MAASTURDY PLACE FOR EXPERIMENTATION"

P4 PRESENTATION DAVID VAN WEEGHEL





Maassilo (2015, Maashaven)

existing

1

new design



$\mathsf{C} \quad \mathsf{O} \quad \mathsf{N} \quad \mathsf{T} \quad \mathsf{E} \quad \mathsf{N} \quad \mathsf{T} \quad \mathsf{S}$

1. HISTORICAL INTRODUCTION

2. VALUE ASSESSMENT

- 3. INTERVENTION STATEMENT
- 4. PROGRAM & STRATEGY
- 5. RELATION PUBLIC SPACE
- 6. FLOW
- 7.LAYERS IN TIME
- 8. REFLECTION

1. HISTORICAL INTRODUCTION

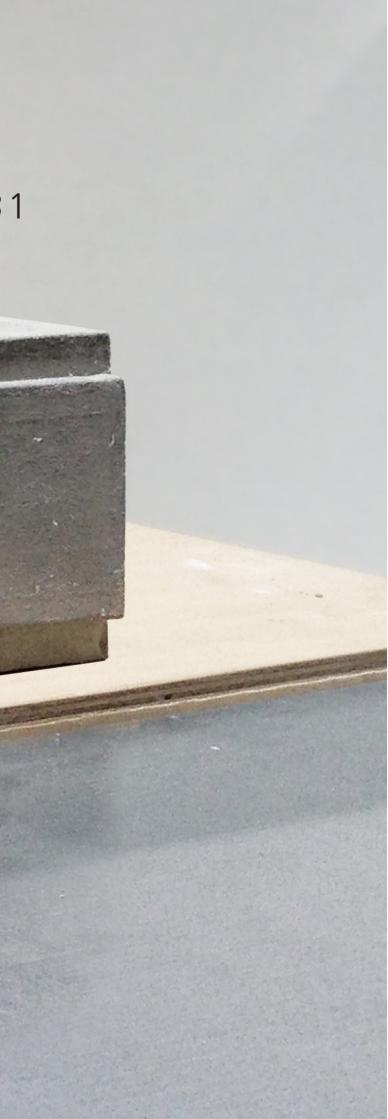
PHASE 1: J.P. STOK - 1910



PHASE 1: J.P. STOK - 1910

TOTAL CAPACITY: 20.000 TONS OF GRAIN

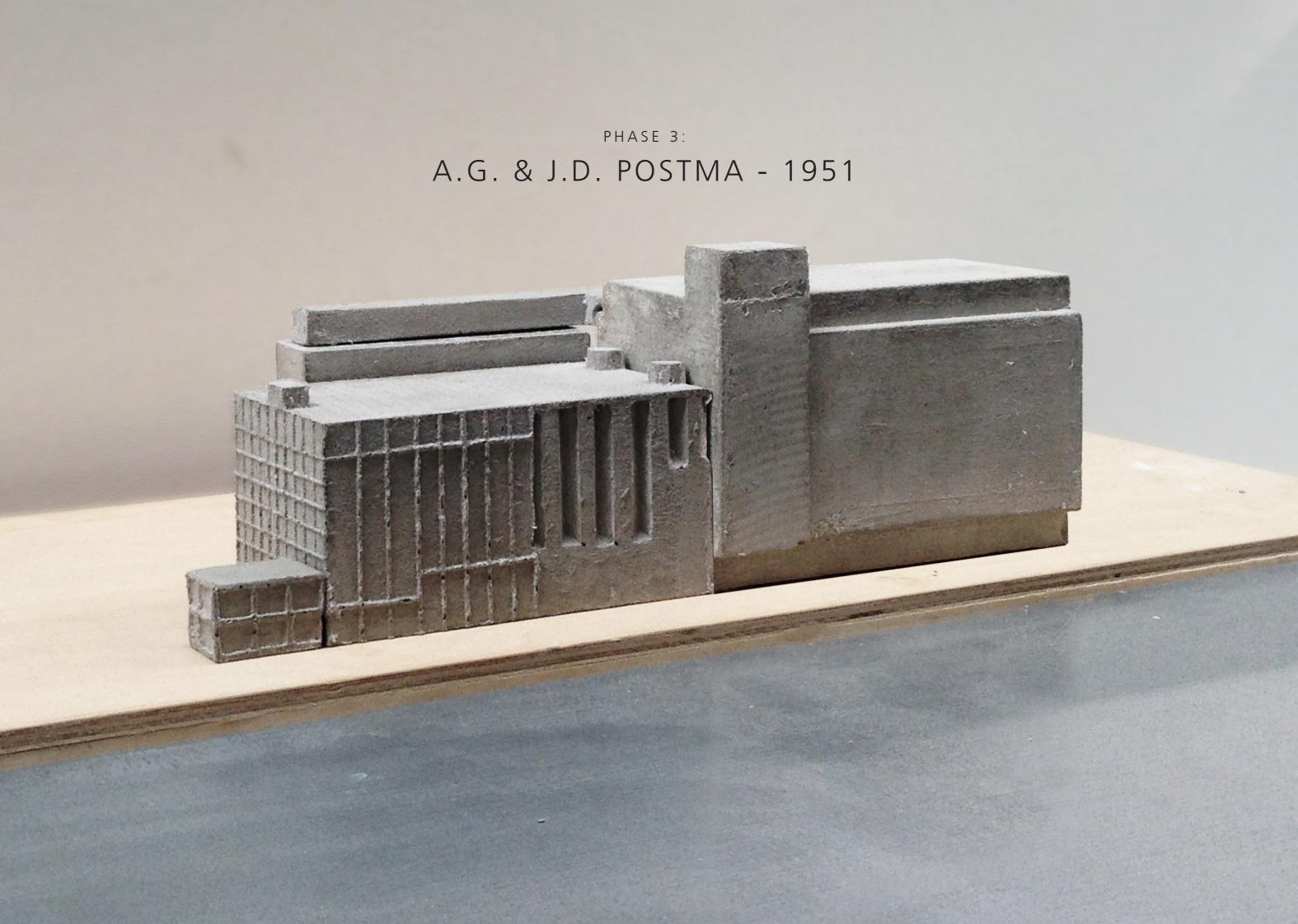
PHASE 2: J.A. BRINKMAN & L.C. VAN DER VLUGT - 1931



PHASE 2: J.A. BRINKMAN & L.C. VAN DER VLUGT - 1931

> 20.000 +44.000 TOTAL CAPACITY: 64.000 TONS OF GRAIN





PHASE 3: A.G. & J.D. POSTMA - 1951

5-27 64.000 +22.000 TOTAL CAPACITY: 86.000 TONS OF GRAIN



PHASE 4: H. HAAN - 1963

ADDITION OFFICE BUILDING



STATIC MASS IN A DYNAMIC ENVIRONMENT

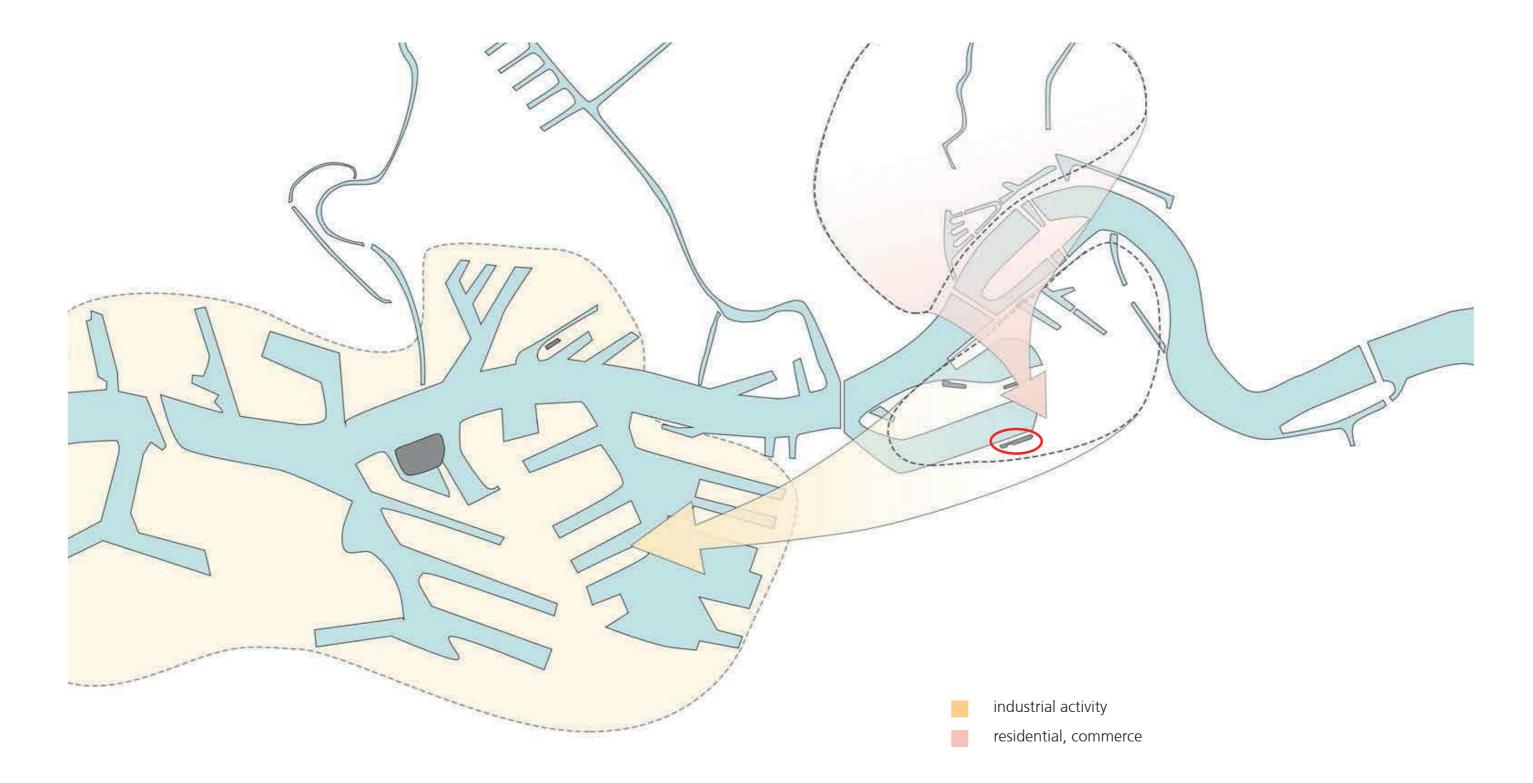
"Bitthistin

Maassilo in Maashaven dynamic, 1956

source: http://217.26.101.136/mfa/binnenvaart/gkvb/mijnjeugd_p94.htm



ABANDONMENT HARBOUR AREA SINCE '805



harbour area Rotterdam, movement industrial activity

2004: NOW & WOW

Party at the Now&Wow, now Maassilo

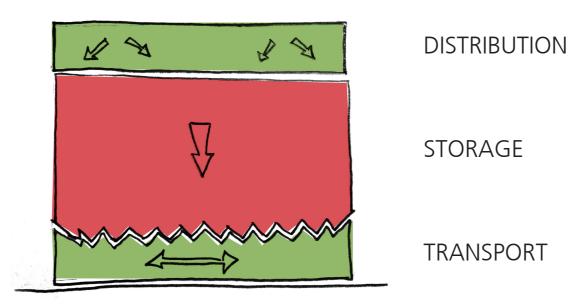
source: maassilo.com

Nie



SILO TYPOLOGY

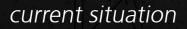
• Now&Wow only inhabited the space that was directly usable



silo typology



MISSED OPPORTUNITY PUBLIC SPACE





MISSED OPPORTUNITY PUBLIC SPACE

historical situation

11

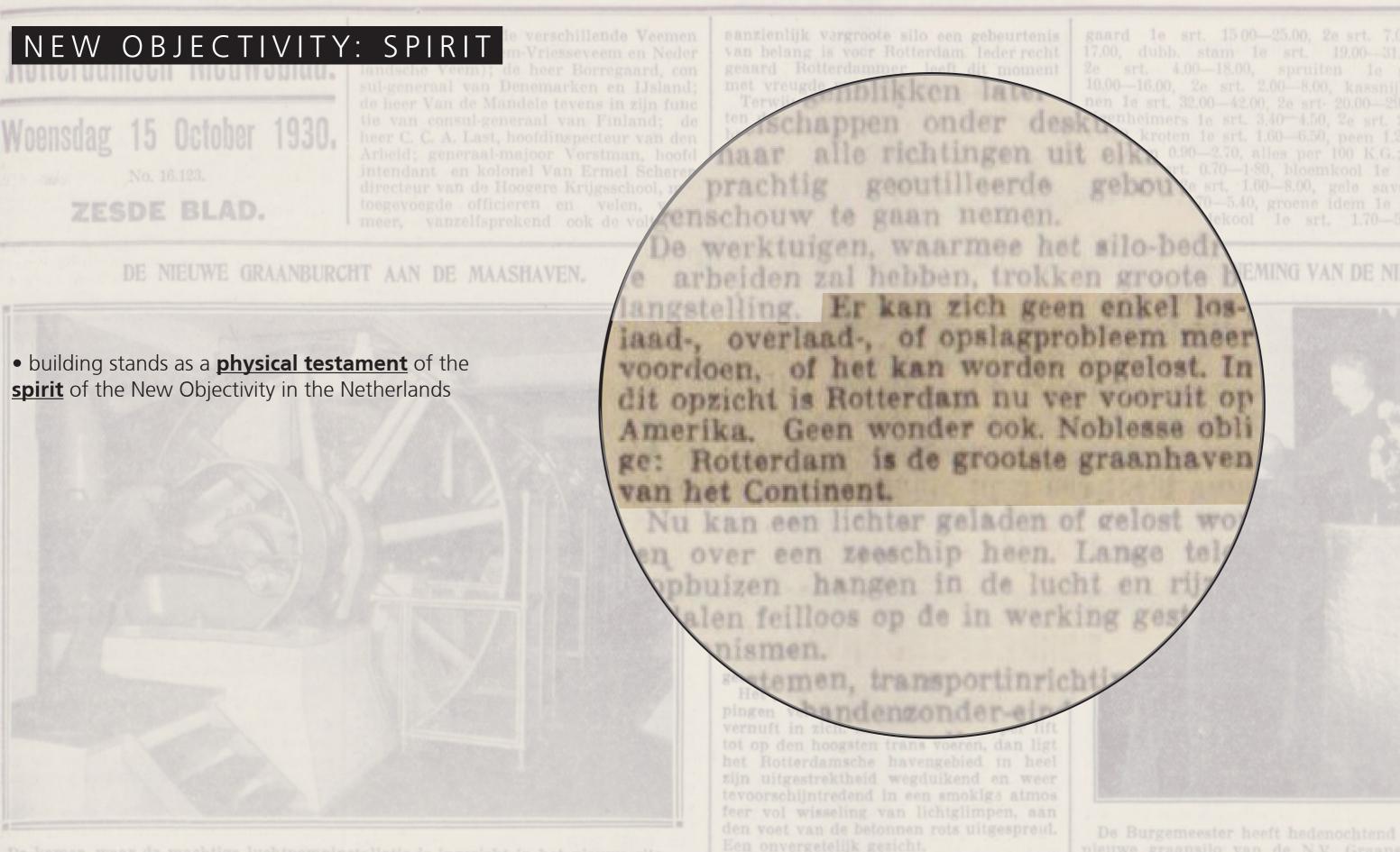
L T

AANTIKENTEI JAADEN 15 Leigesemien

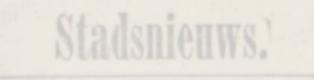
current situation



2. VALUE ASSESSMENT



De kamer, waar de machtige luchtpompinstallatie is ingericht in het nieuwe silo gebouw van de N.V. Graansilo Maatschappij aan de Maashaven.



Raad van commissarissen van de N.V. Graansilo Maatschappij met den directeur, den heer H. F. Schutter.

De neer J. C. Smalt, voorzitter van den

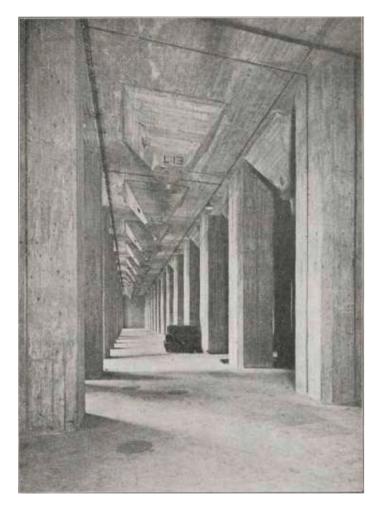
De berging van de "Edera".

Hødenmiddag is men weer met de lo sing van het op de Hinderribben gestra de Italiaansche s.s. "Edera" begonnen; d toestand van het schip is gunstiger g worden. Men hoopt, indien de weersg De Burgemeester heeft hedenochtend nieuwe graansilo van de N.V. Graans Maatschappij aan de Maashaven offici in gebruik gesteld. De Nieuwsblad tograaf kiekte het moment, waarop d Burgemeester het koord in de hand we

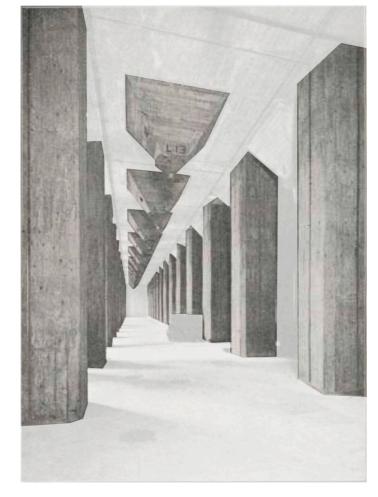
groentjes 1e srt. 3.80-6.00, komkomm 1e srt. 0.60-4.10, cantonnerwitkrop le s

DIRECT, HISTORICALLY BOUND AESTHETICS

- no 'designed aesthetics' (New Objectivity), but direct, bold aesthetics, reminding of the former function & construction process
- historical values present in aesthetical values



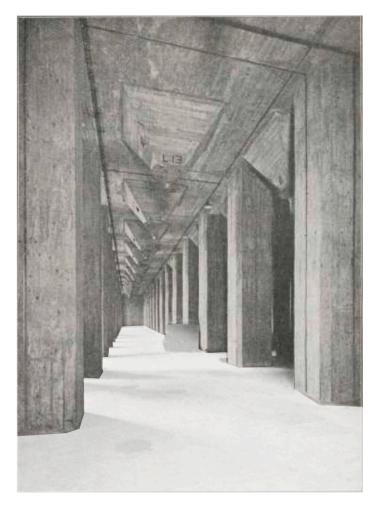
original situation: columns and funnels, ground floor Brinkman & Van der Vlugt source: De Ingenieur (1930)



rhythm, repetition (function)



scale (function)

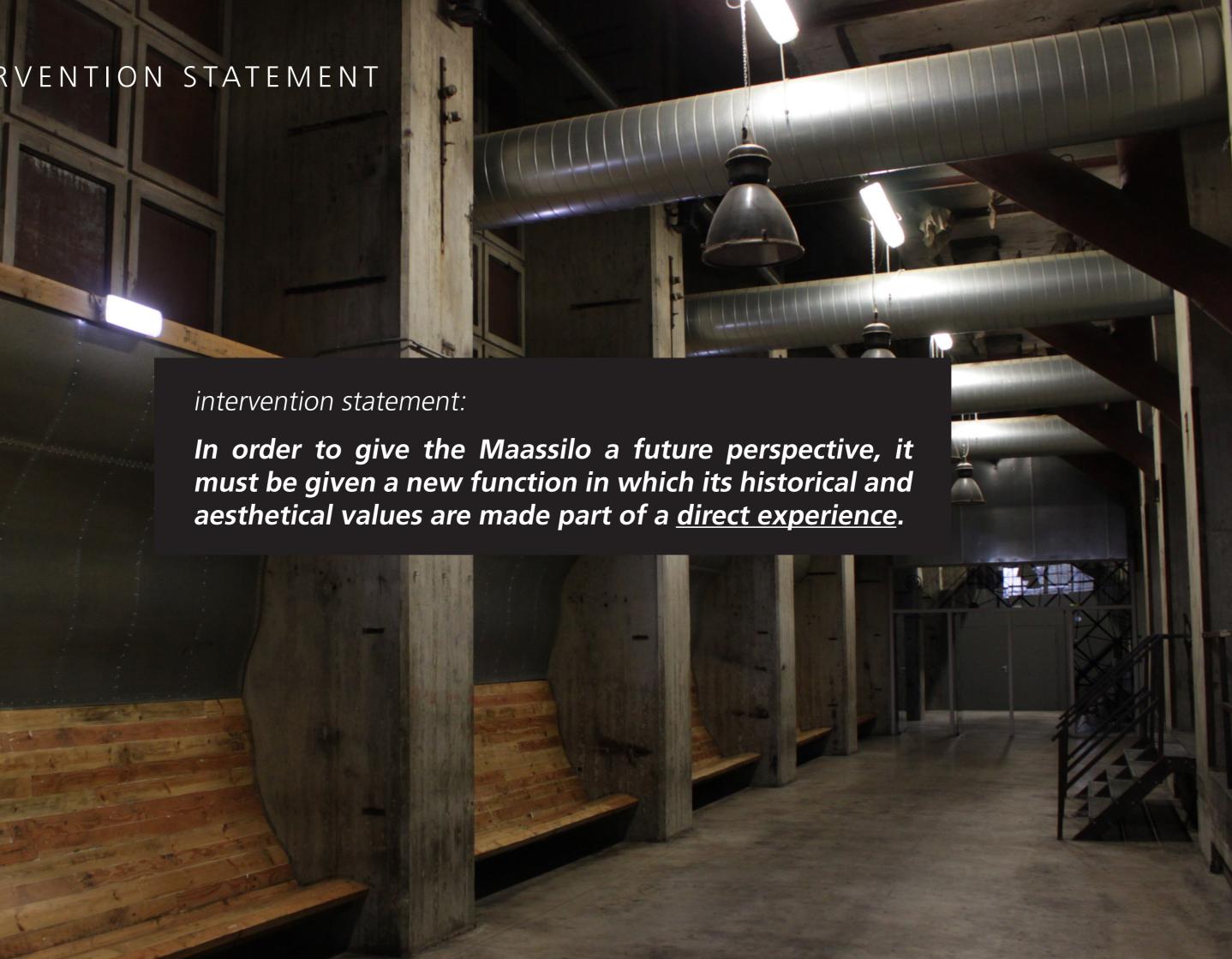


surface (function & construction process)

3. INTERVENTION STATEMENT



INTERVENTION STATEMENT



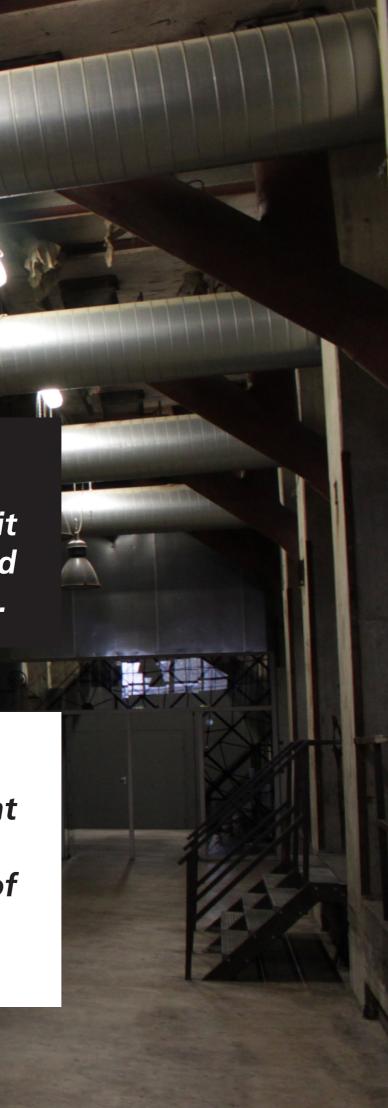
INTERVENTION STATEMENT

intervention statement:

In order to give the Maassilo a future perspective, it must be given a new function in which its historical and aesthetical values are made part of a <u>direct experience</u>.

new function: **<u>night club</u>**

takes building <u>as found</u> as an absolute starting point in experience, thus careful appreciation of the existing
no focus on 'detailed aesthetics', but an <u>active</u> use of <u>tangible qualities building</u>



4. PROGRAM & STRATEGY



definition program:

- NIGHT CLUB, AS AN EXPERIMENTAL PLATFORM FOR CONTEMPORARY ELECTRONIC MUSIC, ART & TECHNOLOGY
- organised by **event organisation** (Mojo, Subbacultcha)





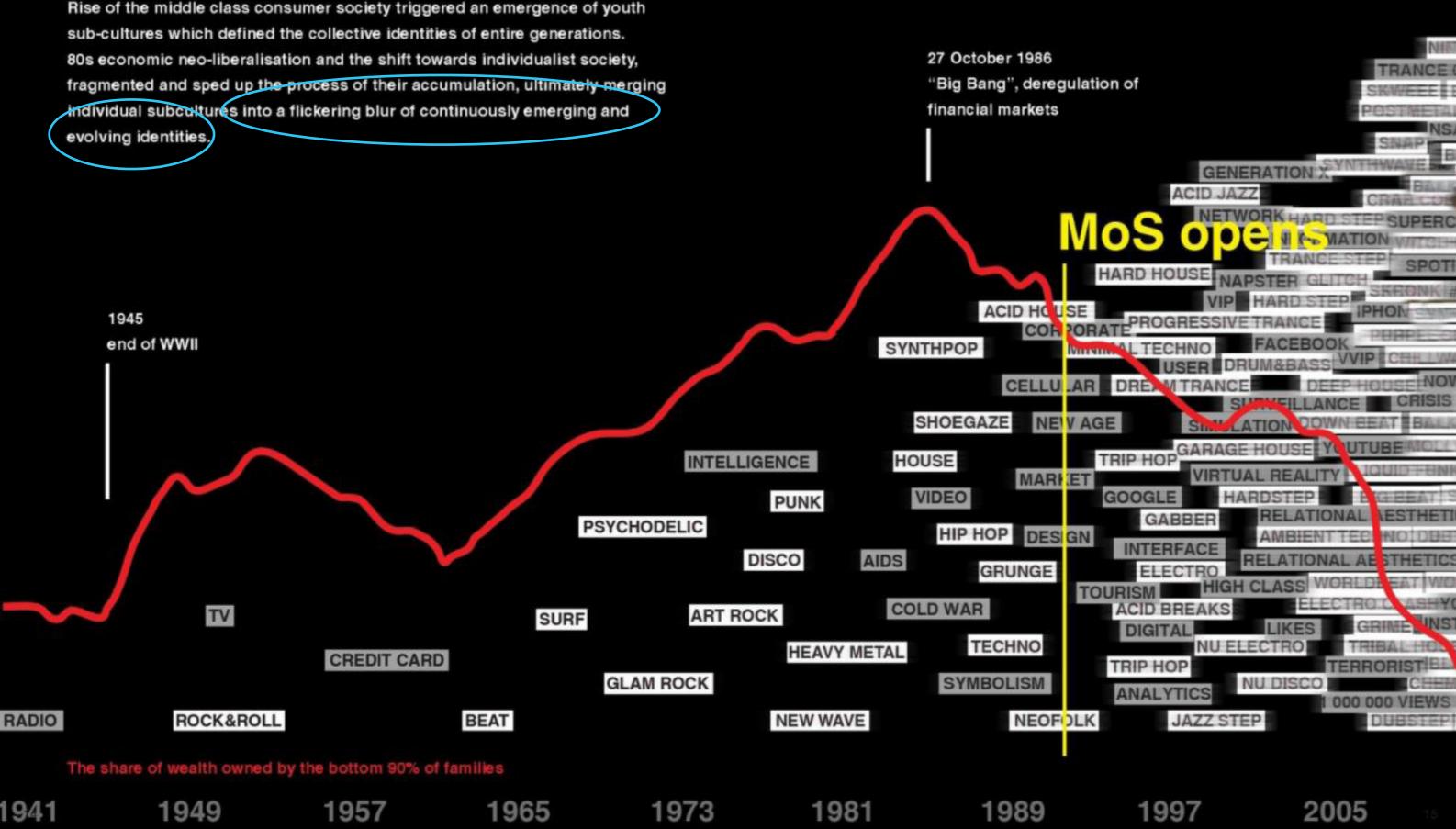


urele Instellingen



M220149a

MUSIC SUBCULTURES SINCE WWII

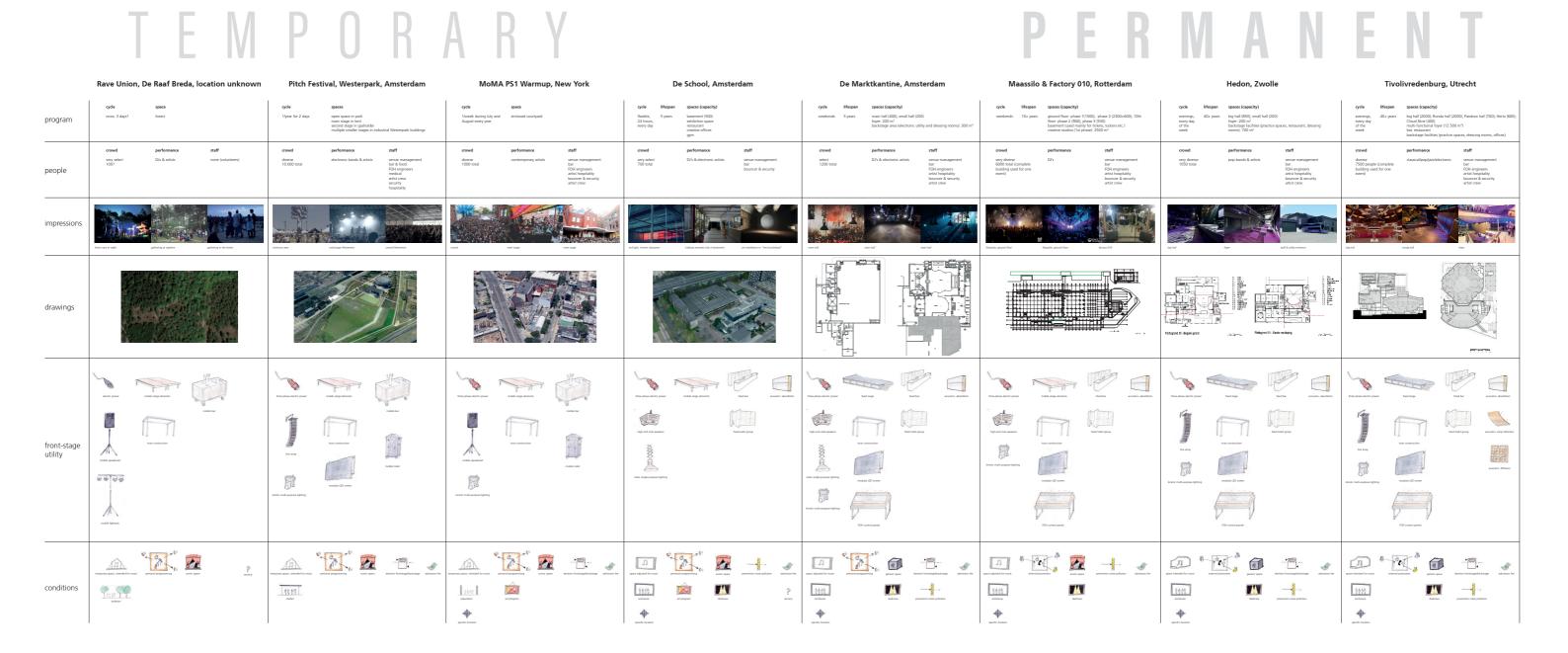


OMA/AMO - Study for Ministry of Sound II (2015)



OMA/AMO - Study for Ministry of Sound II (2015)

INVENTARISATION TEMPORARY/PERMANENT FESTIVITY



CONCLUSION TEMPORARY/PERMANENT INVENTARISATION

TEMPORARY:

- space 'as found' meets functional demands nightclub
- informal space: aesthetical use of space can be left to user



"kunstlokaal", De School, Amsterdam (since 2016) source: instagram

PERMANENT:

- functional demands nightclub consumes space 'as found'
- <u>aesthetically defined</u> space: little spatial interpretation possible

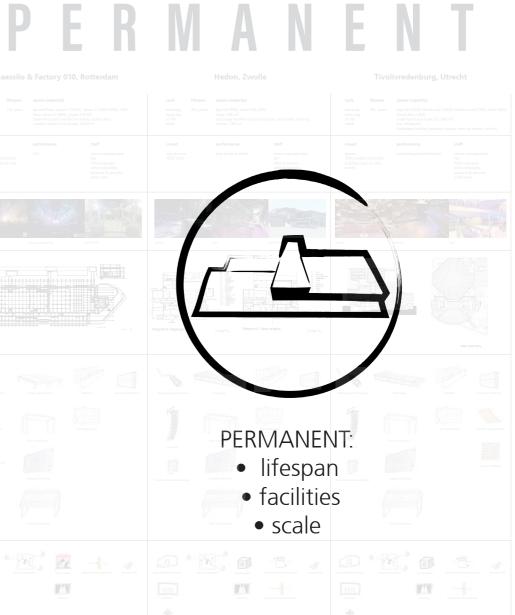


Toffler, Rotterdam (since 2011) source: partyflock.nl

REFLECTION

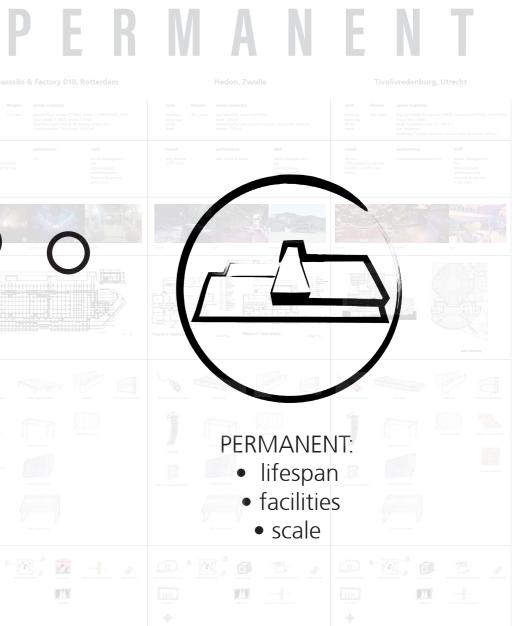
PLACEMENT TEMPORARY/PERMANENT SCALE

ΤΕΜ	POR	ARY		PER	
	Pitch Festival, Westerpark, Amsterdam	MoMA PS1 Warmup, New York			
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					(1) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4

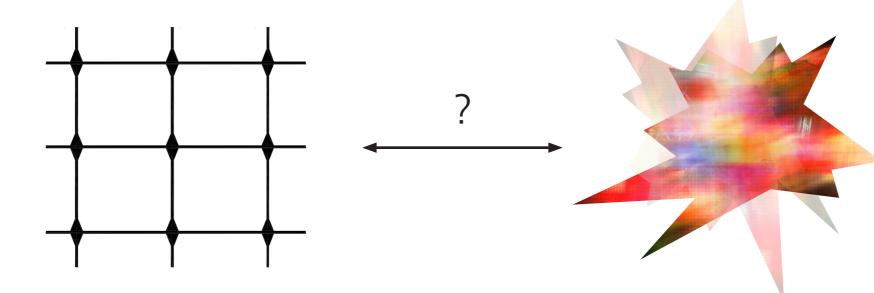


PLACEMENT TEMPORARY/PERMANENT SCALE

TEMPORARY • informal space: spatial experimentation left to user



How can the multi-layered quality of the sturdy Maassilo be structurally reinvented, so that it facilitates and allowes space to the volatile nature of a night club?





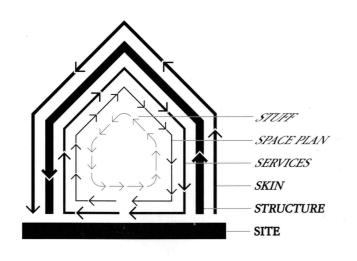


REFLECTION

STRATEGY

design aim: design a sturdy basis for flexible future use

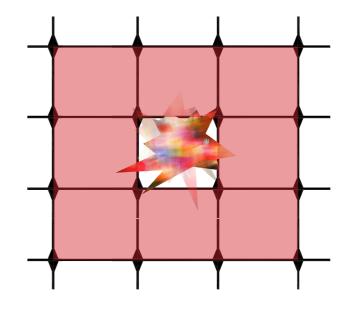
• clear distinction temporary/permanent (structure/stuff) design decisions



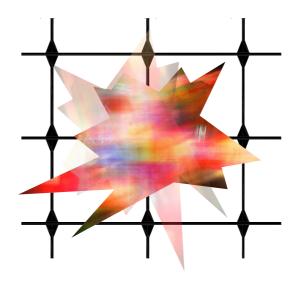
"Shearing layers" (Stewart Brand - How buildings learn 1994)

• **facilitate use**: infrastructure, logistics

• make effective use of the physical, **protective** qualities of the building (f.e. silos as buffers)



• trigger use: in spatial experience of silo cuts, it must be left to users to 'disrupt the order'



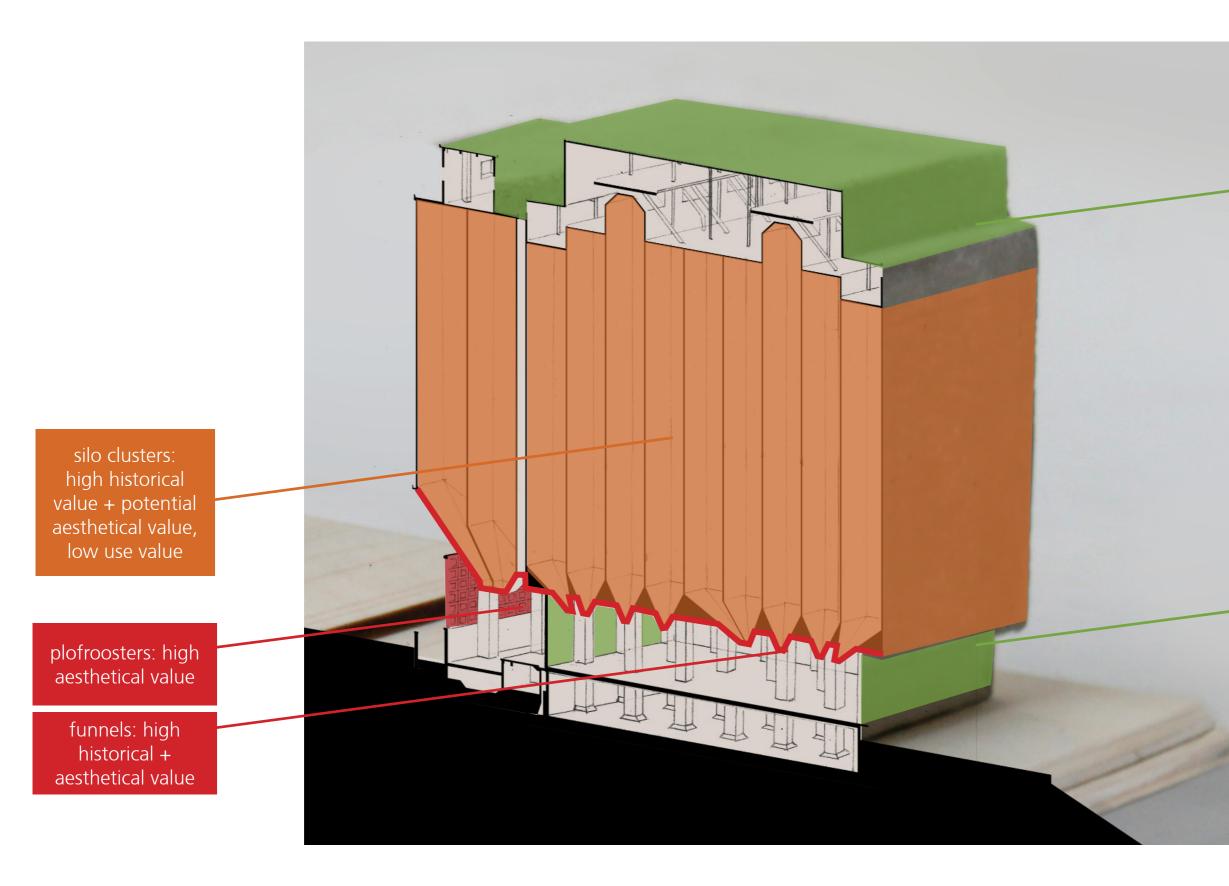
(as seen in permanent venues)

LAYERS IN TIME

REFLECTION

5. RELATION PUBLIC SPACE

RESTRICTIONS & OPPORTUNITIES



section Brinkman & Van der Vlugt - existing

roof & facades attic: indifferent value

facade ground floor: low historical + aesthetical value

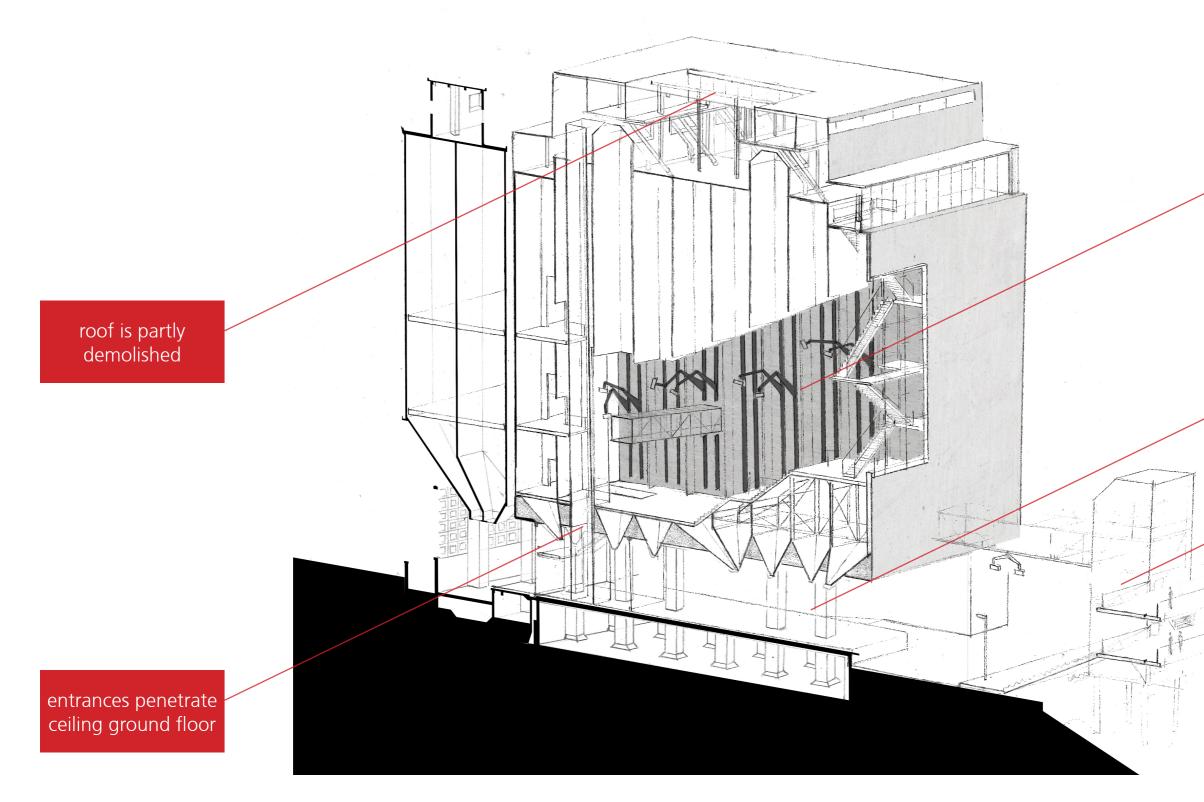


high value medium value

low value

SPACE

GLOBAL OVERVIEW INTERVENTIONS



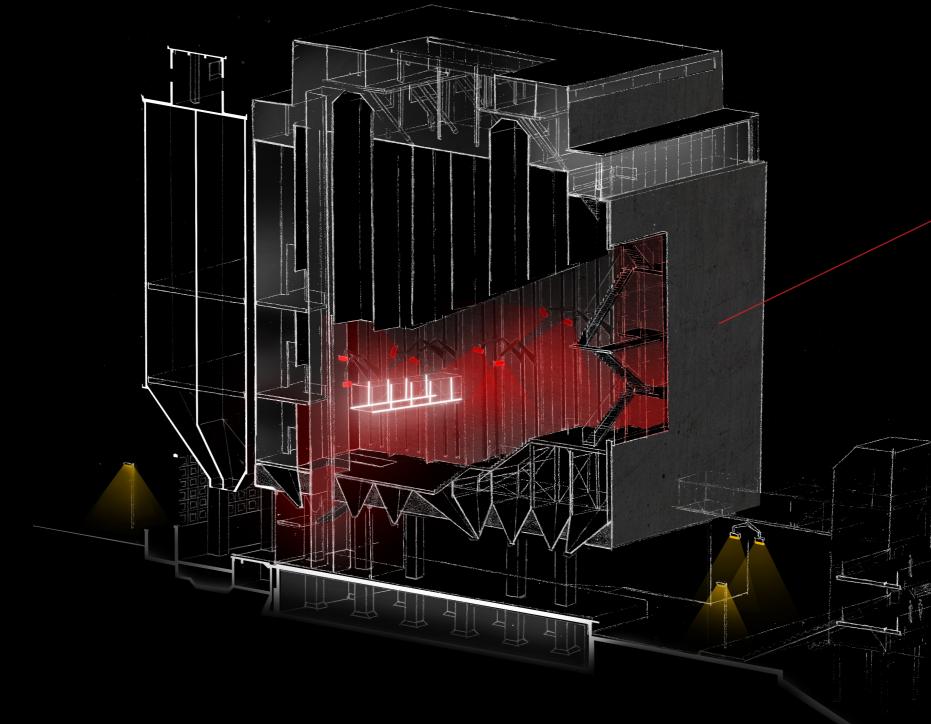
section Brinkman & Van der Vlugt - new

large spaces are cut out of the silos

ground floor is opened up to the quay

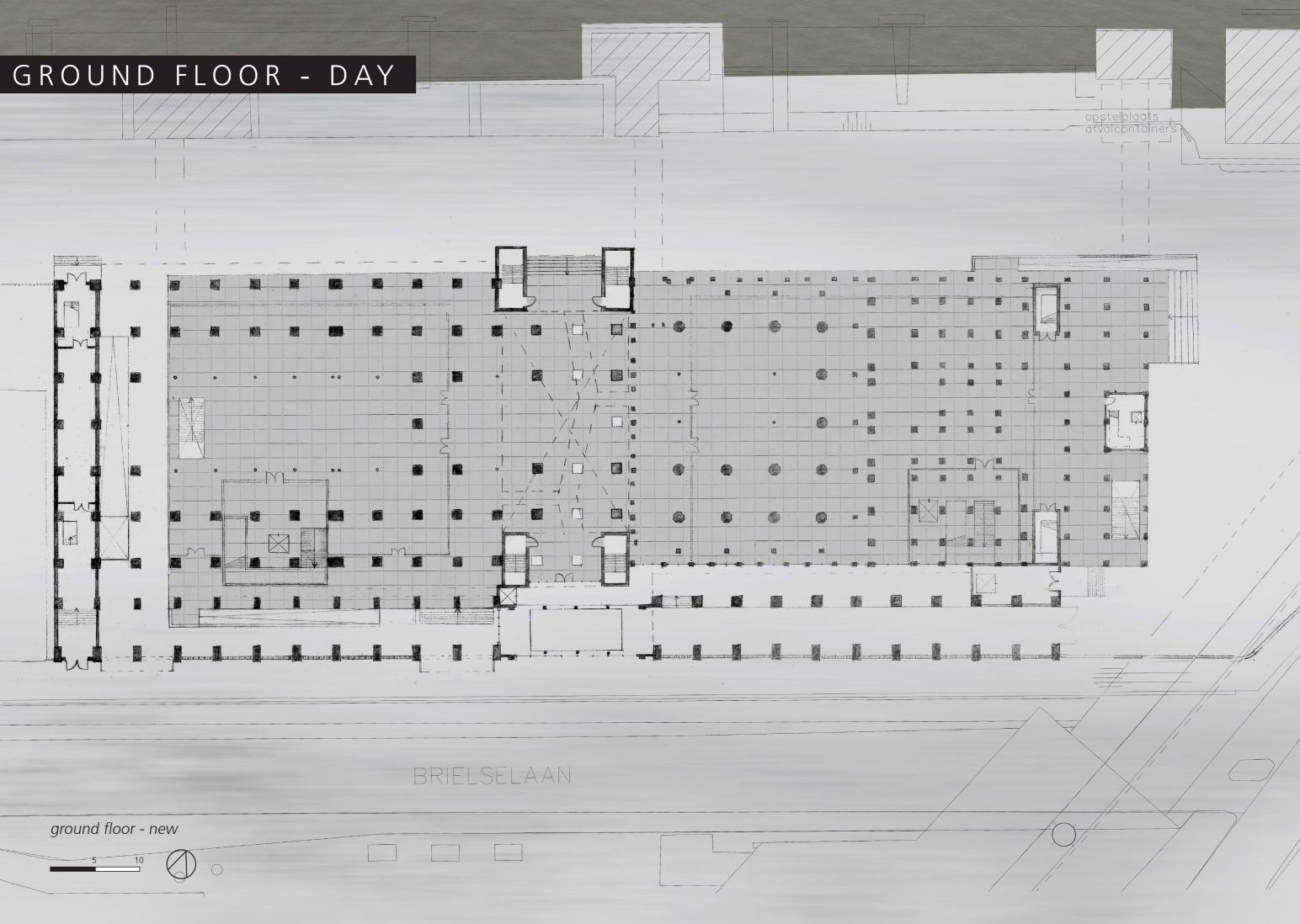
small scale bars in elevator towers

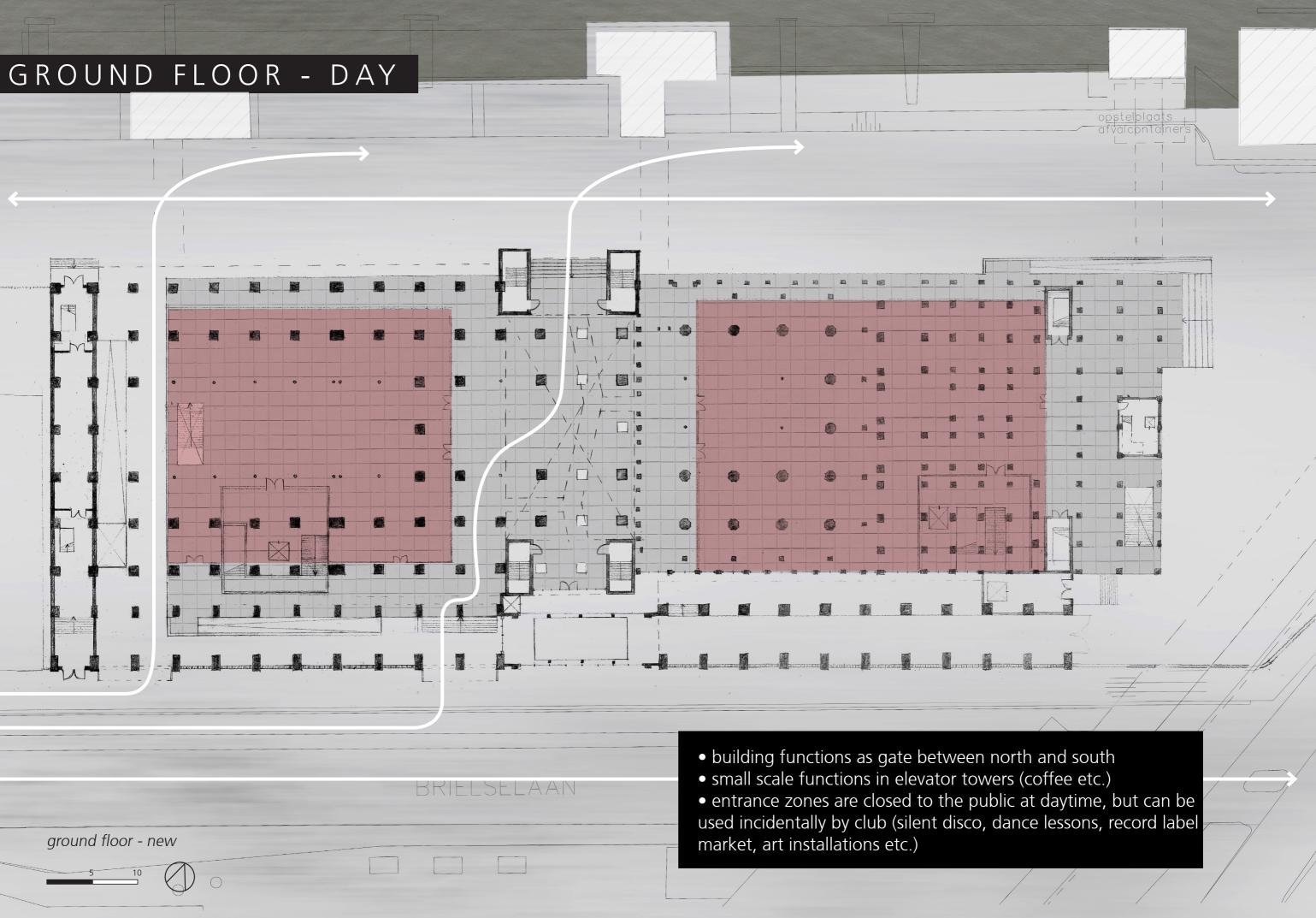
GLOBAL OVERVIEW INTERVENTIONS



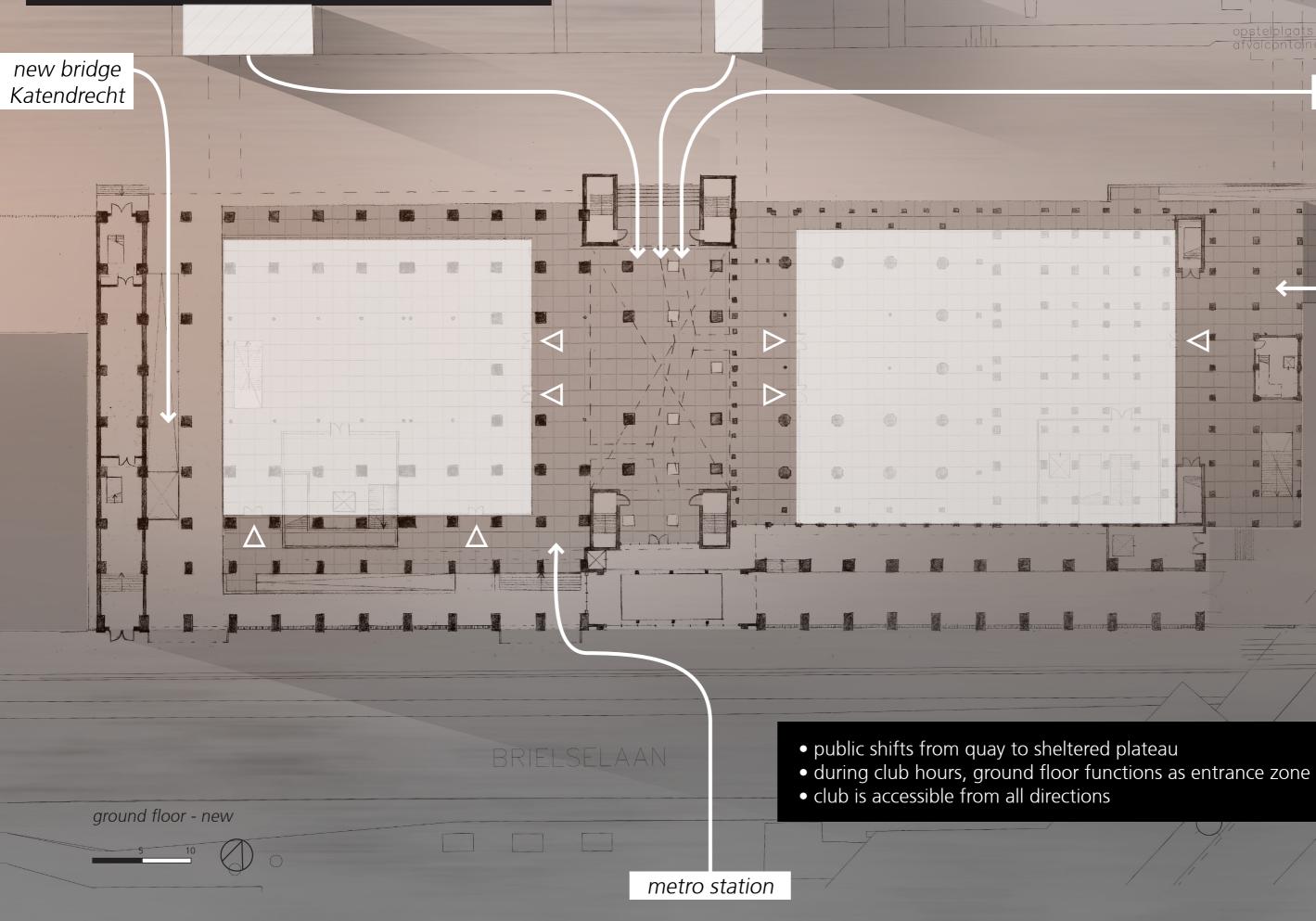
section Brinkman & Van der Vlugt - new (night)

facade opening marks entrance

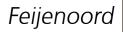




GROUND FLOOR - SUNSET







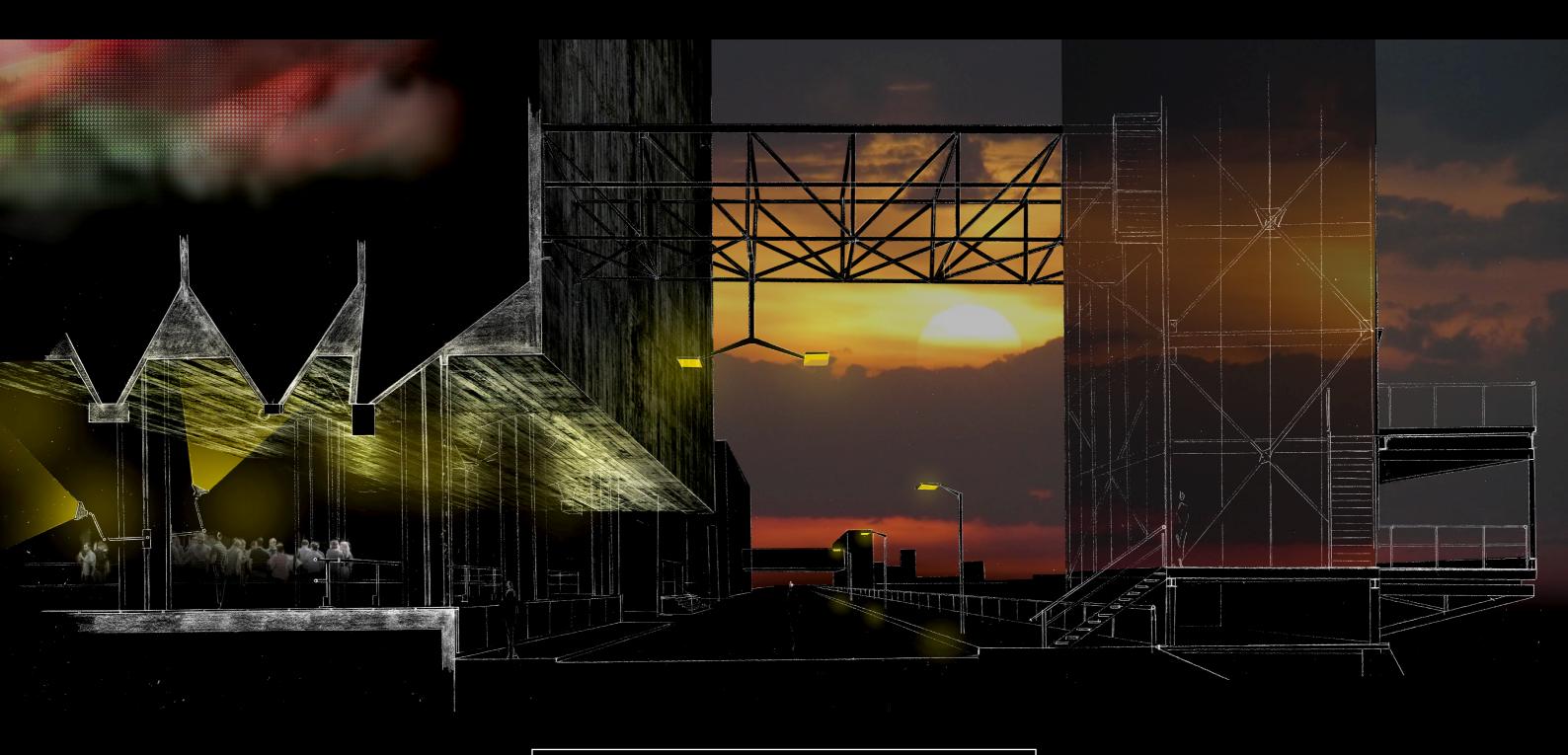
国人中國

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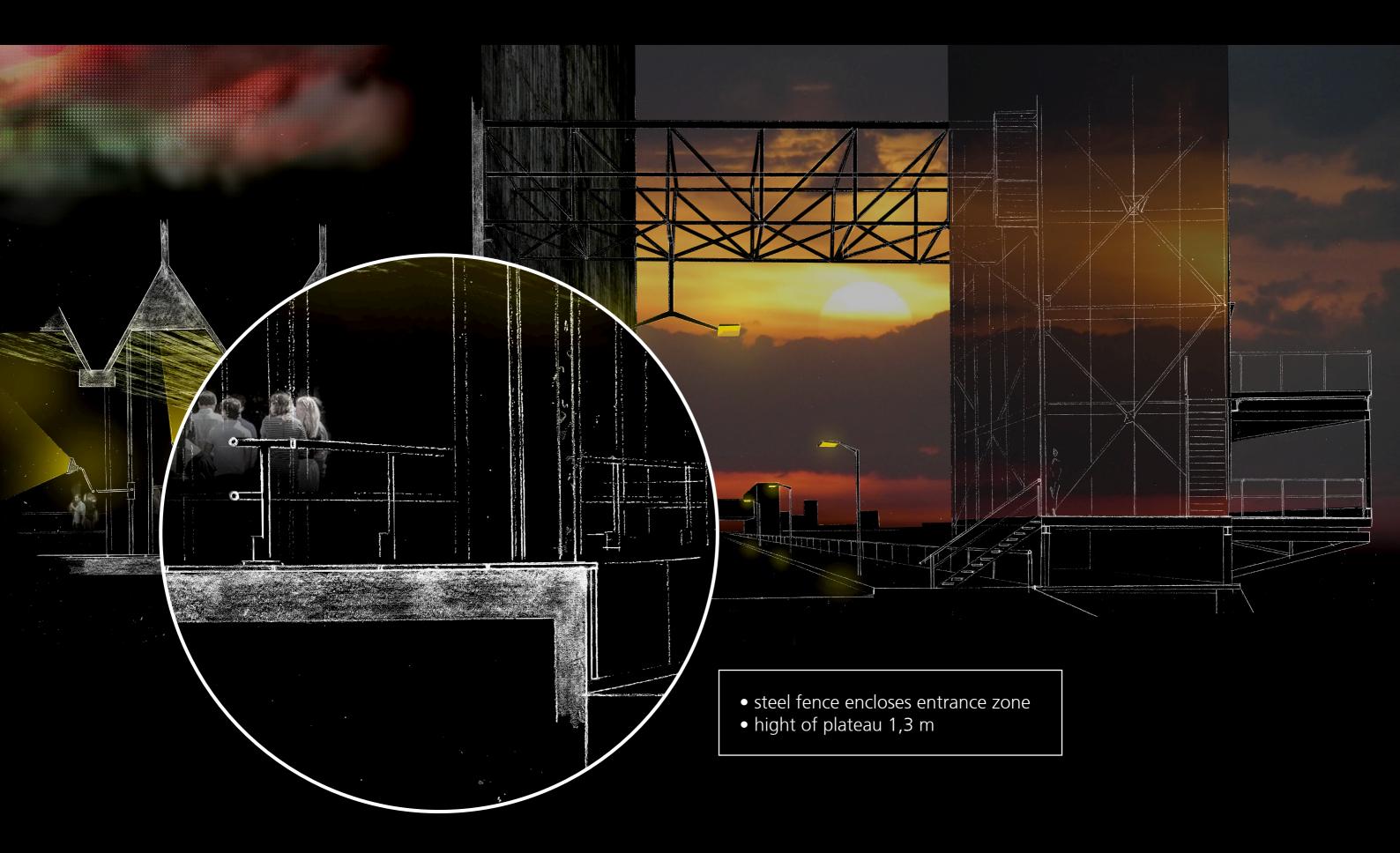
圖差

GROUND FLOOR - SUNSET

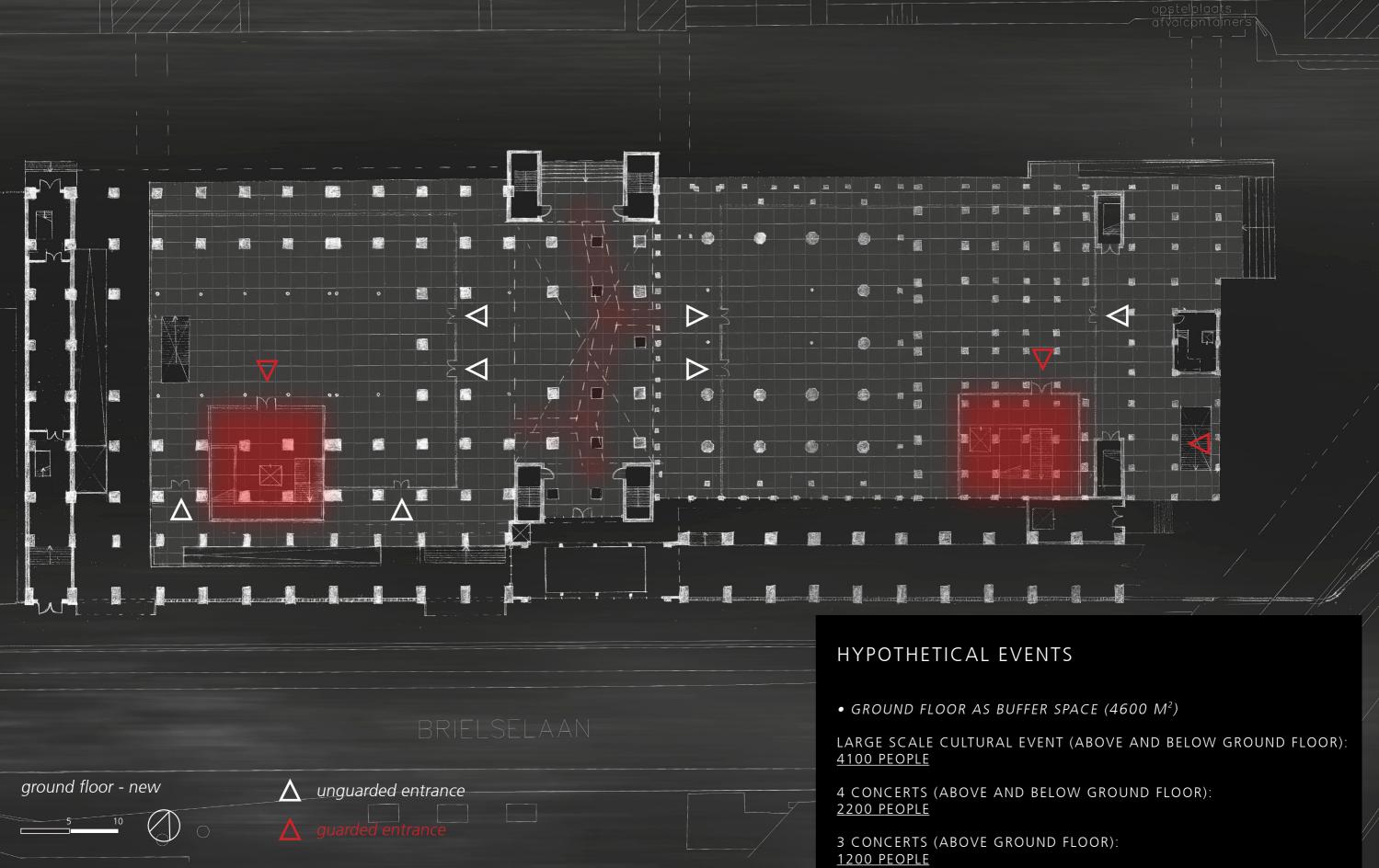


• funnels play key role in moment of anticipation

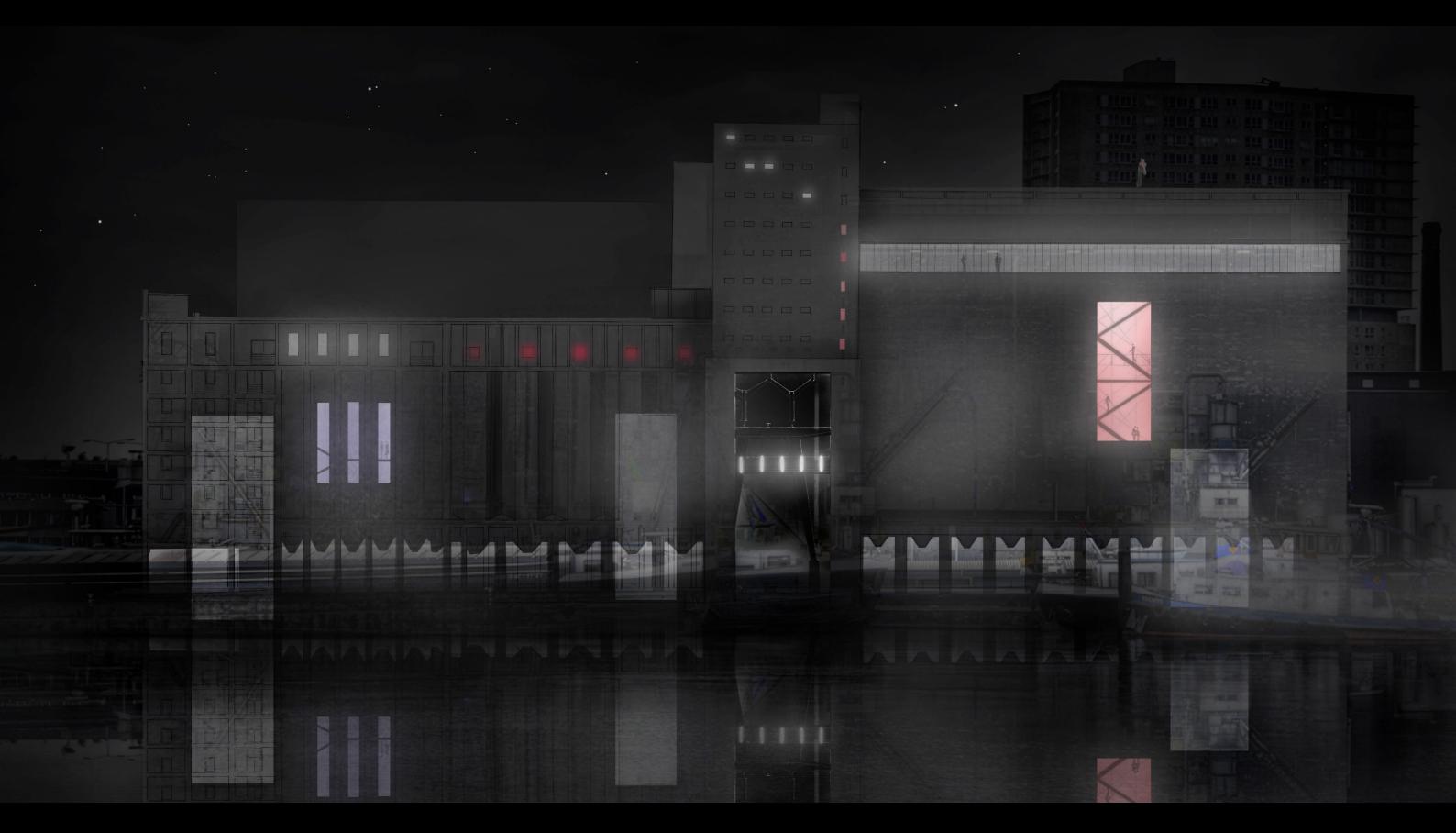
GROUND FLOOR - SUNSET



GROUND FLOOR - NIGHT



NORTH FACADE - NIGHT



NORTH FACADE - NIGHT



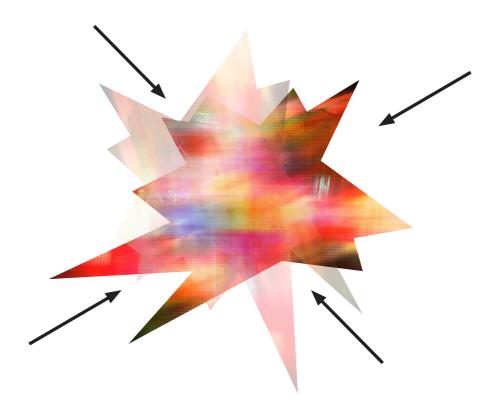
6. FLOW

FUNCTIONAL LAYOUT



long section

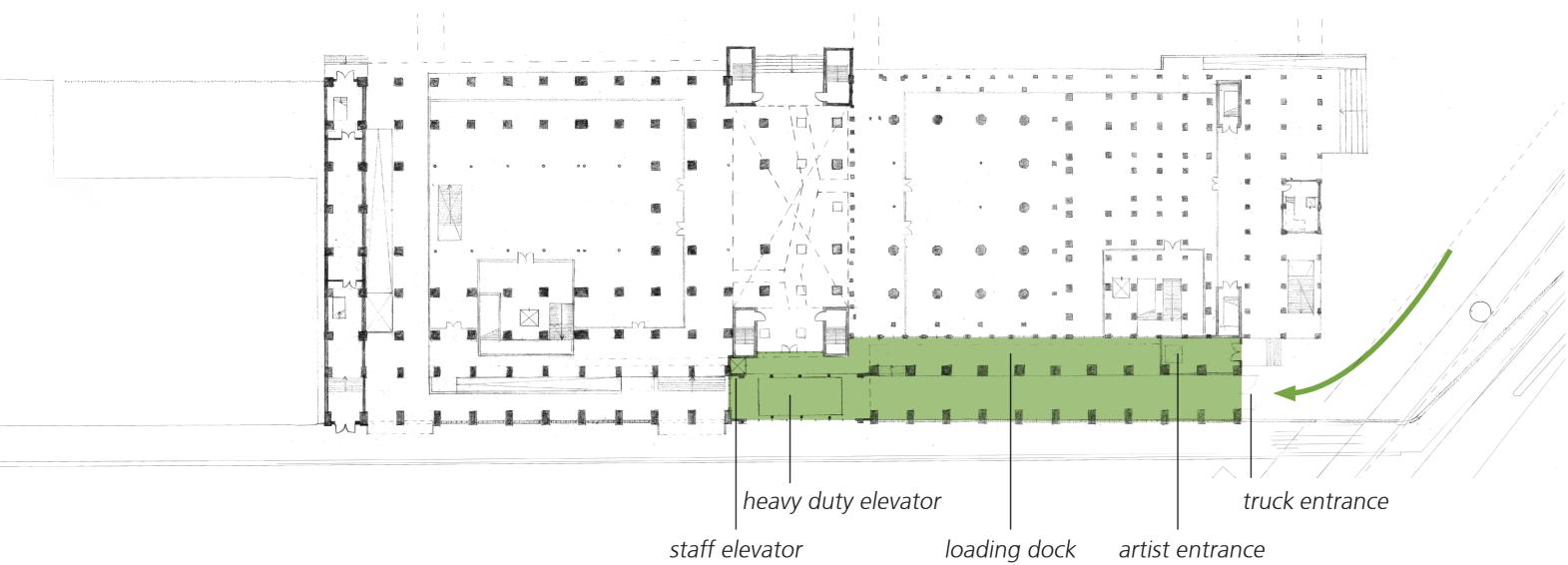
FACILITATING USE



strategy:

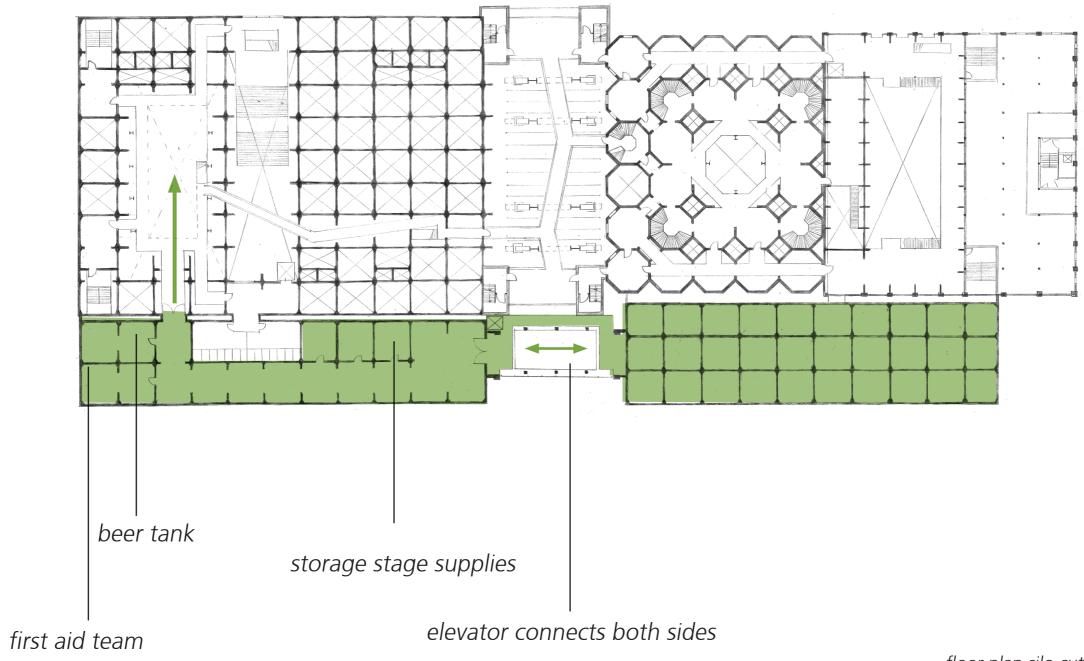
• **facilitate use**: infrastructure, logistics (as seen in permanent venues)

FRONTSTAGE/BACKSTAGE LOGISTICS



ground floor

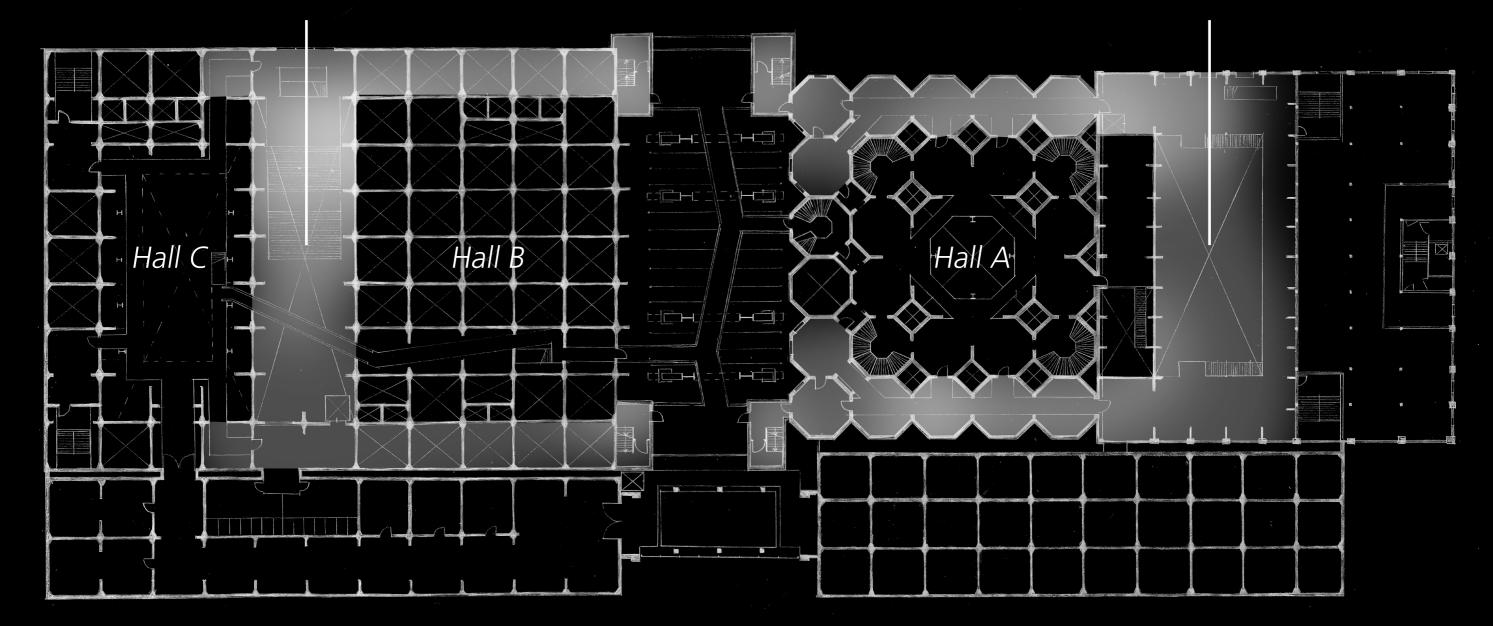
FRONTSTAGE/BACKSTAGE LOGISTICS



FLOW

floor plan silo cutouts

PRIMARY ROUTE

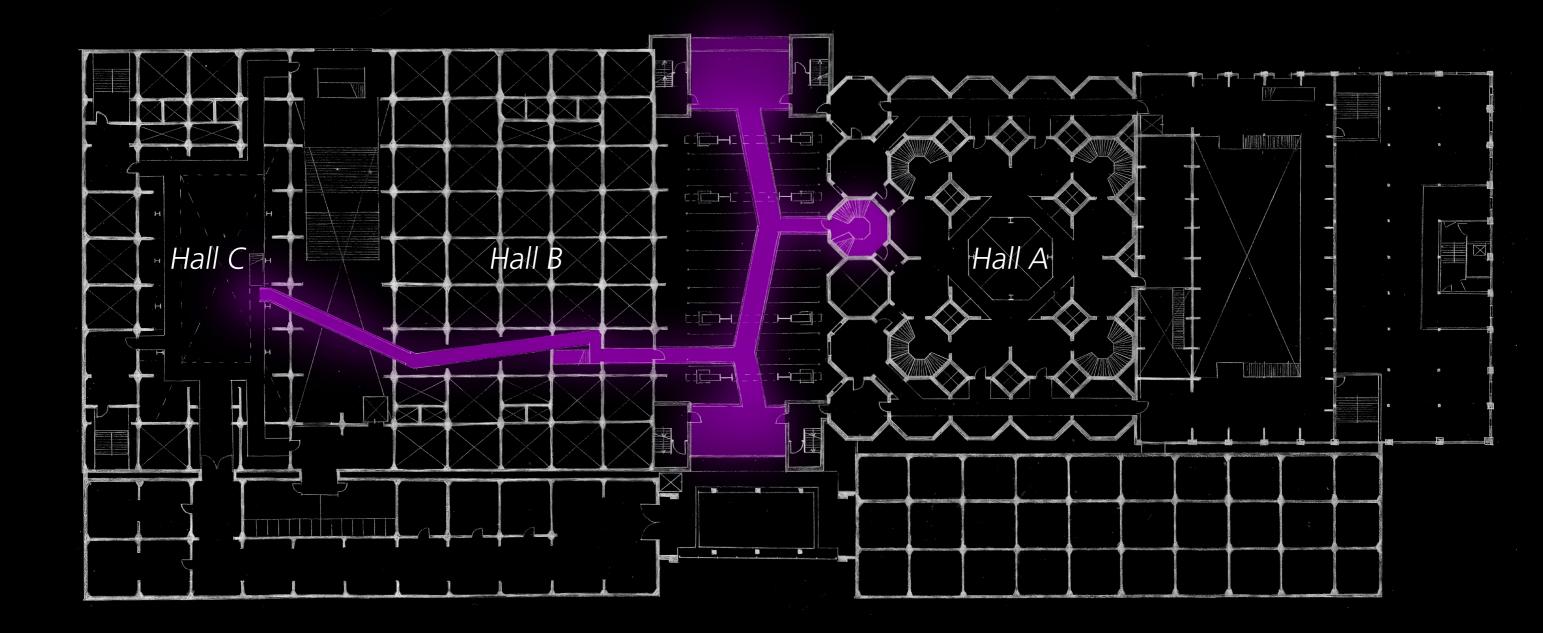


entrance hall

• moves from space to space: entrance zones, exhibition spaces and lounge are part of route

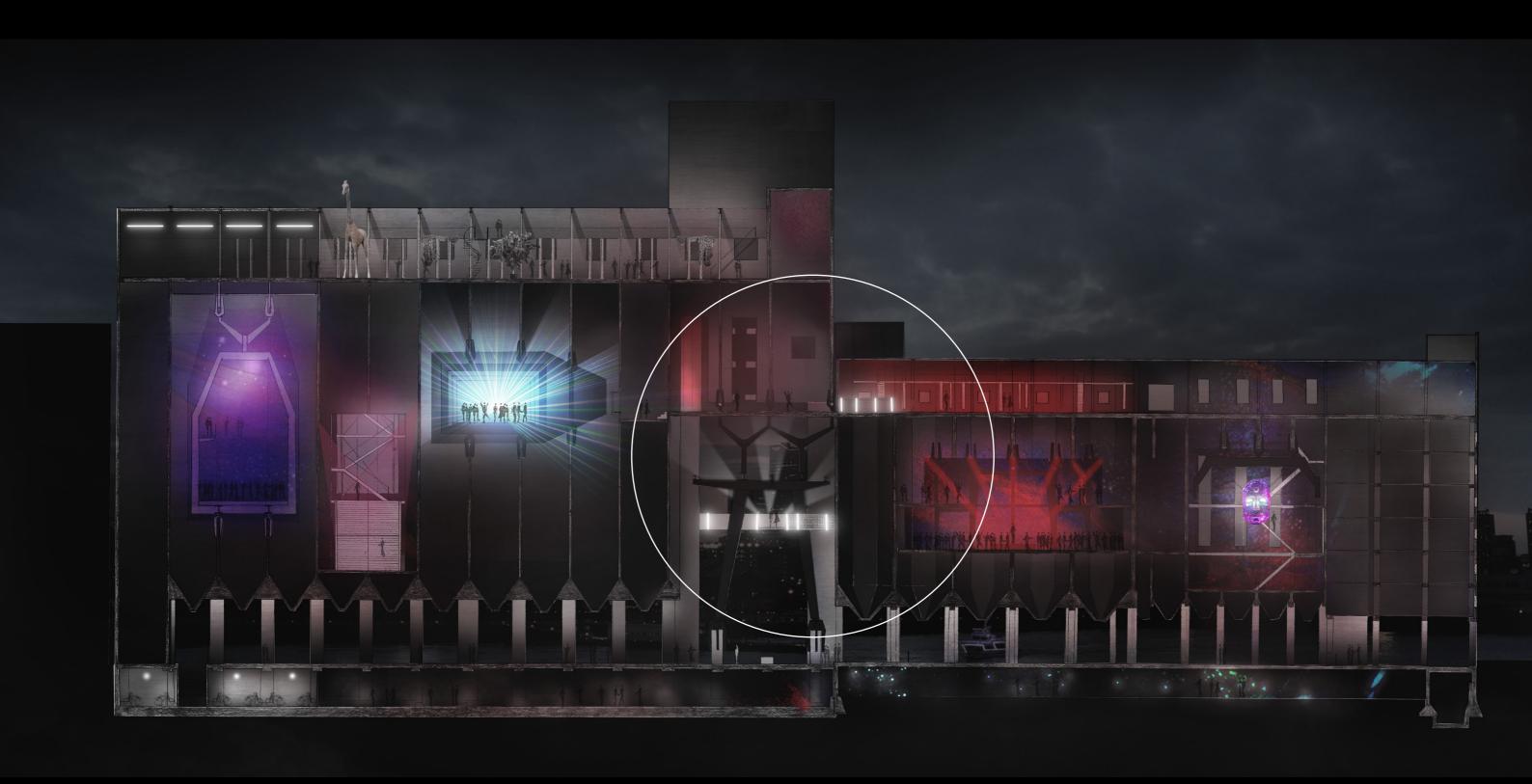
entrance hall

SHORTCUT ROUTE



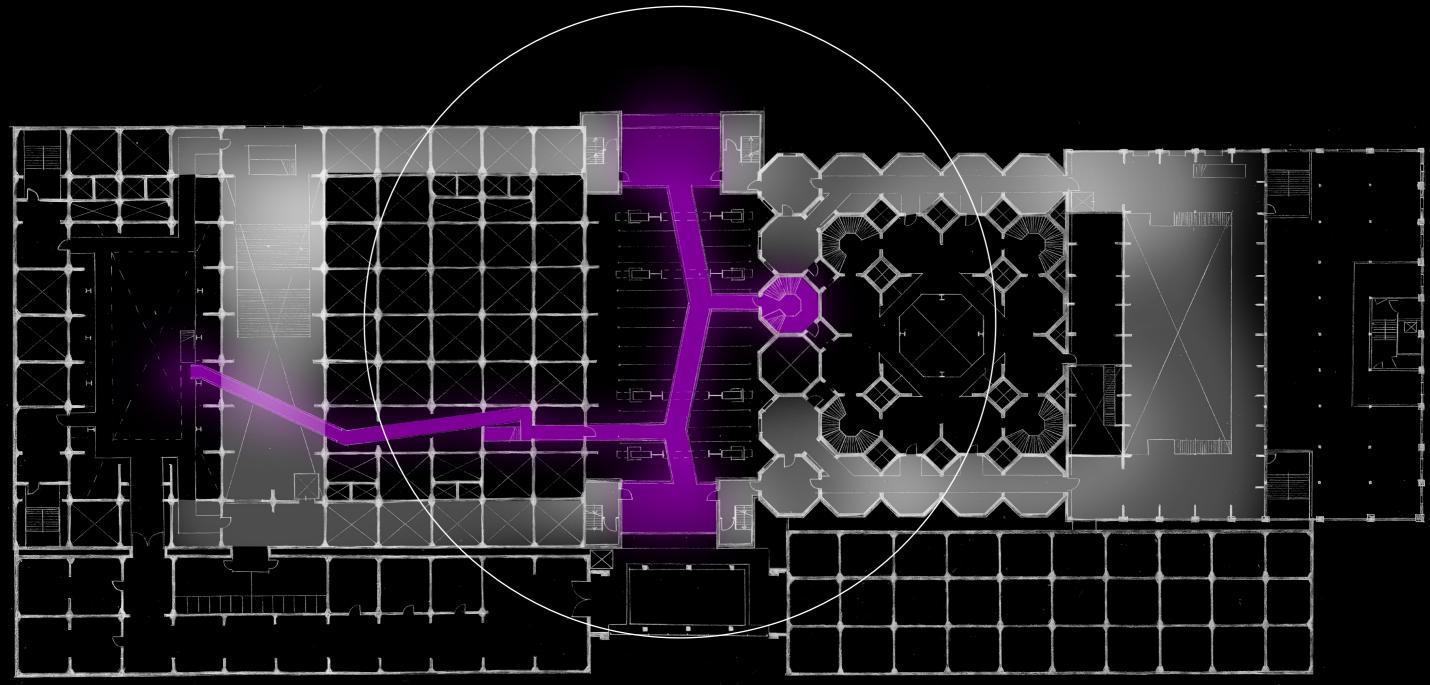
• quick route from dance hall to dance hall

SHORTCUT ROUTE

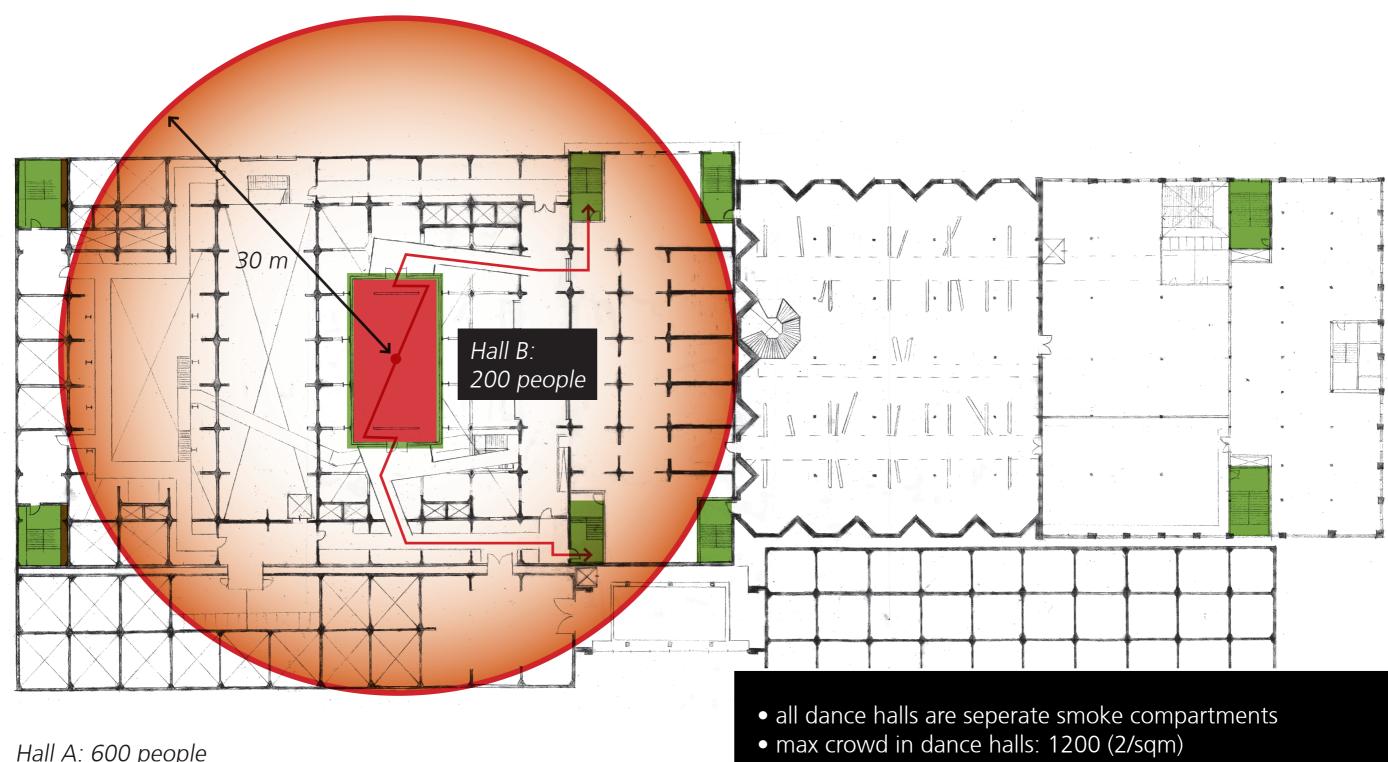


• quick route made recognisable by individual lighting

COINCIDING OF FLOWS



ESCAPE ROUTES

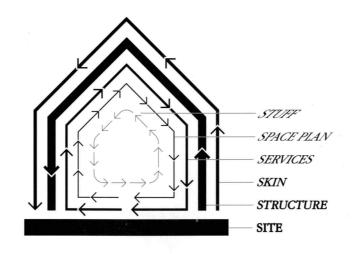


Hall A: 600 people Hall B: 200 people Hall C: 400 people

• staircases (without entrances) dimensioned for 2400 people

7. LAYERS IN TIME

DISTINCTION TEMPORARY/PERMANENT

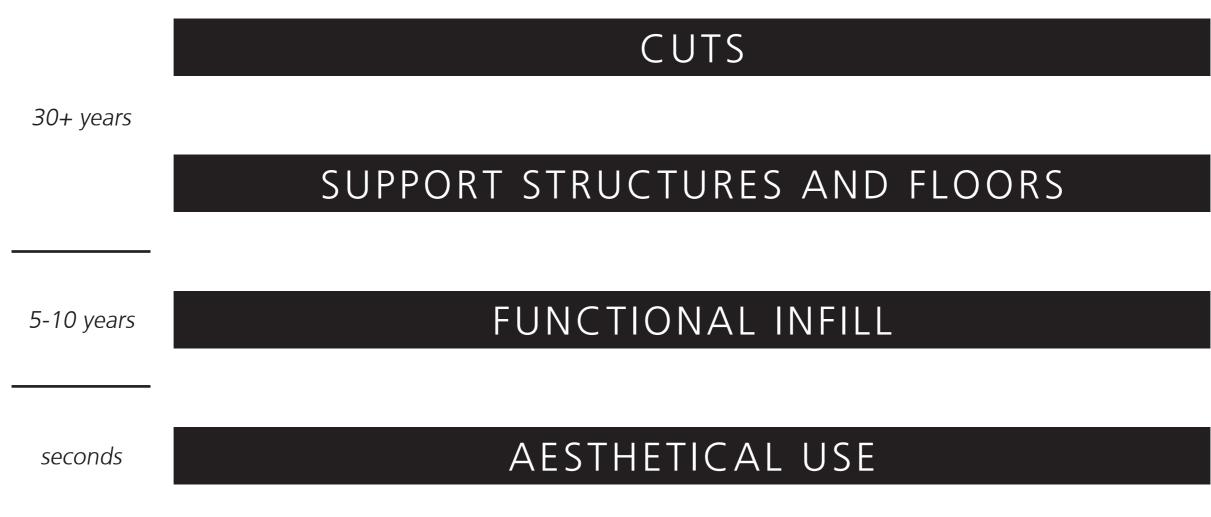


"Shearing layers" (Stewart Brand - How buildings learn 1994)

strategy:

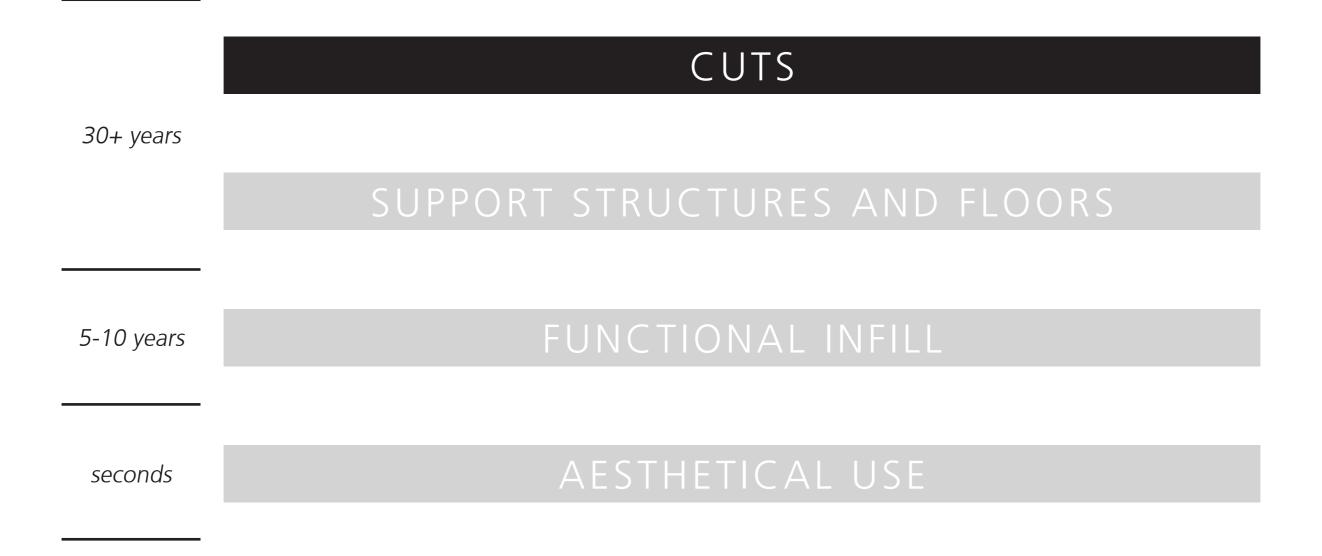
• clear <u>distinction temporary/permanent</u> design decisions

LAYERS IN TIME



LAYERS IN TIME

REFLECTION



FLOW

POSITION CUTTING LANGUAGE



CONICAL INTERSECT, PARIS, GORDON MATTA-CLARK apollo-magazine.com



BUNKER 599, A2, RAAAF + ATELIER DE LYON archdaily.com



dezeen.com

ROUGH

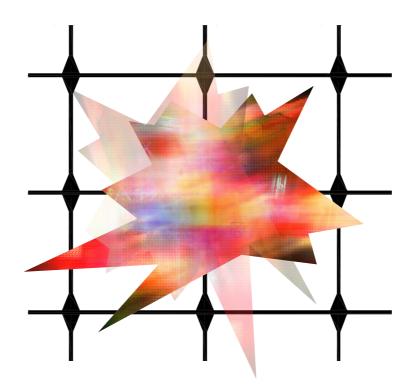
PRECISE



ZEITZ MOCAA, CAPE TOWN, HEATHERWICK

REFINED

POSITION CUTTING LANGUAGE



strategy

• **trigger use**: in spatial experience of silo cuts, it must be left to users to disrupt the order

LAYERS IN TIME

POSITION CUTTING LANGUAGE



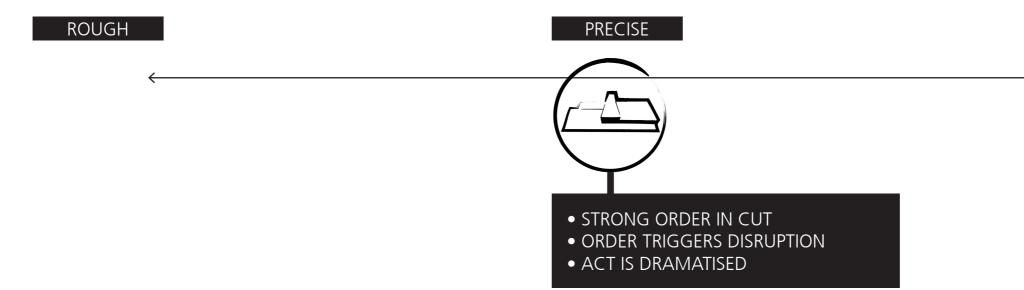
CONICAL INTERSECT, PARIS, GORDON MATTA-CLARK apollo-magazine.com



BUNKER 599, A2, RAAAF + ATELIER DE LYON archdaily.com



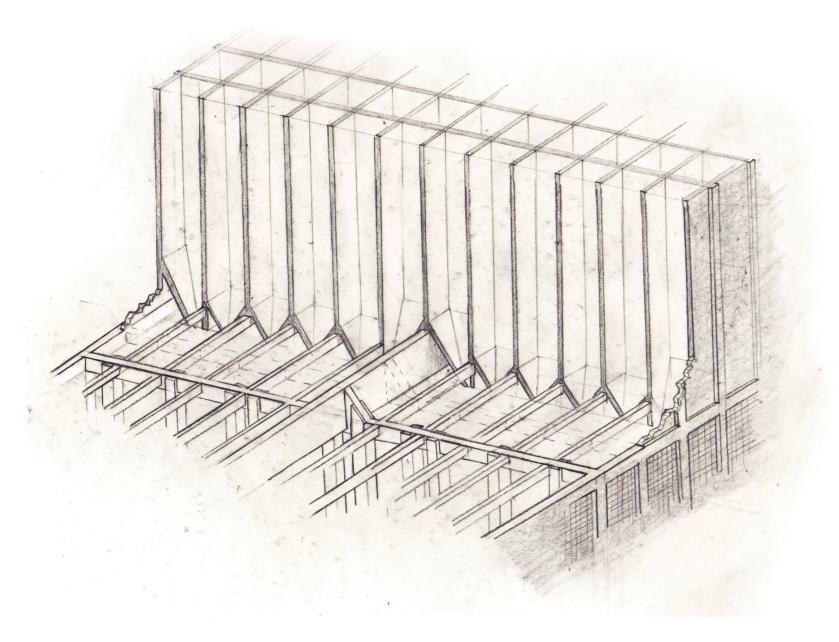
dezeen.com

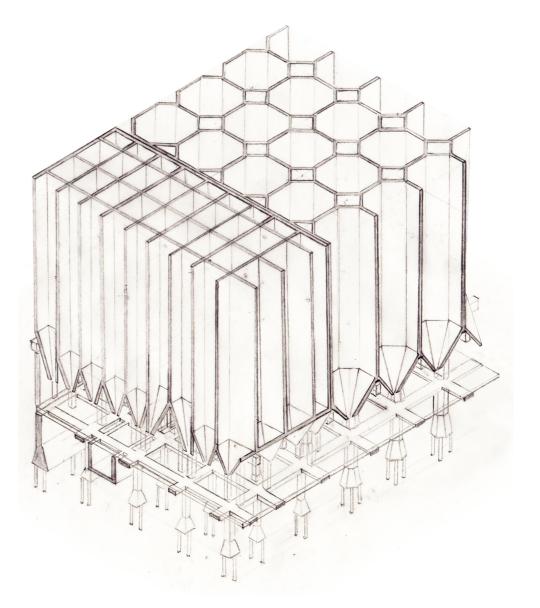


ZEITZ MOCAA, CAPE TOWN, HEATHERWICK

REFINED

OPPORTUNITY: SPATIAL MULTIPLICITY SILO TYPOLOGIES





explorative sections Stok part, early in design process

HISTORICAL INTRODUCTION

VALUE ASSESSMENT

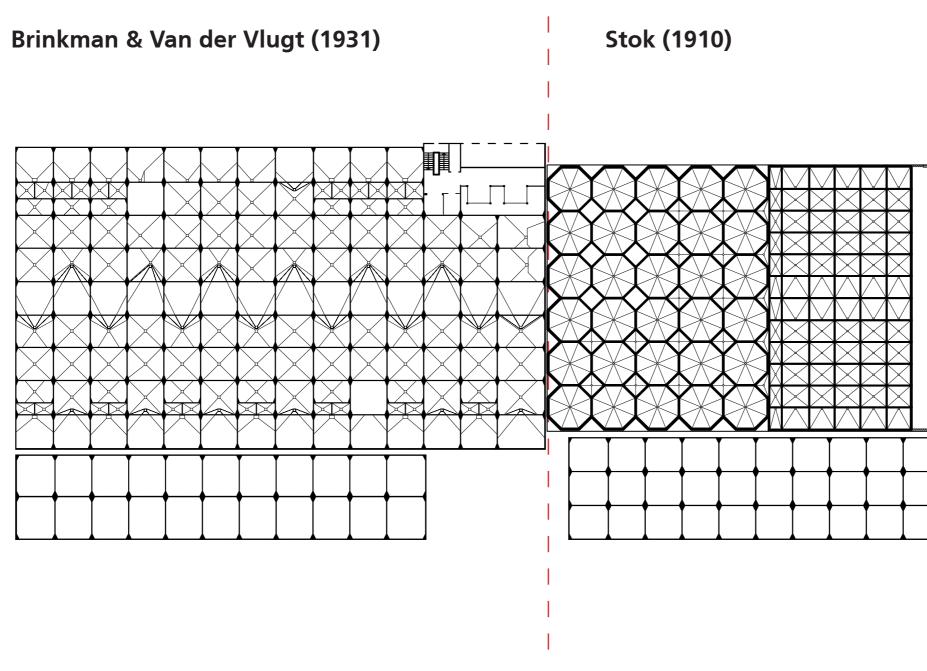
INTERVENTION STATEMENT

PROGRAM & STRATEGY

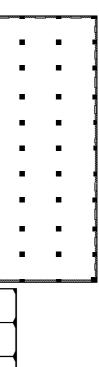
RELATION PUBLIC

FLOW

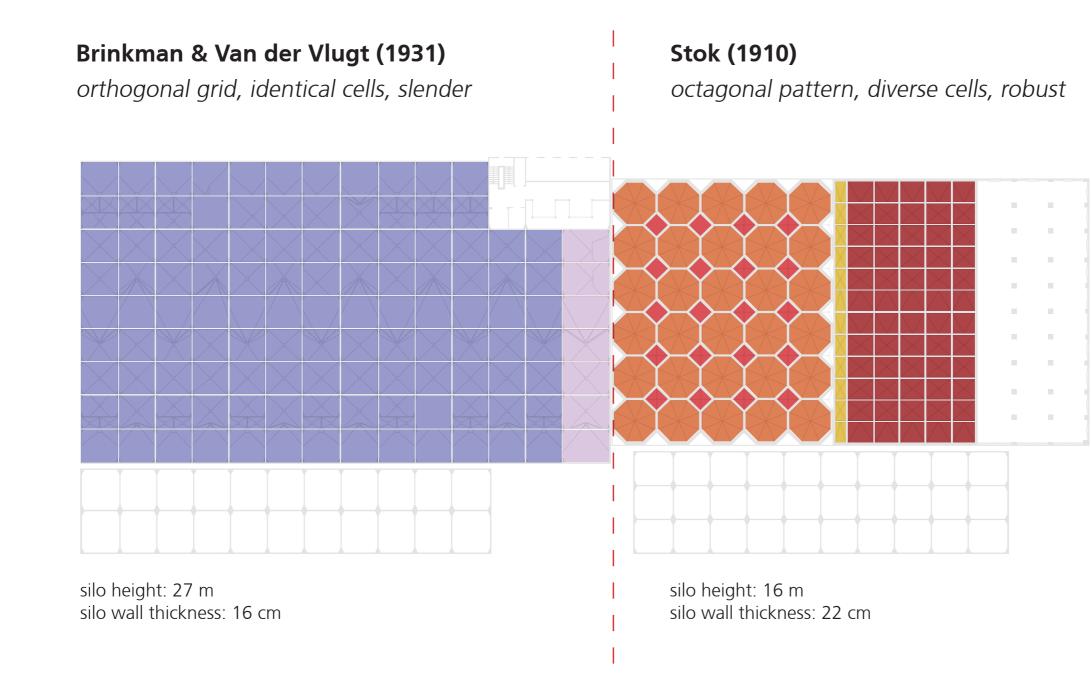
OPPORTUNITY: SPATIAL MULTIPLICITY SILO TYPOLOGIES



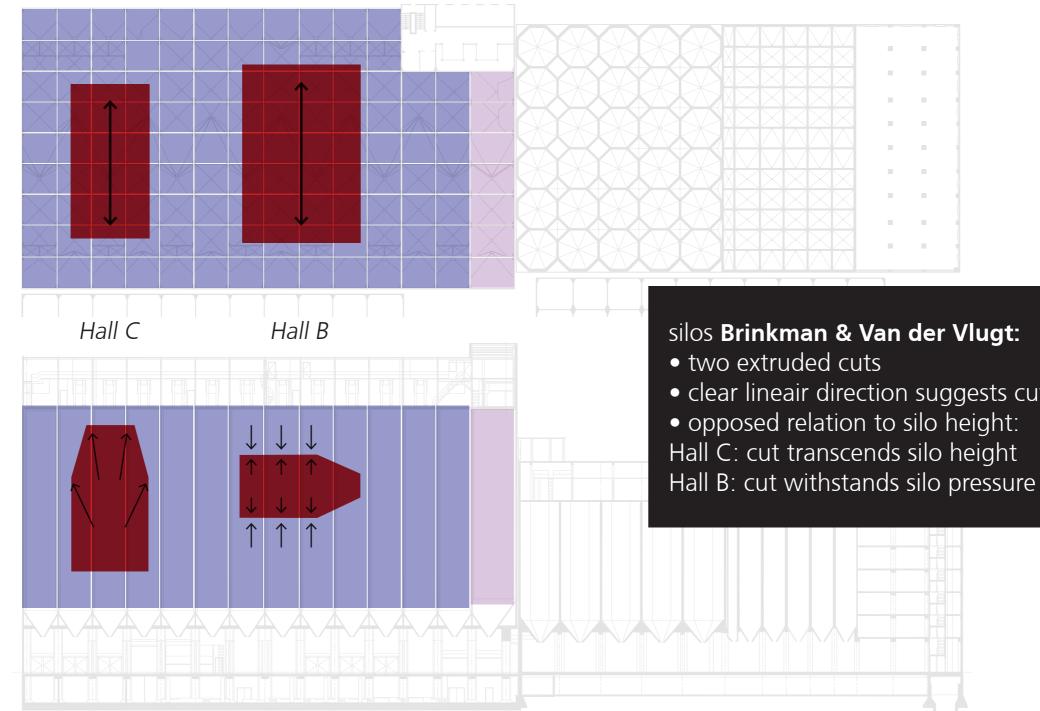
horizontal section silo cells



OPPORTUNITY: SPATIAL MULTIPLICITY SILO TYPOLOGIES



horizontal section silo cells

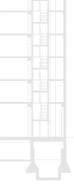


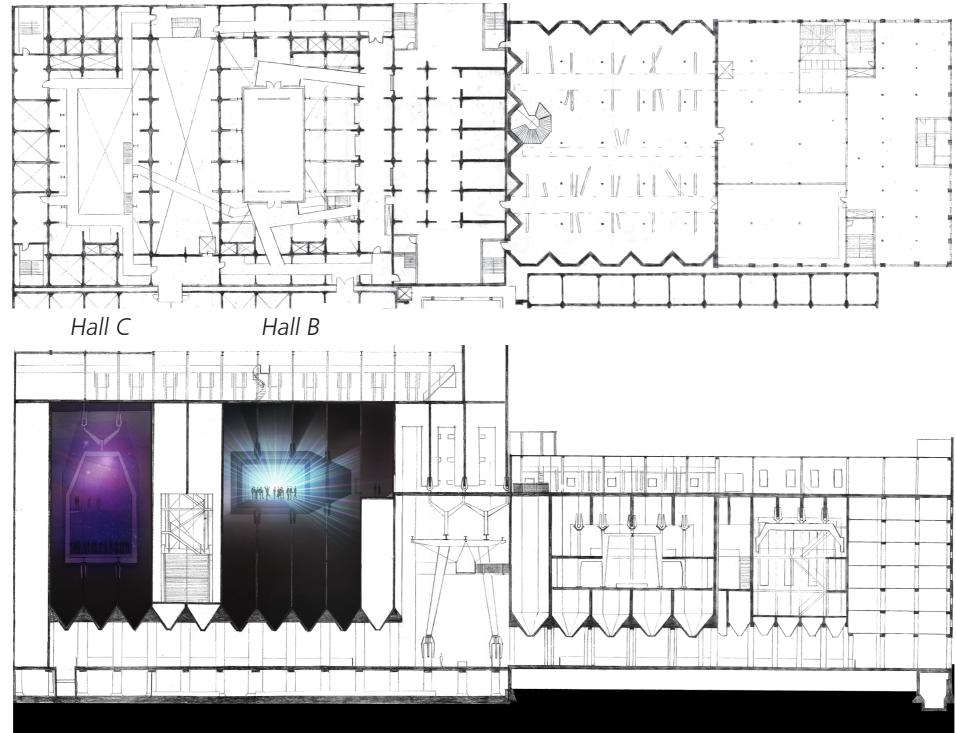
Brinkman & Van der Vlugt (1931)

orthogonal grid, identical cells, slender

silo height: 27 m silo wall thickness: 16 cm

• clear lineair direction suggests cutting action

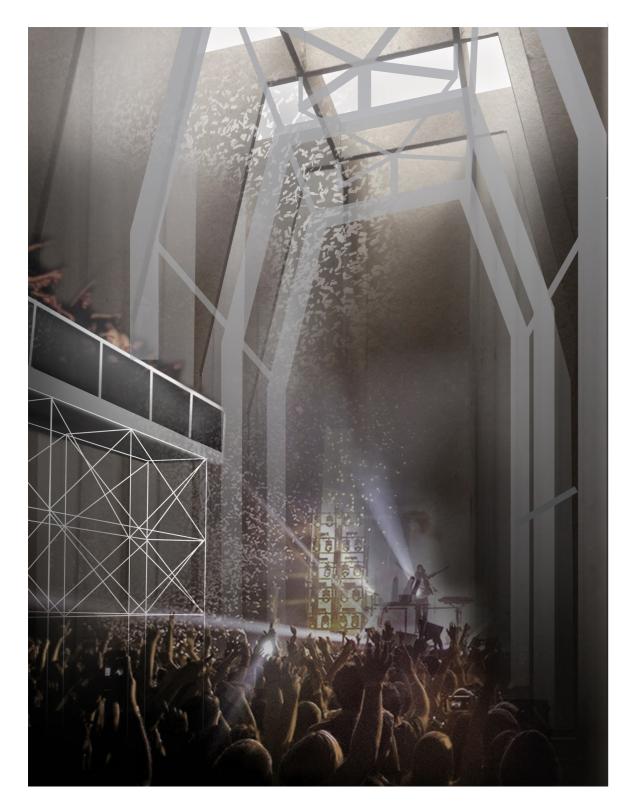


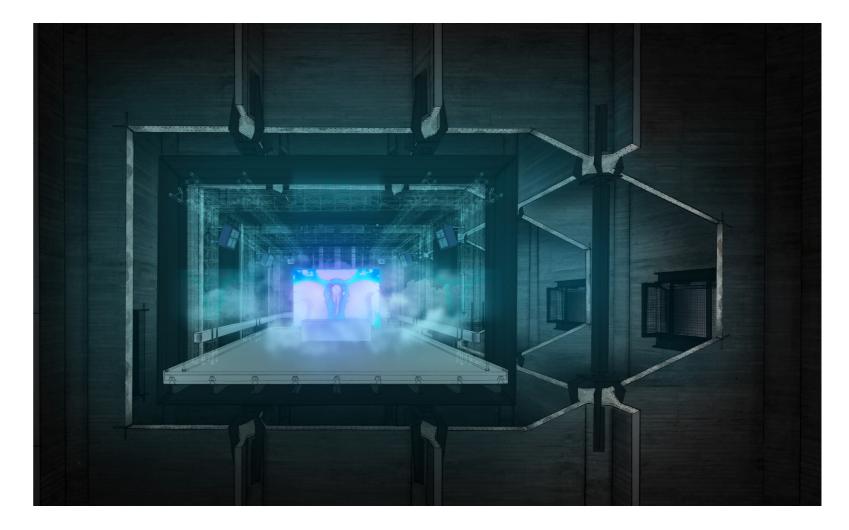


horizontal section silo cells

PROGRAM & STRATEGY **RELATION PUBLIC** FLOW HISTORICAL INTRODUCTION VALUE ASSESSMENT INTERVENTION STATEMENT

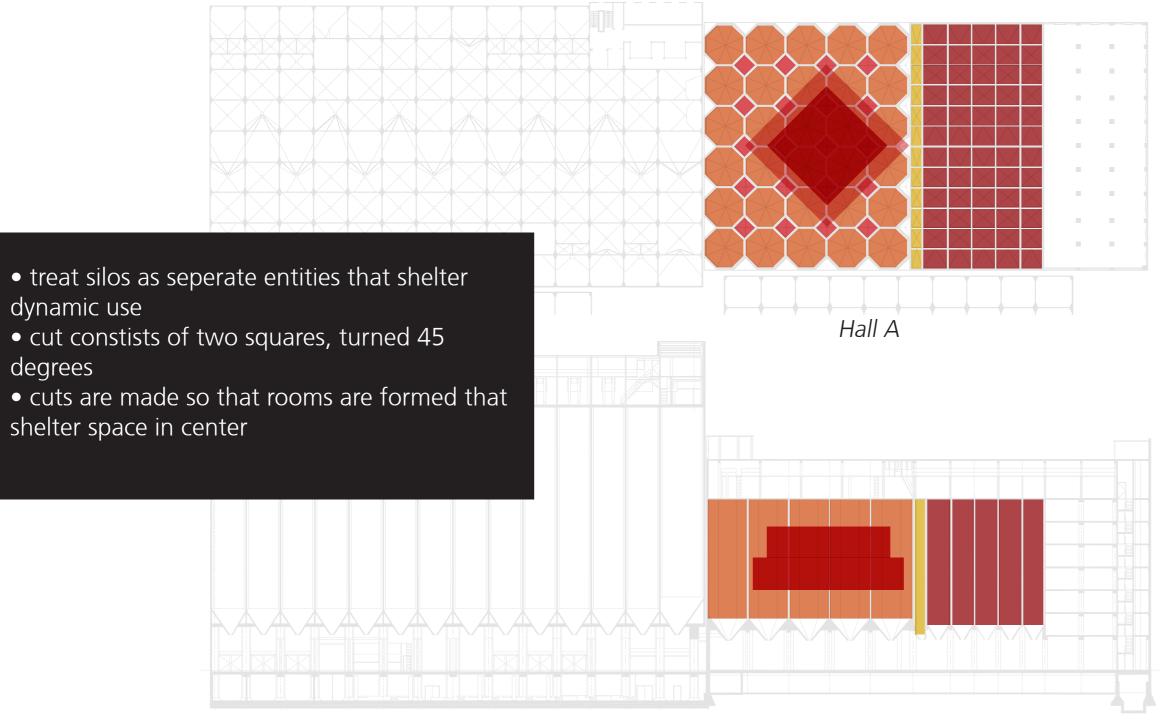






Hall B: make scale silos felt by showing their pressure on structure (black)

Hall C: structure (white) aids in trancending silo height



Stok (1910)

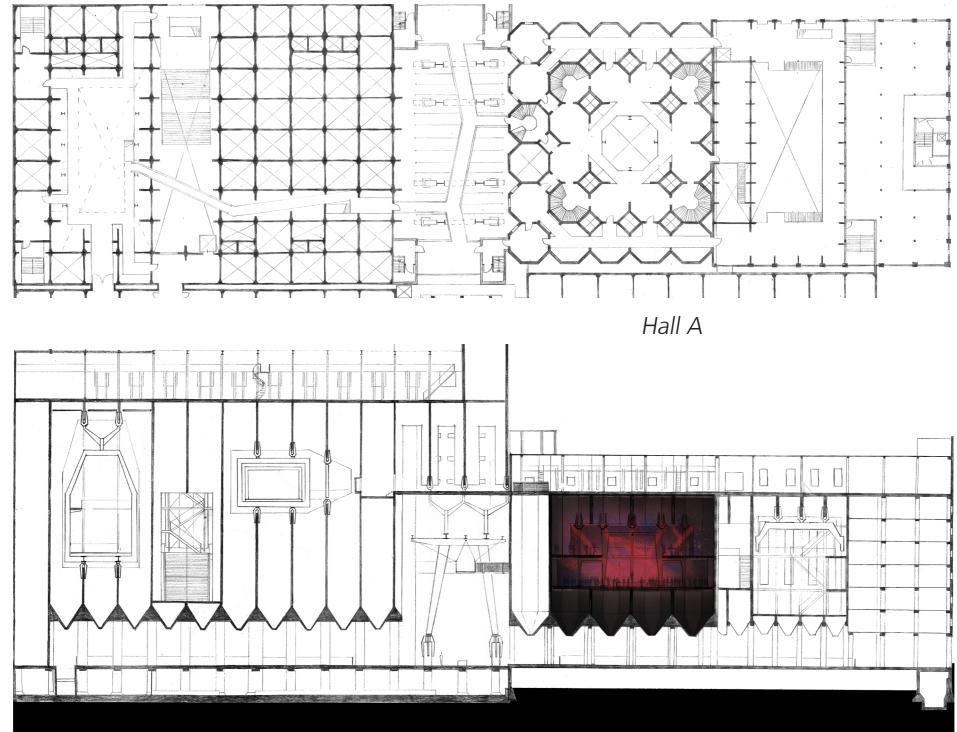
octagonal pattern, diverse cells, robust

silo height: 16 m silo wall thickness: 22 cm

PROGRAM & STRATEGY

RELATION PUBLIC





horizontal section silo cells

PROGRAM & STRATEGY **RELATION PUBLIC** FLOW HISTORICAL INTRODUCTION VALUE ASSESSMENT INTERVENTION STATEMENT

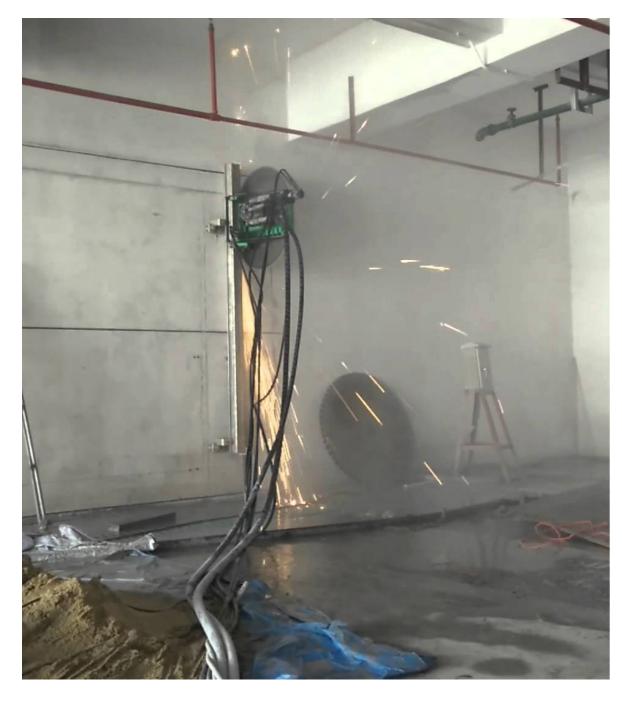


CELEBRATING MULTIPLE SILO TYPOLOGIES

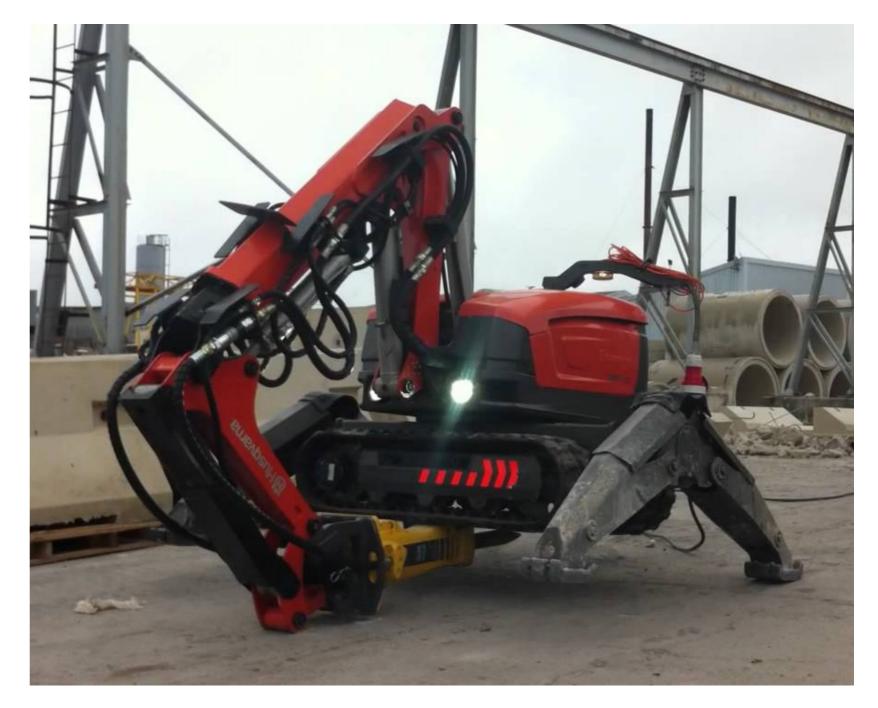


Hall C: multiple (acoustic) rooms around centre stage

CUTTING TECHNIQUE

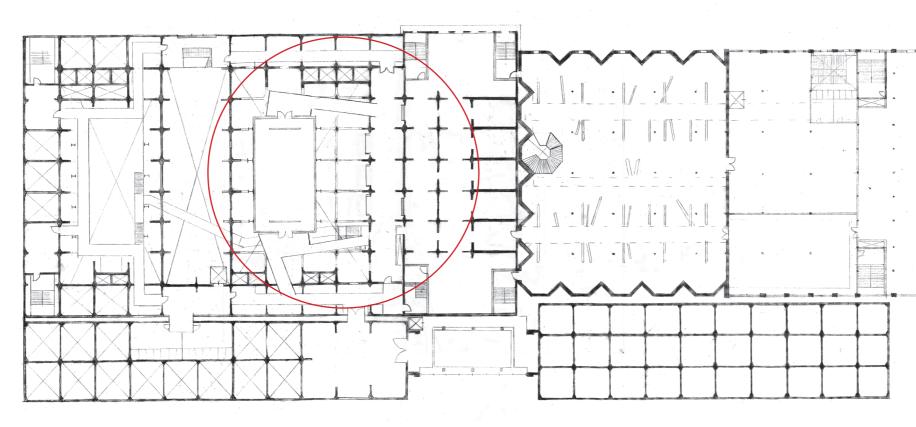


• straightest cuts are achieved with blade saw



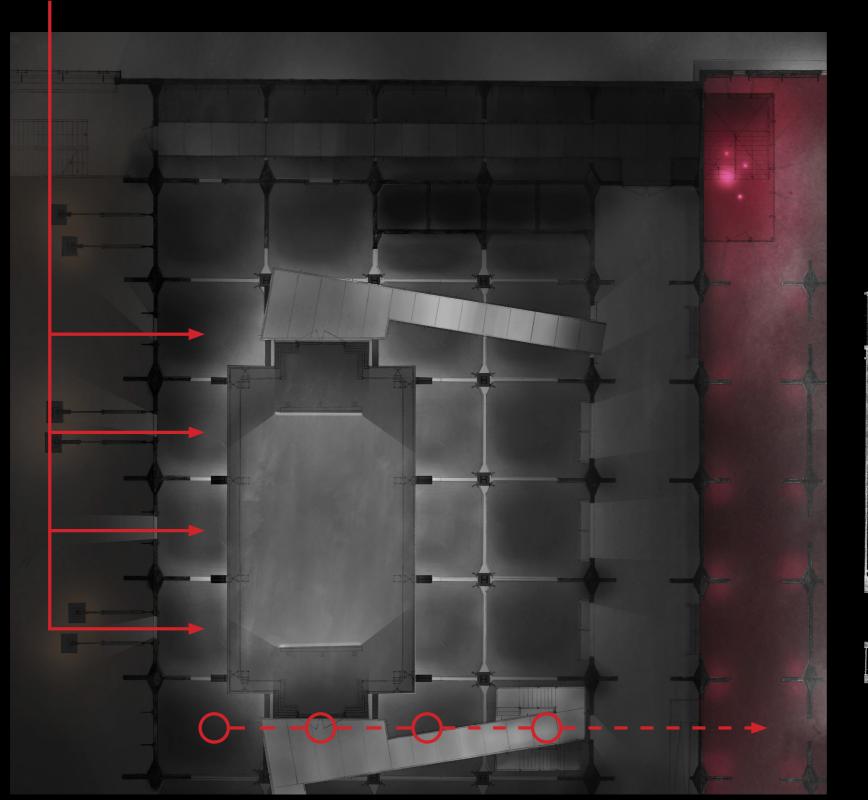
- further demolition with demolition robots: big reach, go through small openings
- demolition costs around 50.000 per dance hall (costs for sawing, demolition, and waste dump)
- demolition time around 1 month per dance hall with one demolition robot

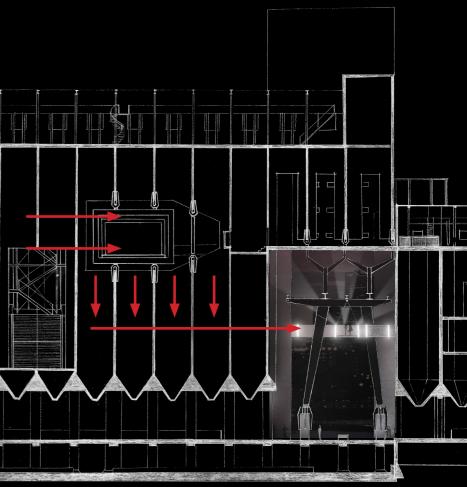
PROGRAM & STRATEGY



• focus area: hall B





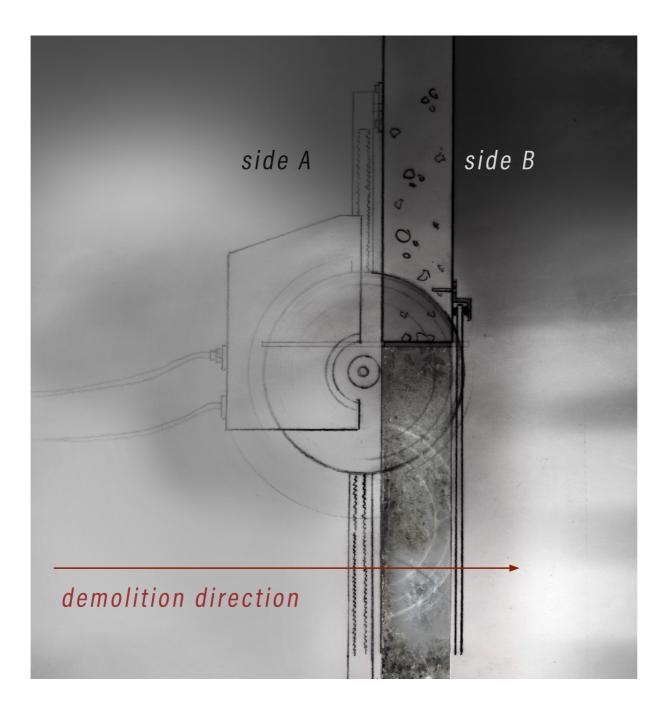


- with of windows (1 meter) follows dimensions robot (0,8 meter)
 waste dump route later used for quick route

• maximum reach demolition robot (HUSQVARNA DXR310): 5,5 meter

• space 8 meters high, made in two phases, visible in window pattern







side A

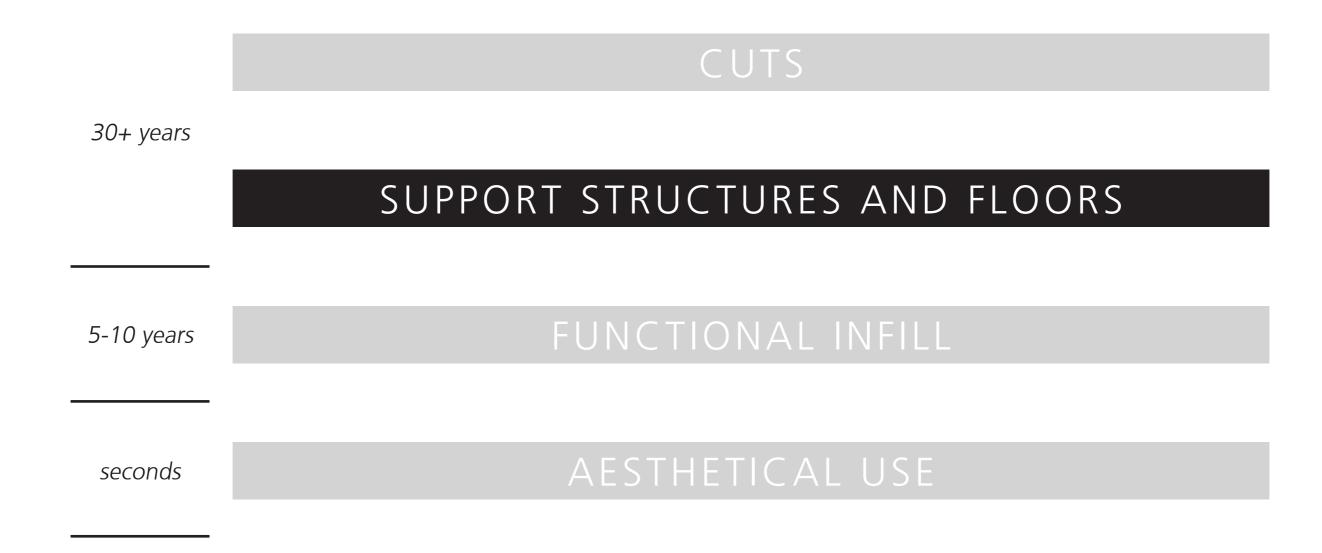


side B

- blade saw leaves traces that indicate demolition direction
- traces remain visible in placement of window



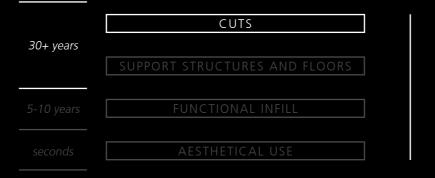




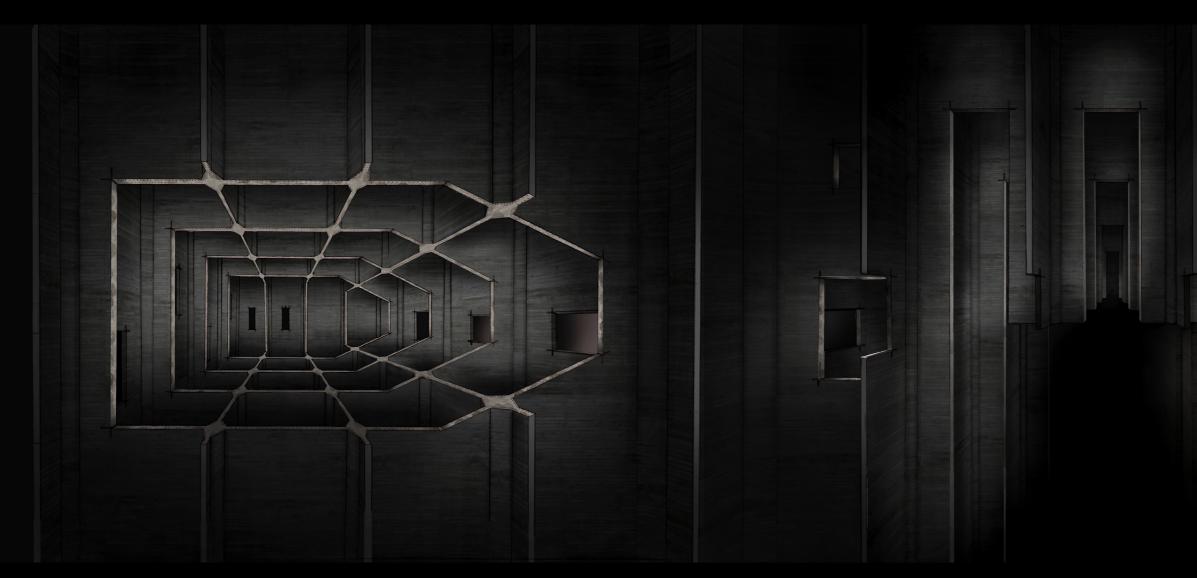
FLOW



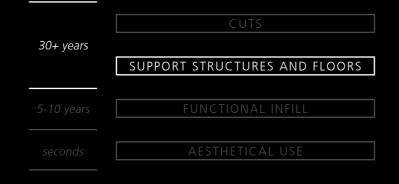
REFLECTION



1. cuts



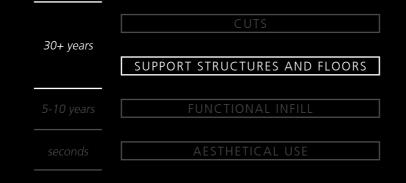




2. support structure



• steel comes in place of concrete



2. support structure



connection concrete and steel structures by claws



1. cut through structural know

HISTORICAL INTRODUCTION VALUE ASSESSMENT INTERVENTION STATEMENT PROGRAM & STRATEGY RELATION PUBLIC SPACE

FLOW



2. placement first part claw, chemical anchoring to concrete



3. placement second part claw

LAYERS IN TIME

FLOW



4. bolted connection two parts



5. square plate, bolted connection

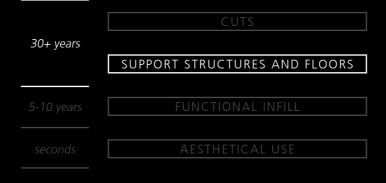


6. beam/column connected to claw



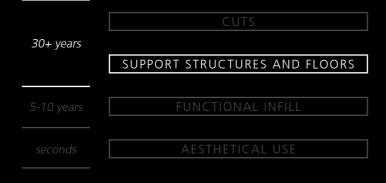
- claw connected independently of cutting surface:
 - demolition traces cannot form problem
 - act of cutting is legible
 also suitable for angled cut

FLOW



2. support structure





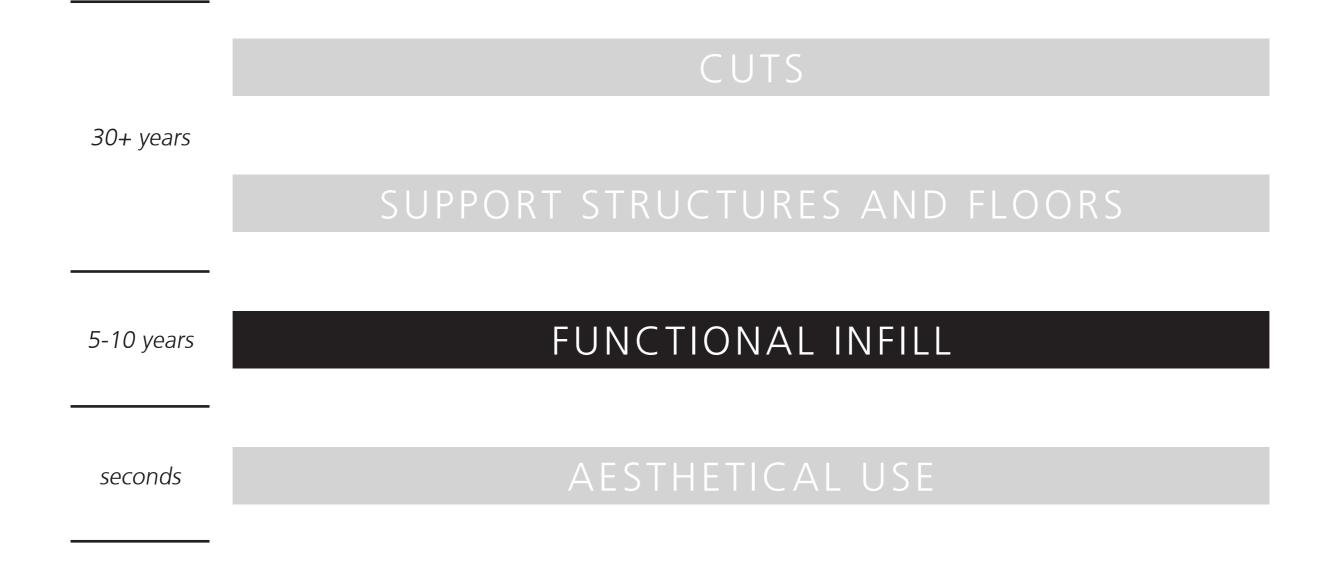
3. secondary beams







floors in spaces to stay are cast in situ (not reversible)
floors in spaces to move (corridors and bridges): steel construction covered with steel tread plate
concrete floors are polished for easy maintainance, finished with transparant anti-slip polyurethane coating

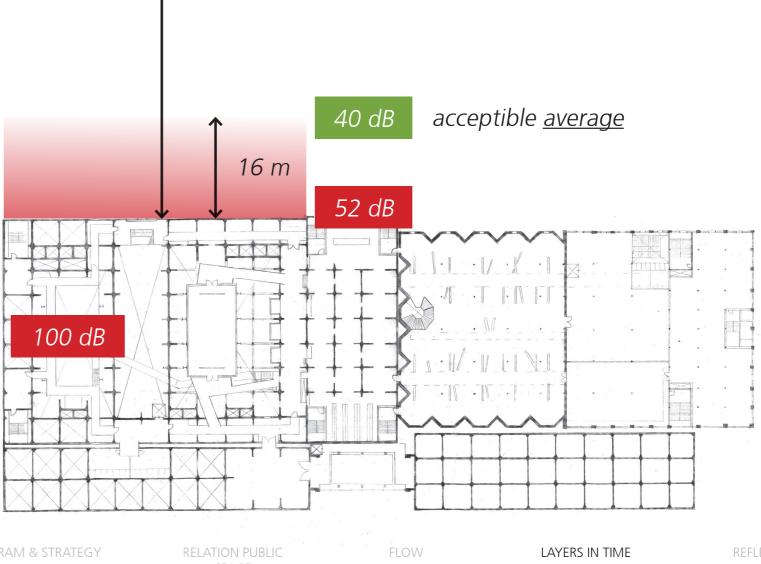


FLOW

110 m

NOISE PLAN - EXTERNAL

- <u>use row of silos facade as noise buffer</u>
- with one silo as noise buffer, noise **peaks** are 40 dB at 16 meters from facade
- 40 dB is acceptible as noise **average** over the day



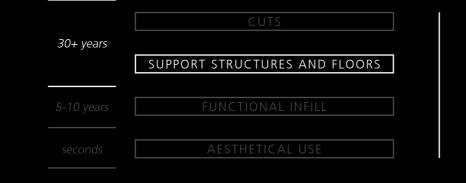
32 dB

NOISE PLAN - INTERNAL

- problems occur in the interior, from one hall to another
- for maximum flexibility, noise levels from other halls must be reduced to a minimum
- flanking sound bass frequencies difficult to predict
- to be sure, middle hall (hall B) made as box-in-box

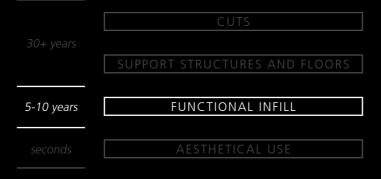


FLOW



4. floors





5. secondary structures



• secondary walls and structures are placed on permanent layer to fulfill a particular function

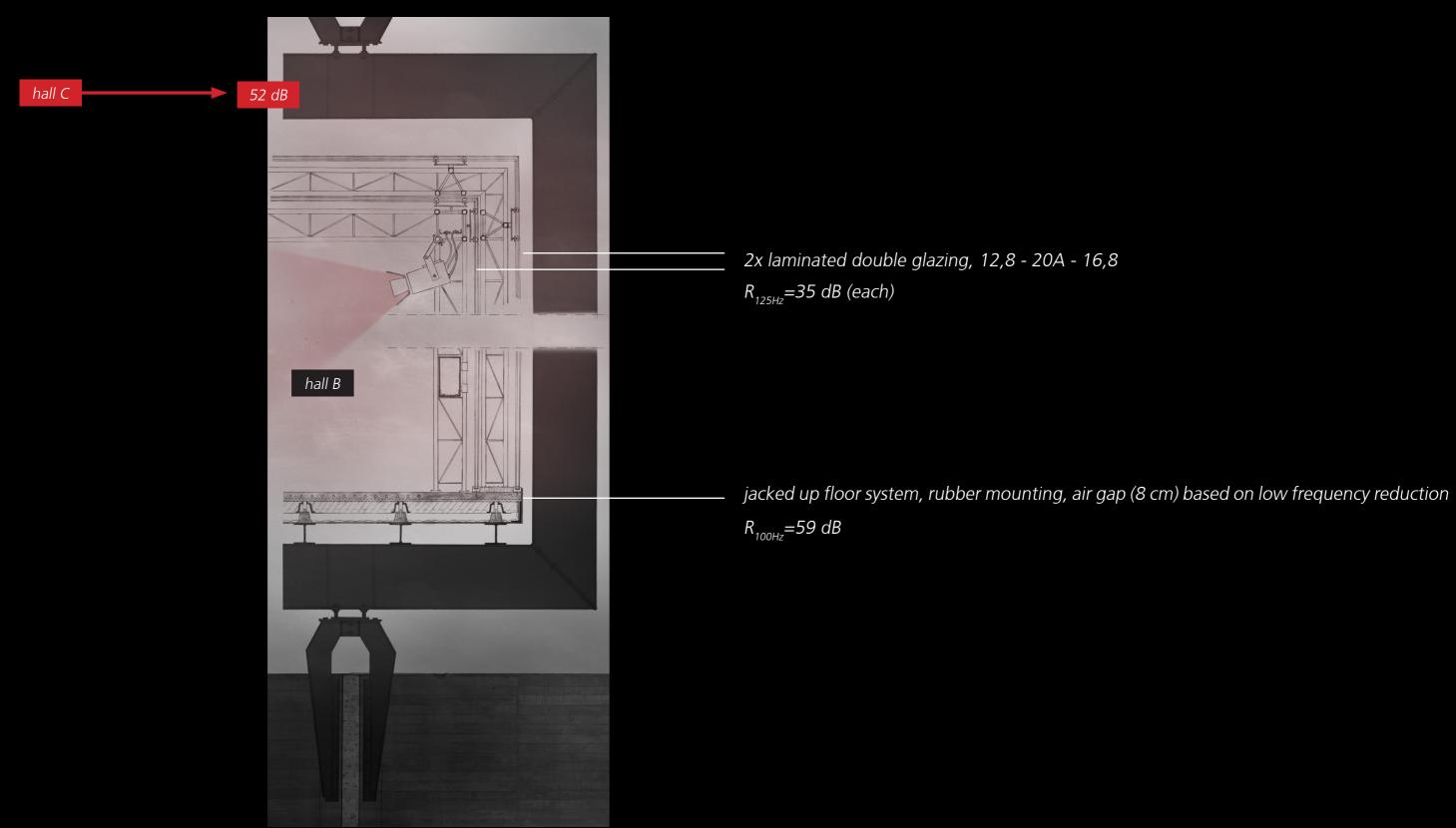
30+ years CUTS 30+ years SUPPORT STRUCTURES AND FLOORS 5-10 years FUNCTIONAL INFILL seconds AESTHETICAL USE

5. secondary structures



• box in box function hall B

HALL B - BOX IN SILO VOID

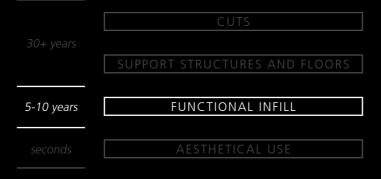


30+ years CUTS 30+ years SUPPORT STRUCTURES AND FLOORS 5-10 years FUNCTIONAL INFILL seconds AESTHETICAL USE

5. secondary structures



sound insulation measures makes open connection to void possible



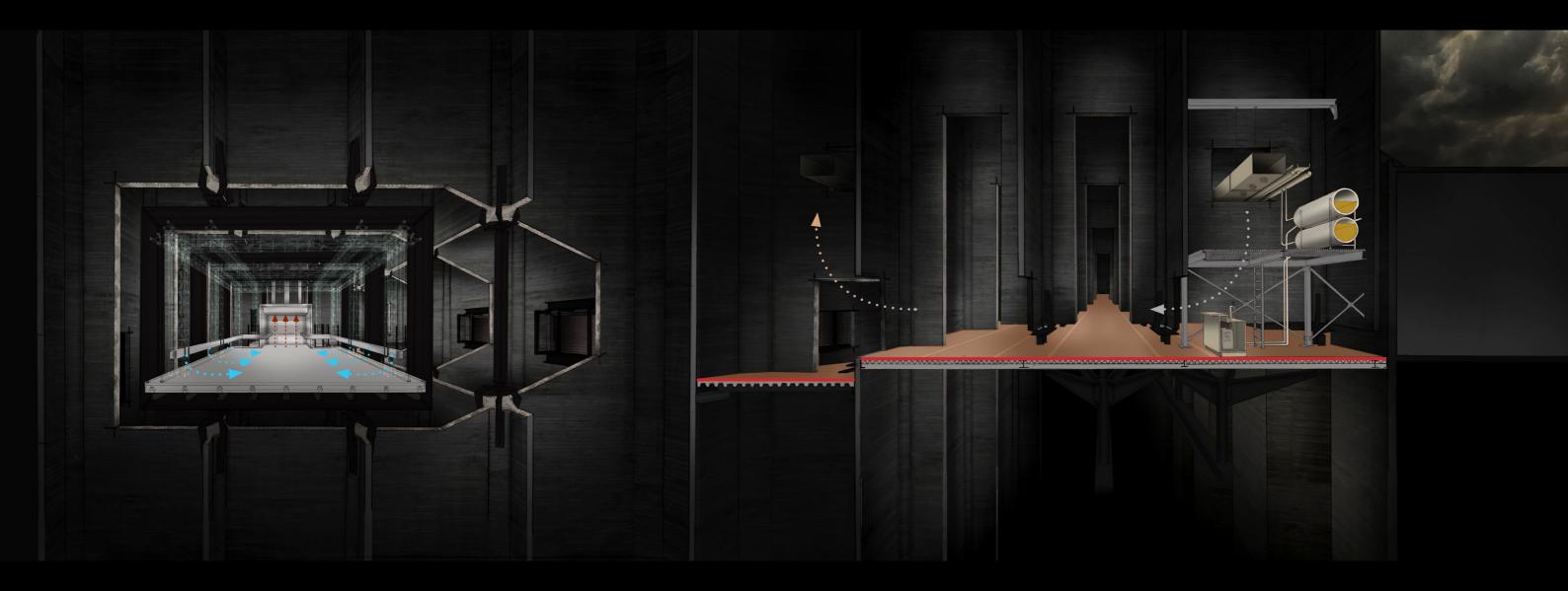
6. machines, services, insulation



• silo assumes bar function, connected to the infrastructure, already made in layer 1: cuts

FUNCTIONAL INFILL 5-10 years

6. machines, services, insulation



hall B:

- mechanical air conditioning (cooling, dehumidifying,
- 40-60% RH, 18 ° C, air inlet 10 ° C at 3 m/s)
- floor heating during 2 hours prior to club hours/concert

expo/bar area:

- mechanical ventilation (only fresh air supply)
- continuous low temperature floor heating

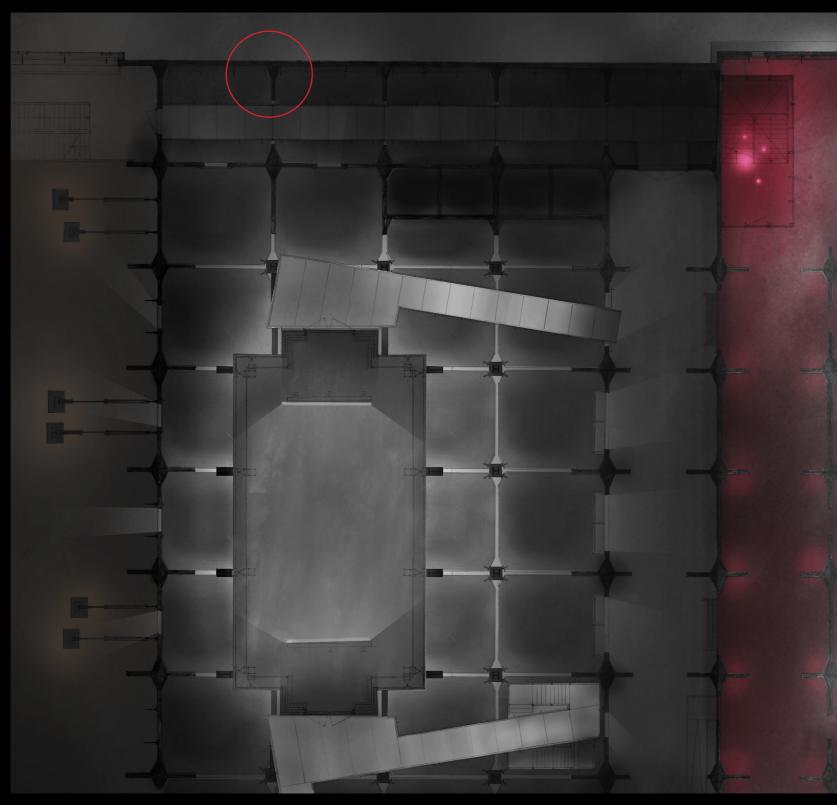
30+ years CUTS 30+ years SUPPORT STRUCTURES AND FLOORS 5-10 years FUNCTIONAL INFILL seconds AESTHETICAL USE

6. machines, services, insulation



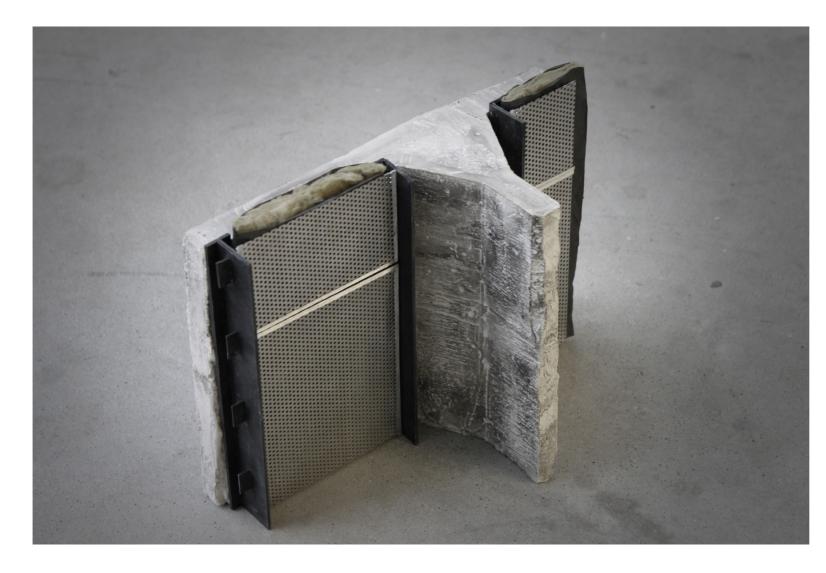
- goal is informal spatial experience
- therefore, infill serves specific function, 'industrial' aesthetics follow

INSULATION





FUNCTIONAL AESTHETICS



• perforated sheet follows functional demands

- demands:

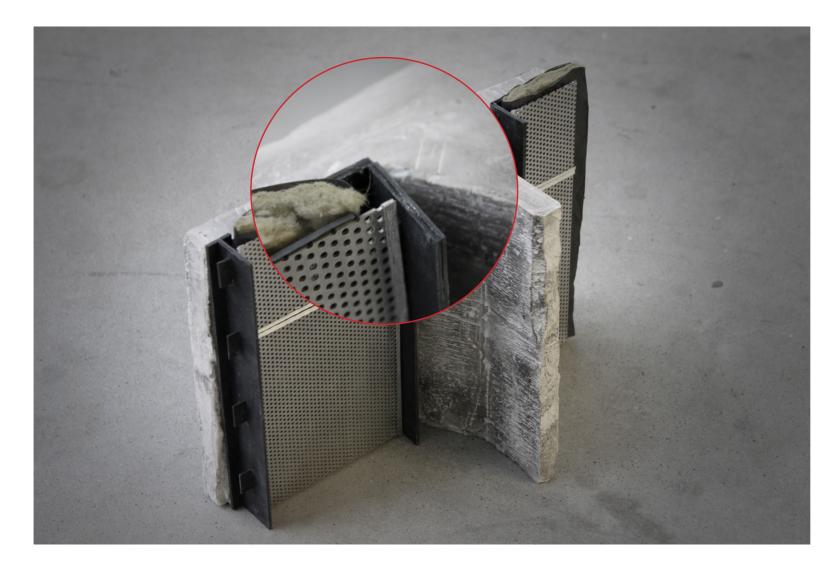
- infill:
- covering:

- thermal insulation - acoustic absorbtion

- thermal insulation blanket, sealed in special acoustically open PU foil (as used in gymnasia)

- perforated galvanized steel sheet

FUNCTIONAL AESTHETICS



- demands:

- infill:
- covering:

• black L- and T- profiles make 'cold' placement on concrete legible, resulting in thermal bridge • serve the story of intruding rather than function

- thermal insulation - acoustic absorbtion

- thermal insulation blanket, sealed in special acoustically open PU foil (as used in gymnasia)

- perforated galvanized steel sheet

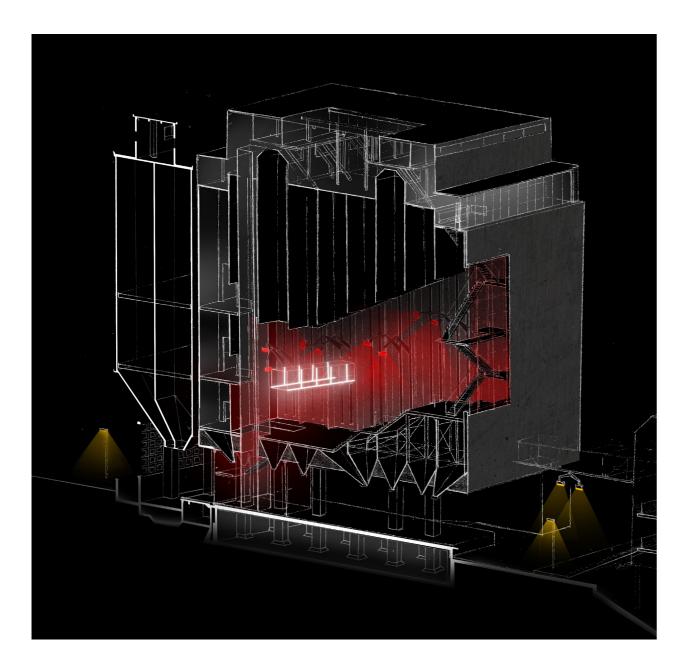
NON-INSULATED ZONE





NON-INSULATED FACADE OPENING

- coming as close to cuts as possible
- detailling as 'cold' as possible, steel against concrete
 profiles behind ridges, act of cutting visible







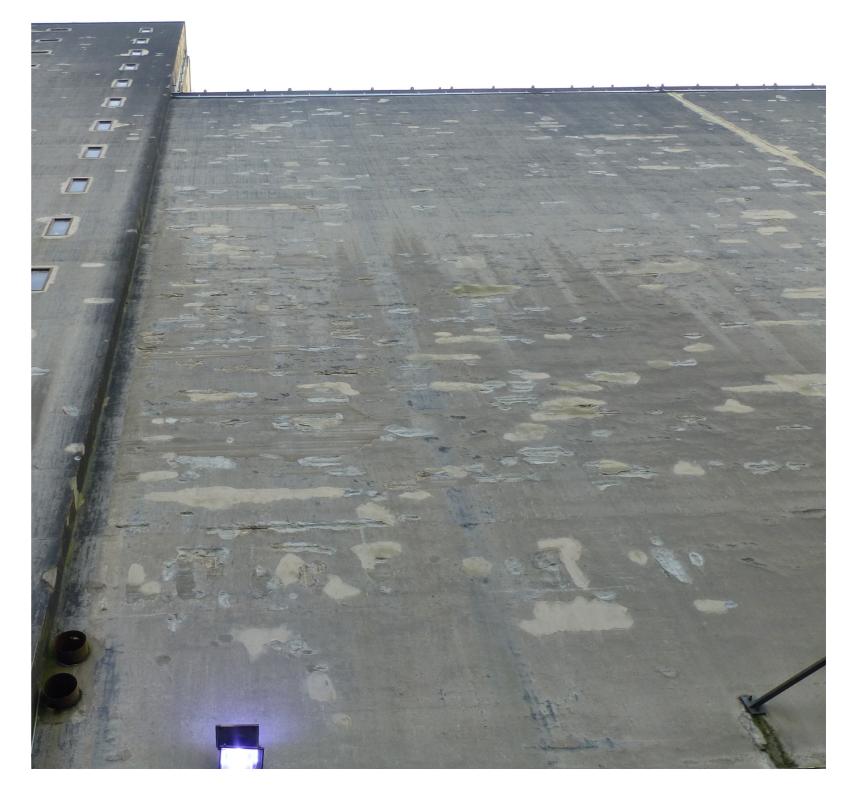
INTERVENTION STATEMENT

PROGRAM & STRATEGY

FLOW

POSITION FACADE REPAIR

- functional approach: make necessary <u>repairs</u>
 (replacing rebars + repair mortar / cathodic protection)
- again, also aesthetic decision that serves story of intruding

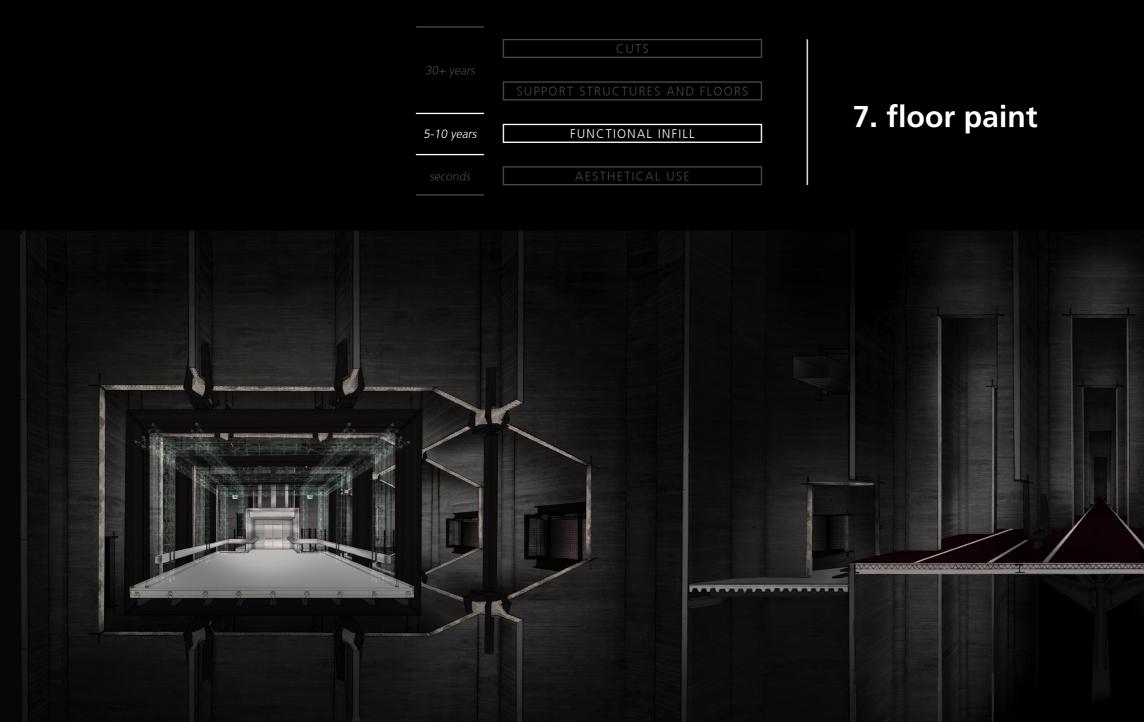


• north facade Brinkman & Van der Vlugt

30+ years CUTS 30+ years SUPPORT STRUCTURES AND FLOORS 5-10 years FUNCTIONAL INFILL seconds AESTHETICAL USE

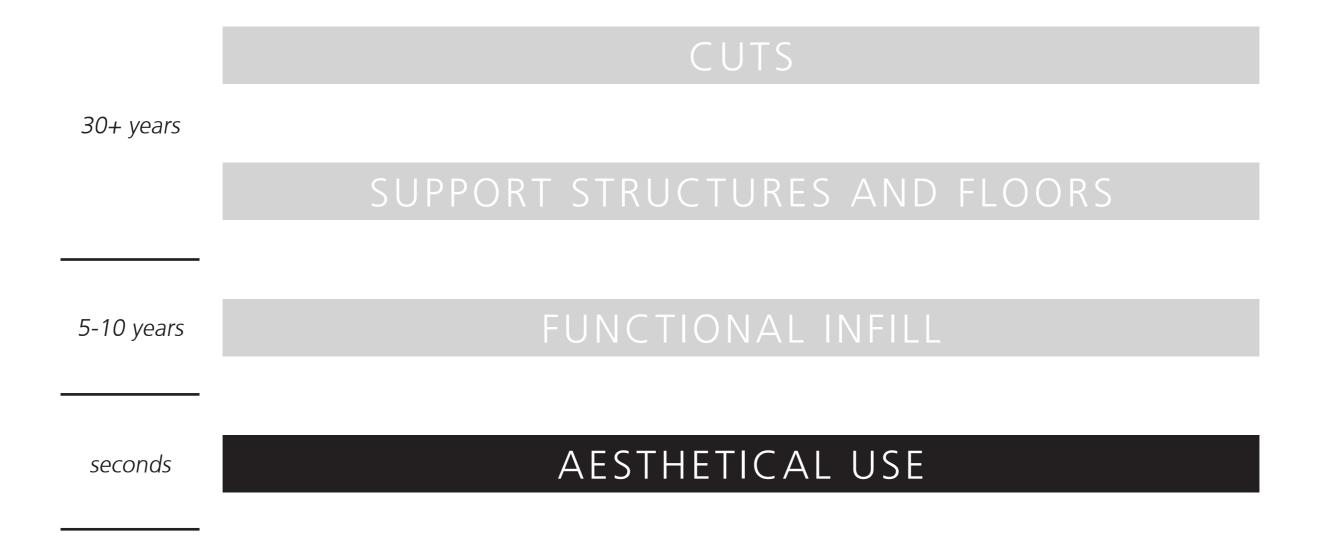
6. machines, services, insulation

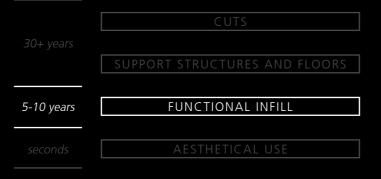




hard-wearing PU coating, wine red
aesthetical choice, but also functional in anticipation on next layer

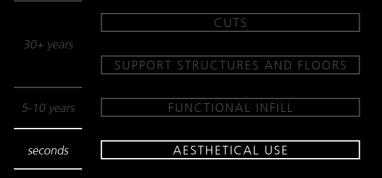


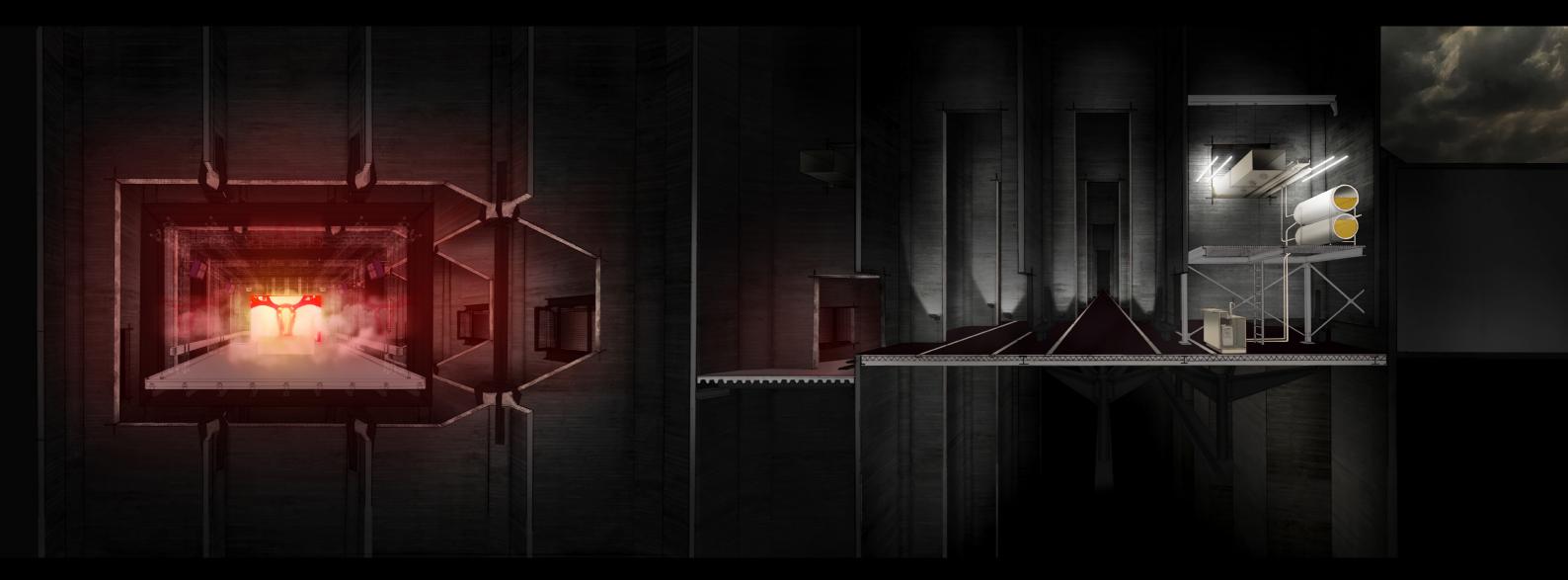




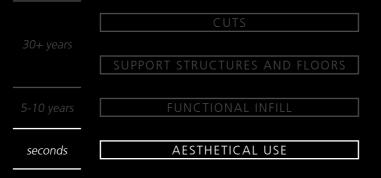
7. floor paint





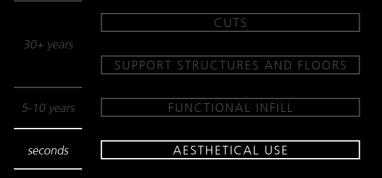


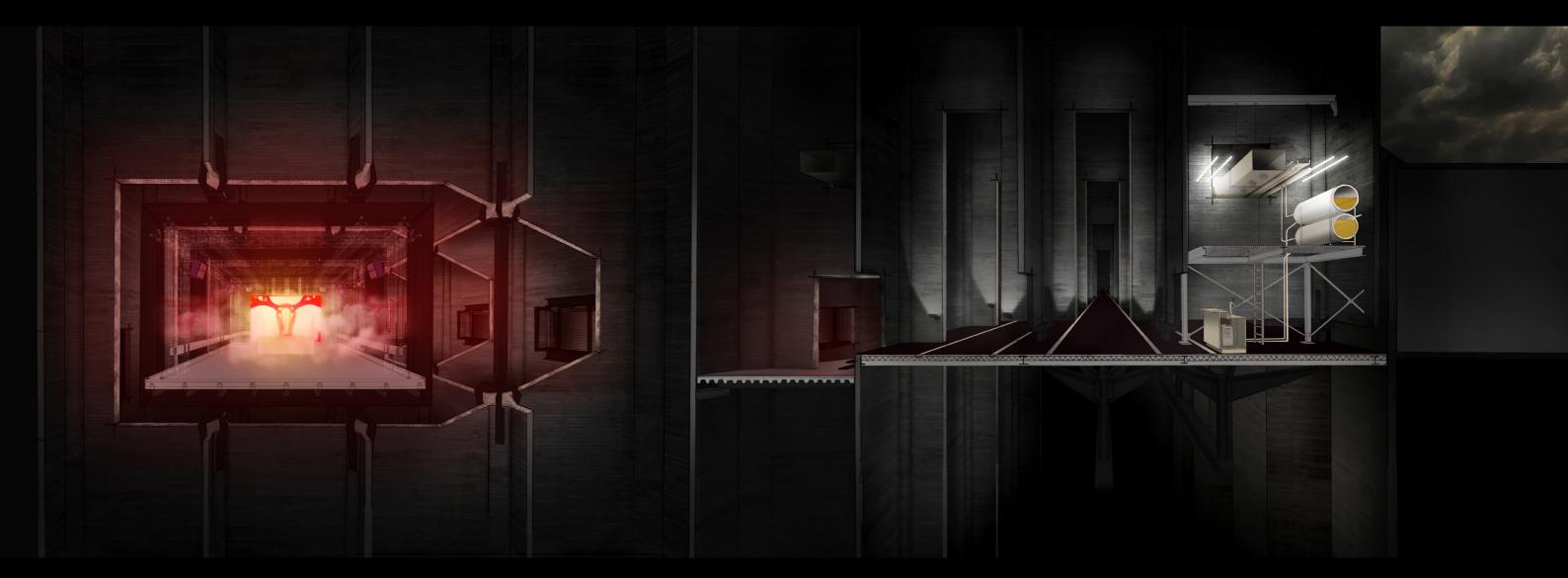
• no paint adjacent to hall B, focus on light and colour hall B



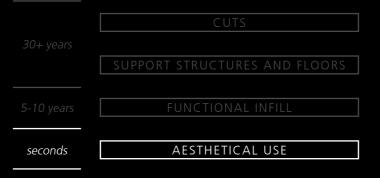


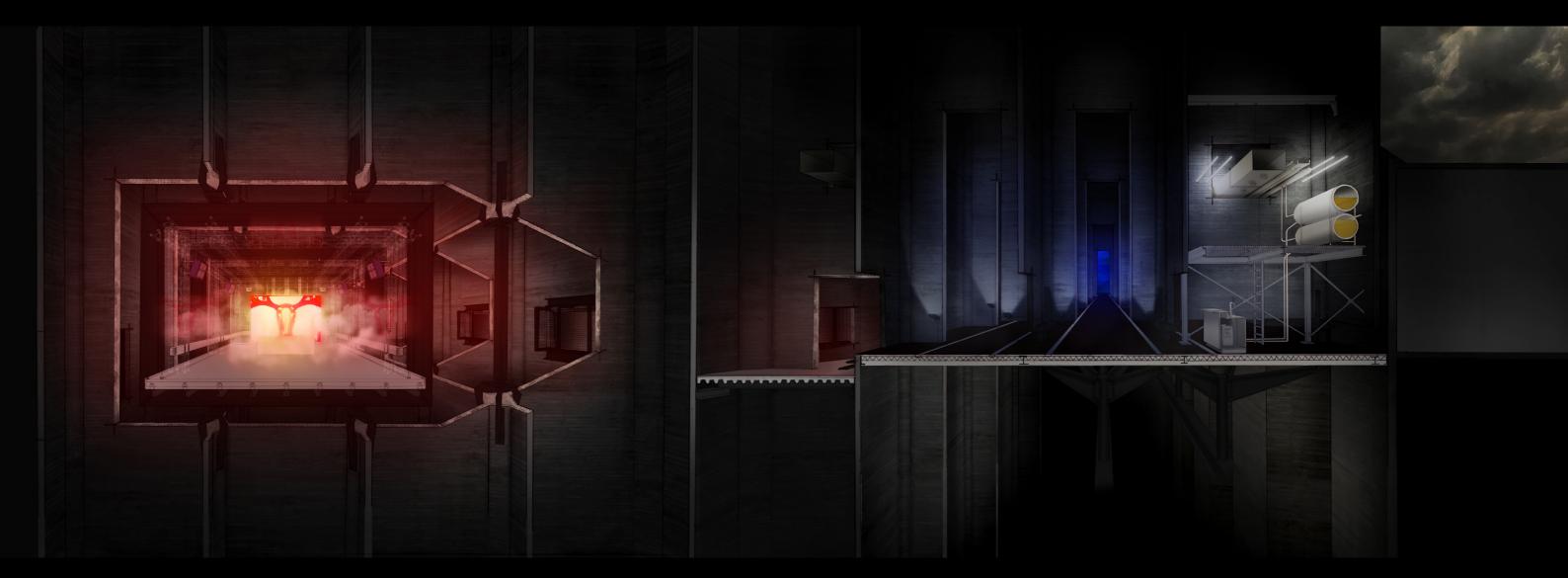
• no paint adjacent to hall B, focus on light and colour hall B





• coloured floor expo/bar area seperates spaces (also reason for small hight difference)





• red weakest colour, functions as in cinemas/theatres





• people come and go

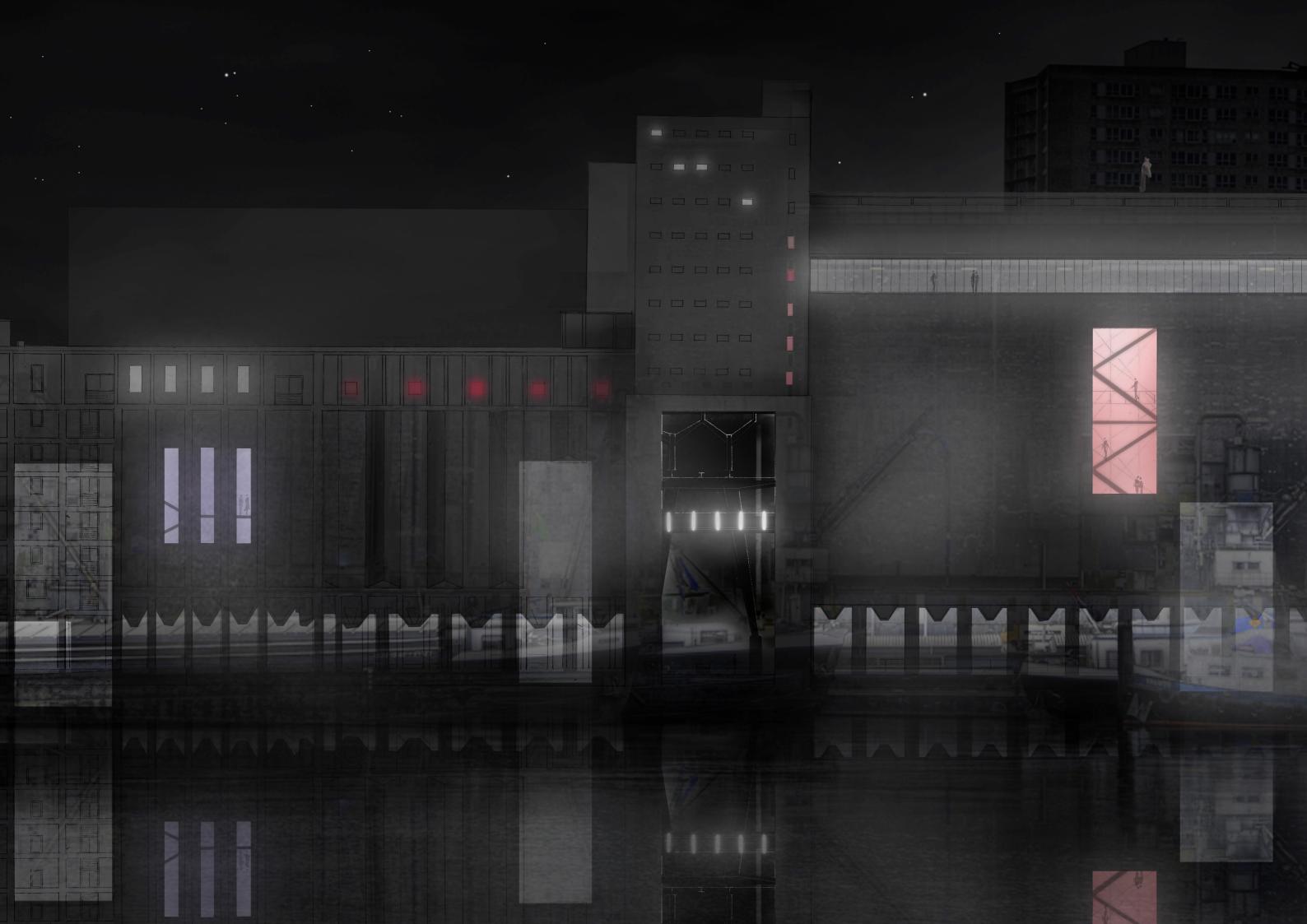
R E F L E C T I O N

research question:

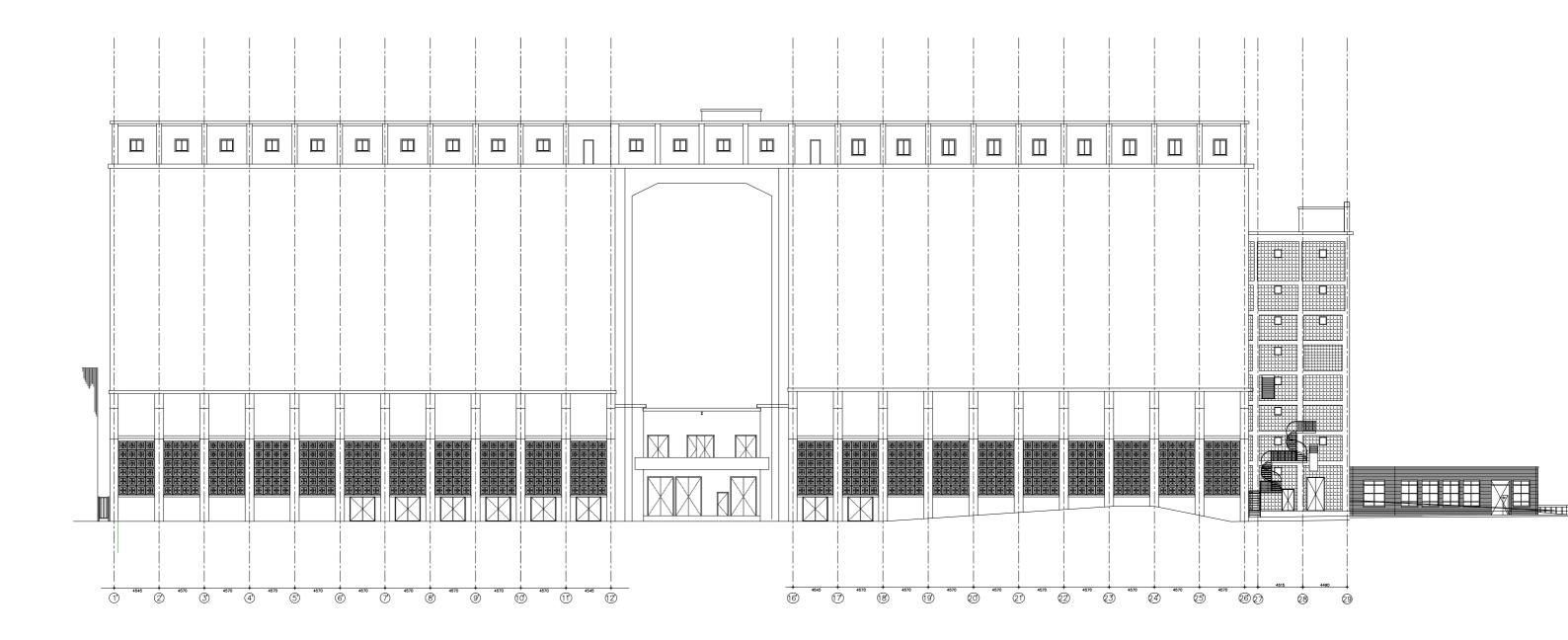
How can the multi-layered quality of the sturdy Maassilo be structurally reinvented, so that it facilitates and allowes space to the volatile nature of a night club?

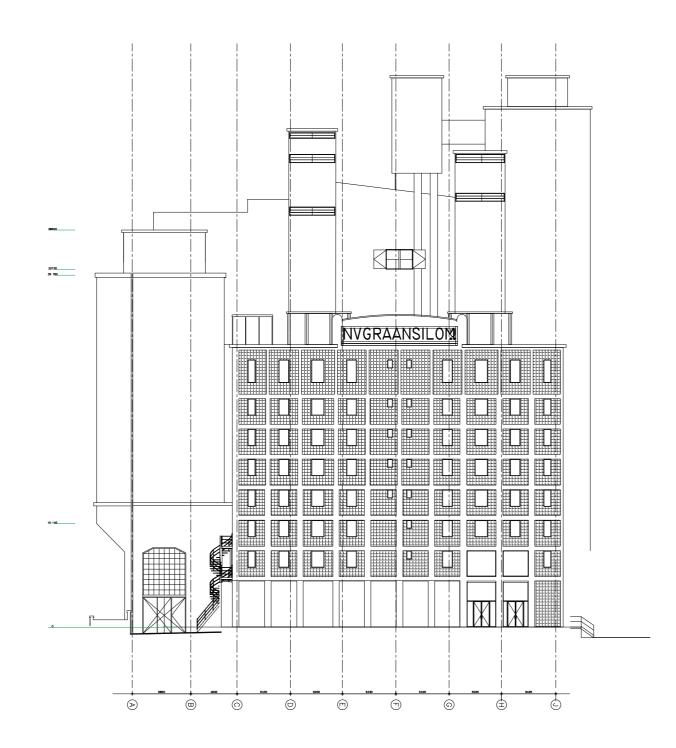
- facilitate use: logistics, routing, basic infrastructure
- making use of physical qualities silos: silos as buffer for external noise
- use of box-in-box questionable, but it also brought quality to the experience of that space and the cuts
- triggering use: follow order of silos in cuts, so people are triggered to disrupt that order - shortcut route important for flow, useful but not necessary in demolition process, but also aesthetical choice that is not easy to change (therefore questionable)
- position: important to regard heritage projects per case. In this case, a highly expressive and intensive function comes to a building with very imposing aesthetics. Therefore, "functional infill" level is kept to minimum.

REFLECTION



extra slides

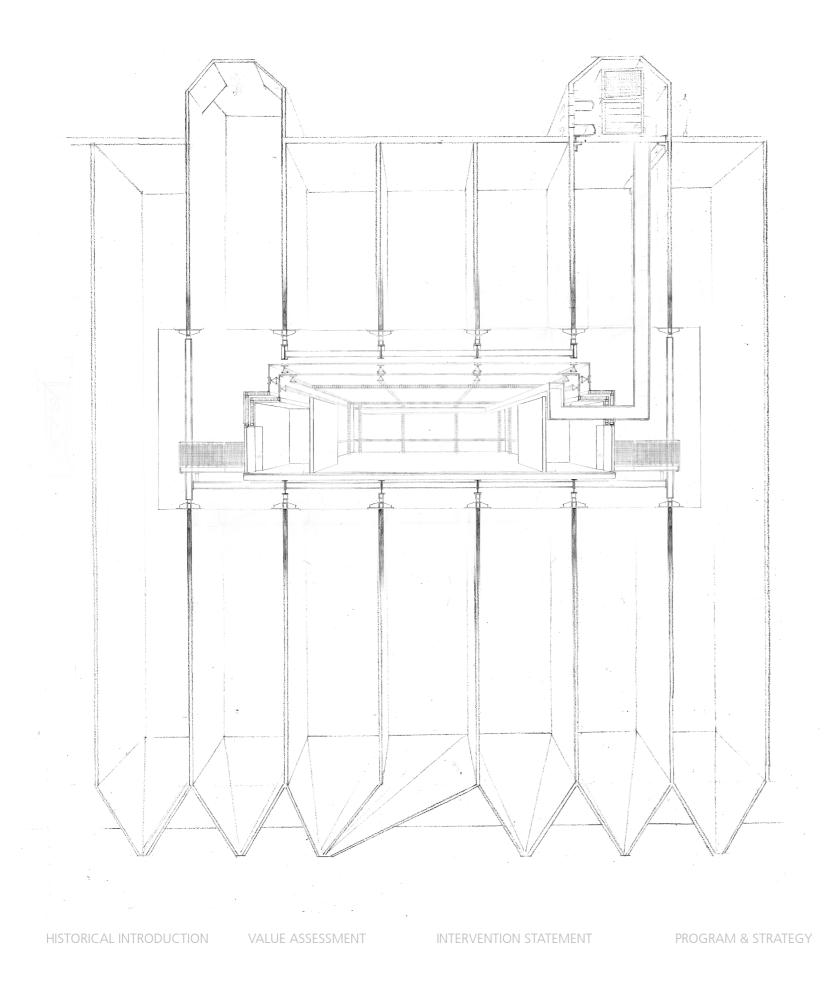




"Thus, space relates to music in the most general sense: music is spatial because a certain sound quality (influenced by the size of performance space) is associated with different genres and types of instrumentation."

M.A. Harley - Space and Spatialization in Contemporary Music (1994)

VENTILATION HALL B

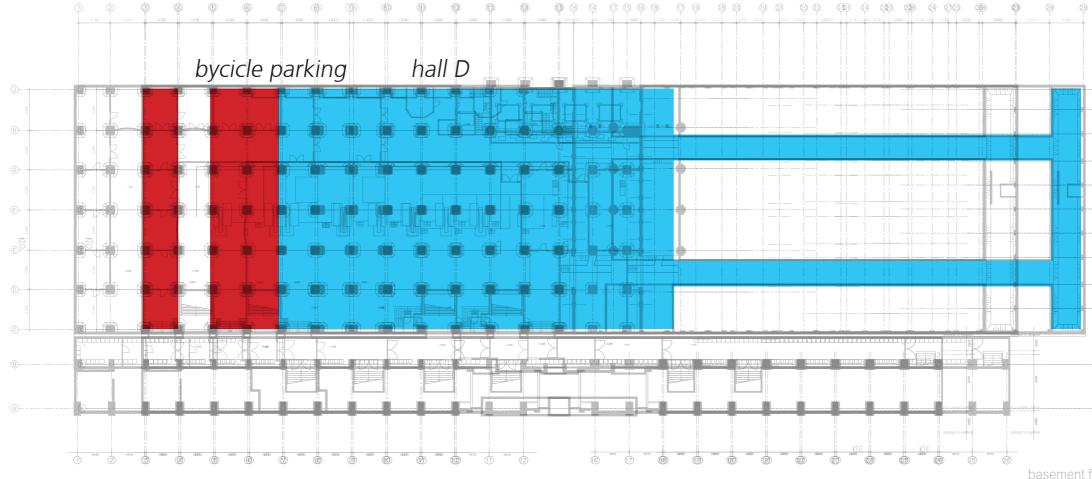


- box is 'plugged in'
- use of row higher silos attic for machinery (roof opened)

RELATION PUBLIC

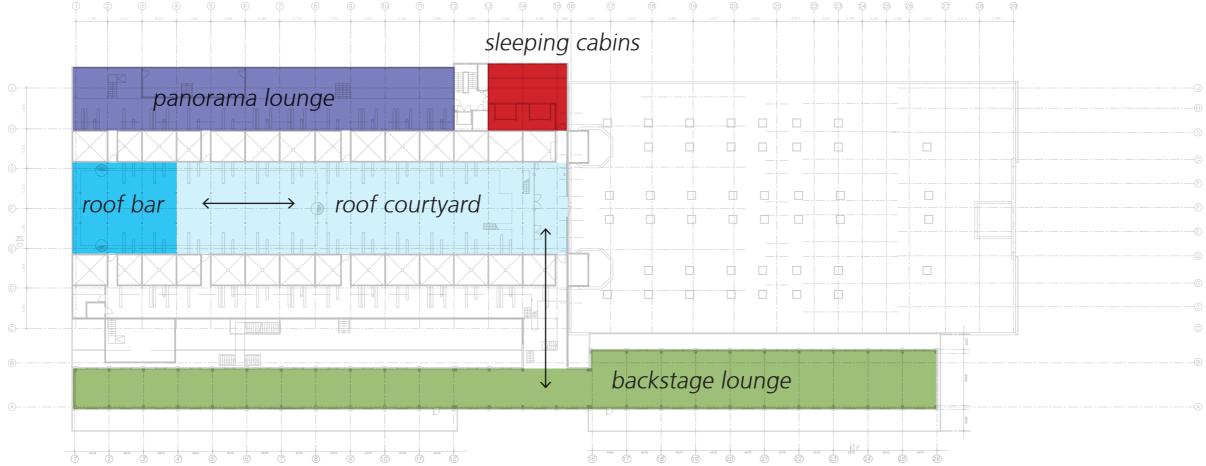
FLOW

PROGRAM LAYOUT BASEMENT



basement fl**basehae**nt floor plan scale 1:500scale 1:500

PROGRAM LAYOUT TENTH FLOOR



10th floor plan scale 1:500

• attic Brinkman & van der Vlugt



•

65 15



Mash-up of tastes and identities dissolves into the white noise total neutrality.







Fellini party



