

Ferdinand List

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M: f.list@posteo.de

W: ferdinandlist.de

1911

the normative power of the de facto, potsdam



Potsdam, Waldstadt II: Plans for a new school campus in a local protected landscape trigger unease among the inhabitants of the district. Waldstadt's people are attached to the nature in their front yards. The position of 'no alternative' taken by the city to present solutions does not get through to the locals and a civic initiative attempts putting up resistance.

Ideas created in the course of a student project form an alternative to the running school campus development plan process in the southern forrest area: In the new suggestion, a school campus is situated on the site of the current Waldstadt-Center along with currently existing programs and generous public spaces. This counter point shows more than a change of plans: Emerging from research about the identity, history and presence of the district, it constructs a basis for discussion for a careful development of the unique district built into the forrest.

A closer view on the Waldstadt-Center reveals that it is the result of a historic elimination of alternatives by a lack of urban planning after german reunion. Said deficiency has materialized itself as a piece of architecture in the form of a 7000 sqm local supply center. Emerged without any consideration of public space, the center has ever since its initiation been a subject of speculation. The project wants to encourage inhabitants to actively discuss their wishes and needs for the district. It scrutinizes the neglect of forrest protection and district identity as an act that occurs in parallel to few individuals dominating a district center out of a financial investment motivation.

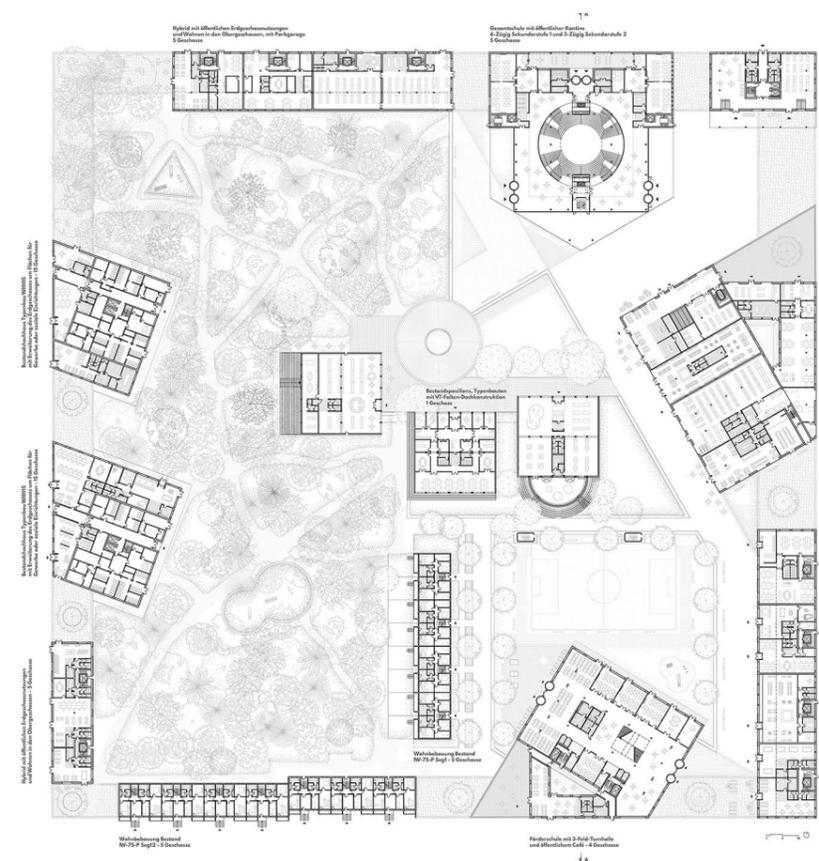
hybridization



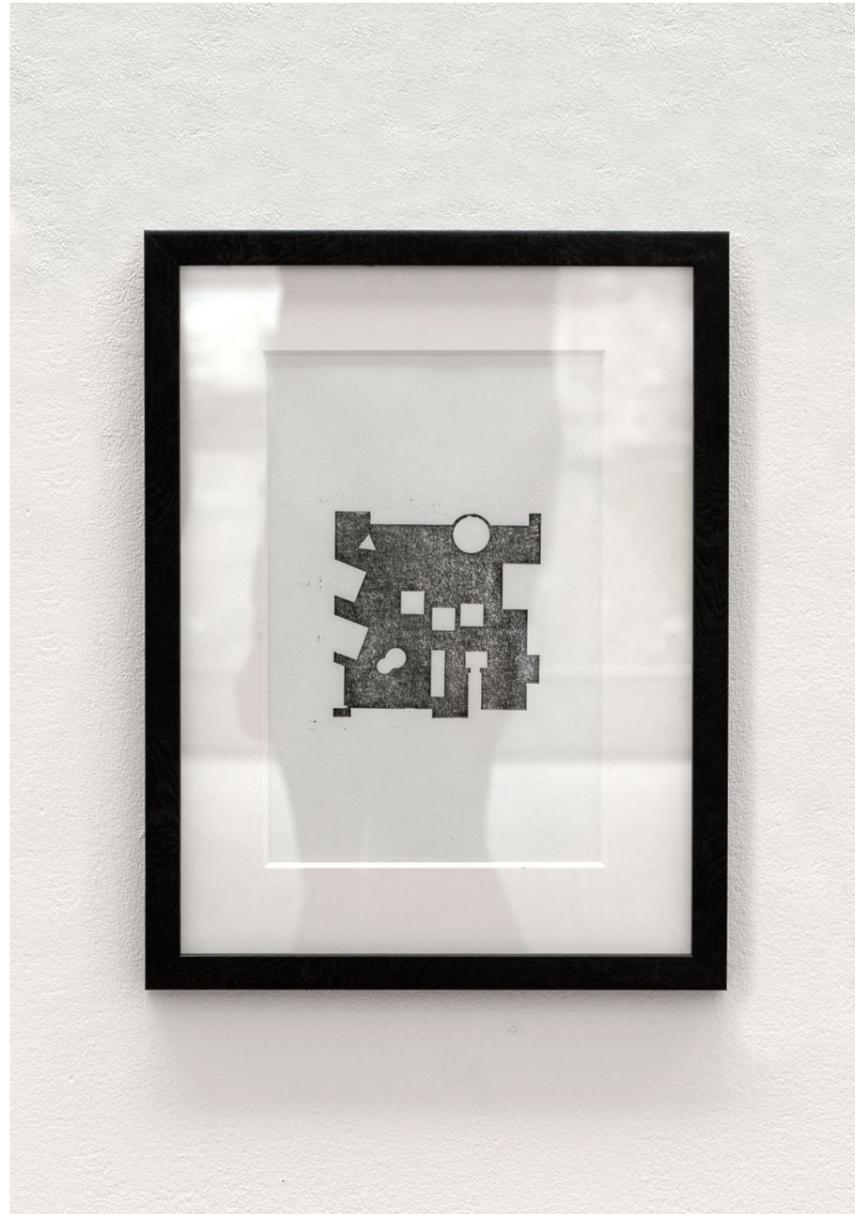
frame: mixed use complex, stock buildings and forrest, school (f.l.t.r.)



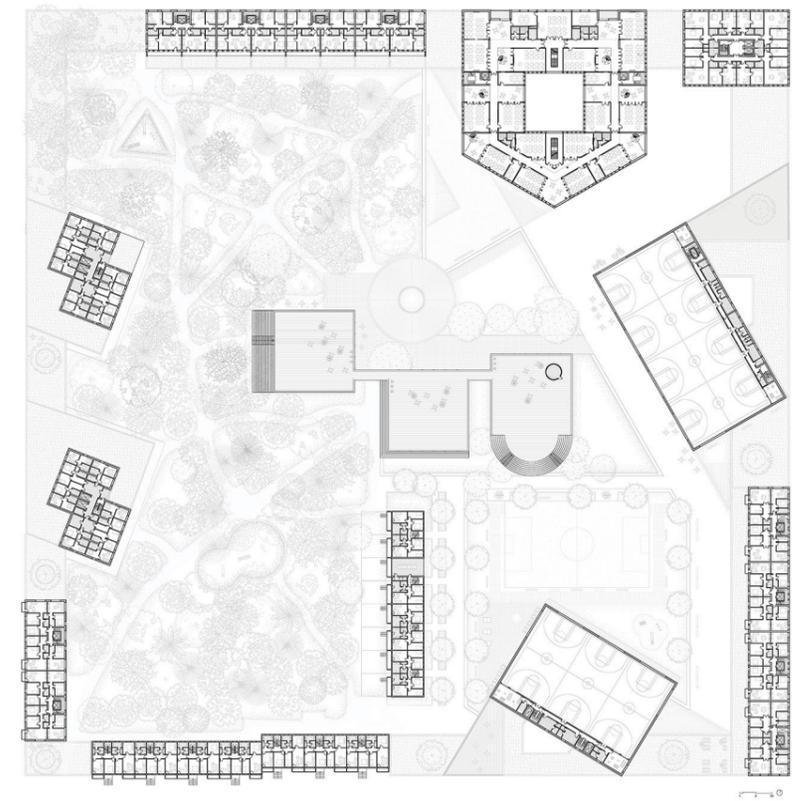
ground floor: differentiated public space



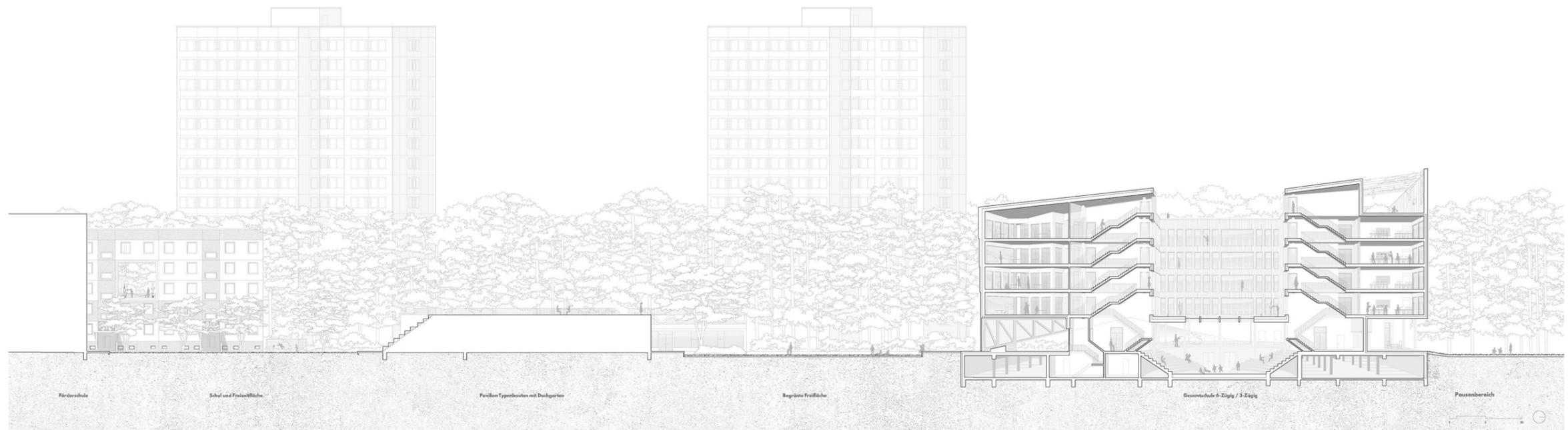
linocut proportion study



third floor: living, learning, working



north-south school section



material identity study: cast, portray, polish, print, digitalize, cnc mill



frottage: polished washed concrete



material identity studies inspired by philipp schaefer's bildbauten



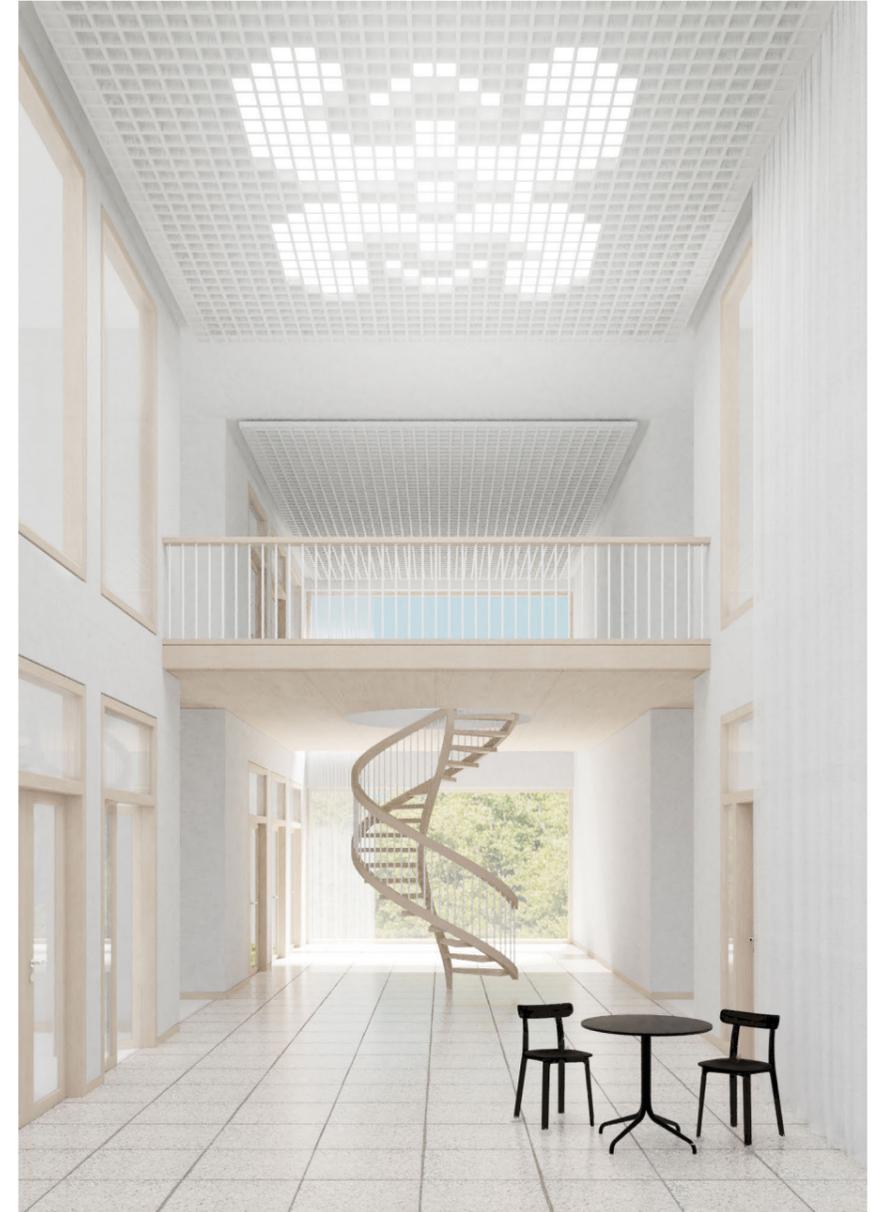
shadow cast, cork facade and sunshade



interior materials: concrete tile, pine wood, mozaik ceiling light



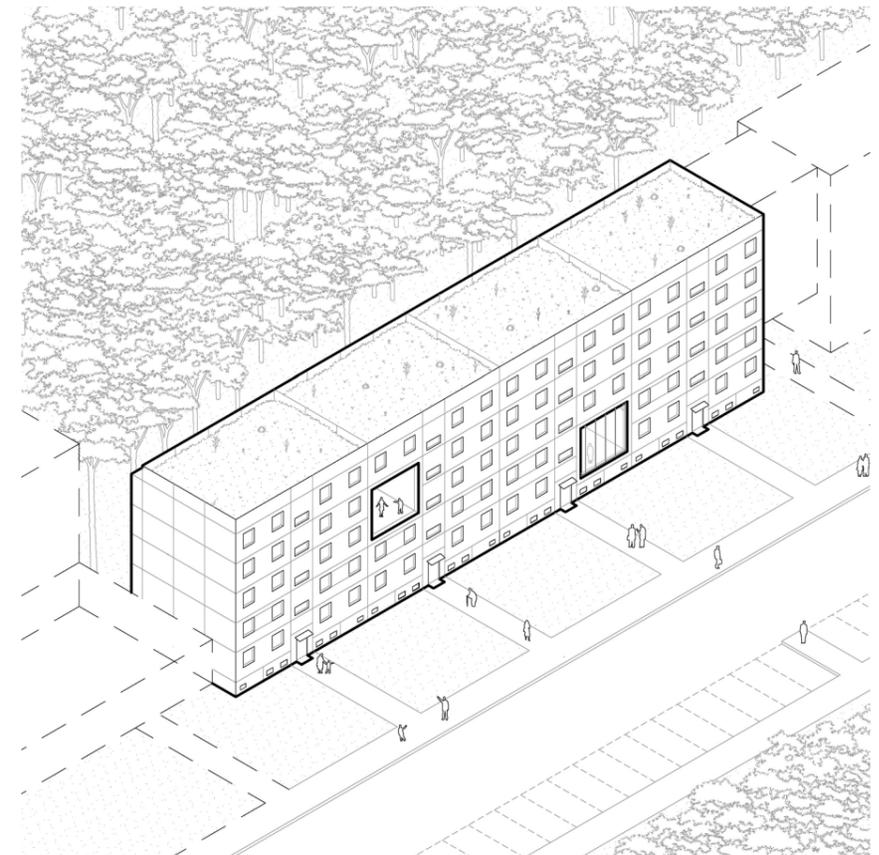
multifunction education space



framing forrest



renegotiating scale



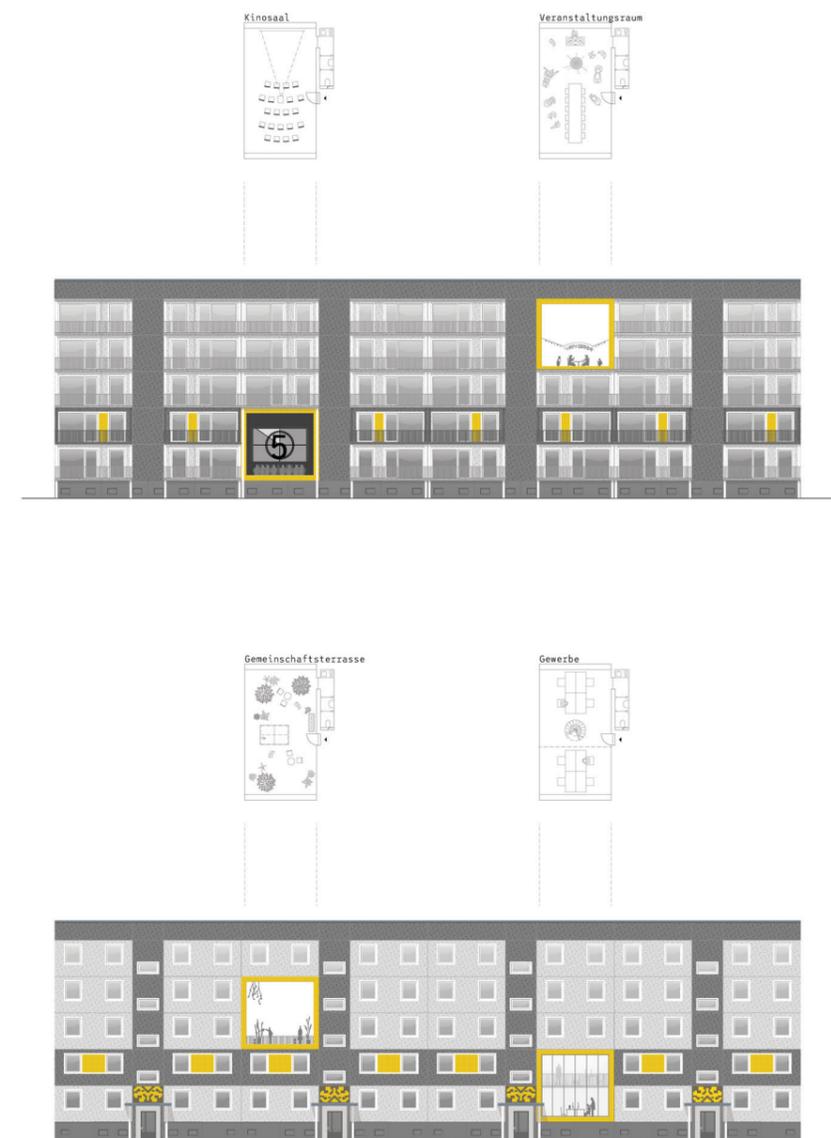
frame



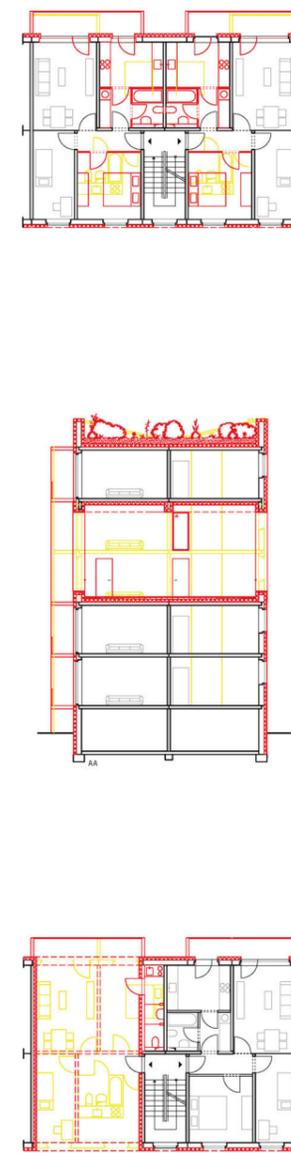
architectur and nature



multifunction frames



plattenbau intervention



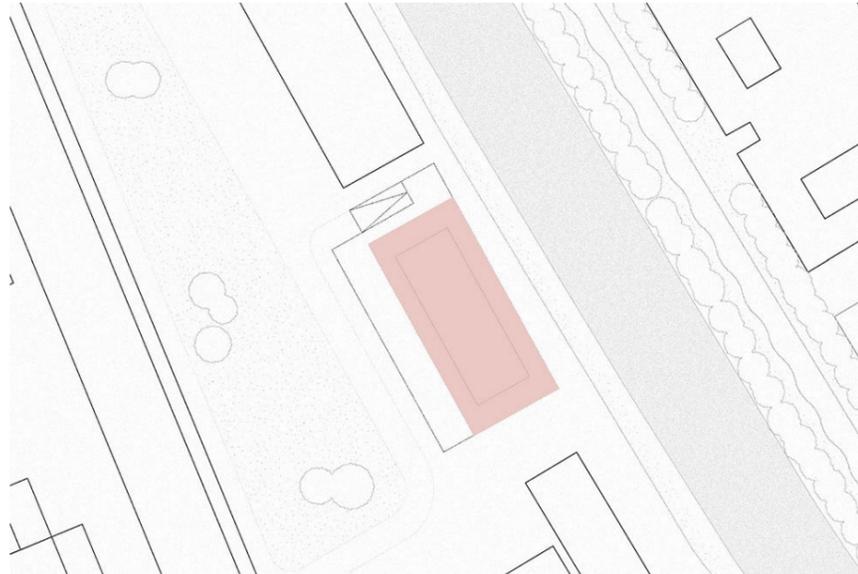
on site actions: photo contest, calendar, discussion, press

exhibition at local civic center



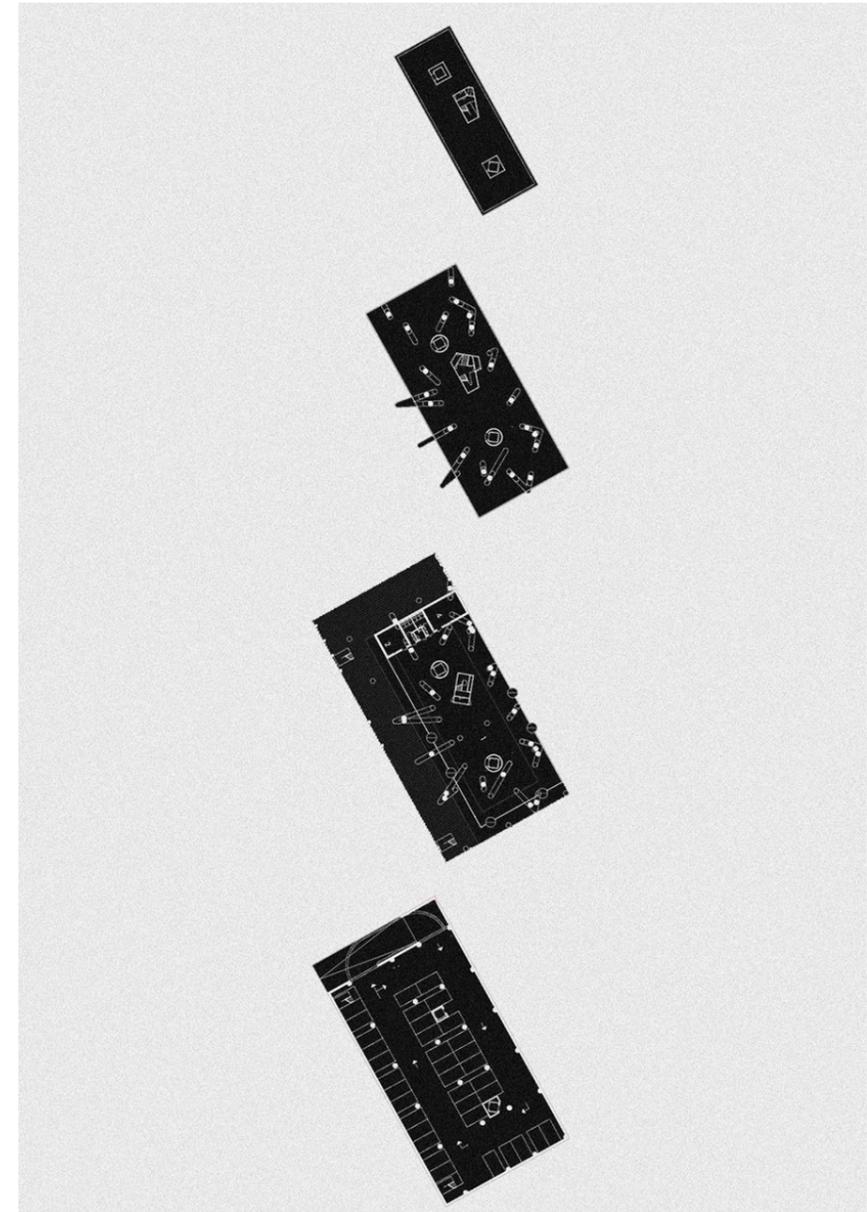
1804

new structural pragmatism, berlin

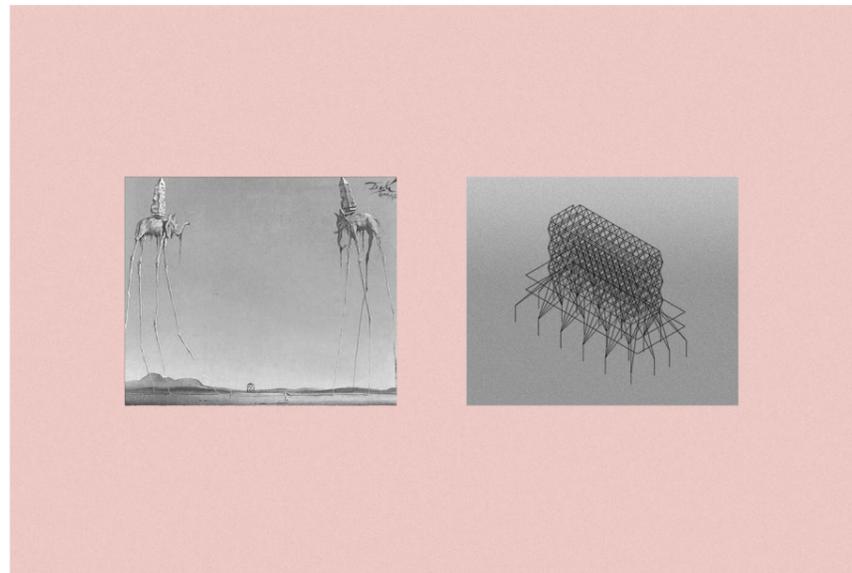


project focus	intelligent support structures, parametric design, transparent circulation
project start	april 2018
project duration	5 months
total gfa	7.500 sqm
framing weight	6.250 t
garage structure	8,5 m concrete column grid
tower structure	2,30 m load bearing diamond grid steel facade
tower stories	6
socket stories	2
garage stories	2
max beam deformation	3,70 cm
max slab deformation	5,50 cm
max beam utilization	30 %
max slab utilization	20 %
keywords	Intelligent support, parametric form finding, garage pragmatism, transparency, connections, confrontation, rethinking paradigms, digitalization, flexibility, office layouts, mediation, maximization

garage, ground floor, office, roof



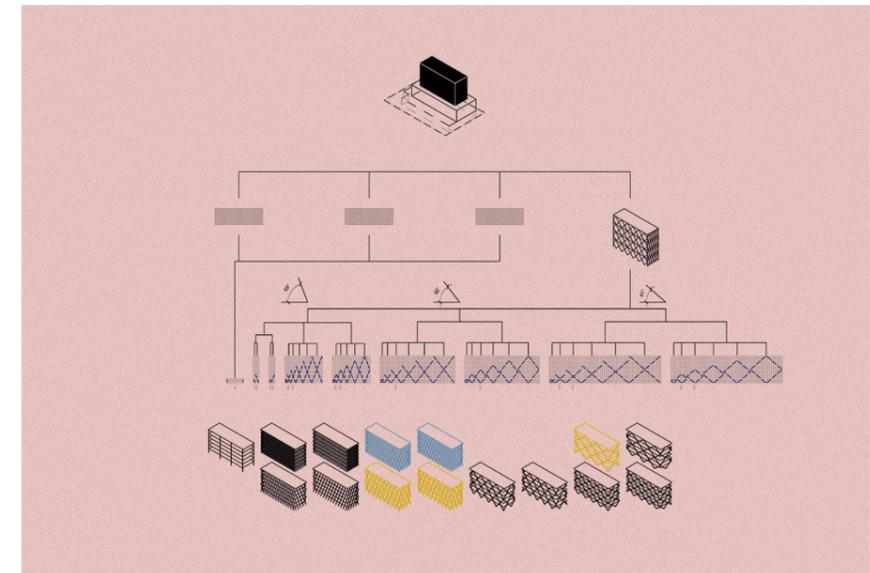
progress model, elephant house



new structural pragmatism, facade studies

Office architecture today is a portrait of garage architecture. The typical 2,50 m parking lot dimension usually projects itself onto an ~8 m concrete skeleton defining the layout of the following stories. Floor areas are best fitted to maximize rental revenue; architects become facade artists.

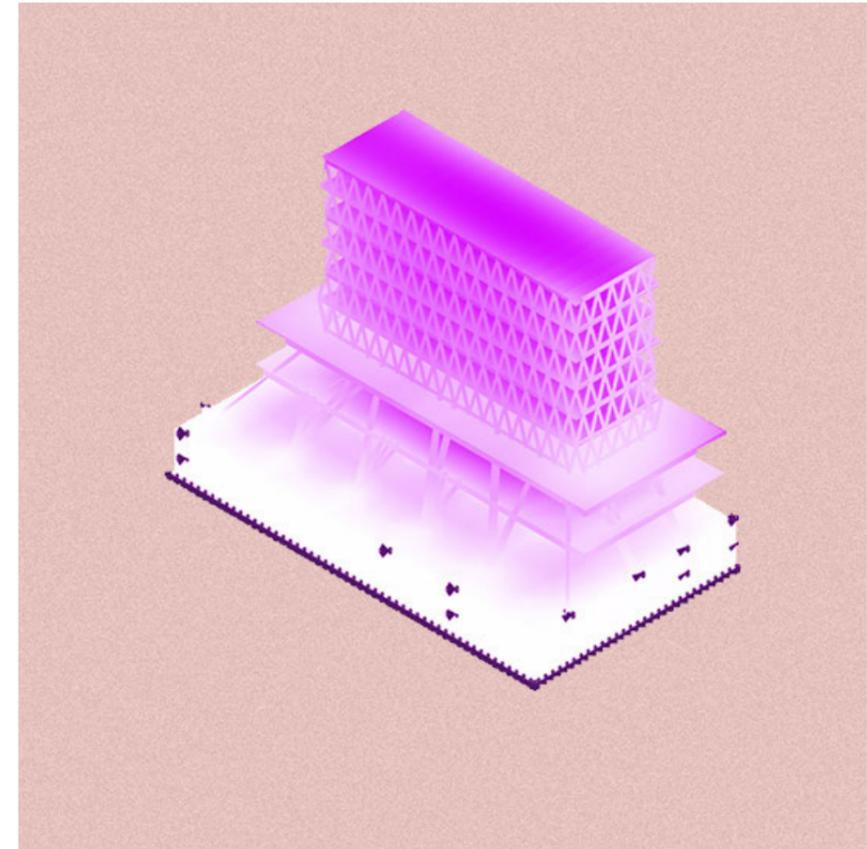
The study attempts to renegotiate the conditions of office buildings: The normally incomprehensible interface of the garage grid and an entirely different office grid are emulated by the use of computation: while the garage follows vehicle measures, the tower exhausts the lot dimensions set in the development plan with a load bearing steel facade and traversing hollow slabs. The socket converts from one grid system to another; enabling the maximized tower floor plans. Additionally, the load bearing stiffening facade relieves the circulation from its core responsibilities; enabling a transparent flexible accessibility of the building with even the elevator communicating traffic to the different stories. The new computational pragmatism of spatial maximization without compromise and a careful level of redundancy in the building services creates a new kind of communicative office space.

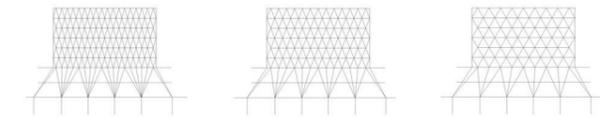
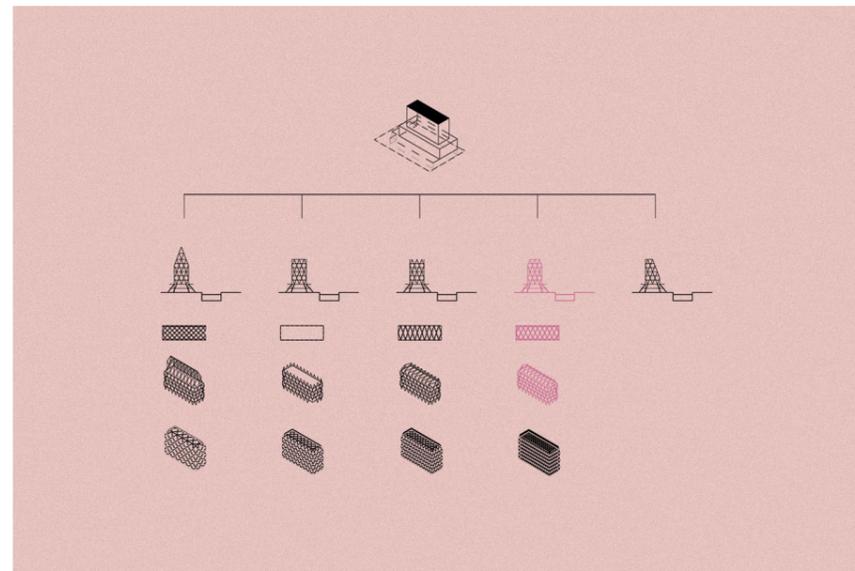


forces simulation



utilization





203

280

405

Arch. Qualität	++	++	+
Gebäudeherstellung	++	+	-
Rohbaumasse	6250 t	6284 t	6450 t
Verformung max.			
Stützen Fassade	1.35cm (1.40cm)	1.70cm (1.45cm)	2.20cm (1.70cm)
Stützen Sockel	3.70cm (4.00cm)	4.30cm (4.00cm)	12.00cm (4.00cm)
Decken Turm	5.40cm (5.40cm)	5.40cm (5.40cm)	5.40cm (5.40cm)
Decken Sockel	5.50cm(5.60cm)	8.00cm(5.60cm)	14.0cm(5.60cm)
Auslastung max.			
Stützen Fassade	30%	29%	36%
Stützen Sockel	10%	9%	14%
Decken Turm	12.5%	12.5%	12.5%
Decken Sockel	25%	24%	26%

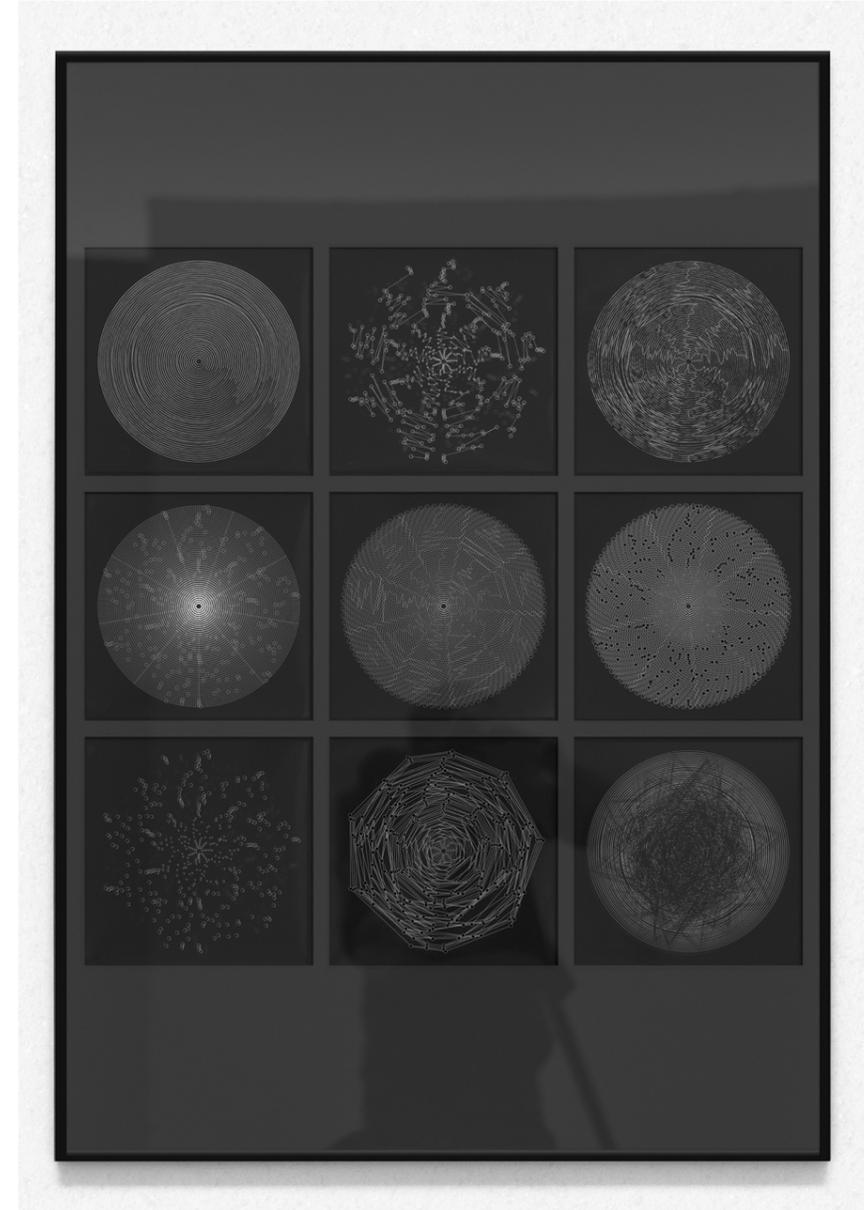
1609
architecture manifold



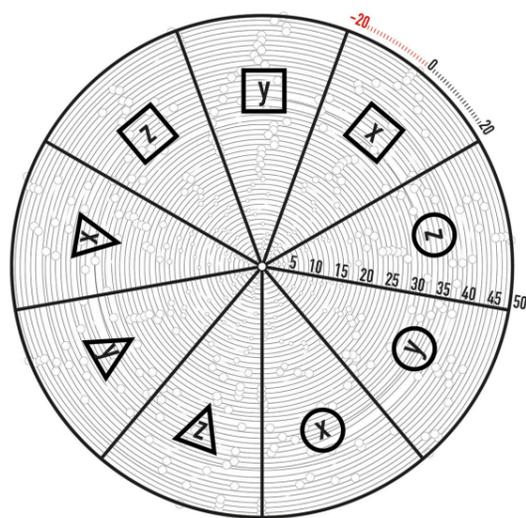
Patrik Schumacher adjudges architecture an organizational and an articulating character with each of them referencing complex environments. These environments are networks consisting of nodes of physical, economical, juridicial, ecological, political, aesthetical, cultural and emotional nature. Under consideration of the concatenation of their components, environments provide us with affordances (Seifert) to interact with them. An architecture can only be defined in a context if it reacts to that context's affordances and therefore becomes a part of its complex system. The presented installation is a metaphoric representation of said systems. The abstract object had its form determined by its function to simulatanuously shadow project four simple geometric shapes. Its very shape was computed using an evolutionary algorithm.

In order to reach an as exact as possible projection of the four shapes, the evolutionary grasshopper algorithm continuously reorientates the position of the shapes in space by manipulating their center points' x, y and z values. During this reorientation the shape surfaces' normals are always oriented towards the object center (0,0,0). The object itself is created by the extrusion of the shape surfaces which are then intersected. The process is driven by a fitness function which compares the individual shapes' perimeters to the perimeters of parallel slices cut through the object. If the difference between the parameters is zero, the projection is accurate. The resulting object is cut out of a hard foam block using a five axis CNC milling machine. This piece is then used to produce a five parts gypsum formwork for founding the porcelain object seen in the photograph. Porcelain is the material of choice because of its intangibility, free of emotional burden, leaving the center of attention to its emergence rather than to its being.

photograms 70x100



architecture synthesis diagram



evolutionary porcelain shadow object



0000
burano



dunkirk



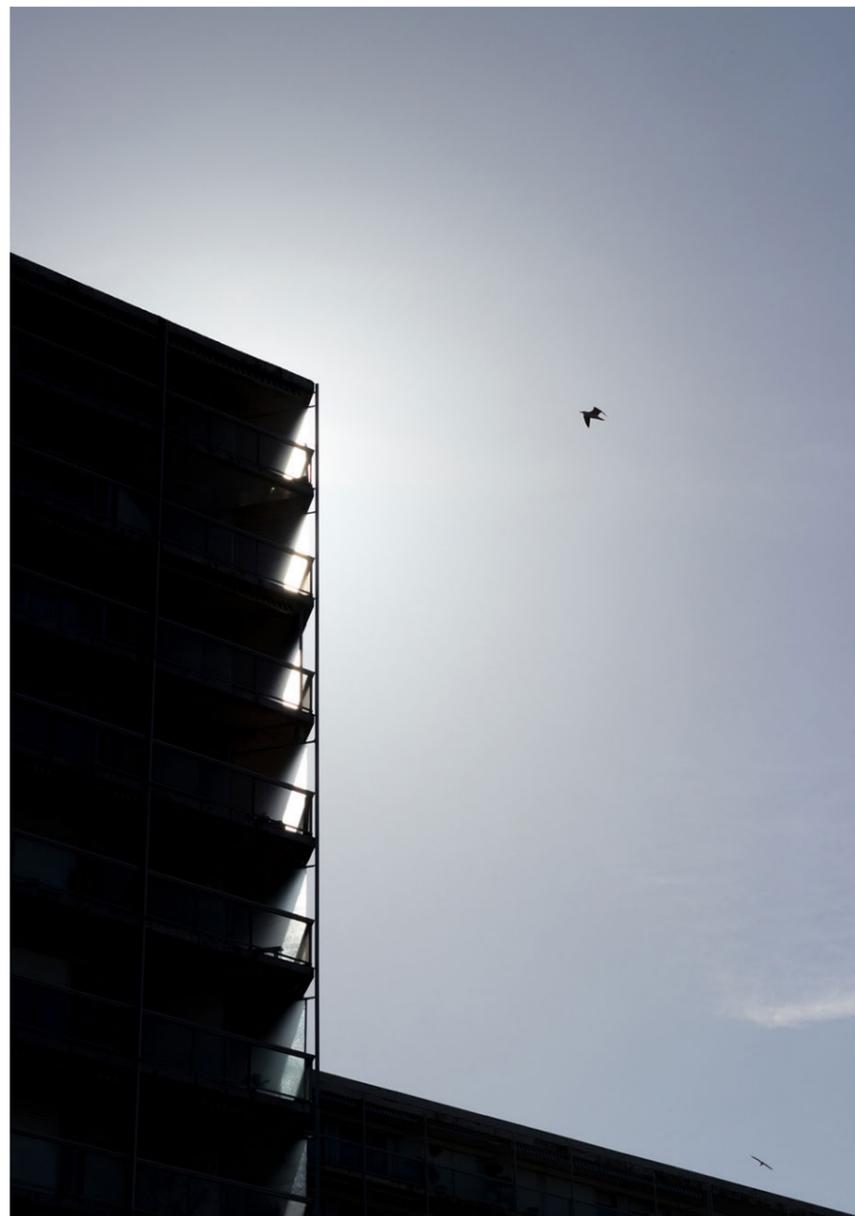
caen



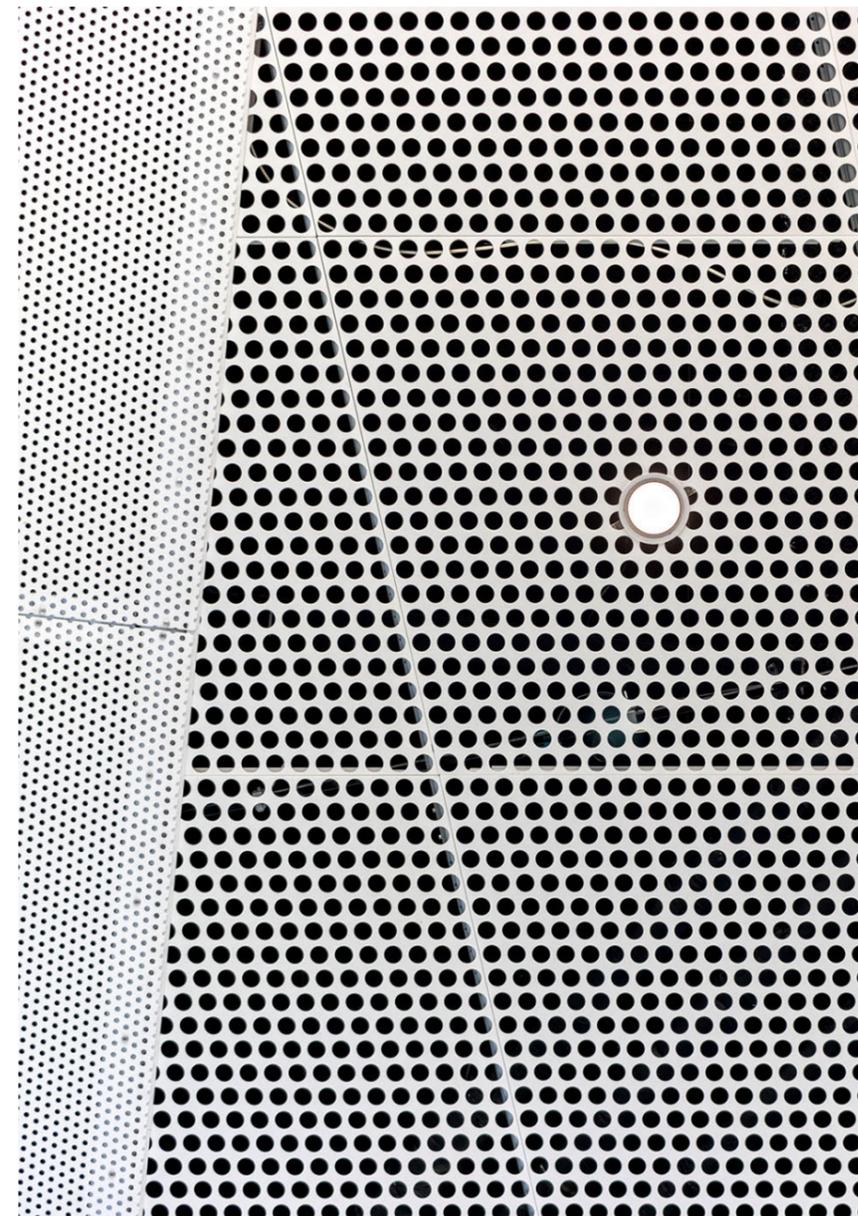
barcelona, rouen



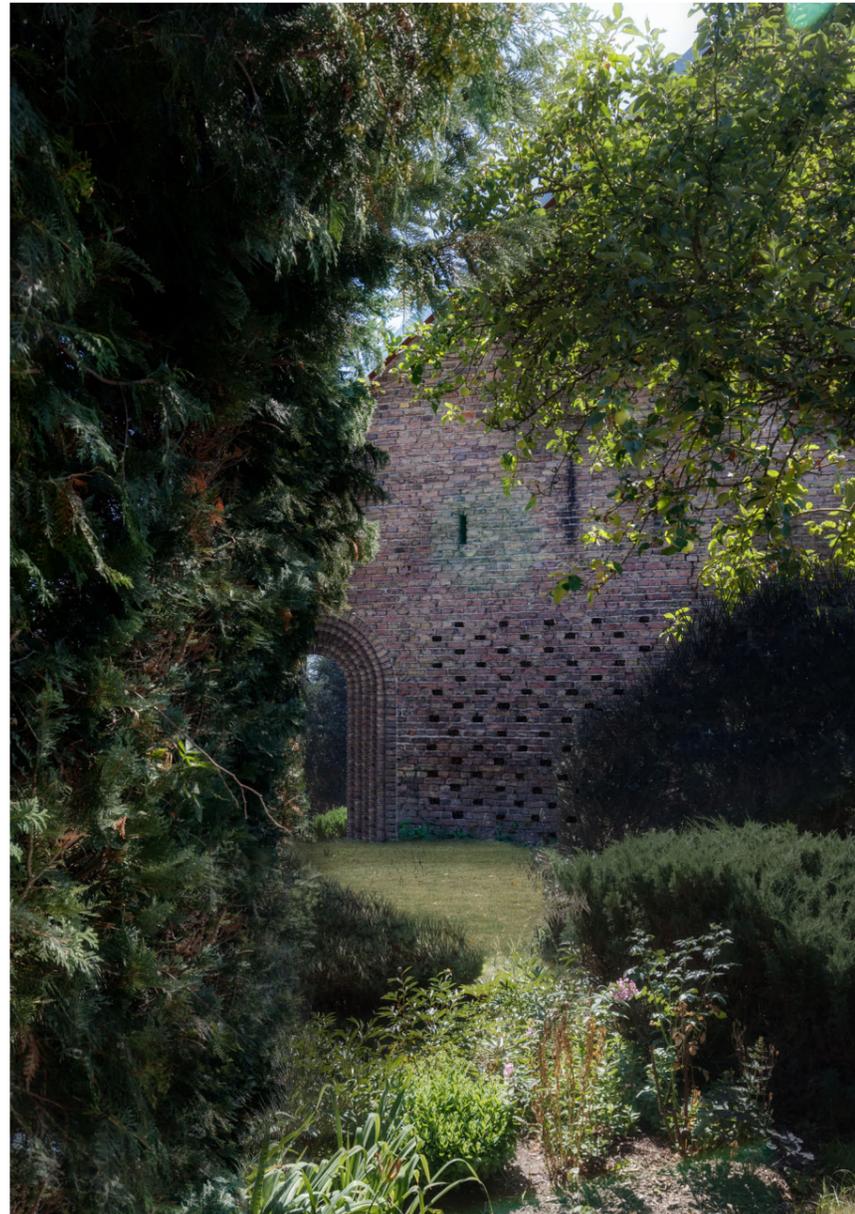
le havre



caen



montage



composition



Ferdinand List

2 0 2 0

M: f.list@posteo.de

W: ferdinandlist.de