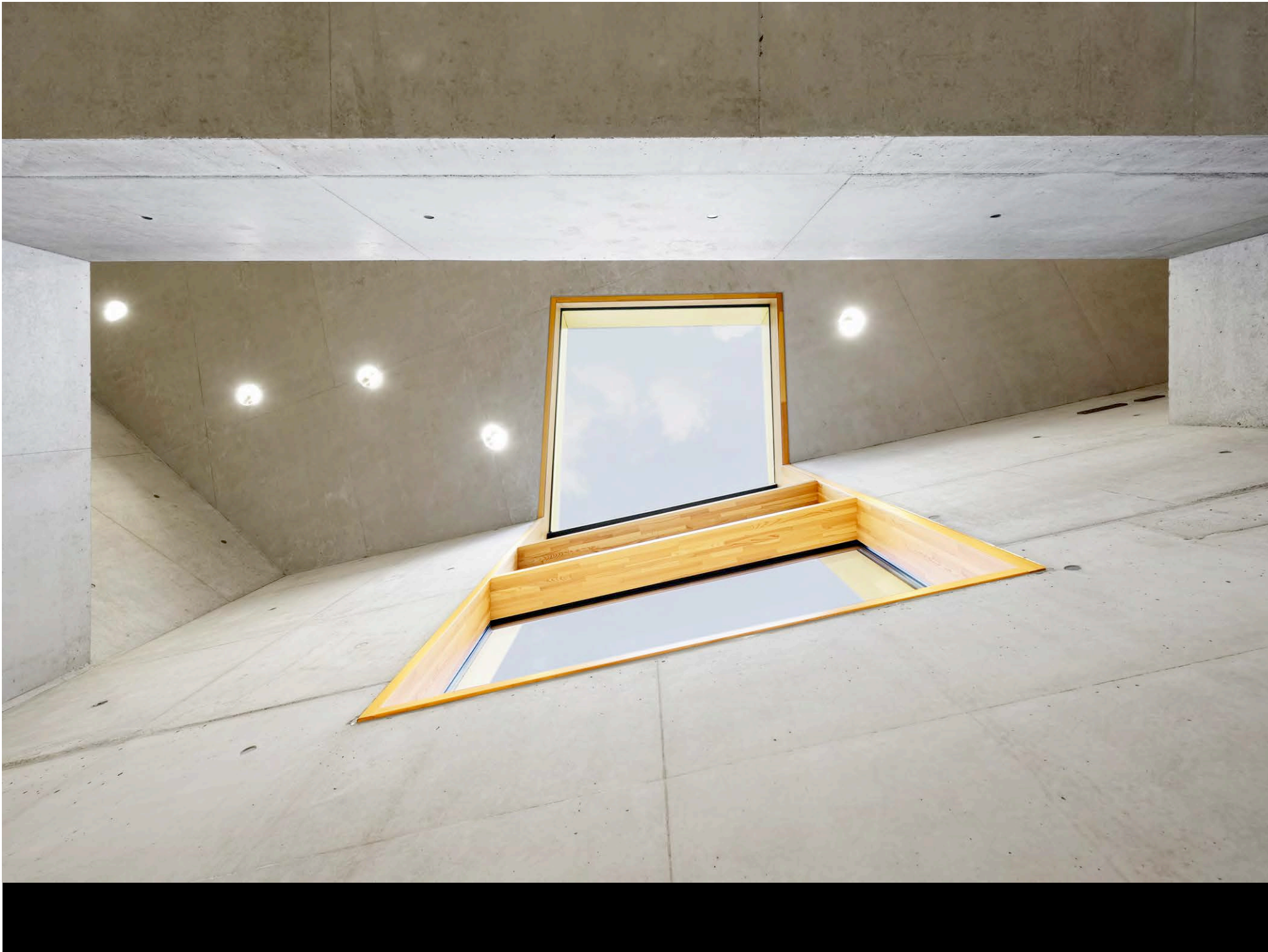




















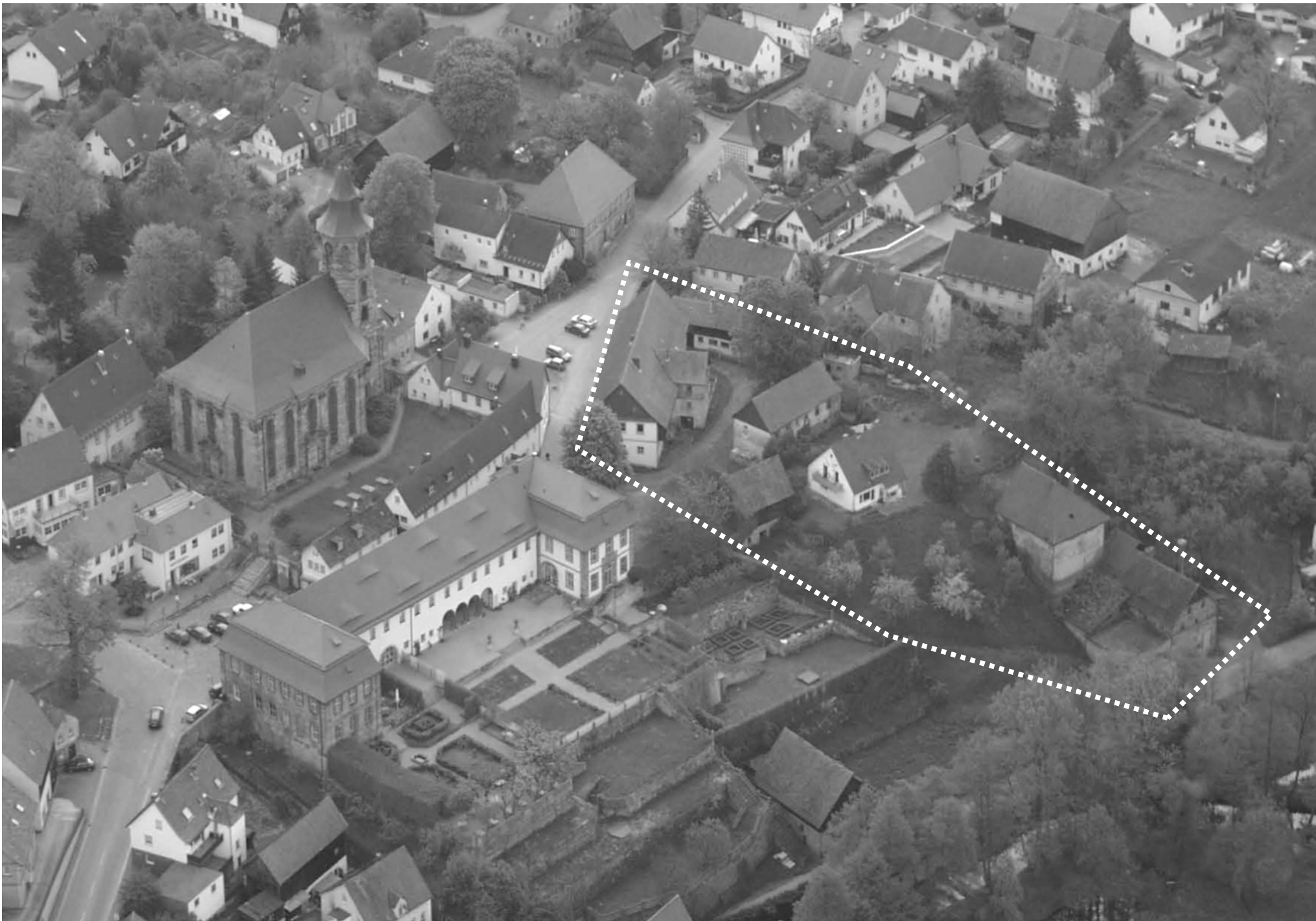


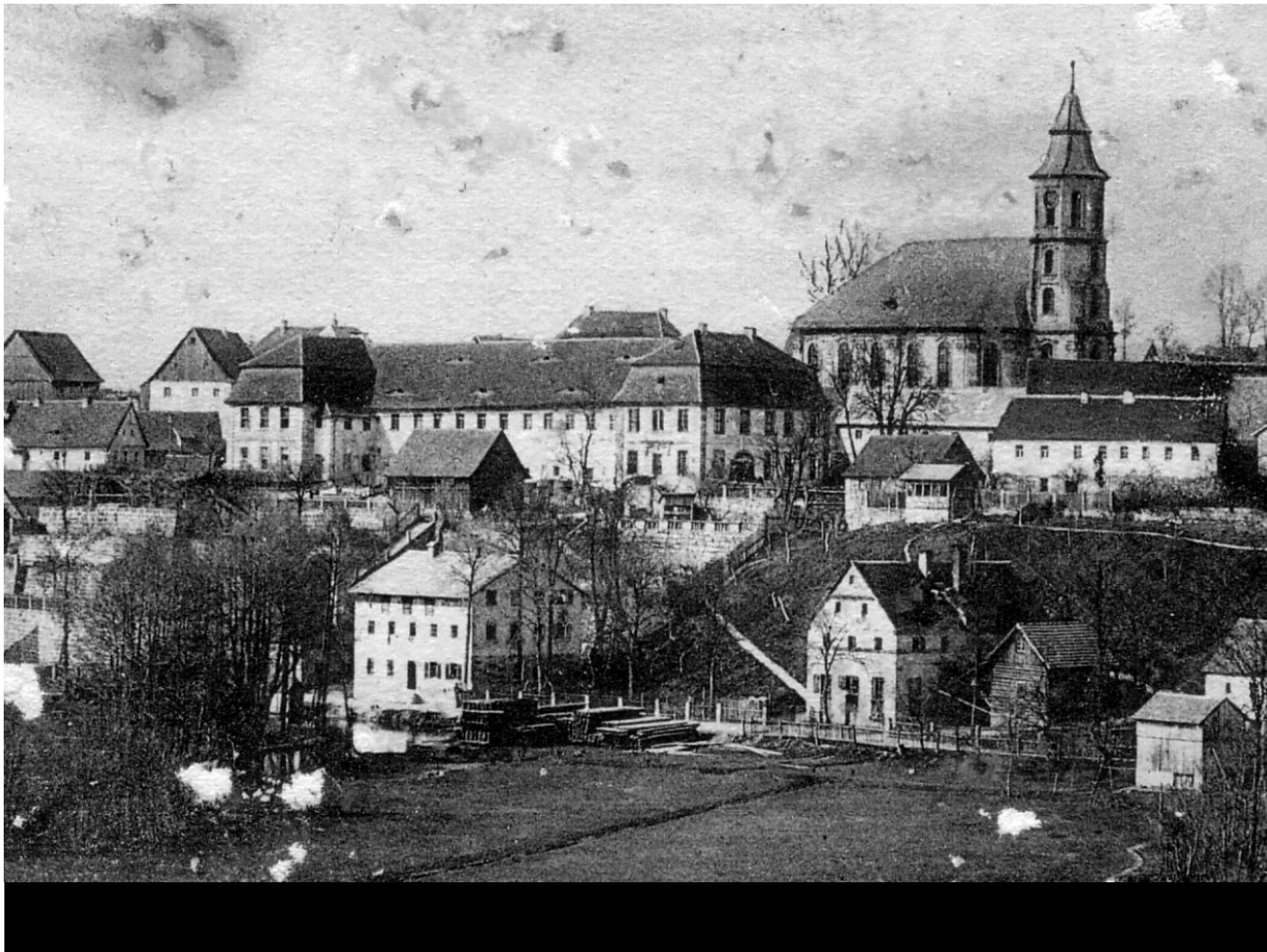
entdecken + erneuern

# Hölzel-Areal Neudrossenfeld

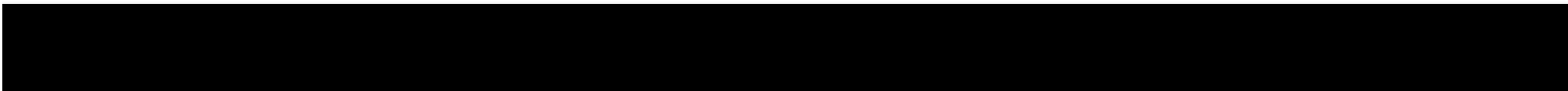
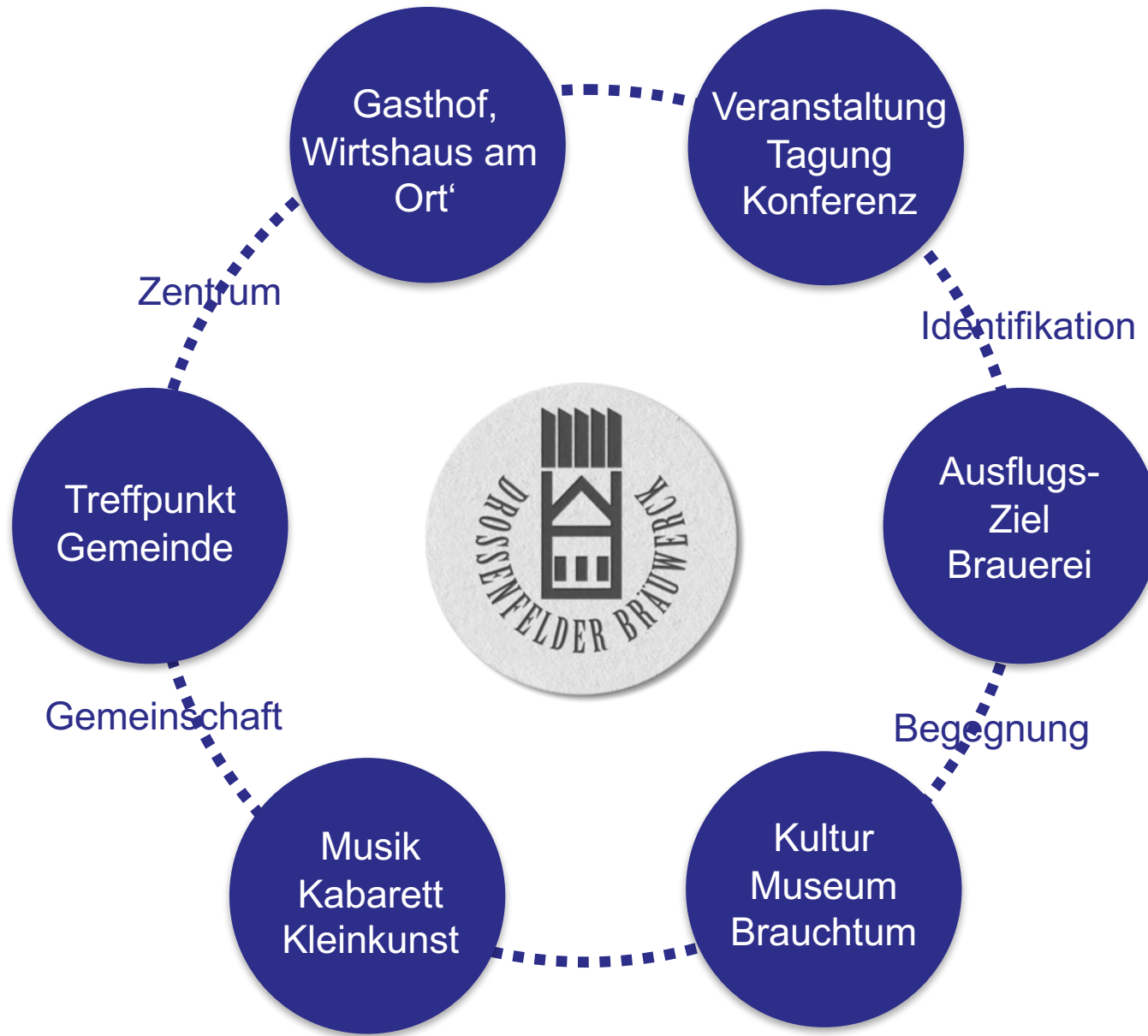
Revitalisierung eines  
Gasthof- und Brauereigeländes  
2009-2013 | ArGe mit Gatz





















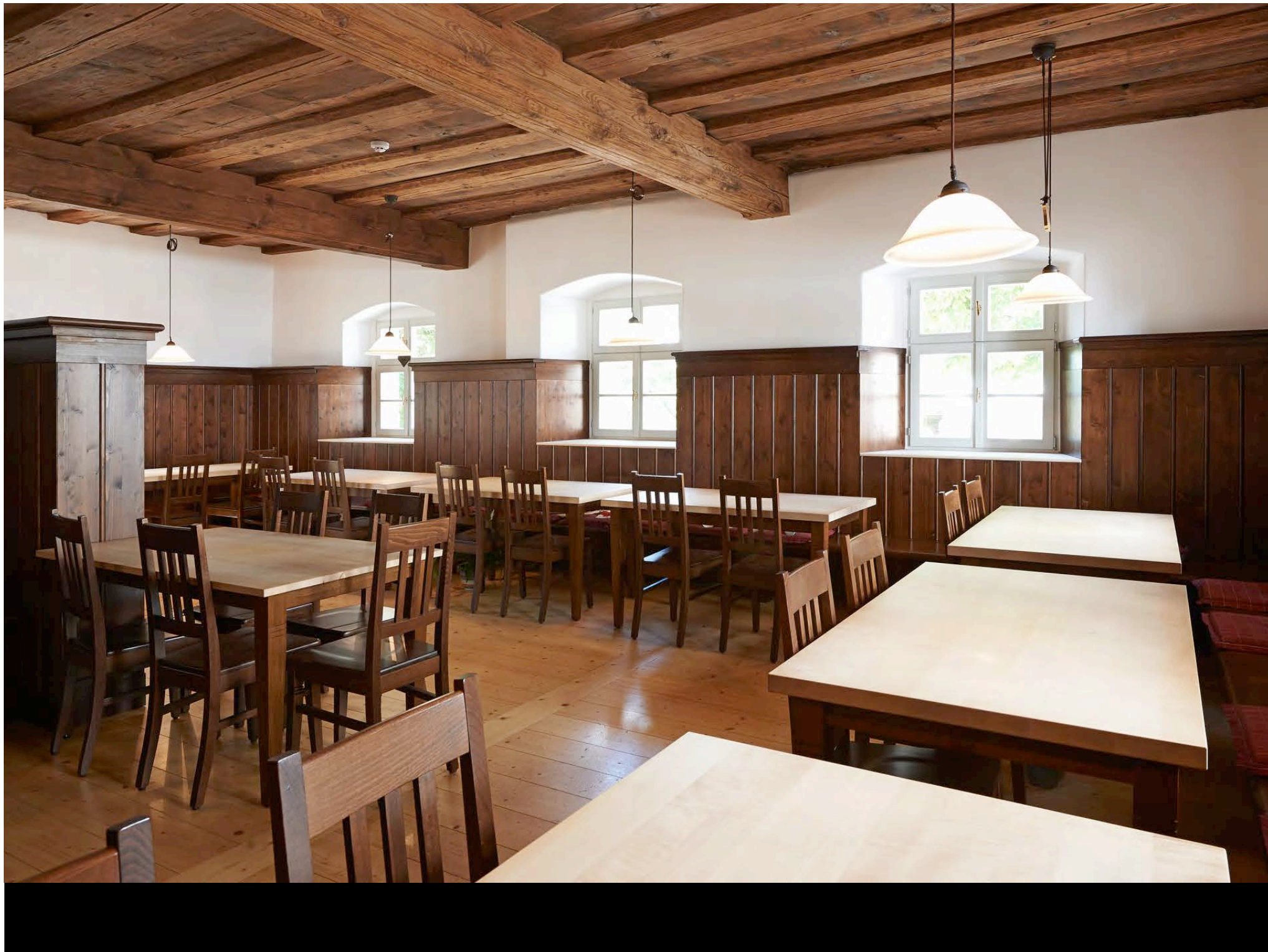
























# Aussen



0-0,25 m Backstein

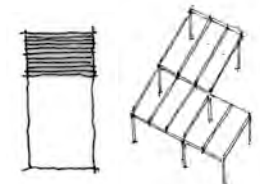
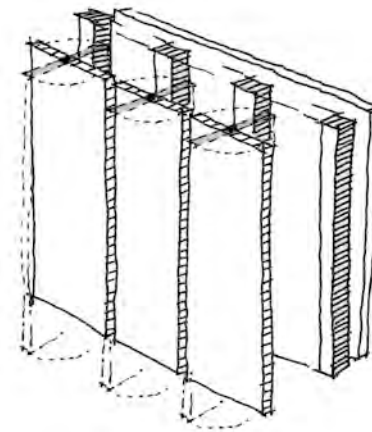
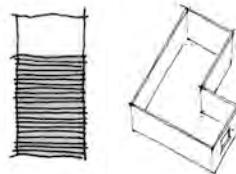
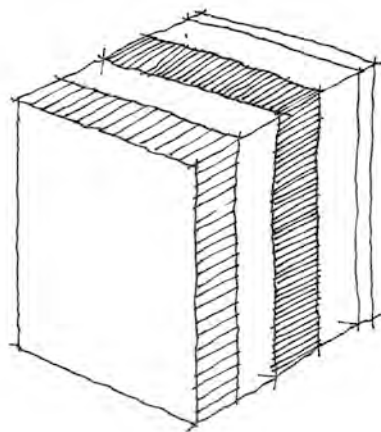
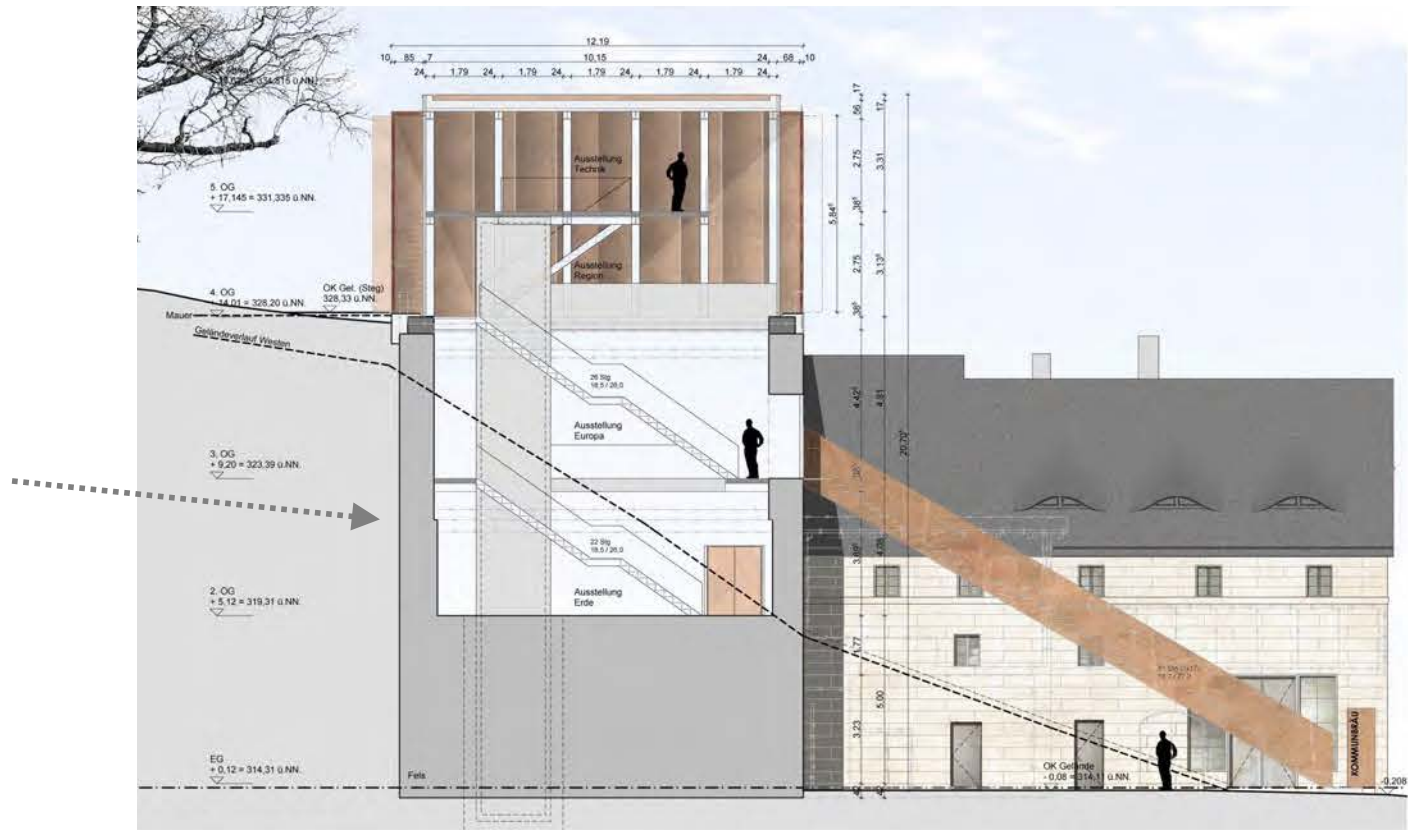
-0,5 m Teerkork /  
Wandfüllung

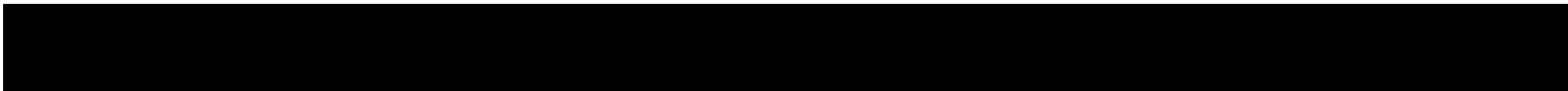
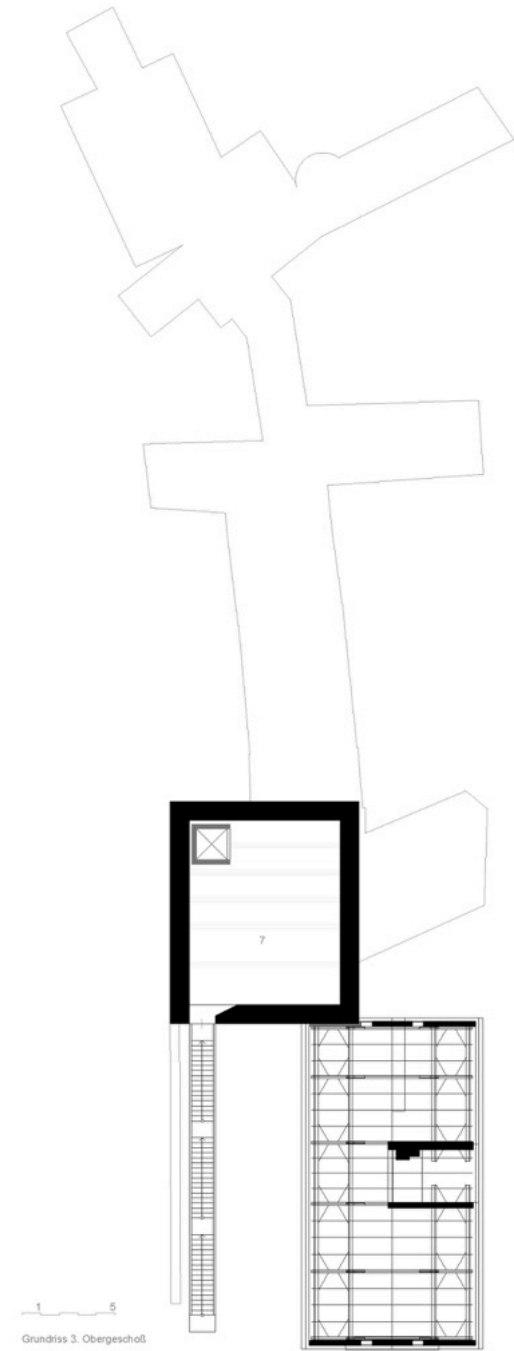
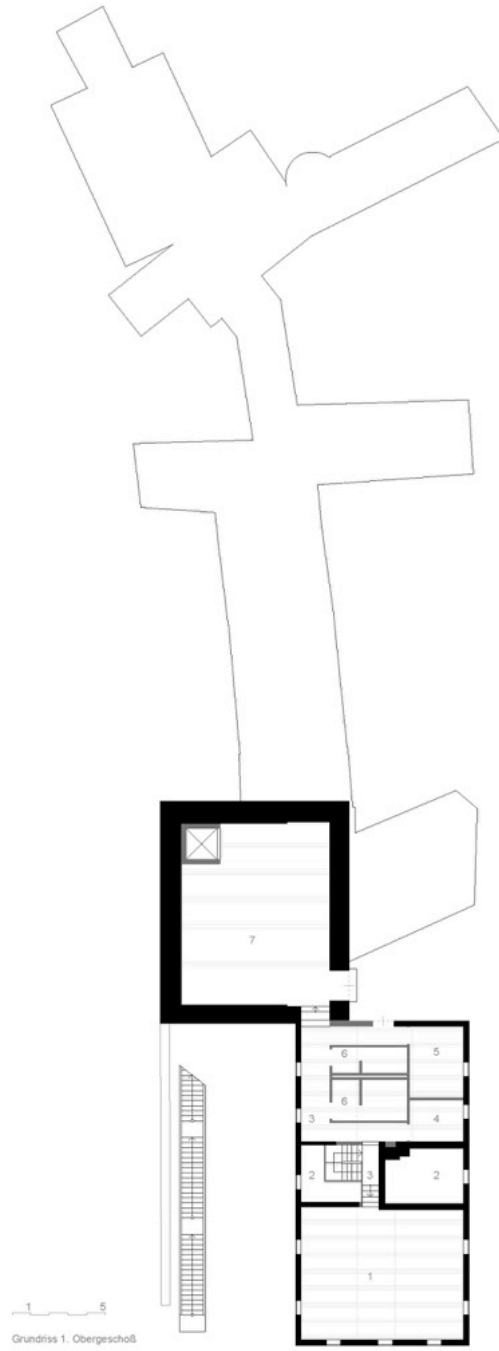
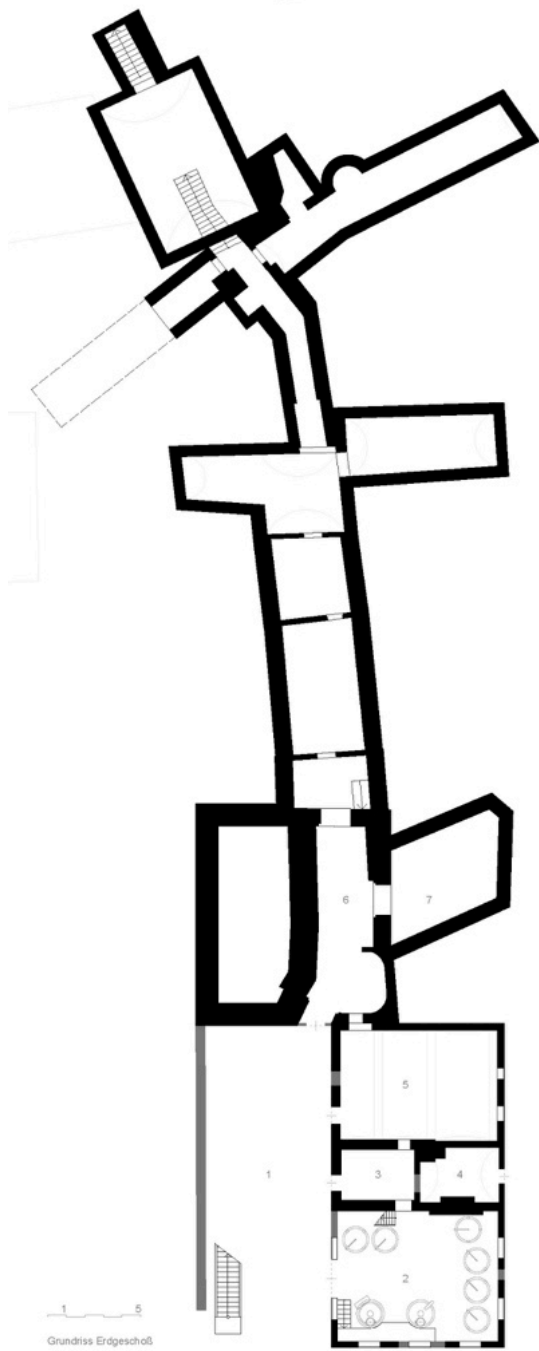
-0,90 m Backstein

-1,08 m Teerkork /  
Wandfüllung

-1,10 m Putz

# Innen

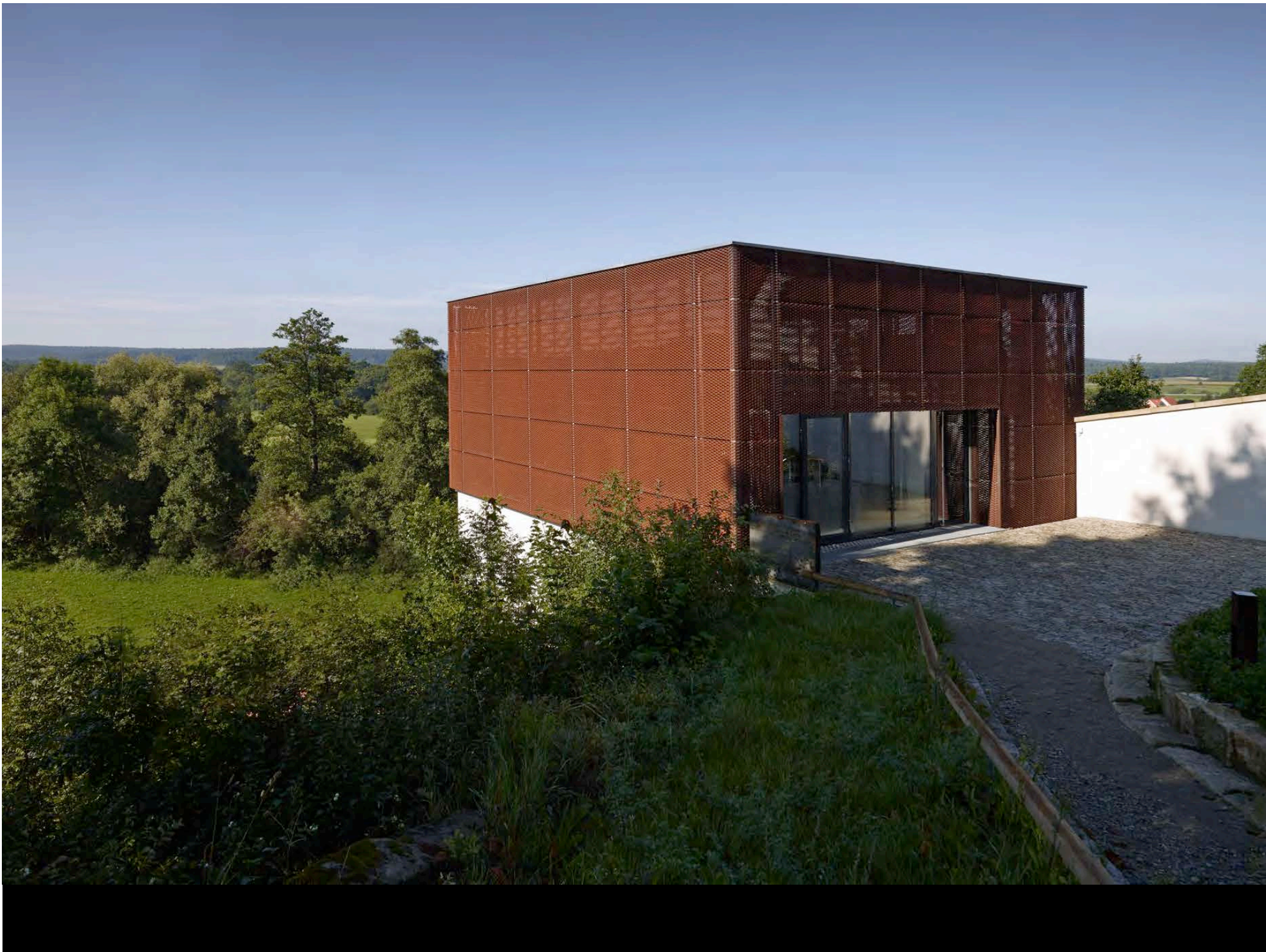


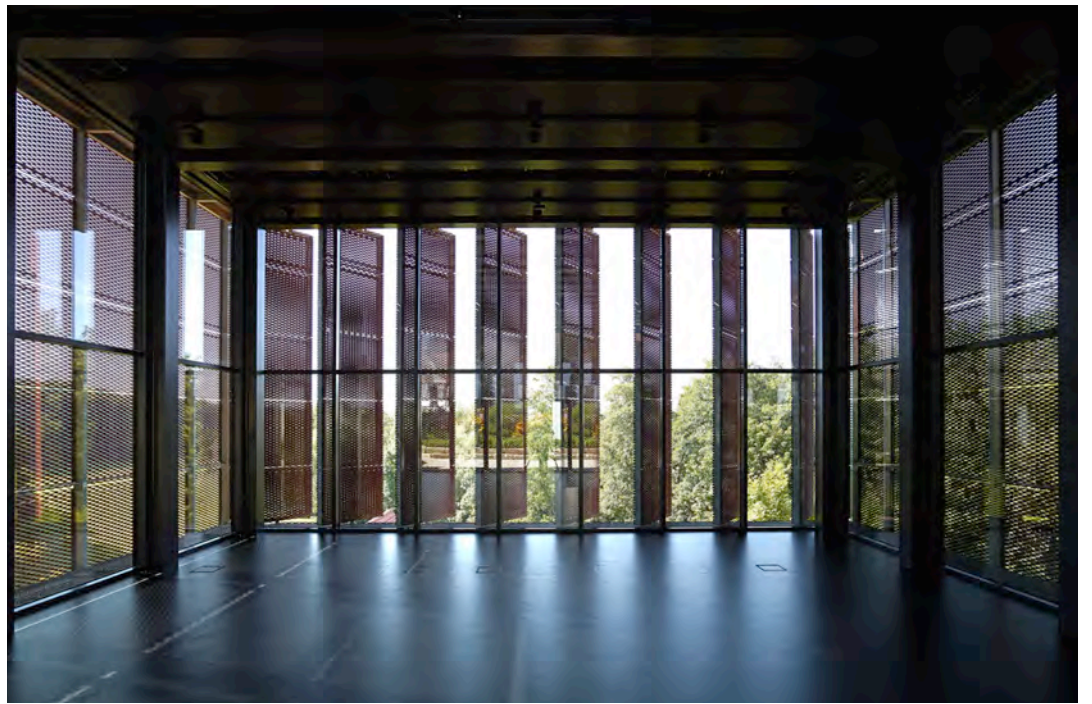








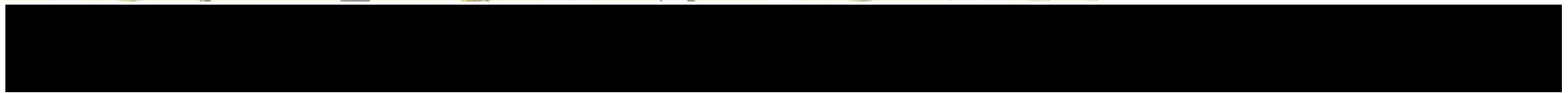
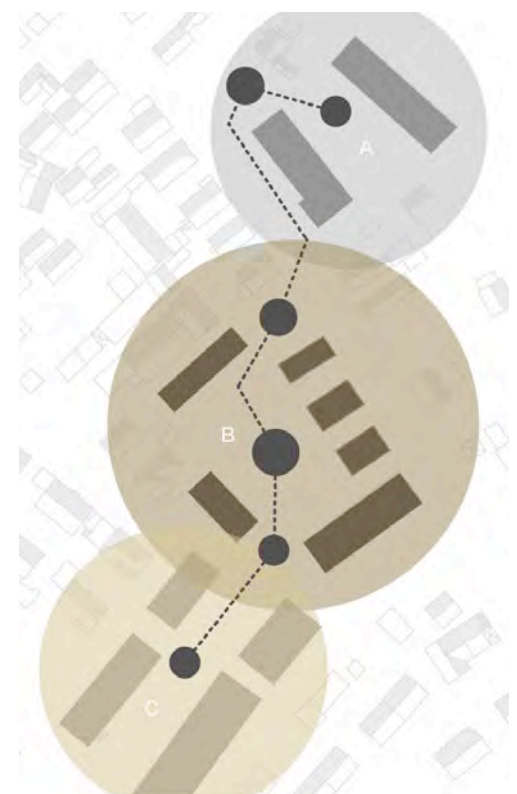
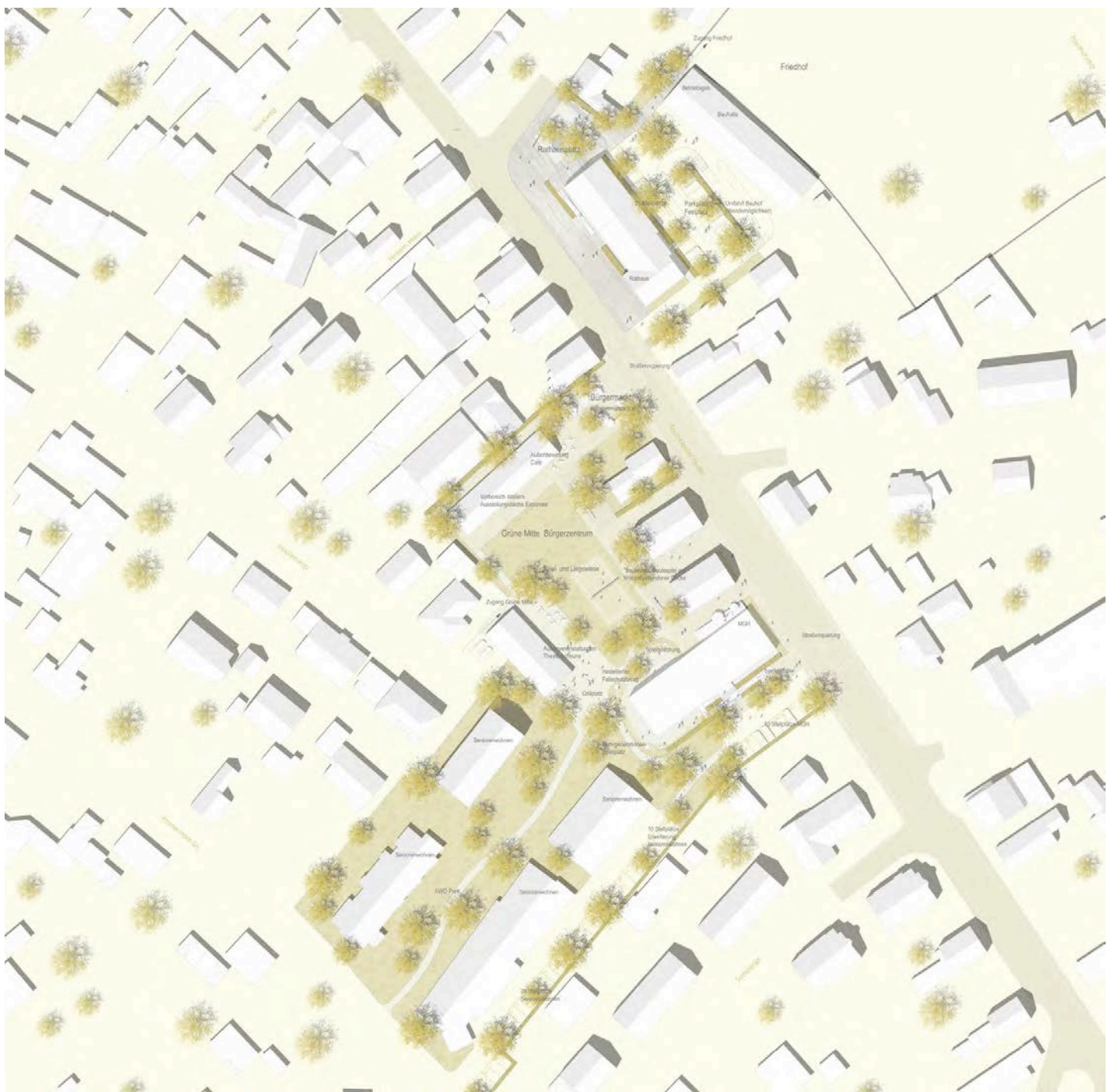


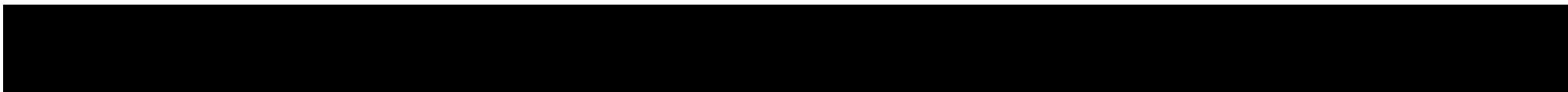


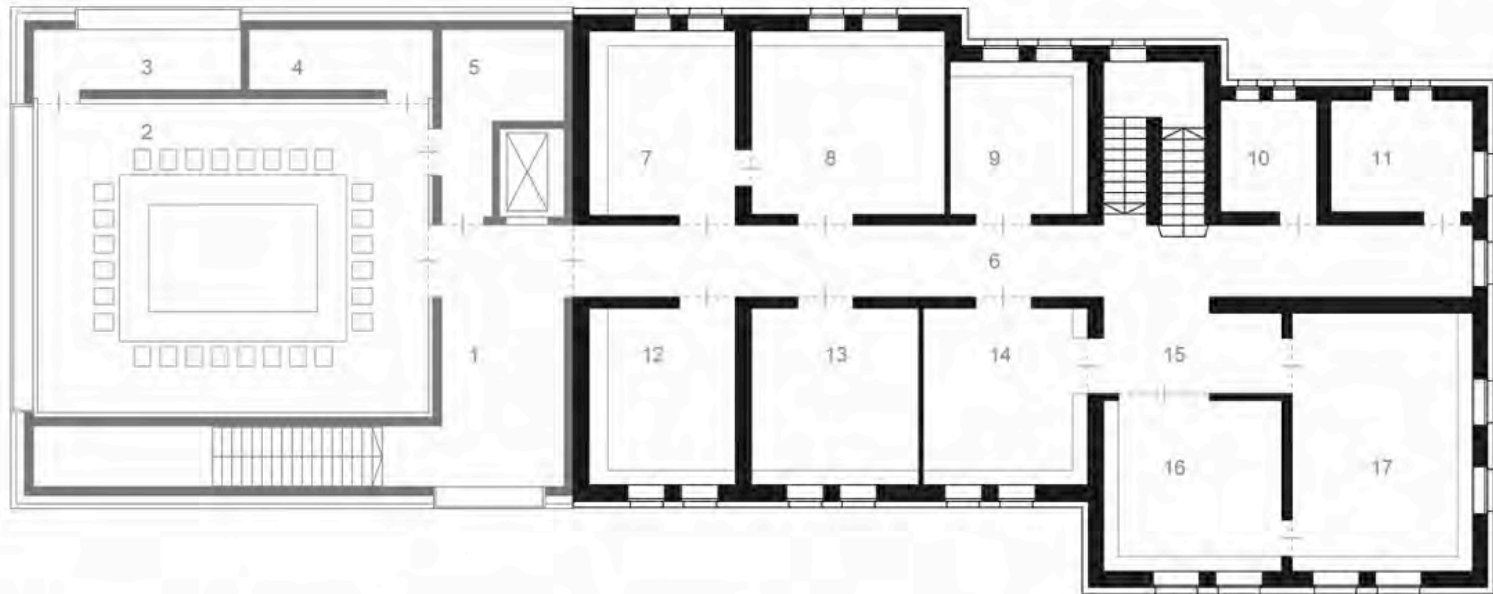




Bürgerzentrum Strullendorf  
Rathaus und Bauhof

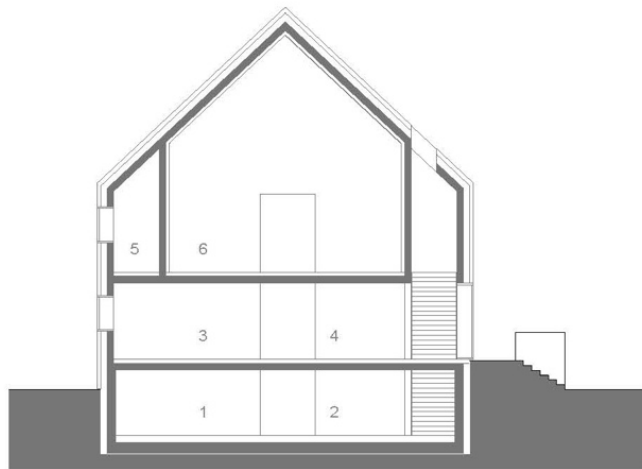






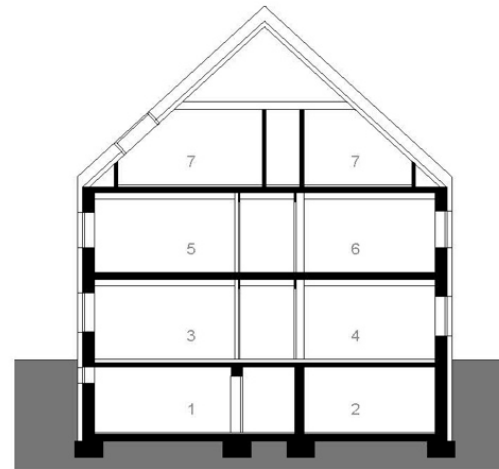
1 5  
Grundriss 1, Obergeschoss

- |                            |                     |
|----------------------------|---------------------|
| 1 Foyer                    | 10 WC Damen         |
| 2 Sitzungs- und Bürgersaal | 11 WC Herren        |
| 3 Stuhllager               | 12 Besprechung      |
| 4 Technik                  | 13 Steuerstelle     |
| 5 Teeküche                 | 14 Geschäftsleitung |
| 6 Flur                     | 15 Wartezone        |
| 7 Kämmerer                 | 16 Sekretariat      |
| 8 Kasse                    | 17 Bürgermeister    |
| 9 Gebühren                 |                     |



Schnitt Neubau

- 1 Lüftung
- 2 Archiv | Lager
- 3 Information
- 4 Windfang | Foyer
- 5 Stuhllager
- 6 Sitzungs- | Bürgersaal



Schnitt Altbau

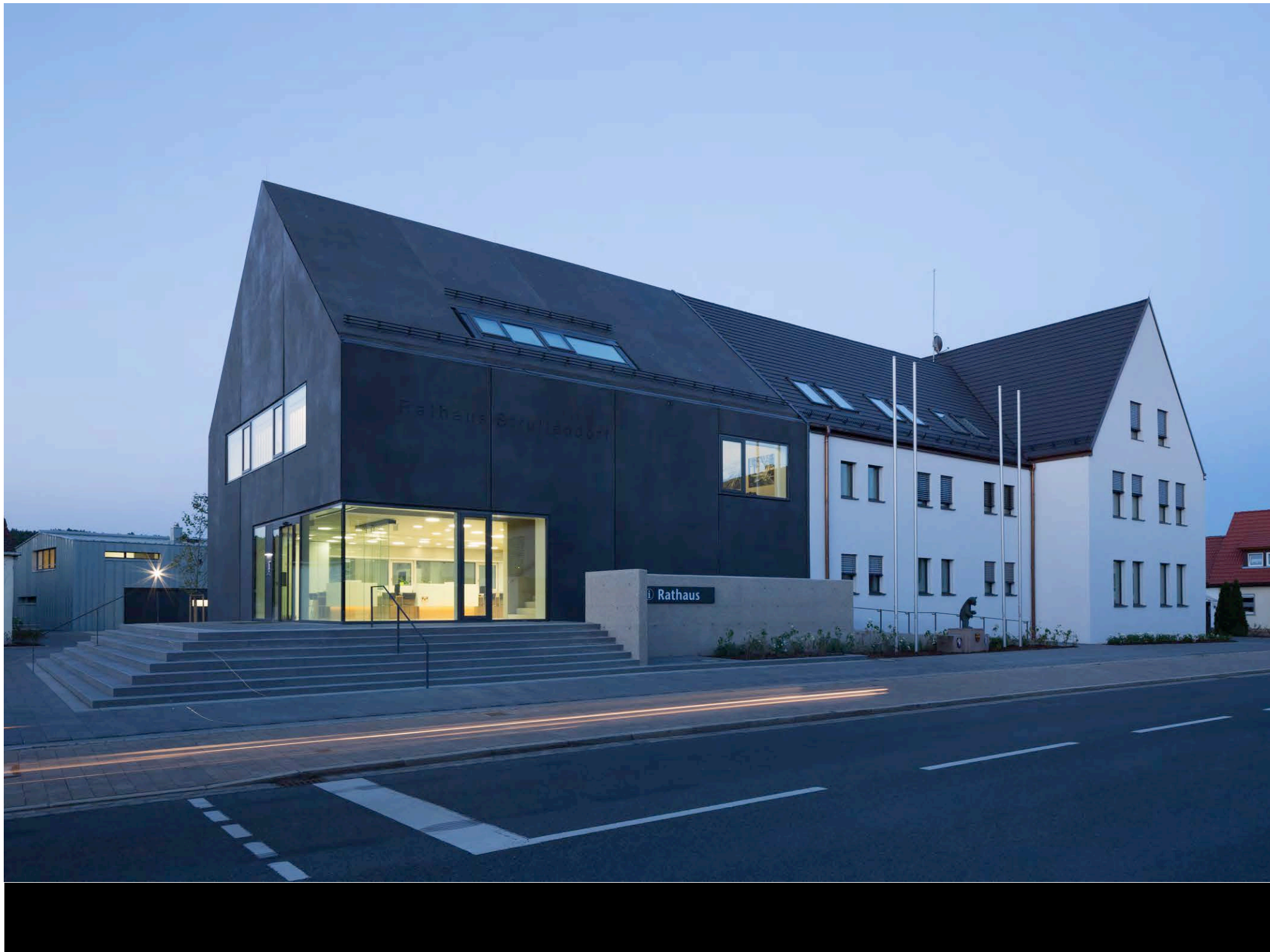
- 1 Technik
- 2 Abstellraum
- 3 Personalwesen
- 4 Bauamt
- 5 Kasse
- 6 Steuerstelle
- 7 Registratur





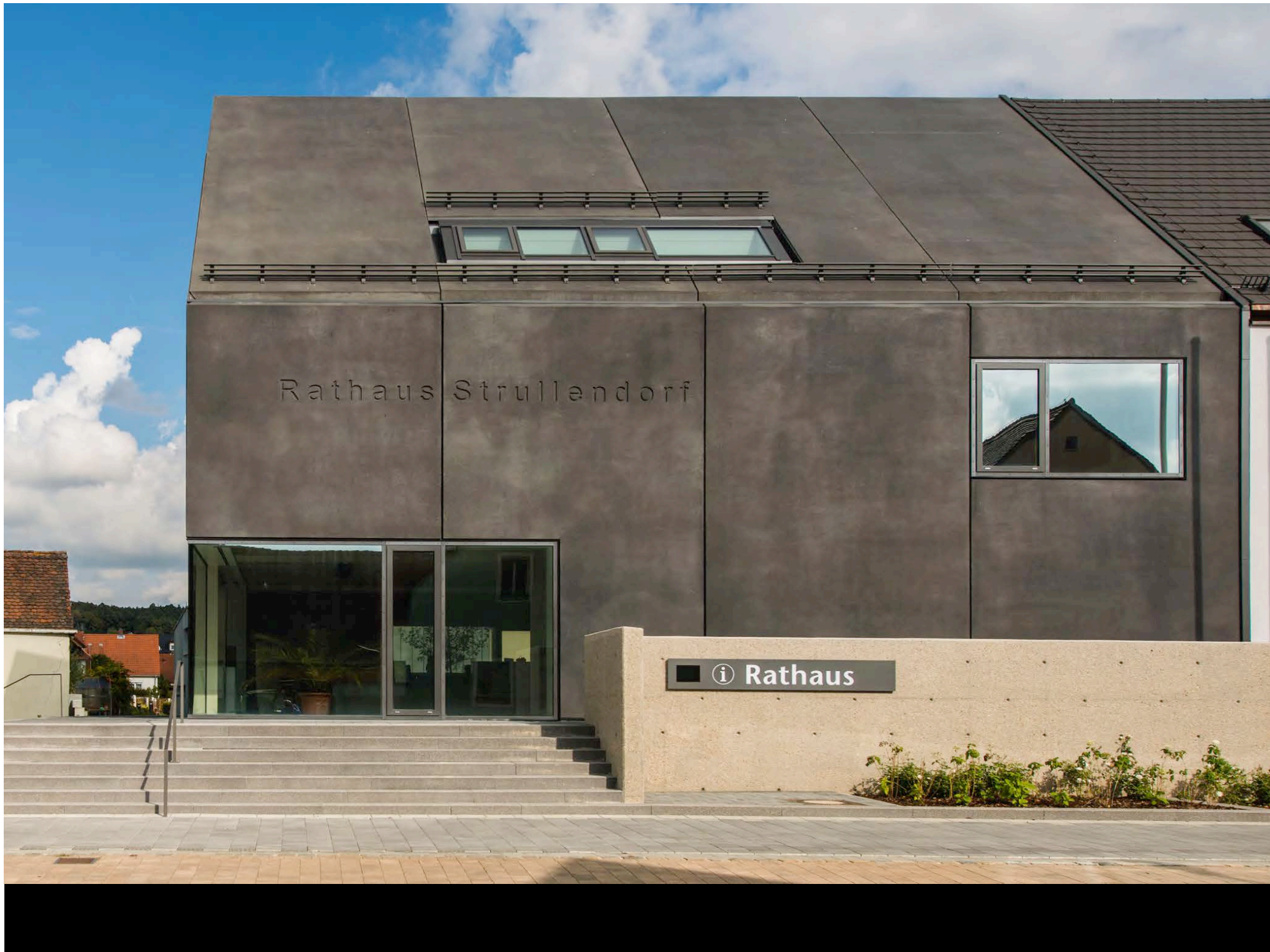


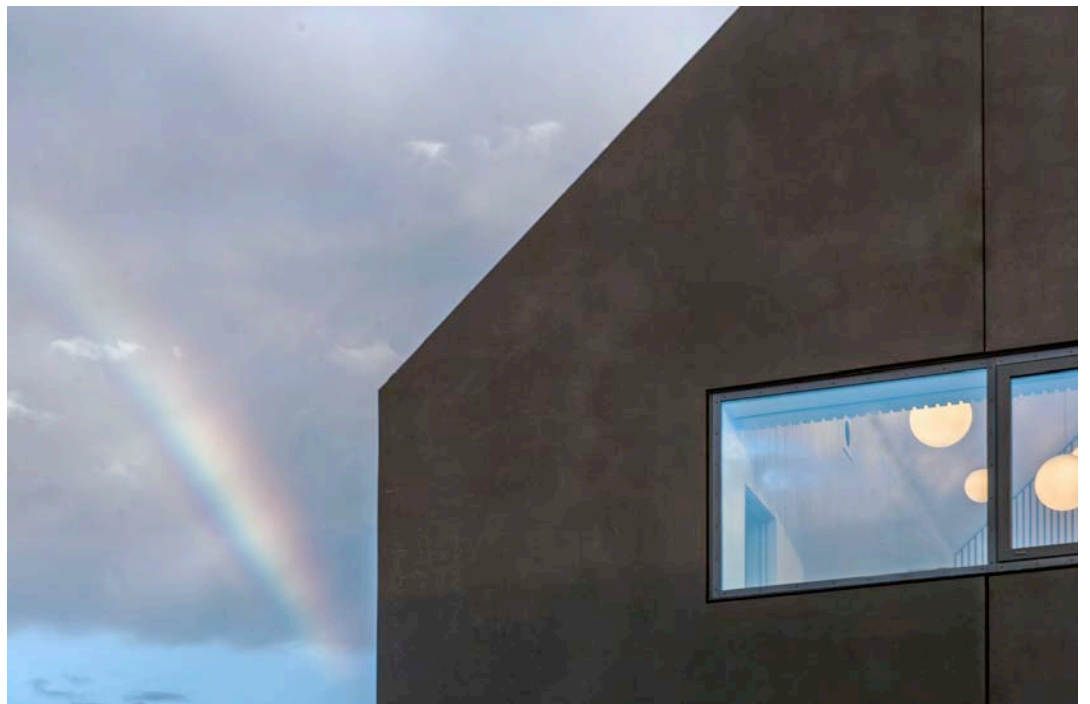
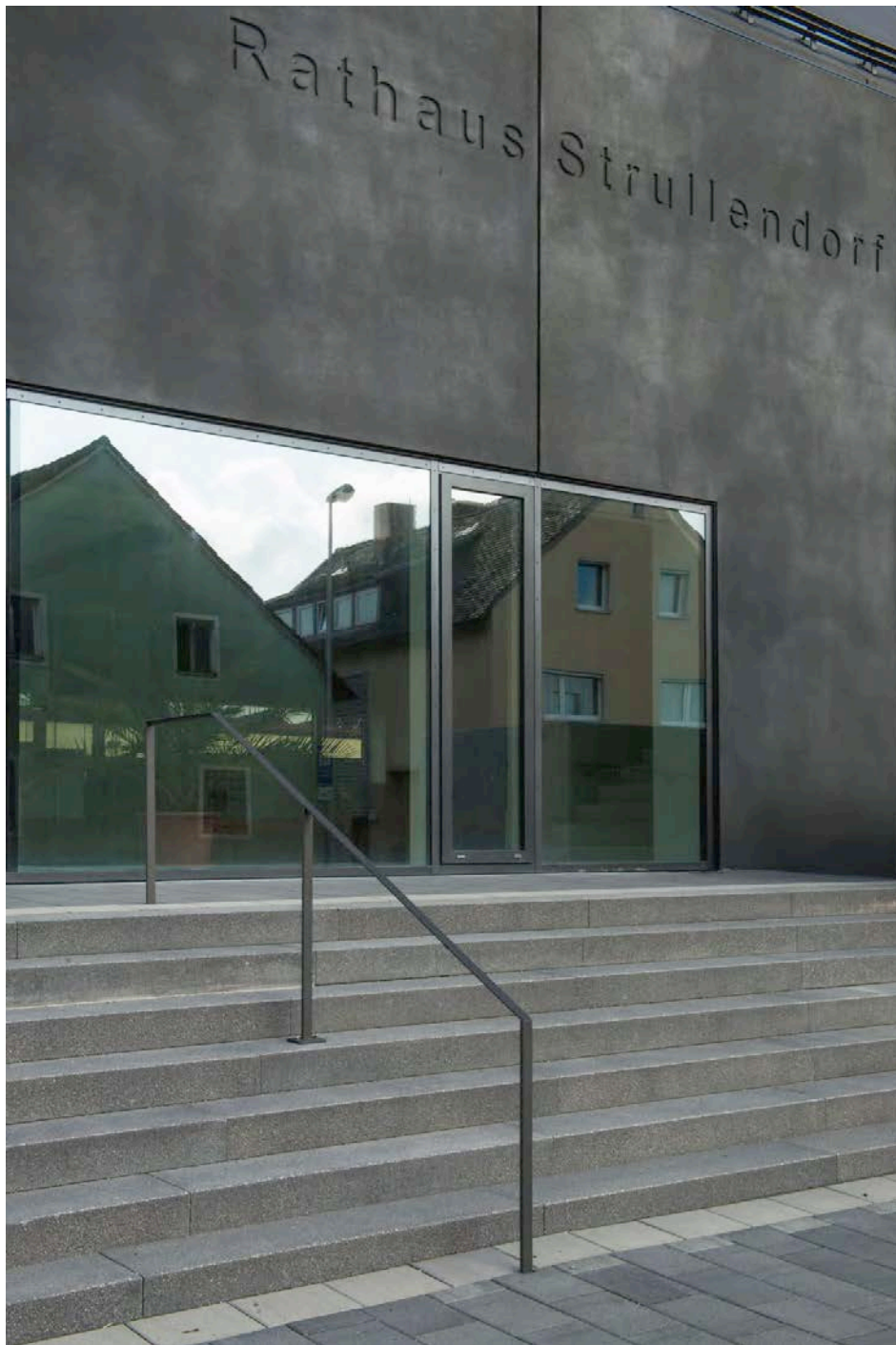
Rathaus Strullendorf

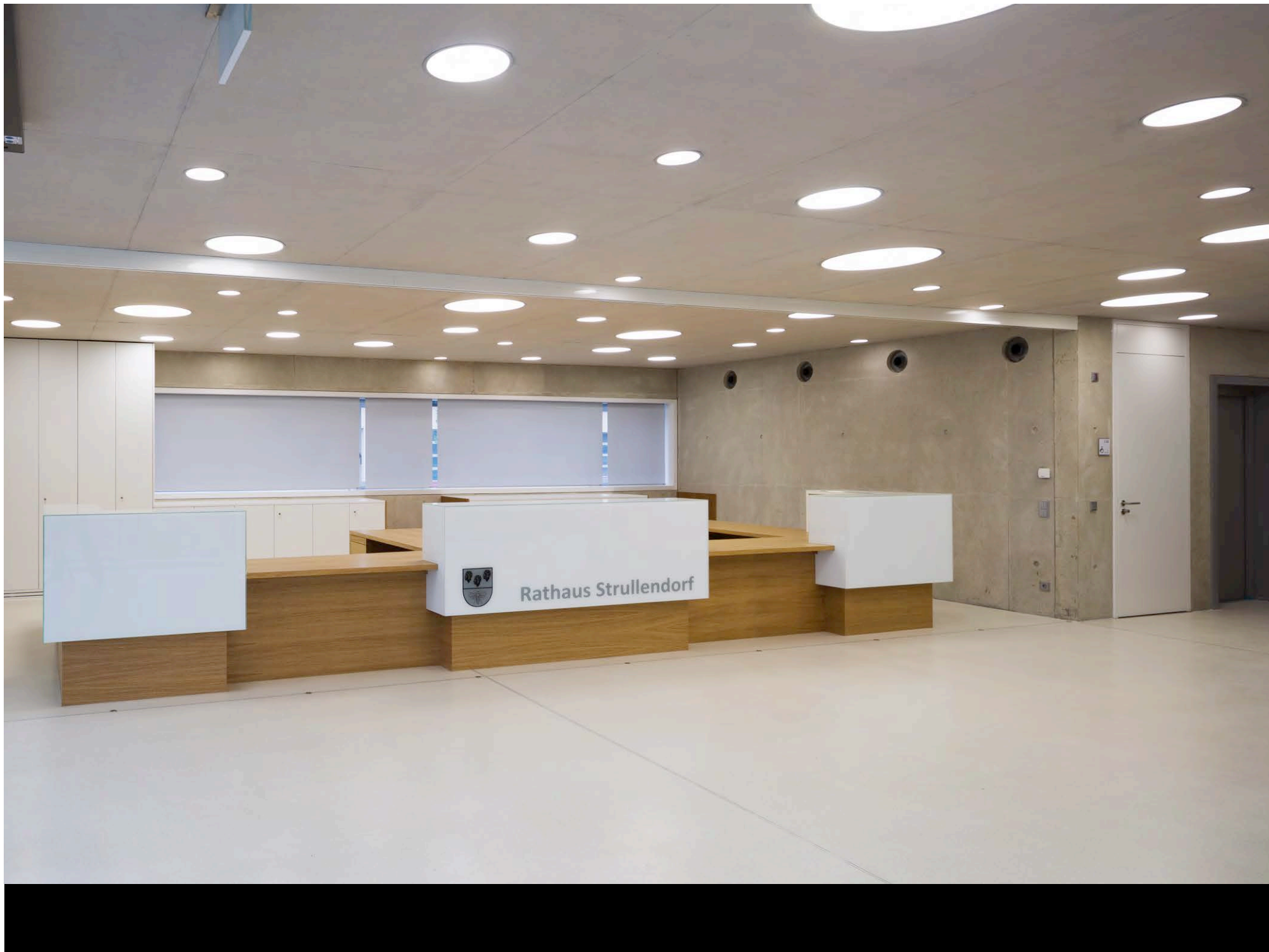


Rathaus Strullendorf

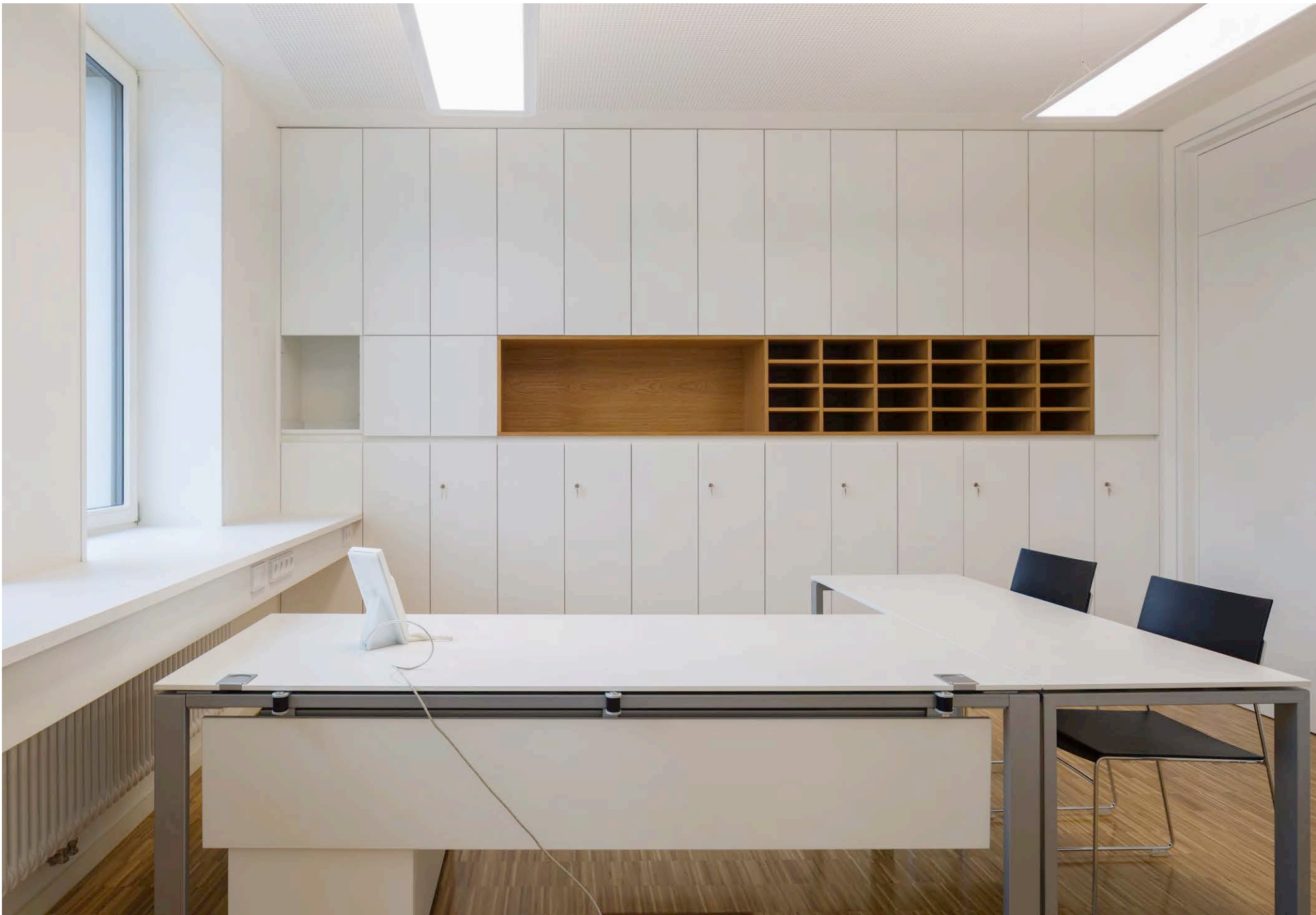
 Rathaus

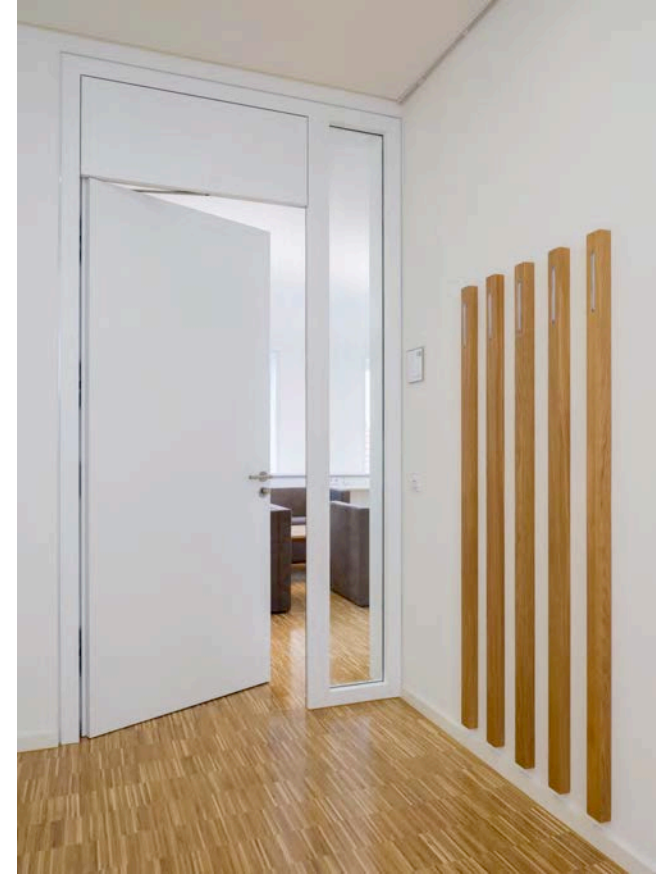






Rathaus Strullendorf











Vielen Dank für die Aufmerksamkeit.

