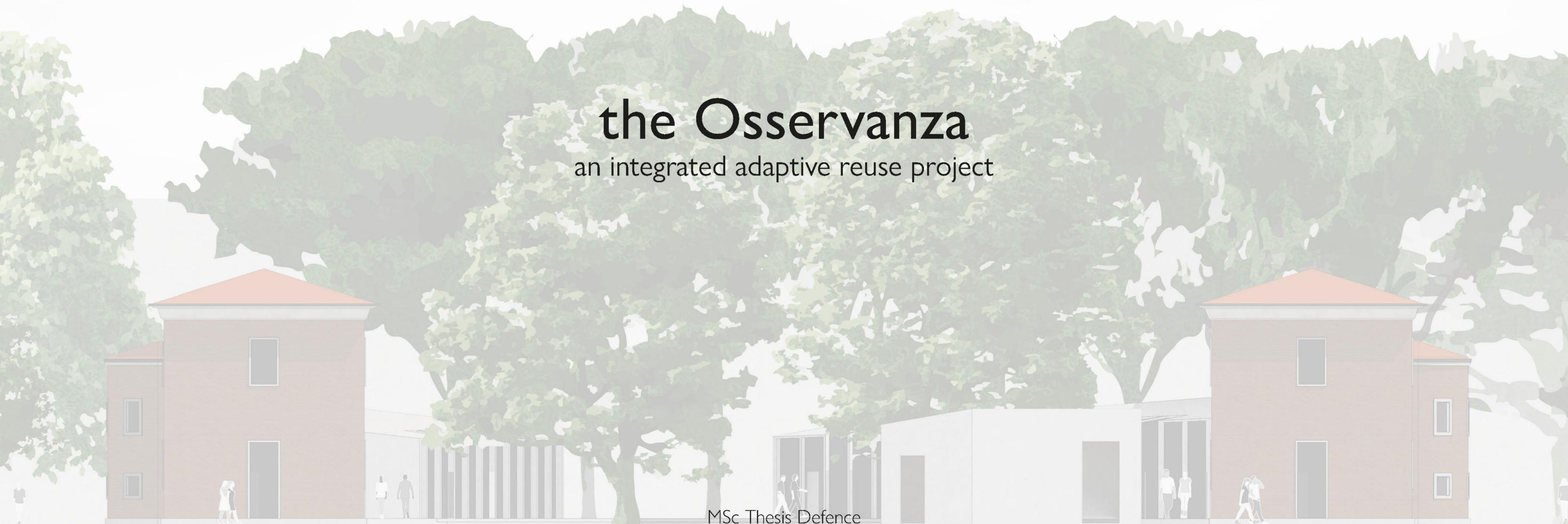


Andrea Fusaro

the Osservanza

an integrated adaptive reuse project



MSc Thesis Defence

2nd July 2020

Discuss the benefits of integrating architecture, real estate management and entrepreneurship to foster and support the fully sustainable requalification of defunctionalized historic campuses.

a story in Imola

analysing the impasse

researching the breakthrough

a methodological blueprint

embodying the findings

another walk in the Osservanza

Imola



a story in Imola



fig. 1: Birdsight picture of the city centre of Imola.



fig. 2: central squares of Imola (left) and Delft (right).

a story in Imola



Aerial view of the city of Imola

Google Earth imagery database





fig. 3: View of the main avenue from the administration courtyard past the entrance.



fig. 4: View towards west (top) and east (bottom) of the palm avenue crossing the main avenue.



fig. 5: View of the sequence of paired pavilions from the lateral avenue.



fig. 6: (top) View of the pavilions 17-19 and of their courtyard from the lateral avenue.
fig. 7: (bottom) View of the pavilions 6-8 and of their courtyard from the main avenue.



fig. 8: View of the pavilions 5-7 and of their courtyard from the main avenue.
In the background the pavilions 17-19.



fig. 9: First floor corridor of pavilion 7.



Birdsight view of the Osservanza

Google Earth Imagery database

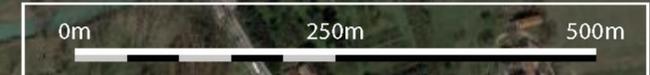




Birdsight view of the Osservanza

Google Earth Imagery database



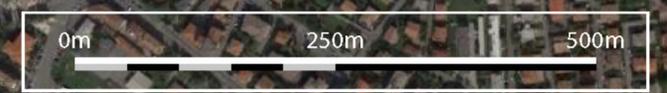


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Aerial view of the city of Bergamo

Google Earth imagery database



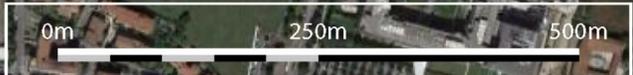


Aerial view of the cities of (from left to right):
Florence, Genoa, Brescia

Google Earth Imagery database



a story in Imola

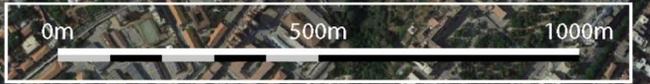


a story in Imola



Aerial view of the cities of (in clockwise order):
Naples, Rome, Palermo, Limbiate, Rome (center)

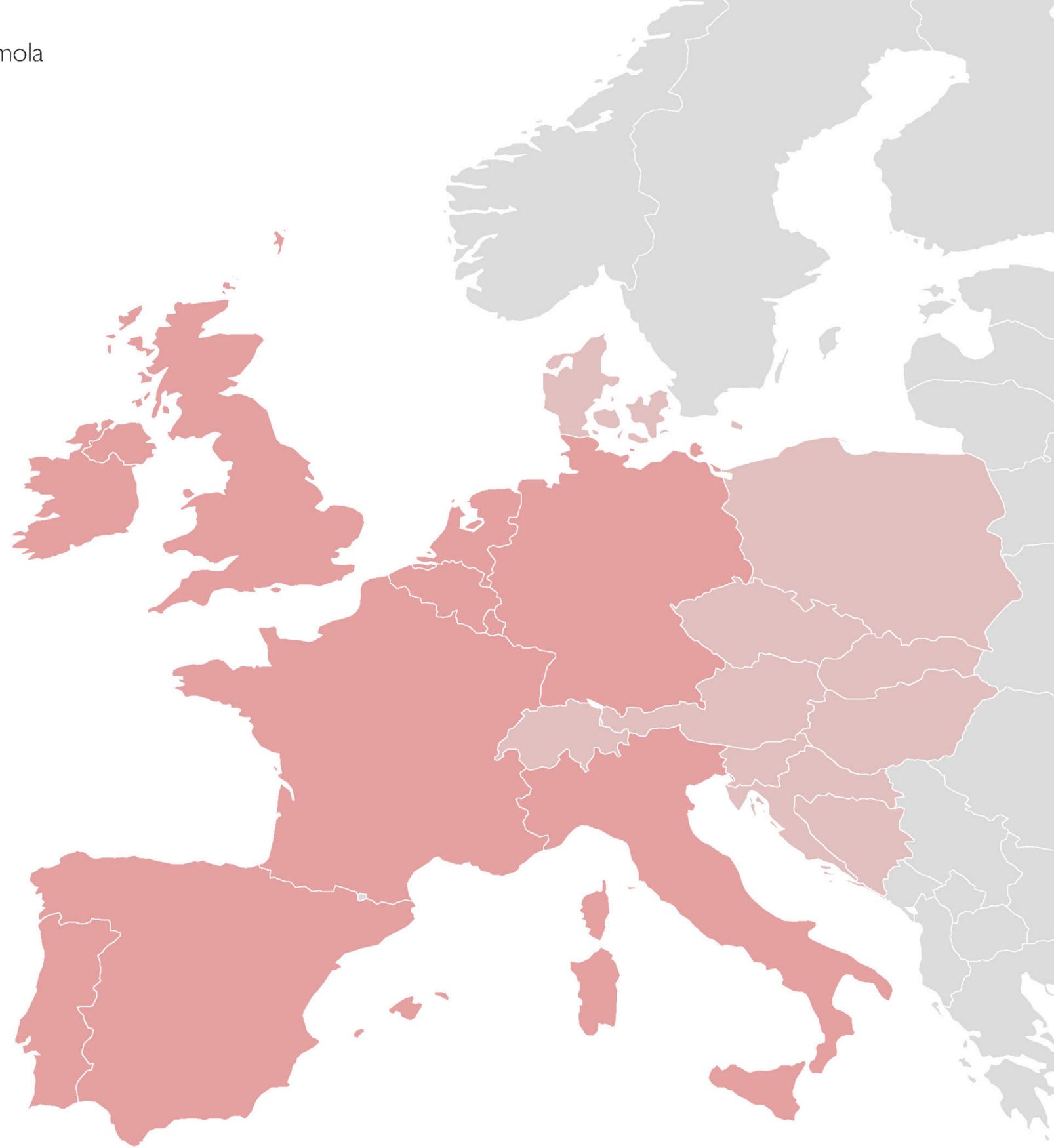
Google Earth Imagery database



72
historic psychiatric complexes
partially or completely abandoned.



Several hundreds
in Western and Southern European countries



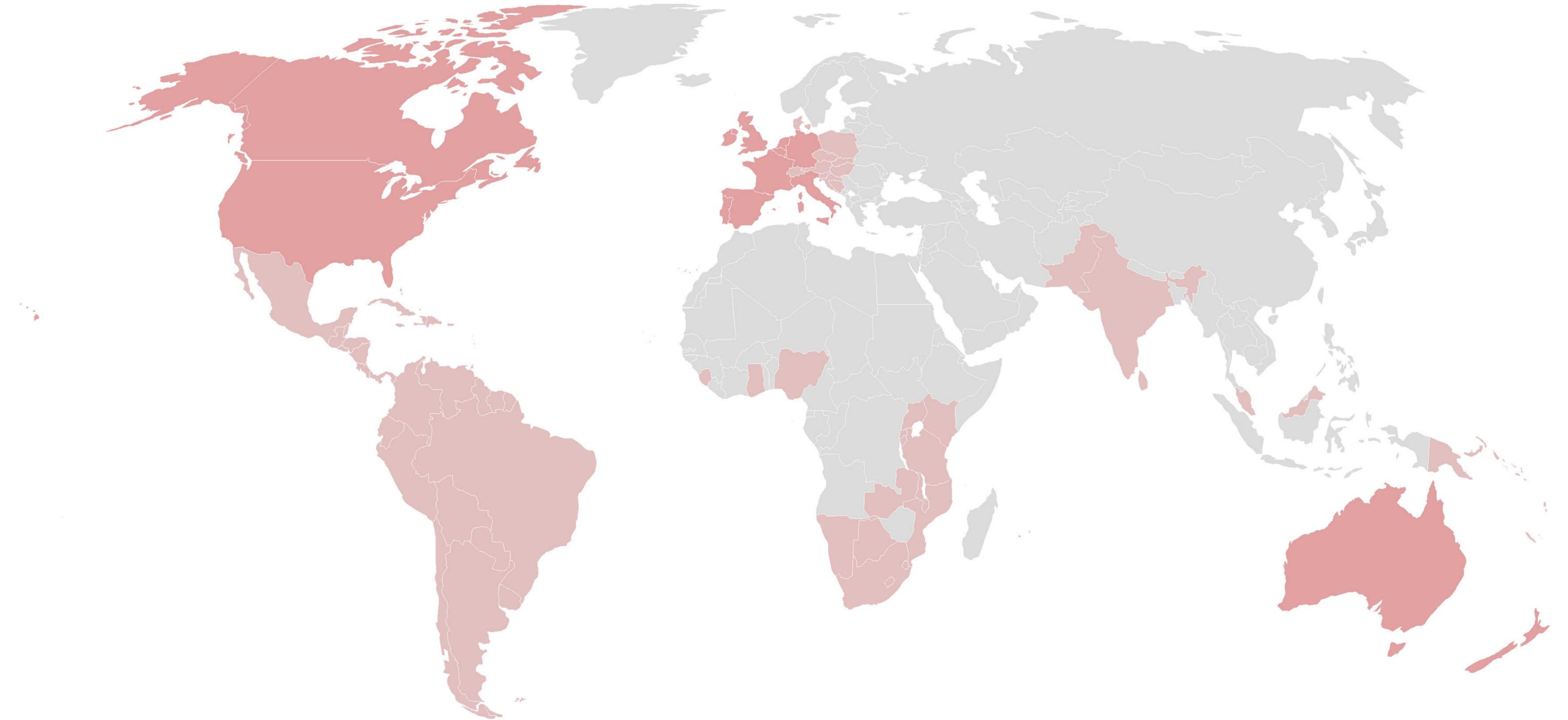


fig. 11: World diffusion map of the phenomenon of dismissed former psychiatric complexes.

Western world public and private organizations created following the precepts of the Age of Enlightenment starting from the second half of the 19th century.

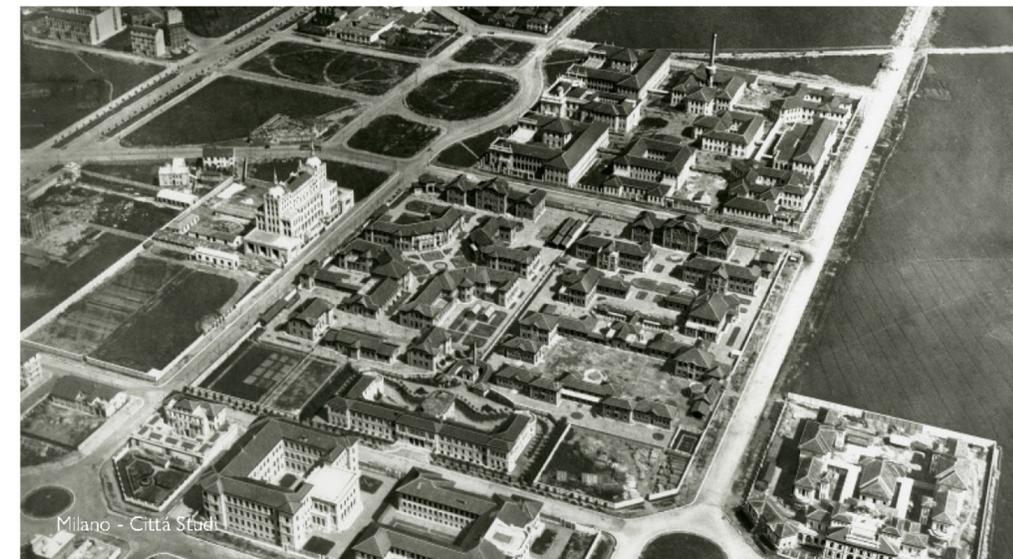
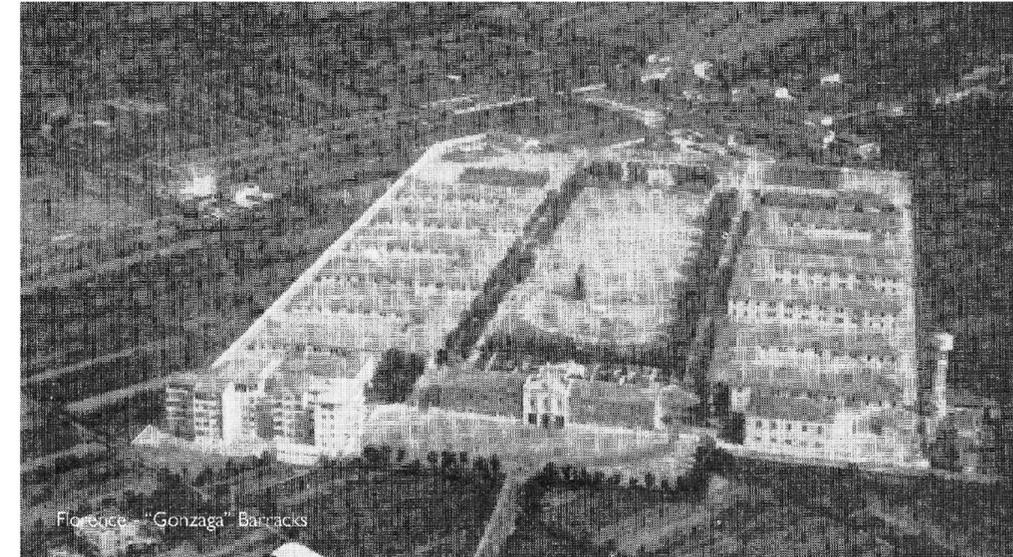
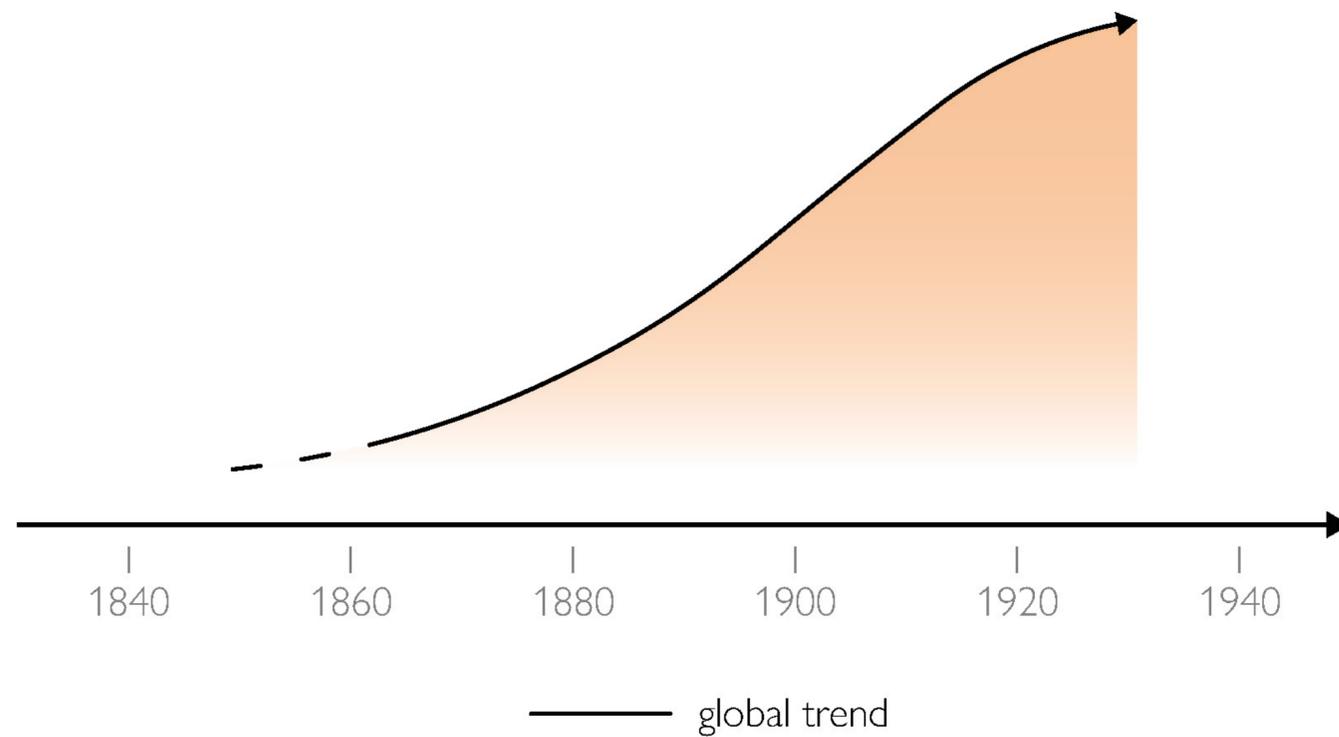


fig. 12: Birdsight views of some specimens of campus-like historic complexes hosting healthcare, military, justice and education institutions.



Campuses characteristics:

1. Easily accommodate organizational complexity
2. Allow organizational and physical evolution by incremental adaptive reuse interventions.

fig. 13: Trend of occupation of campus-like portfolios for compliant public and private organizations for the first half of the 20th century.



fig. 14: The Coal Drops yard in London show an example of adaptively reused industrial halls and gasometers.

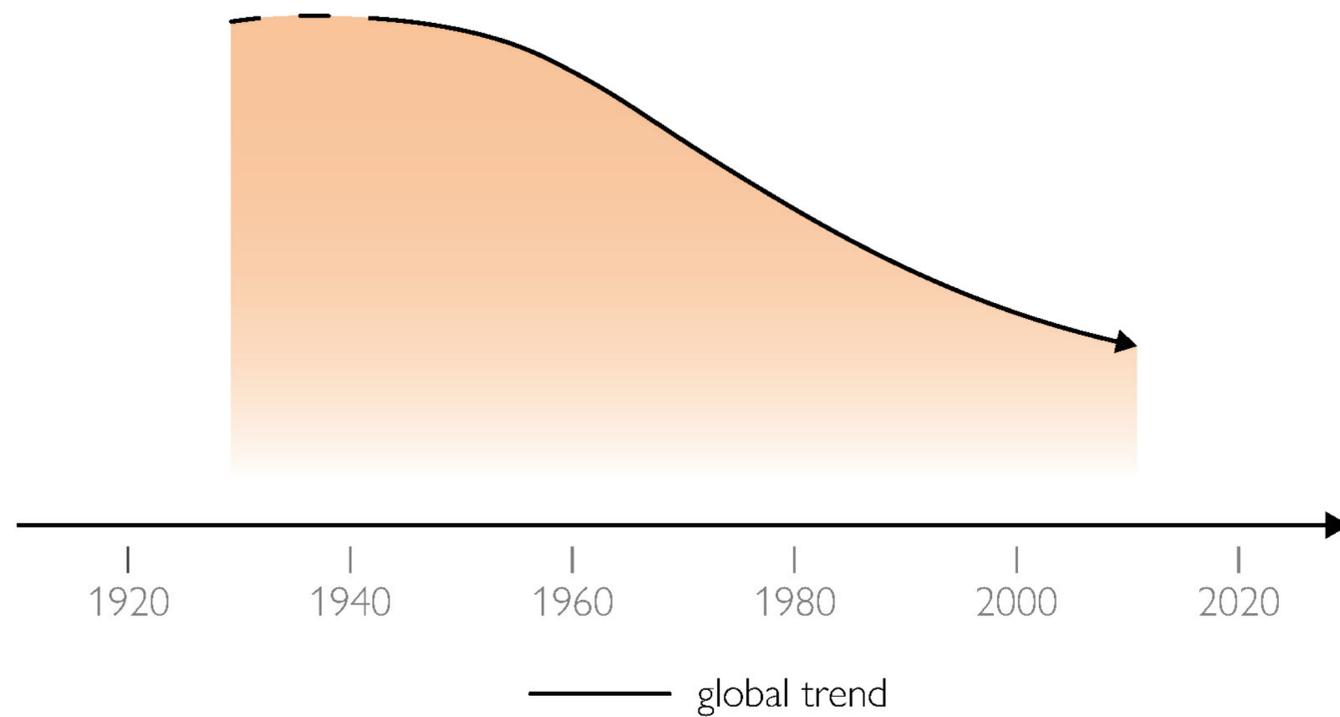


fig. 15: Trend of occupation of campus-like portfolios for compliant public and private organizations for the second half of the 20th century.

Adaptive reuse could not respond to:

1. Radical organizational reforms leading to lack of supplanting function
2. Greater architectural/functional reconfiguration scales

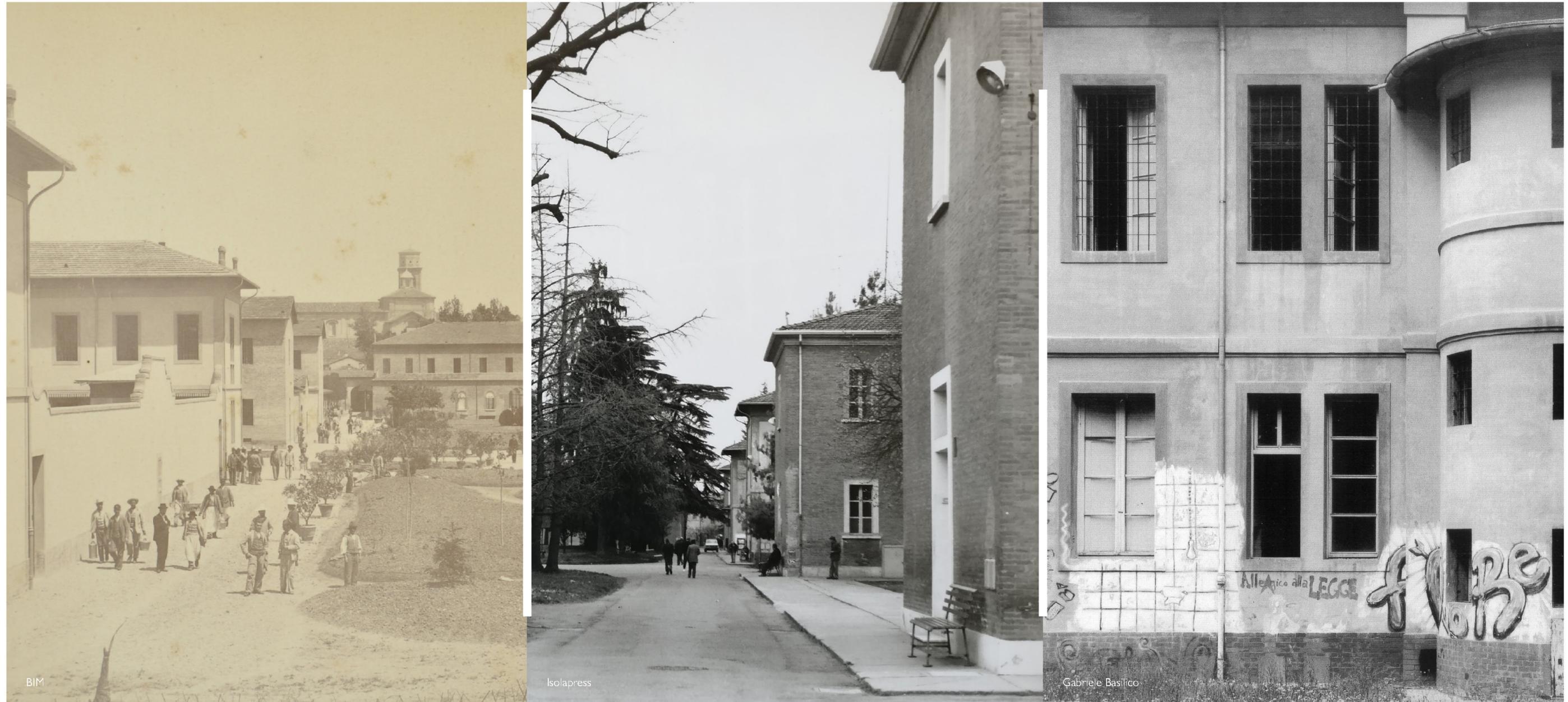
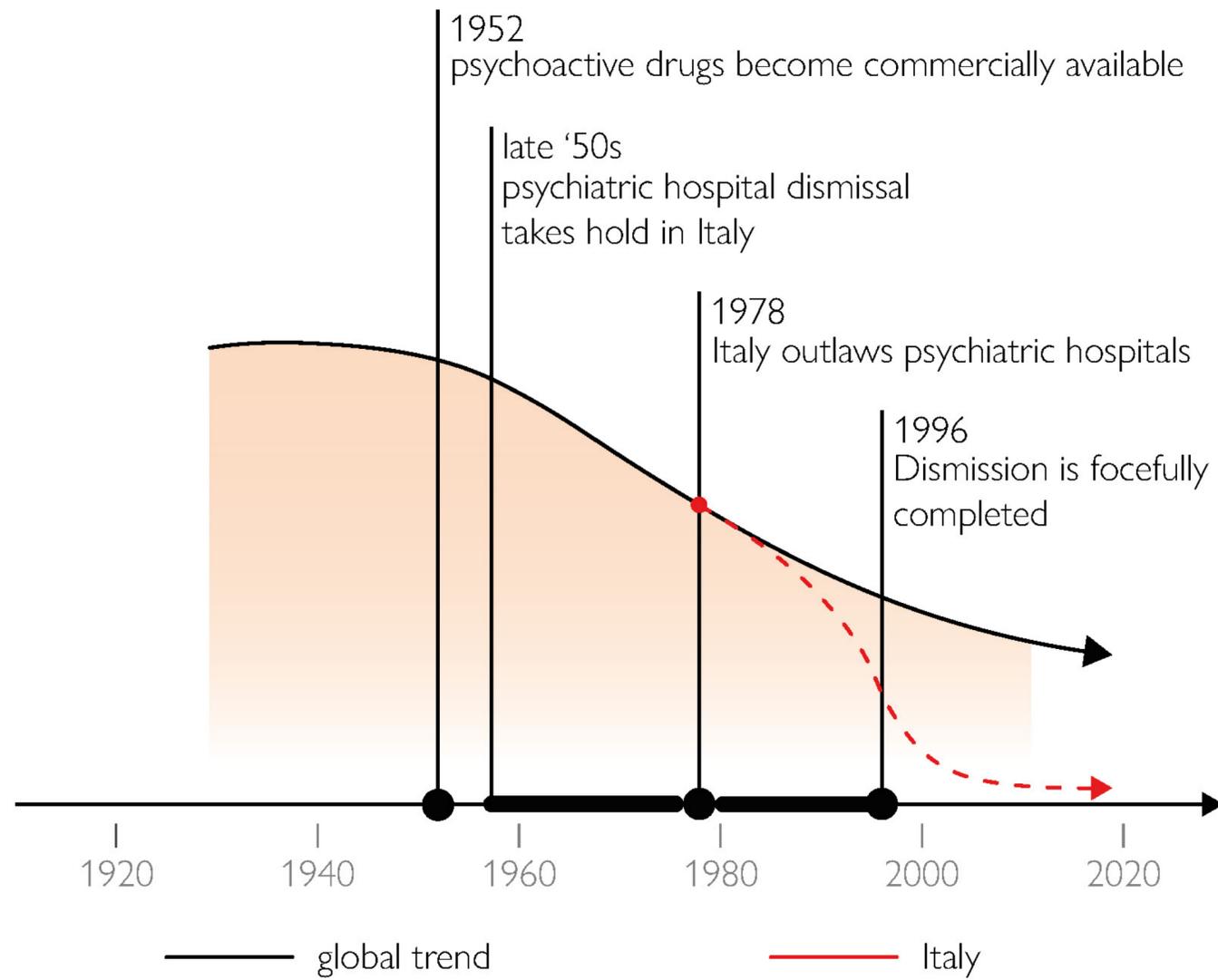


fig. 16: Photos of the Osservanza in different phases of its lifespan up to its dismissal.
From left to right pictures from 1910/20, 1991 and 2001.



The dismissal of psychiatric hospitals in Italy is representative because of its peculiar developments.

fig. 17: The dismissal timeline of former psychiatric hospitals in Italy compared to the general trend for campus-based organizations.



40+ years
long dismissal processes

$\pm 10 \text{ Mm}^2$
of heritage urban voids

$\pm 2,5 \text{ Mm}^2$
of abandoned heritage GFA



5 | 67





5 | 67





fig. 18: The four processes resulting from current adaptive reuse models, divided per intervention and non intervention scenarios.

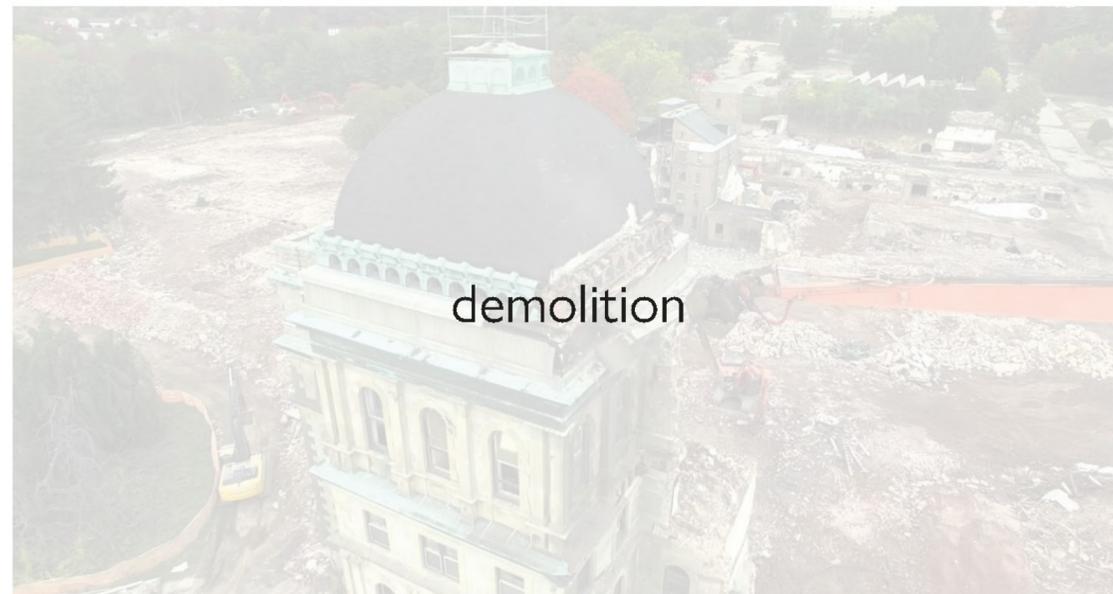


fig. 19: The four processes resulting from current adaptive reuse models, divided per intervention and non intervention scenarios.

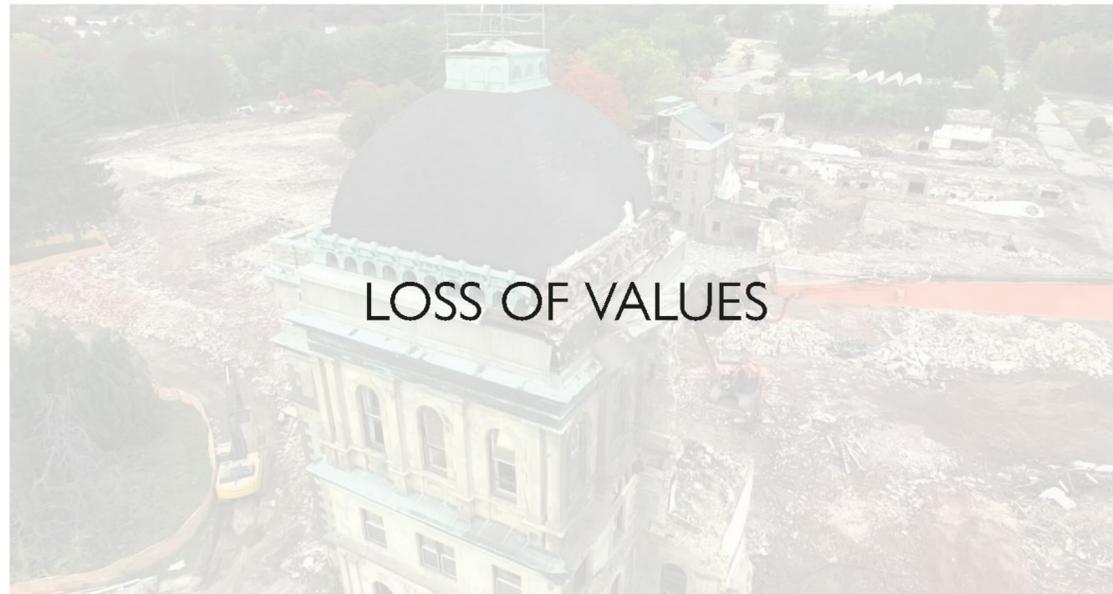


fig. 20: The four processes resulting from current adaptive reuse models, divided per intervention and non intervention scenarios.

PROBLEM STATEMENT

It is currently impossible to avoid critical losses
of architectural, urban, functional, economic, historic and socio-cultural values
of defunctionalized historic campuses in broad-spectrum adaptive reuse scenarios.

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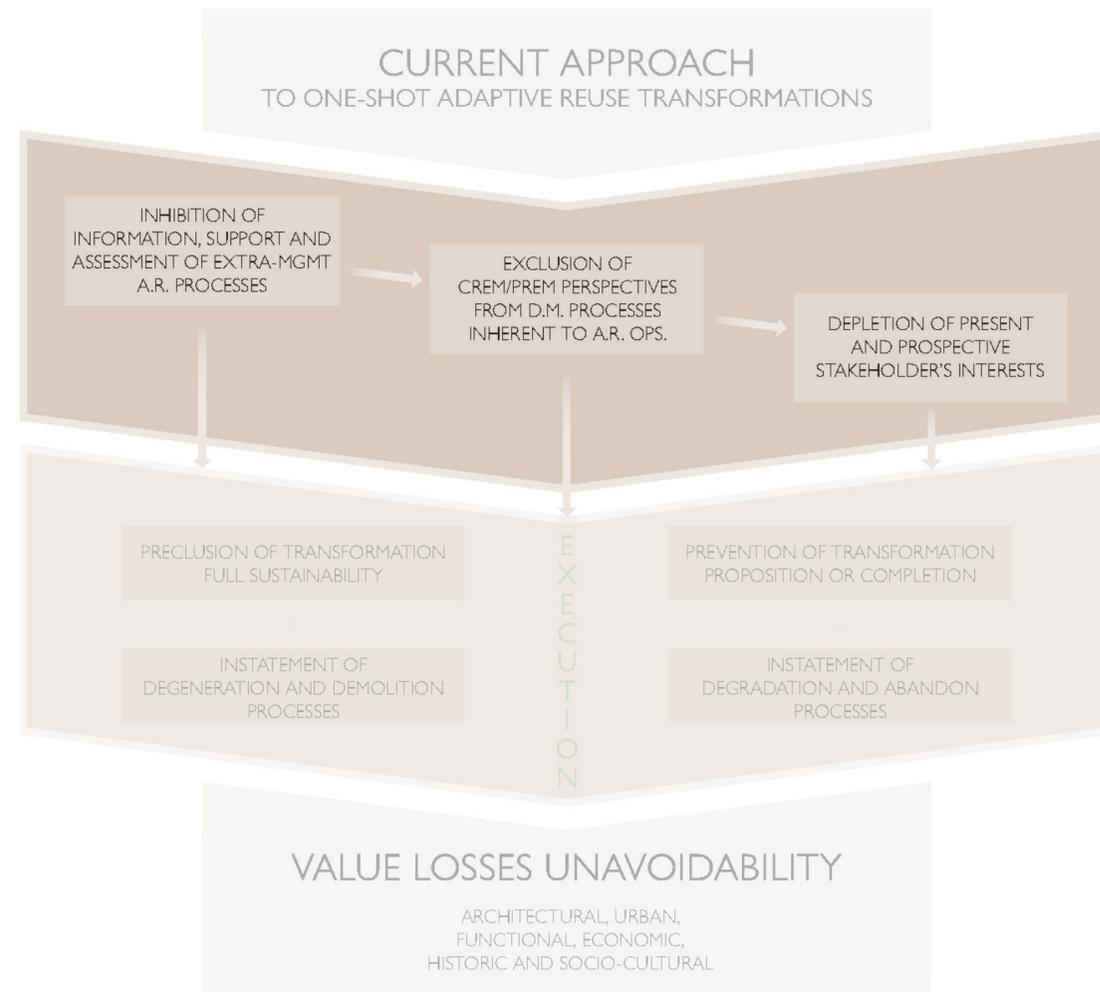
researching the breakthrough

a methodological blueprint

embodying the findings

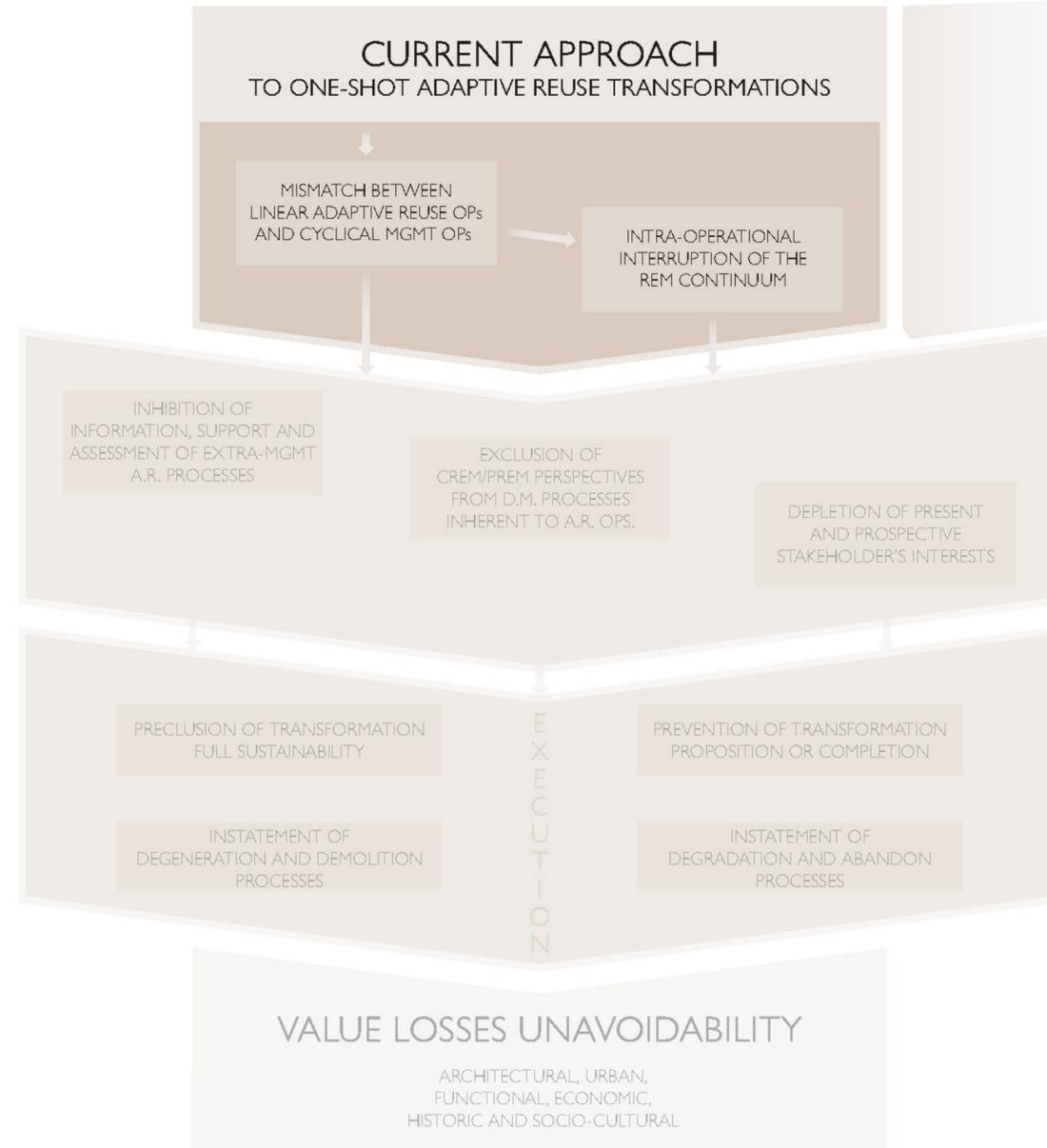
another walk in the Osservanza





Problem dynamics from an organizational perspective:

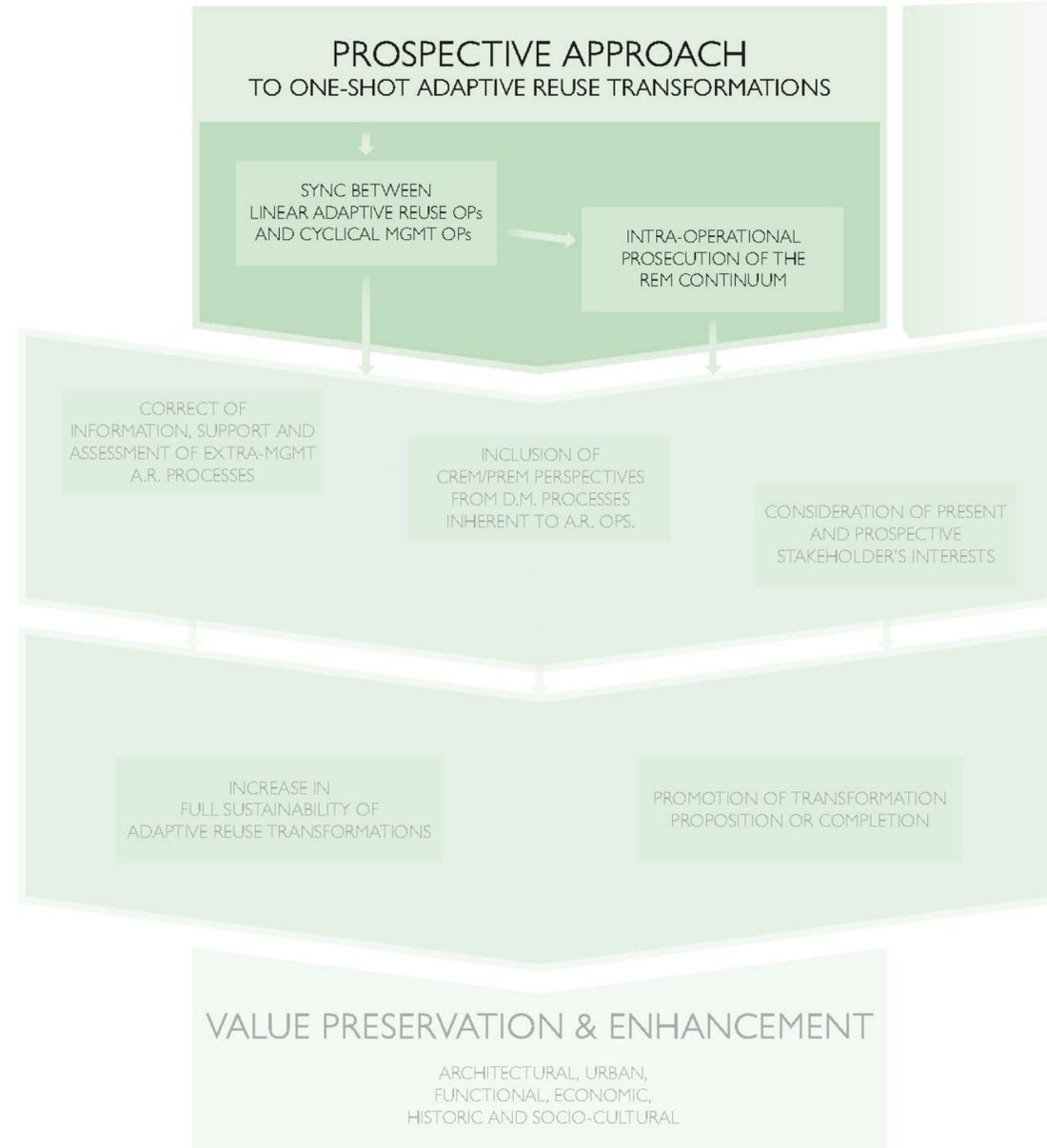
1. Inhibition of extra managerial intervention processes
2. Exclusion of CREM/PREM perspectives in decision making
3. Losing of stakeholders' interests and support



Source of problem dynamics:

1. Mismatch between cyclical managerial processes and one-off adaptive reuse ops.
2. Interruption of REM continuity correspondently to adaptive reuse ops.

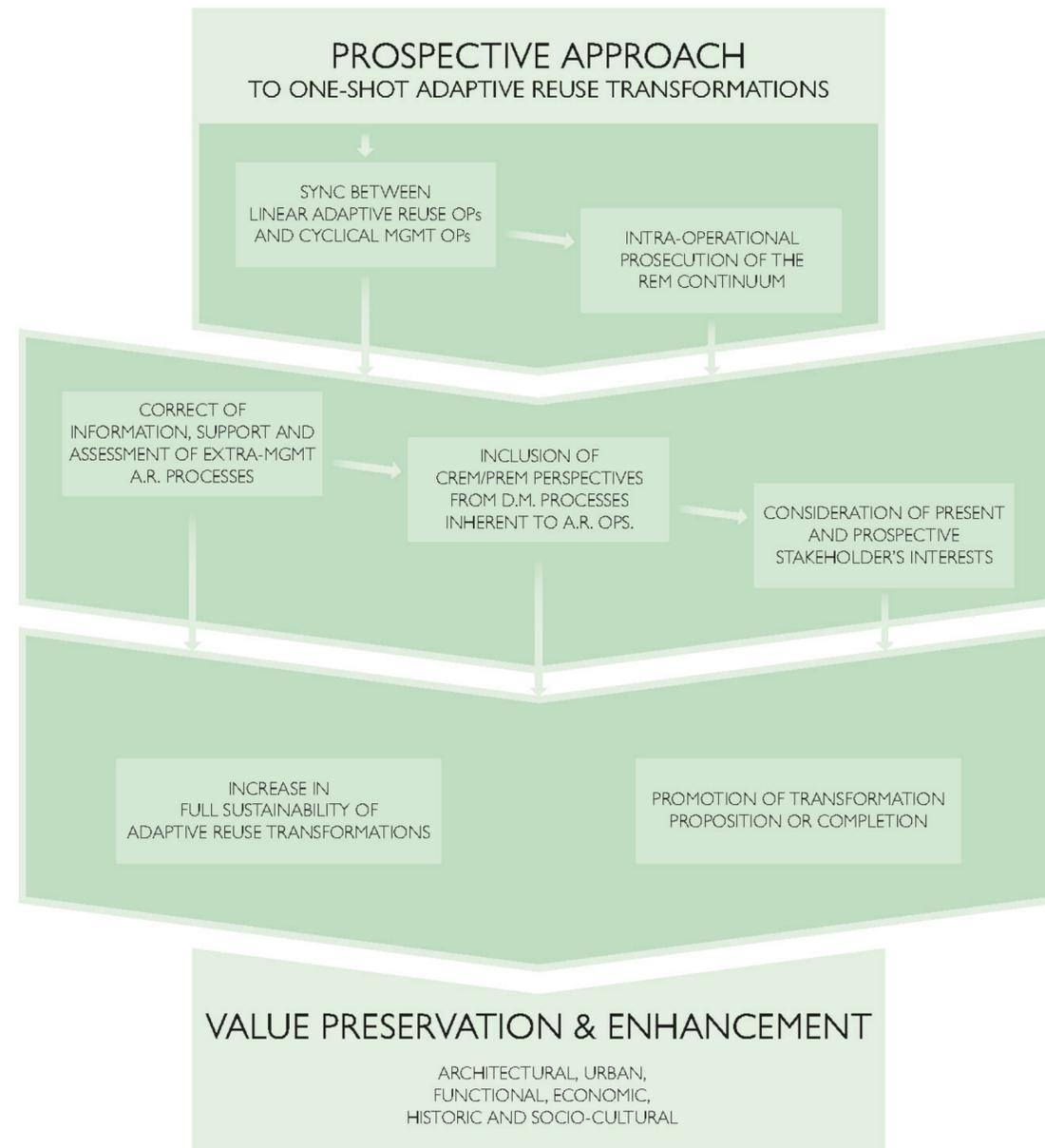
Missing integration of managerial processes into adaptive reuse operations



Avoidance of problem dynamics:

1. Synchronization between cyclical managerial processes and one-off adaptive reuse ops.
2. Maintenance of REM continuity correspondently to adaptive reuse ops.

Full integration of managerial processes into adaptive reuse operations



Trickle-down effect towards

1. Full sustainability of broad-spectrum transformation.
2. Fostering transformations' proposition and completion

Preservation and enhancement of the values of the complexes

RESEARCH QUESTION

How can current campus REM theories be successfully employed to contrast the value losses of defunctionalized historic campuses by fostering and supporting fully sustainable broad-spectrum adaptive reuse transformations?

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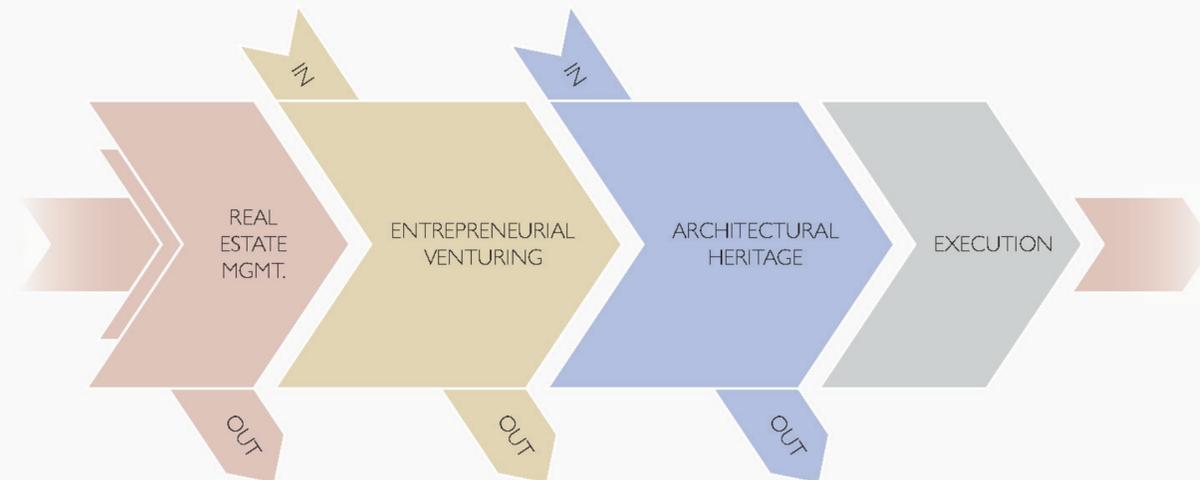
embodying the findings

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Required adaptive reuse intervention levels:

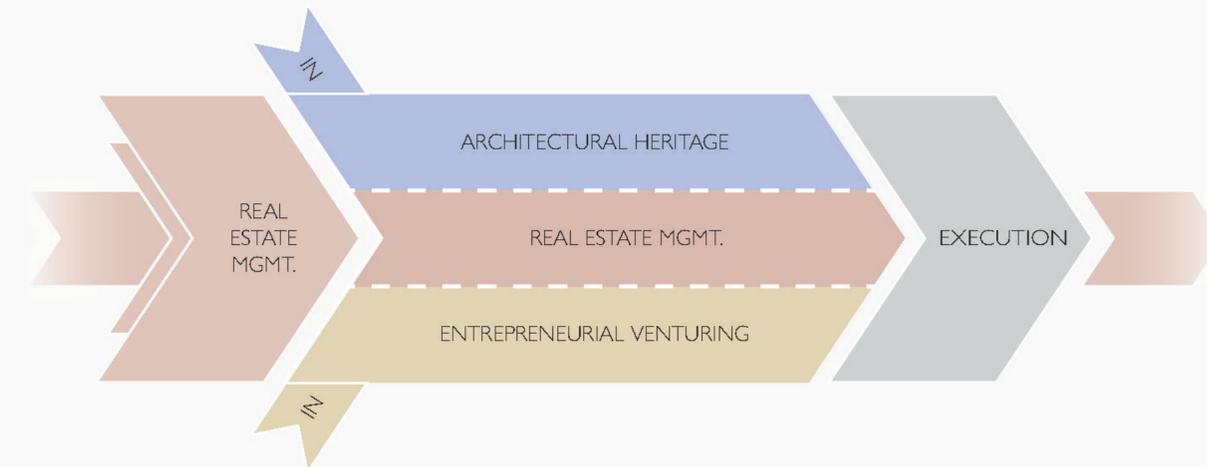


Current operational models:
serially structured

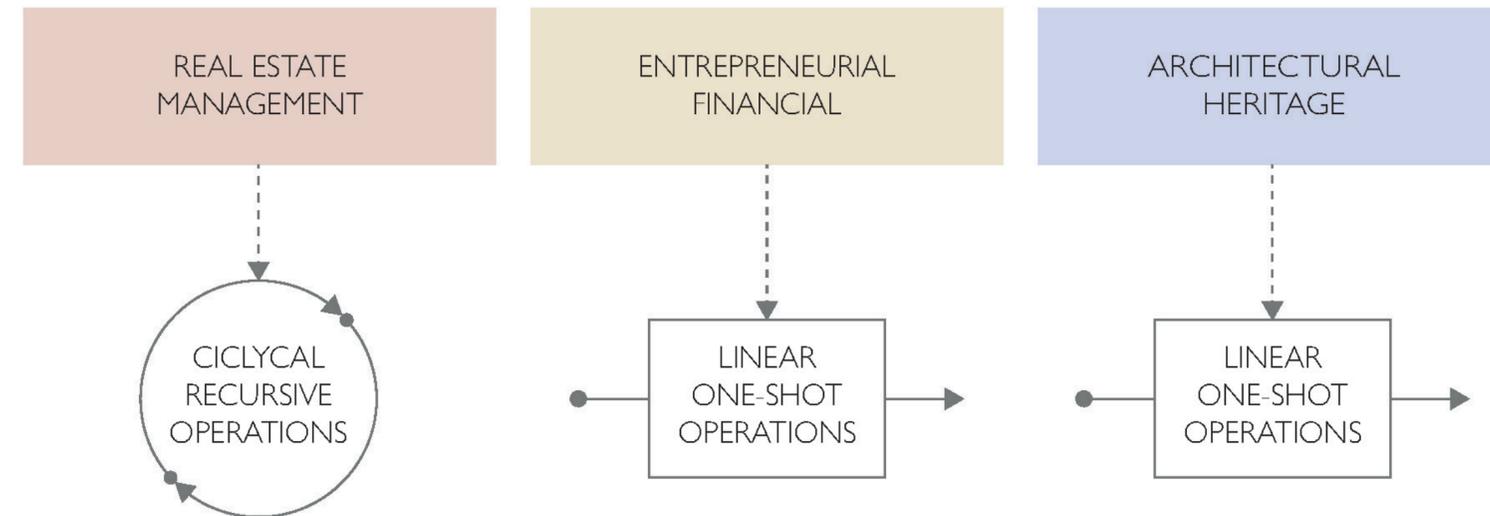


No integration among levels
Operations are discontinuous

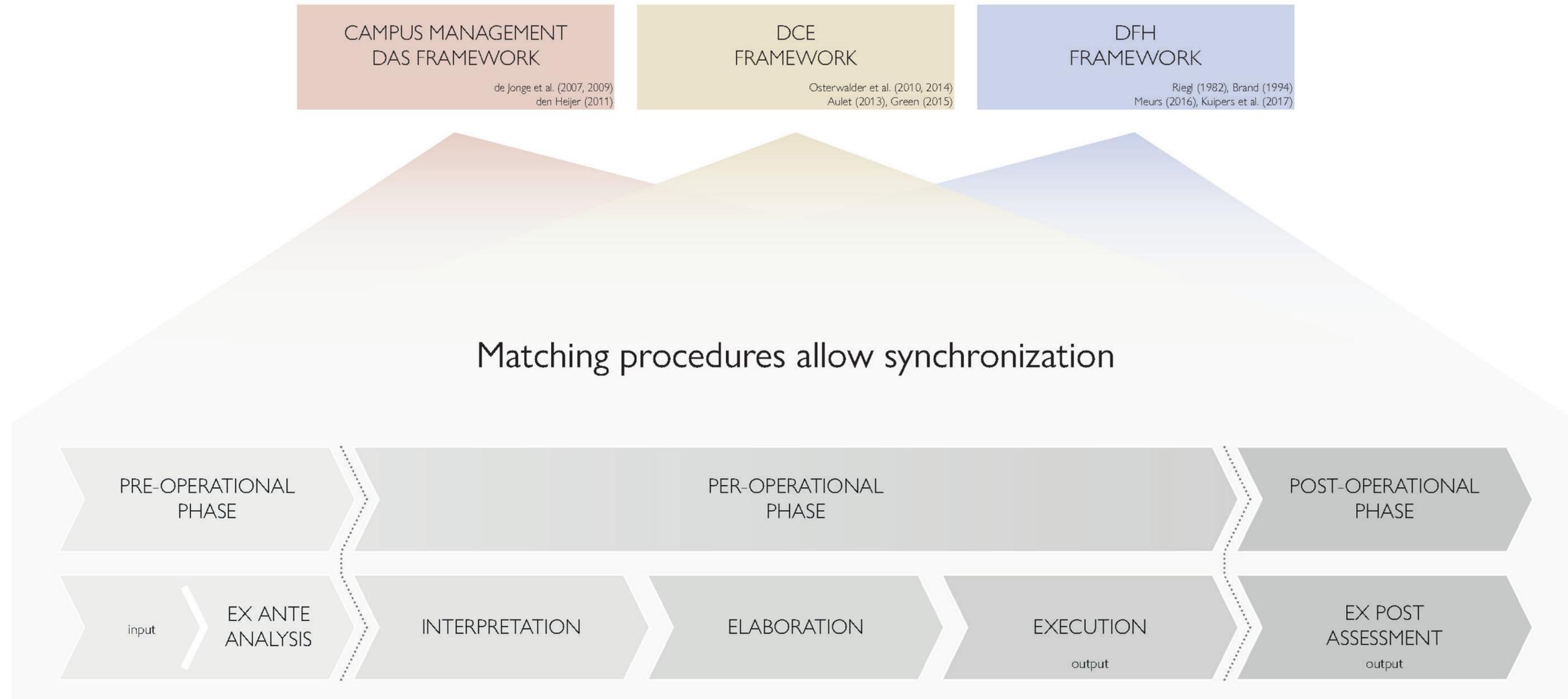
Ideal operational models:
parallely structured



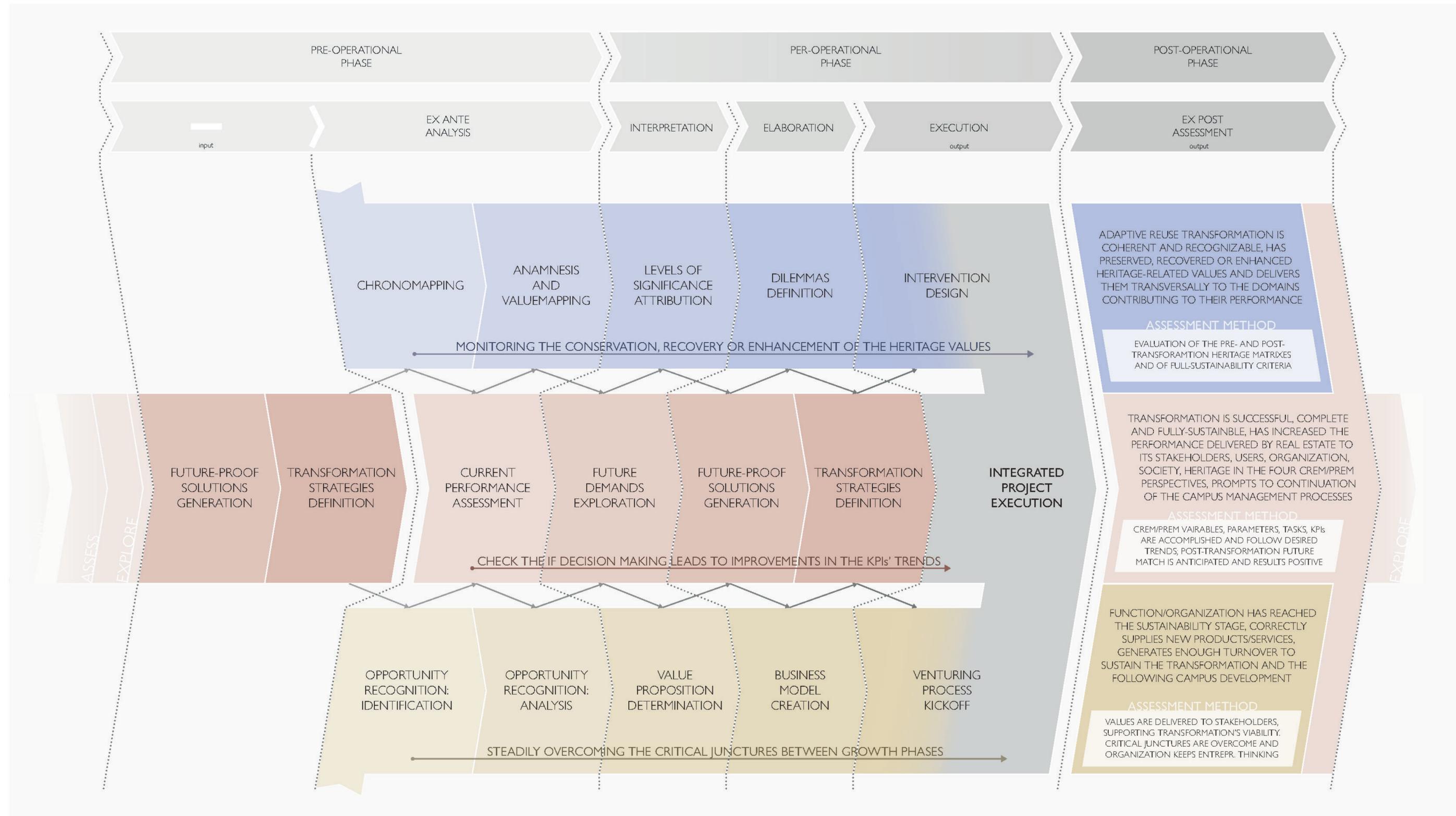
Integration among levels
Operations are completely synchronized



Match between intervention domains is not intuitive
and very hard to realize



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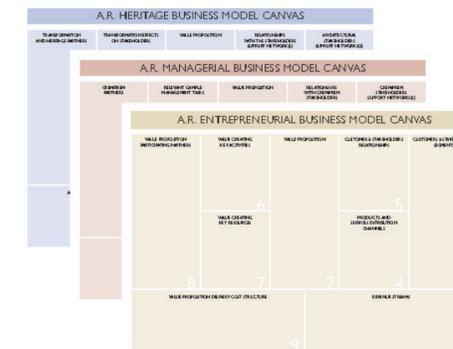
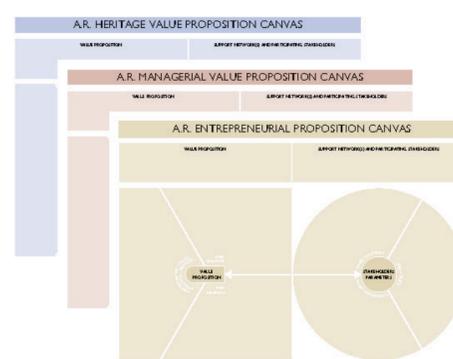
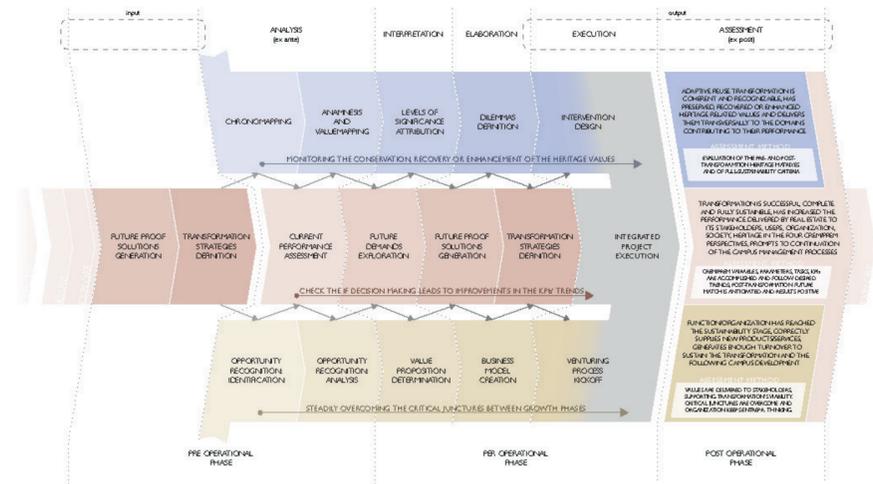
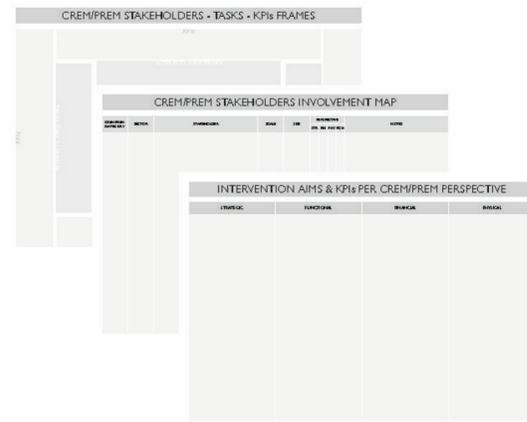


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HERITAGE VALUE MATRIX										
H/H	LOCATION	ARCHITECTURE	EXTERIOR	INTERIOR	PLANNING	LANDSCAPE	ARTS	SCULPTURE	DESIGN	VALUE
HERITAGE										
ARTS										
DESIGN										
PLANNING										
LANDSCAPE										
SCULPTURE										
DESIGN										
PLANNING										
LANDSCAPE										
SCULPTURE										
DESIGN										
PLANNING										
LANDSCAPE										
SCULPTURE										

DESIGN THEMES MATRIX									
DTM	ARCHITECTURE	EXTERIOR	INTERIOR	PLANNING	LANDSCAPE	ARTS	SCULPTURE	DESIGN	VALUE
HERITAGE									
ARTS									
DESIGN									
PLANNING									
LANDSCAPE									
SCULPTURE									
DESIGN									
PLANNING									
LANDSCAPE									
SCULPTURE									

VALUE SIGNIFICANCE MATRIX										
VSM	LOCATION	ARCHITECTURE	EXTERIOR	INTERIOR	PLANNING	LANDSCAPE	ARTS	SCULPTURE	DESIGN	VALUE
HERITAGE										
ARTS										
DESIGN										
PLANNING										
LANDSCAPE										
SCULPTURE										
DESIGN										
PLANNING										
LANDSCAPE										
SCULPTURE										



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REAL ESTATE
MANAGEMENT

ENTREPRENEURIAL
FINANCIAL

ARCHITECTURAL
HERITAGE

OBJECTIVE

Reinstate a minimal but viable use to catalyse the dynamics of incremental adaptive reuse interrupted in the second half of last century

PHASING

PARTNERING
PUBLIC & PRIVATE

UPSCALING

PHASING

smaller and more **agile**
interventions

low risk for
stakeholders

adjustments
of direction

PARTNERING PUBLIC & PRIVATE

UPSCALING

PHASING

smaller and more **agile**
interventions

low risk for
stakeholders

adjustments
of direction

PARTNERING PUBLIC & PRIVATE

access to potentially
ever-increasing demand

reach out to private
economic resources

tackle public problem
entrepreneurially

UPSCALING

PHASING

smaller and more **agile**
interventions

low risk for
stakeholders

adjustments
of direction

PARTNERING PUBLIC & PRIVATE

access to potentially
ever-increasing demand

reach out to private
economic resources

tackle public problem
entrepreneurially

UPSCALING

low impact on
intervention promotor

direct contact with
support network

readiness for
following phases

a methodological blueprint

how does this inform the function?

PHASING

few but relevant actors
for catch-all reach

early involvement
for co-creation

immediate delivery of
value for economical
self-sustainability

PARTNERING PUBLIC & PRIVATE

insertion in
triple helix environment

maintainment of
public ownership

make requalification a
private interest

UPSCALING

managerial transfer
to regional scale

designing for wider
catchment area

aim to create a
flagship project

automotive



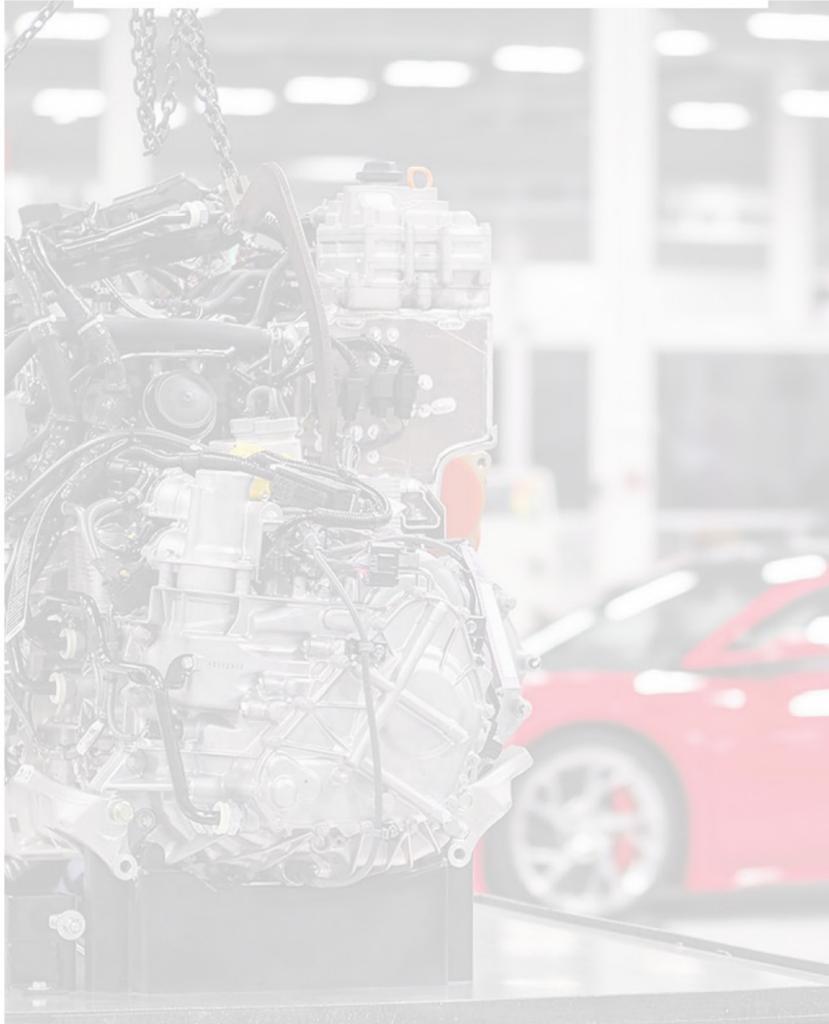
healthcare



automation



automotive



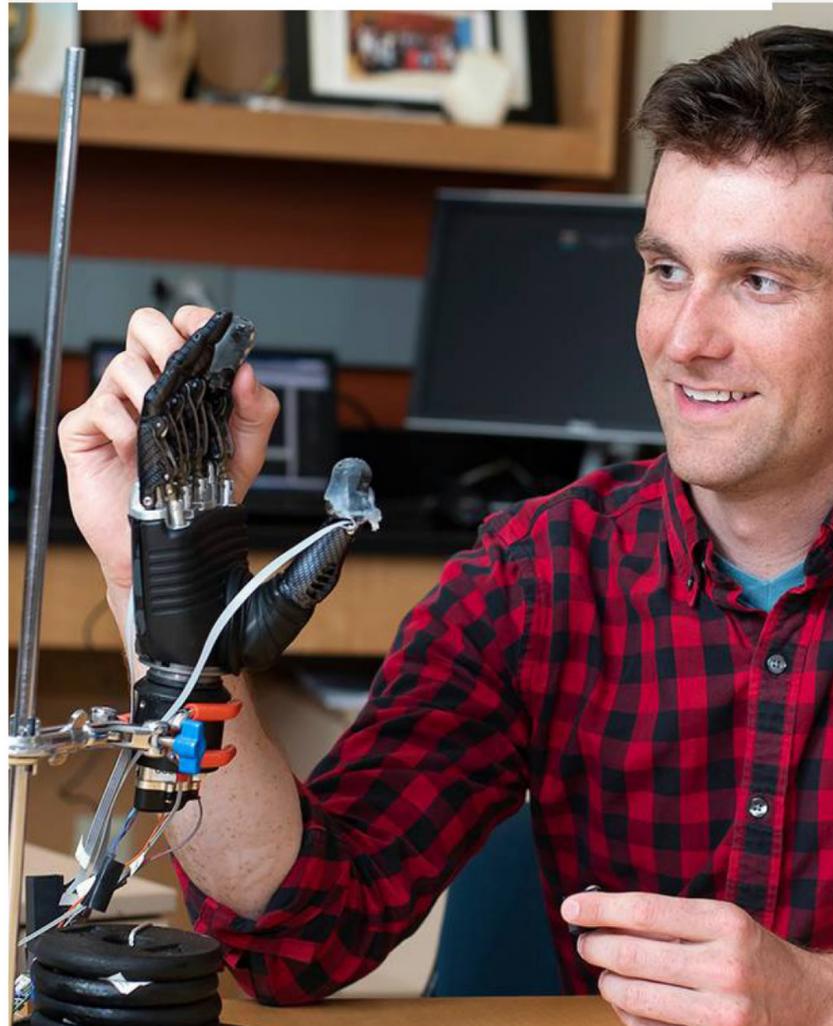
healthcare



automation



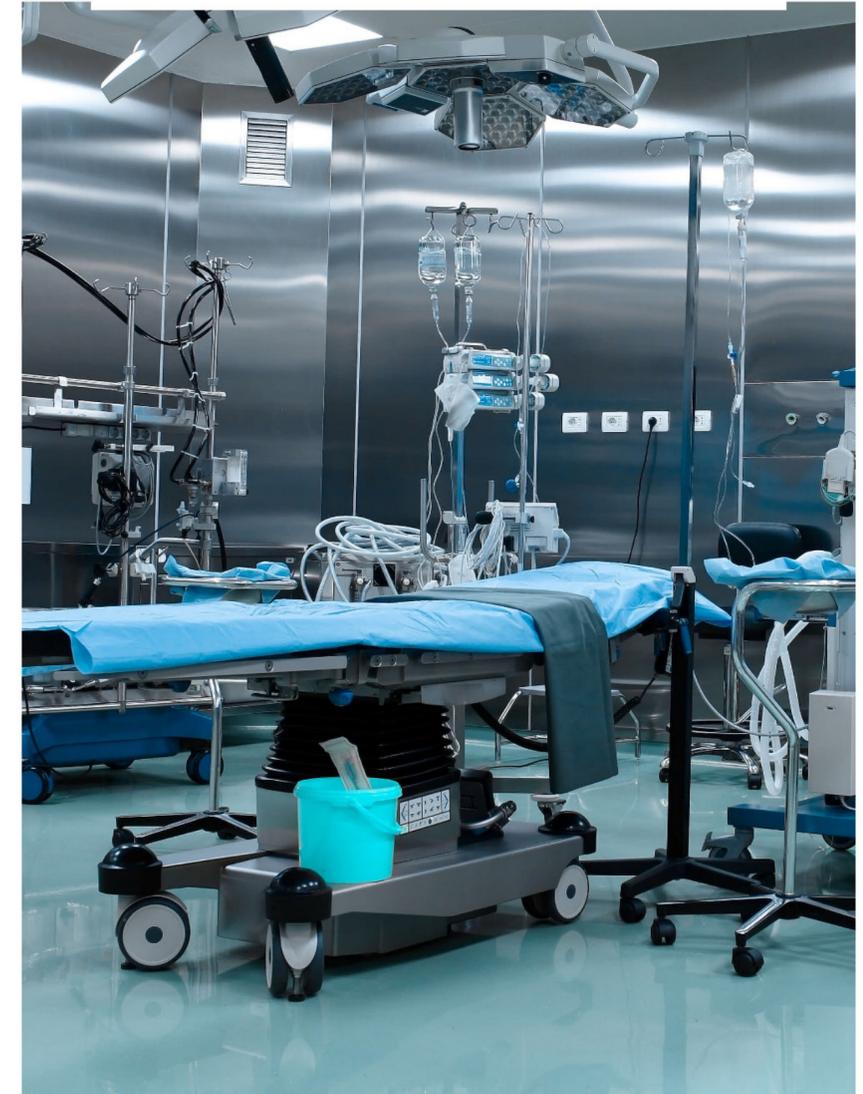
prosthetics

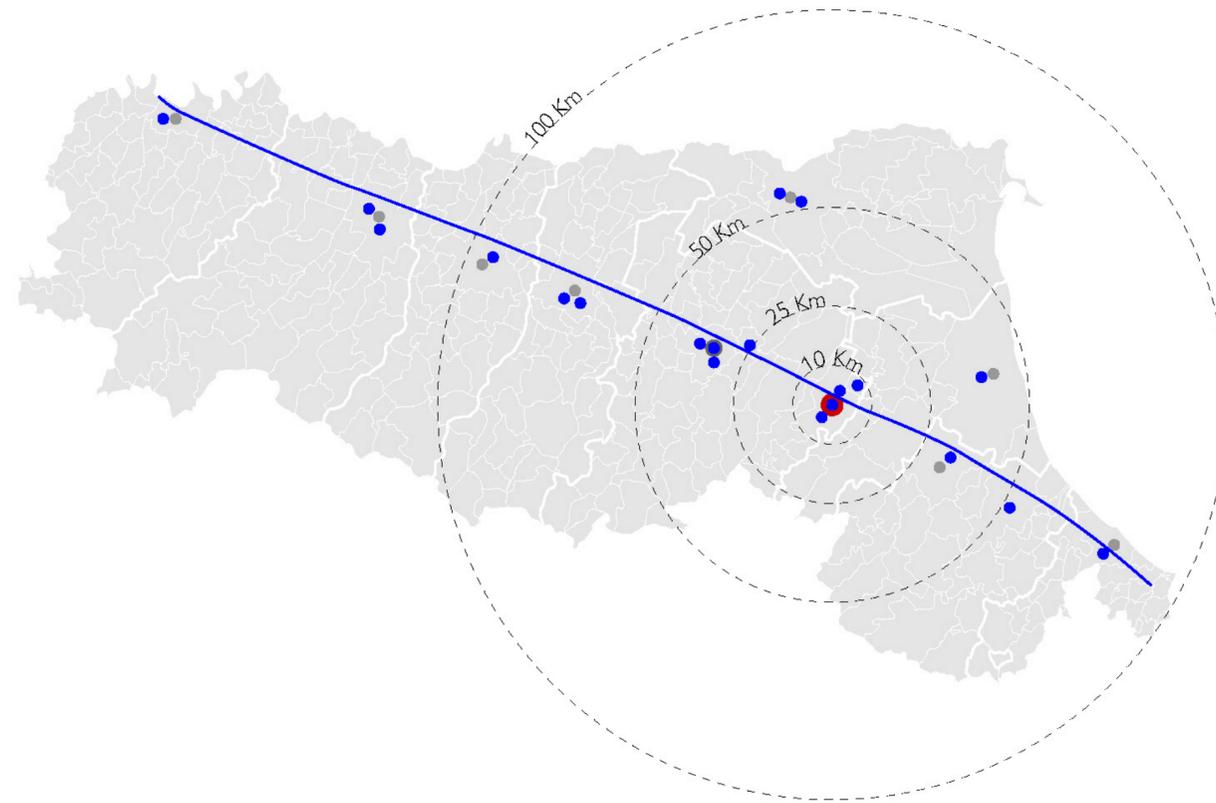


geriatric neurology



oncology





healthcare as a
regional strategic asset

25
successful startups p/y

4
medical universities

3
international institutions

fig. 21: distribution map of the major healthcare triple helix actors operating at least at the regional scale.

a methodological blueprint

how does this inform the design?

PHASING

phased steady
requalification of complex

greater flexibility of
functional mix

enhance function
architecturally
without limiting

PARTNERING PUBLIC & PRIVATE

clear distinction between
public and private spaces

facilitation of
face-to-face contacts

urban reintegration
of the complex

UPSCALING

design favours versatility
for higher occupancy rates

city entitled to
satellite activities

uniqueness driven
project recognisability

a story in Imola

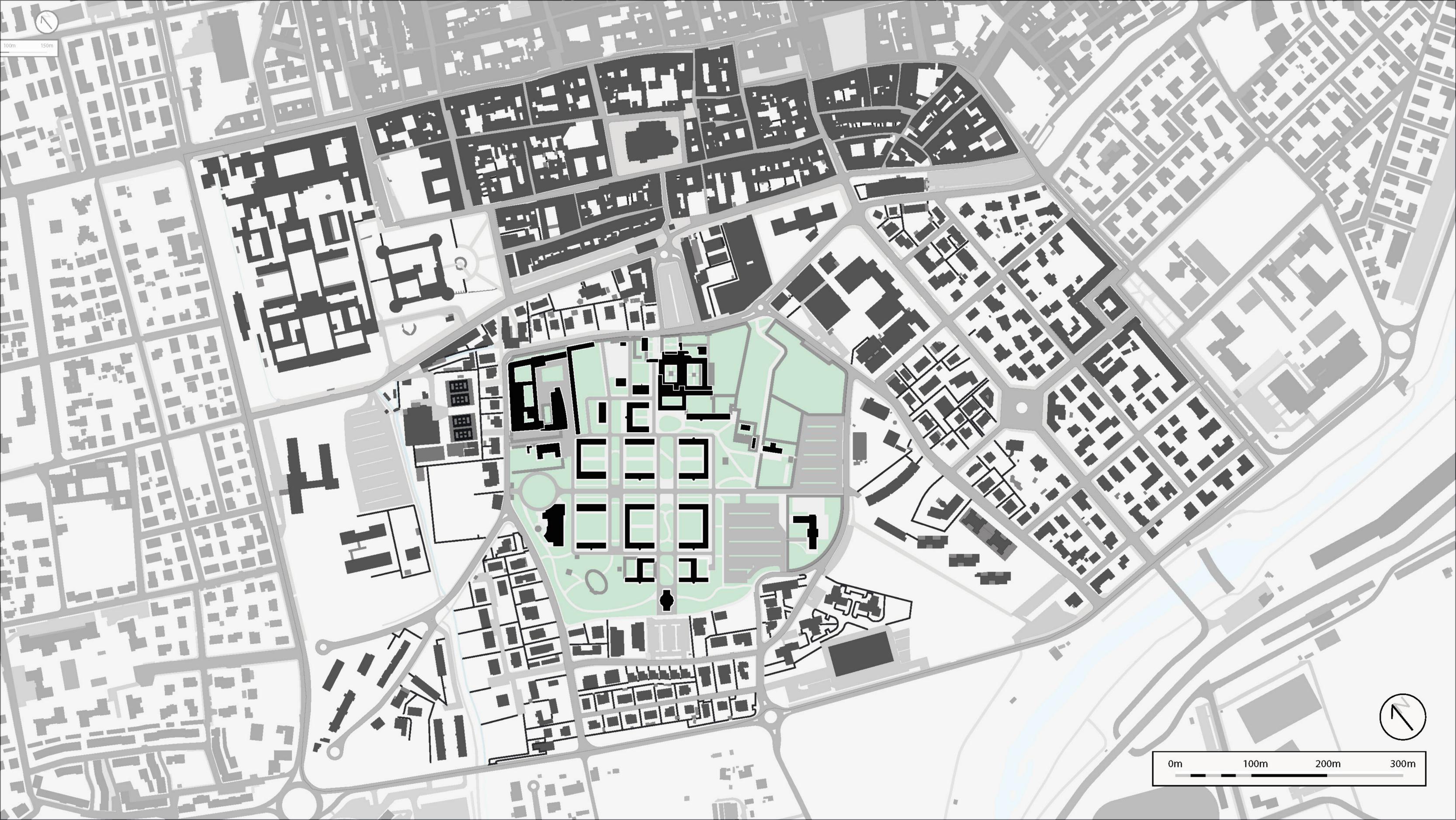
analysing the impasse

researching the breakthrough

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embodying the findings

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cases	surface	
	ext.	built
total	13,72 ha avg.	1,79 ha avg. 13%
the Osservanza	14,42 ha	2,0 ha 14%

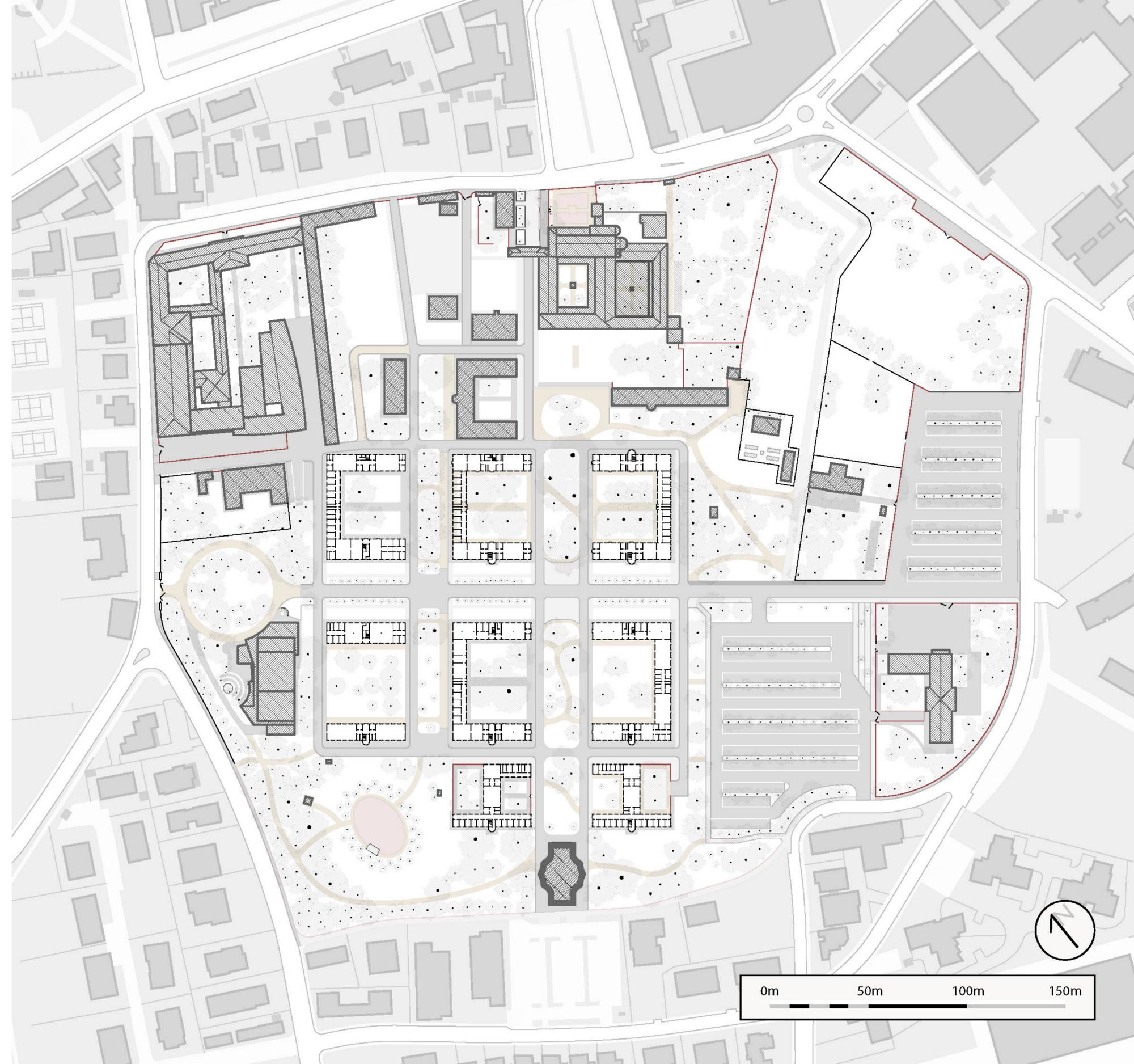




fig. 22: View of two paired pavilions. The interposed courtyard is enclosed by walls.

embodying the findings



fig. 23: view of the complex from the administration building showing the paired female (left) and male (right) pavilions.

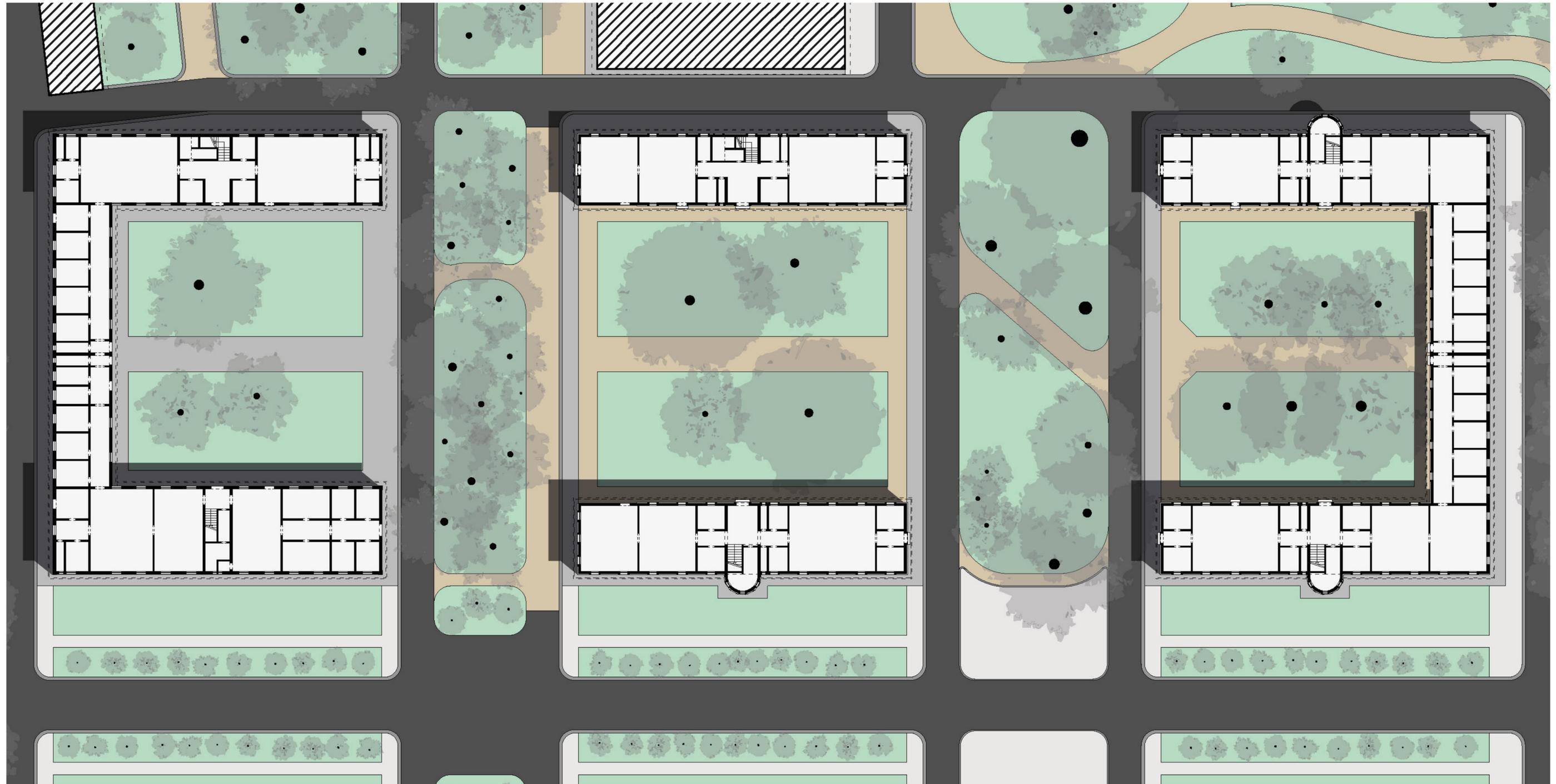


fig. 24: Ground floor plan of the cluster interested in phase 1.





fig. 25: First floor plan of the cluster interested in phase 1.





fig. 26: View of the interiors of a pavilion with dormitories and canteens at the groundfloor.



fig. 27: View of the interiors of a pavilion with a ward of isolation cells.



fig. 28: View of a canteen in a pavilion.



fig. 29: View of a dormitory in a pavilion.

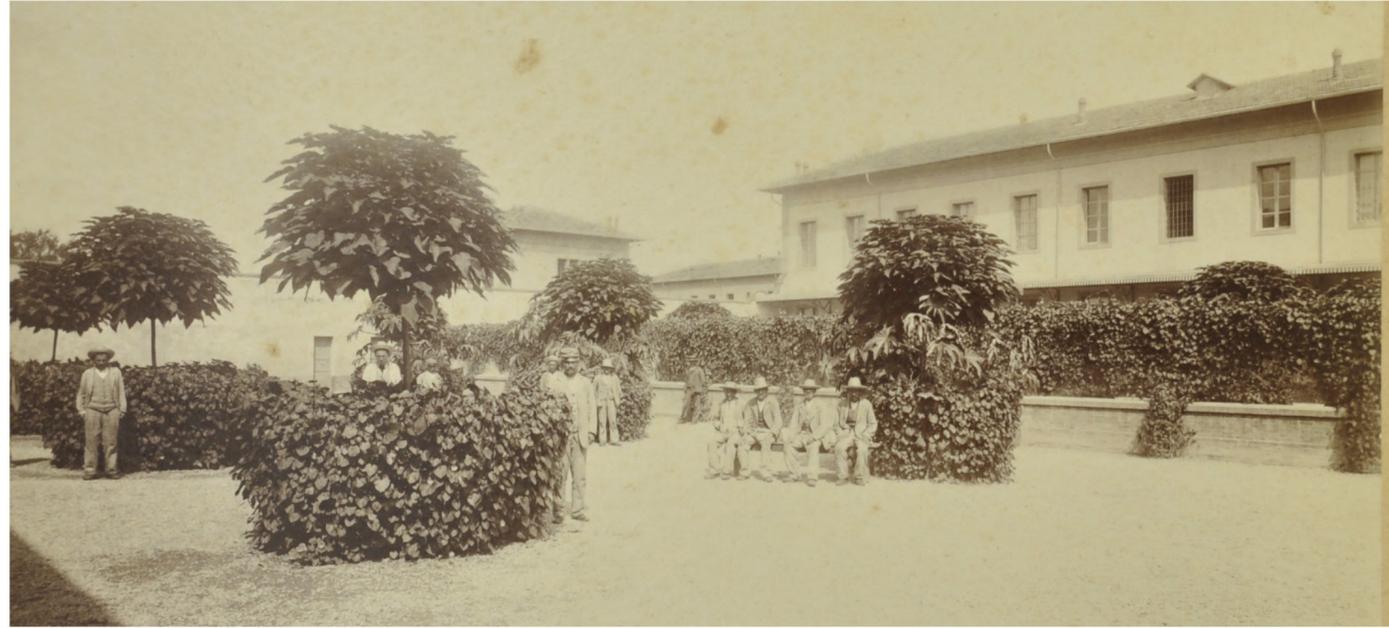


fig. 30: Views of the common recreational spaces in some courtyards



fig. 31: View of a female pavilion's courtyard.



fig. 32: Views of the walls being teared down in 1974, changing the nature of the complex

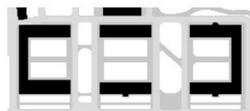




fig. 33: Ground floor plan of the phase 1 project



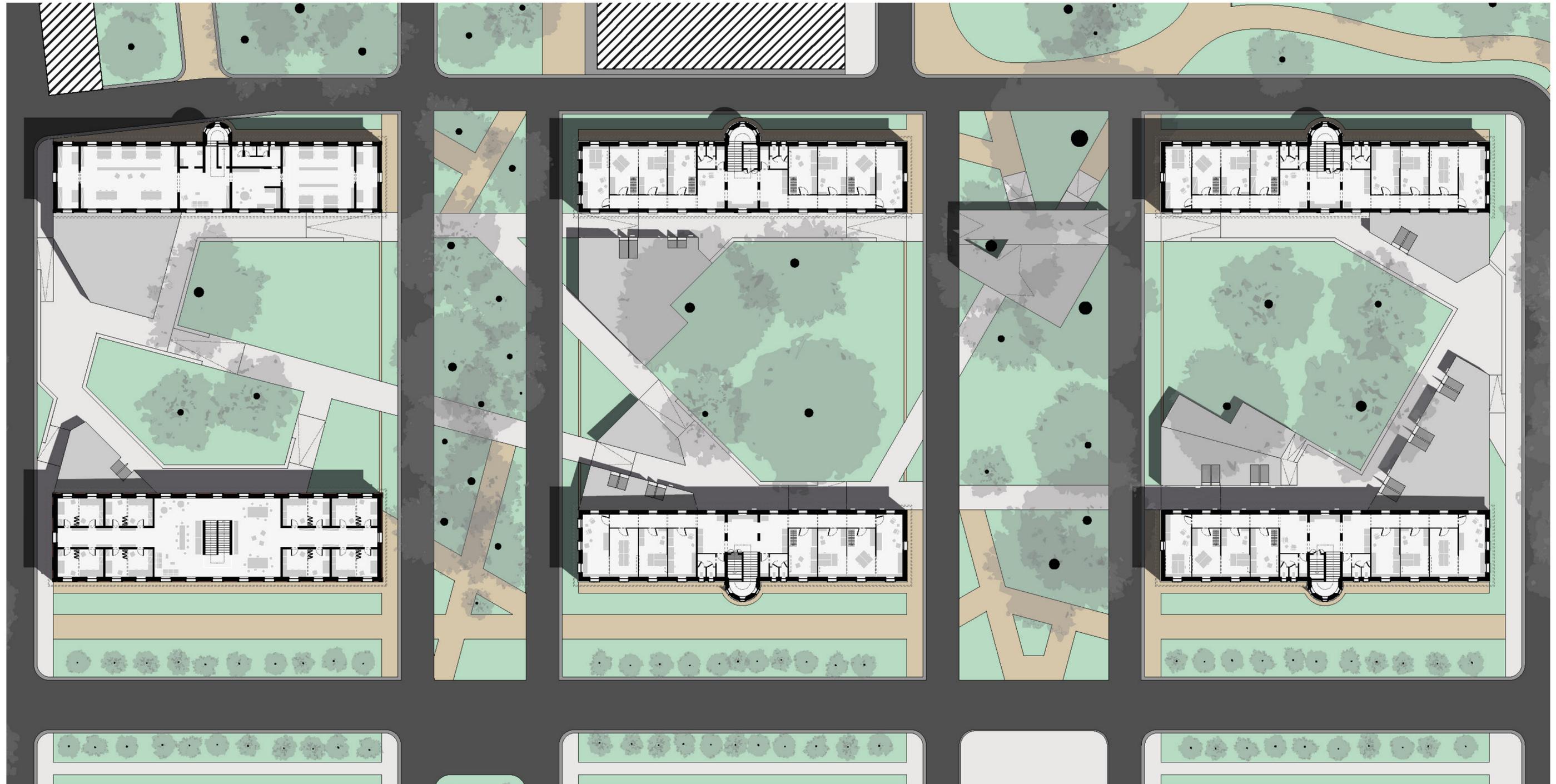


fig. 34: First floor plan of the phase 1 project



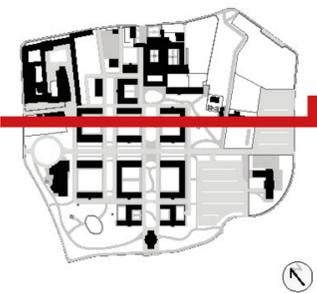
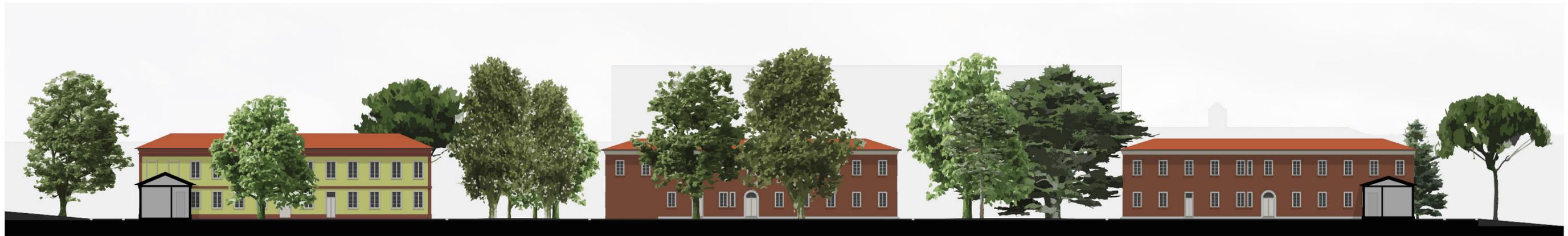


fig. 35: Pre-/post-intervention elevation of the northern pavilions of the cluster as seen from their courtyard

embodying the findings

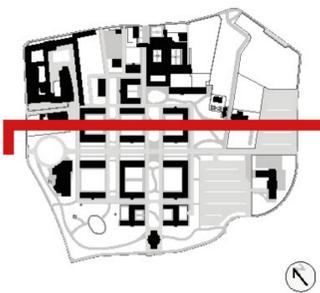
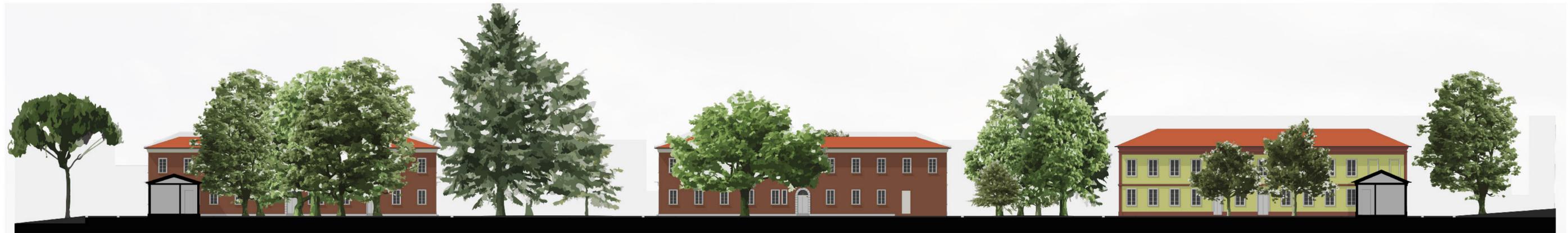


fig. 36: Pre-/post-intervention elevation of the southern pavilions of the cluster as seen from their courtyard

embodying the findings

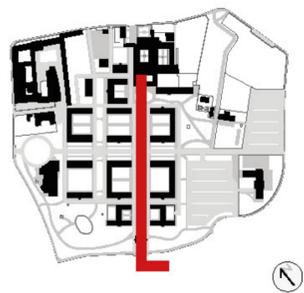


fig. 37: Pre-/post-intervention elevation of the complex as seen from the main avenue.

embodying the findings

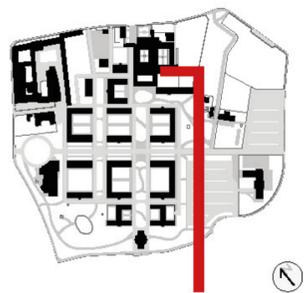


fig. 38: Pre-/post-intervention elevation of the complex as seen from the parking avenue

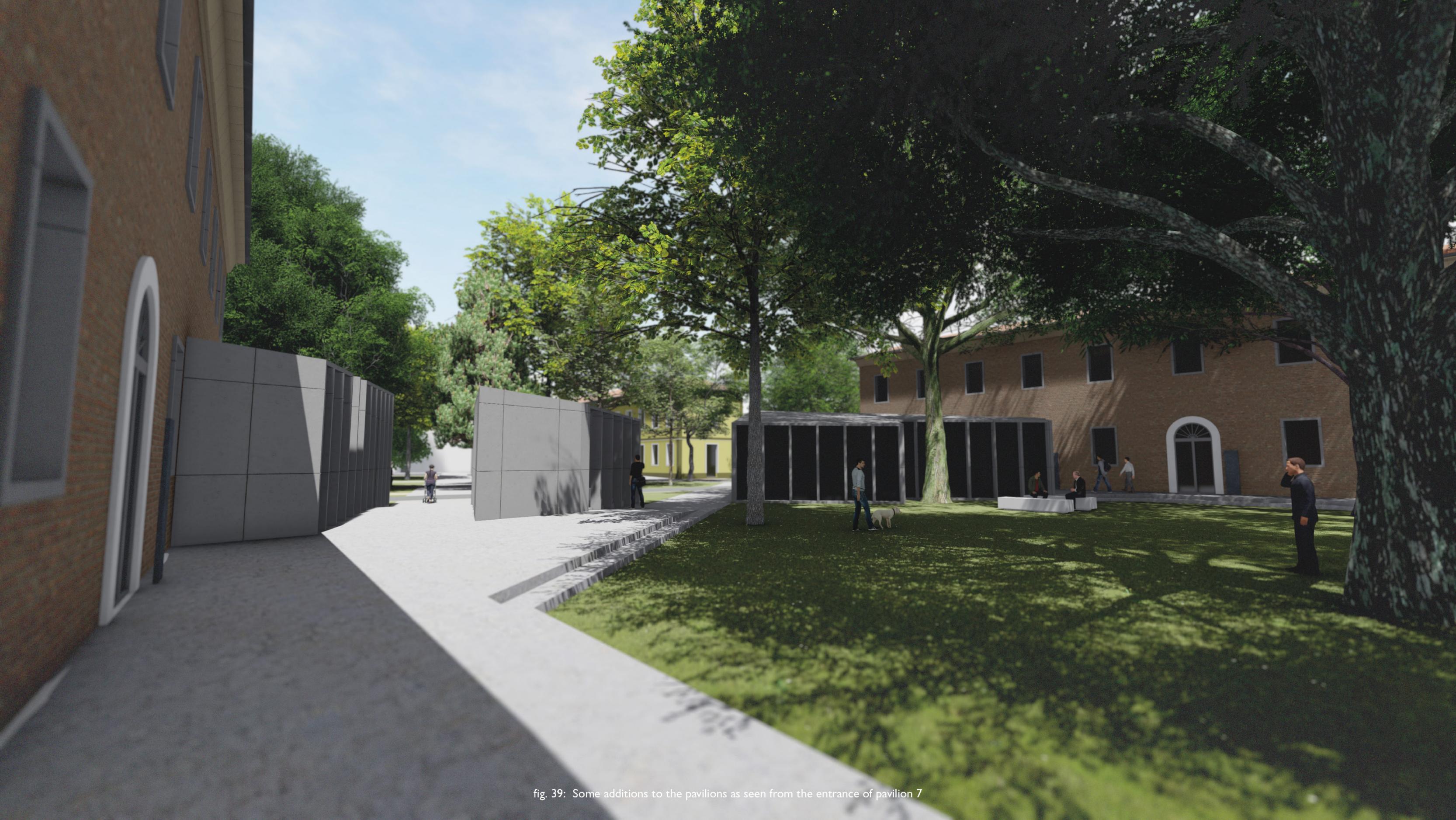


fig. 39: Some additions to the pavilions as seen from the entrance of pavilion 7

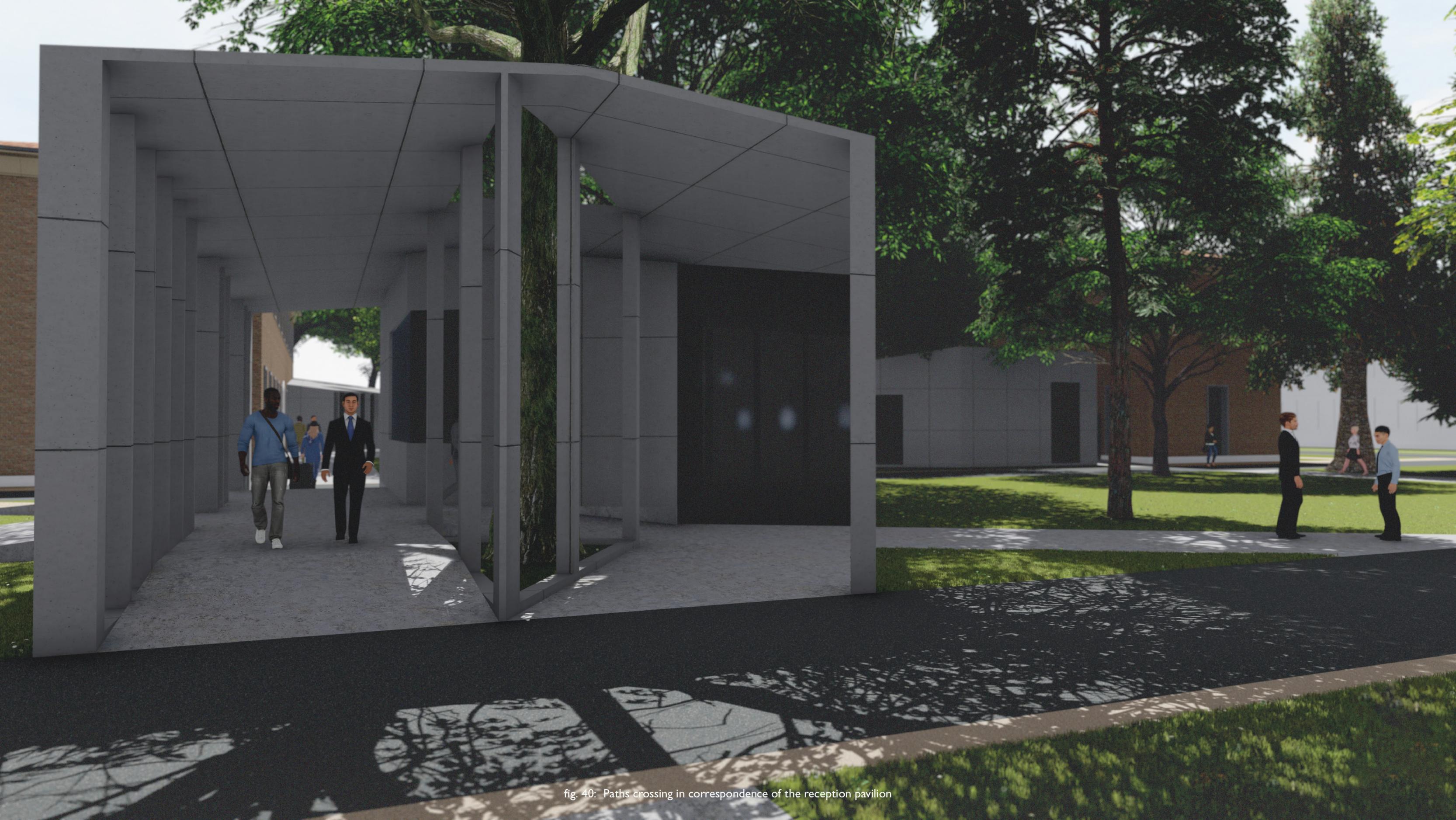


fig. 40: Paths crossing in correspondence of the reception pavilion



fig. 41: View towards pavilion 8 from the parking avenue entrance







fig. 42: Elevation of the north pavilion in the eastern portion of the cluster as seen from the courtyard.





fig. 43: Elevation of the south pavilion in the eastern portion of the cluster as seen from the courtyard.

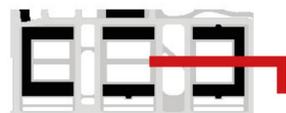




fig. 44: Elevation of the eastern entrance to the cluster: between pavilins 6 and 8.

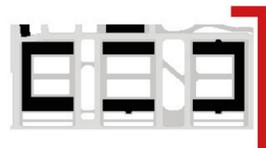


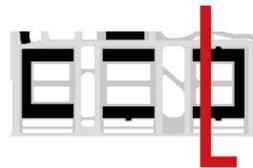


fig. 45: Elevation of the eastern pavilions of the cluster and view on their courtyard.

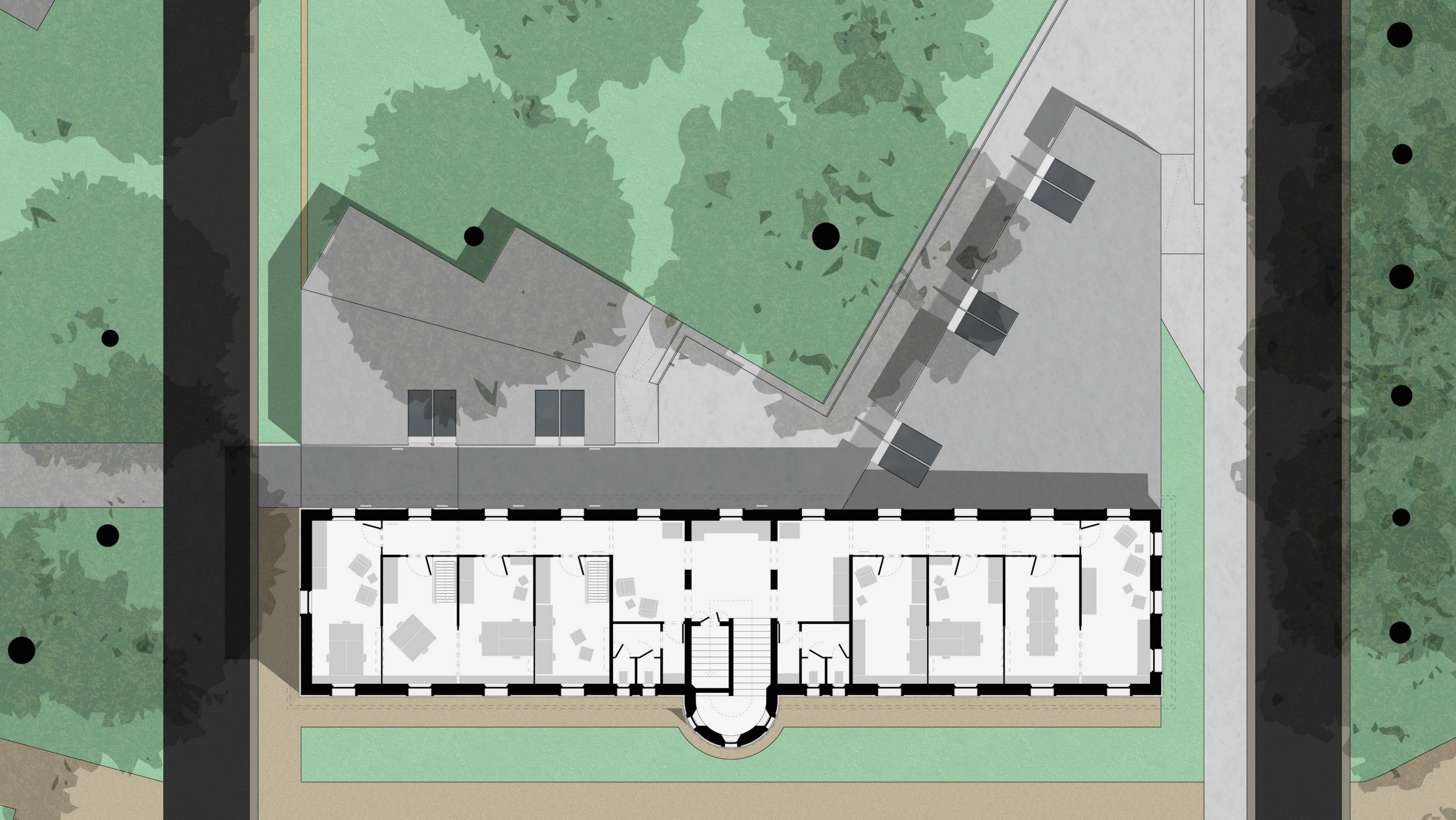




fig. 46: Typical section for the pavilions and of the courtyard.







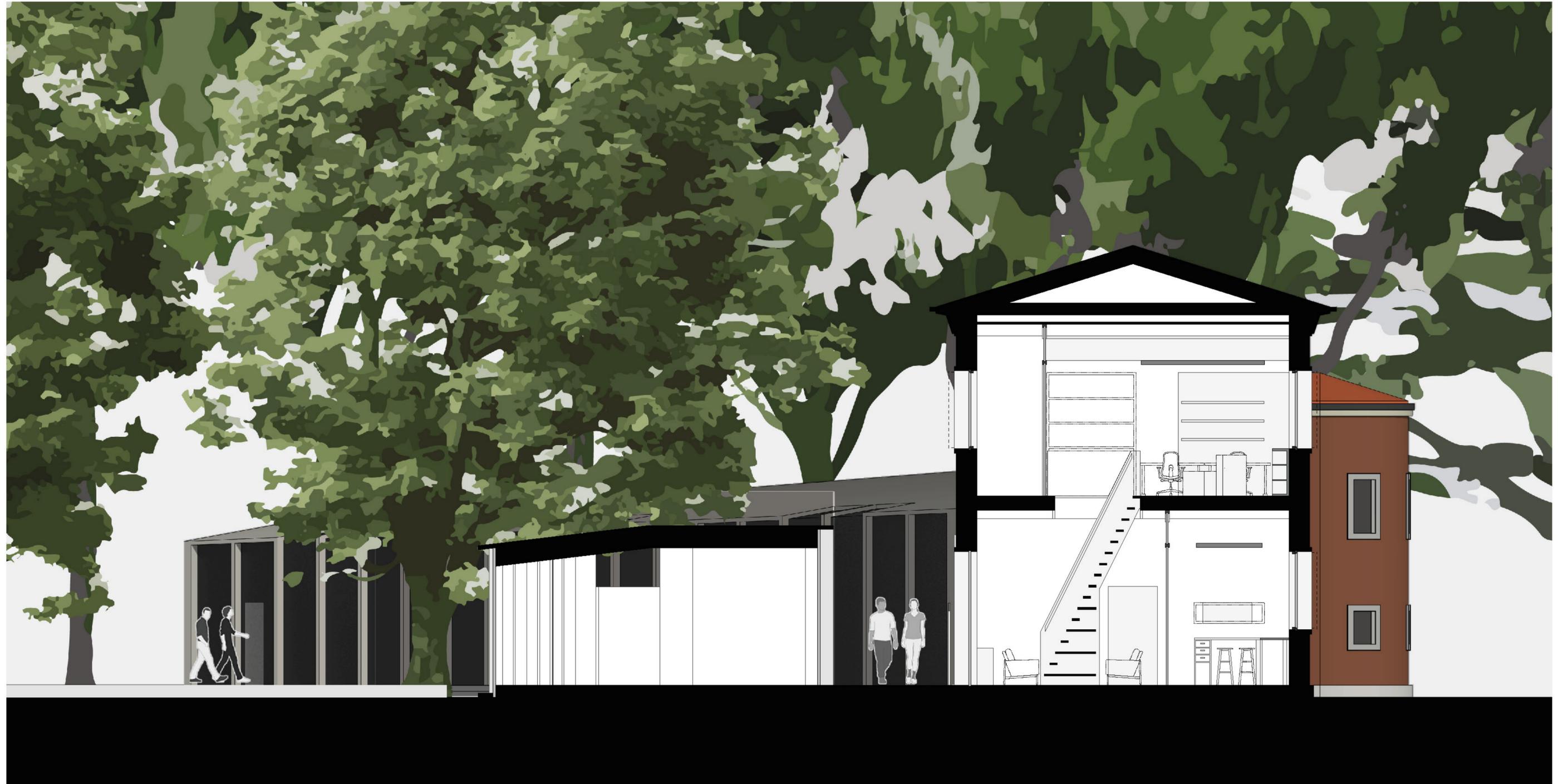


fig. 47: Typical section of the pavilions and of the courtyard.



embodying the findings

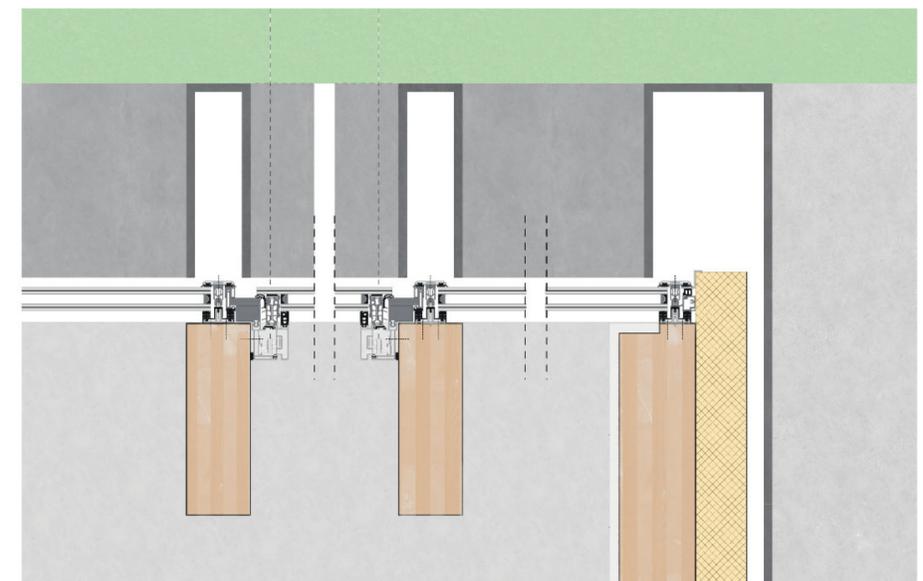
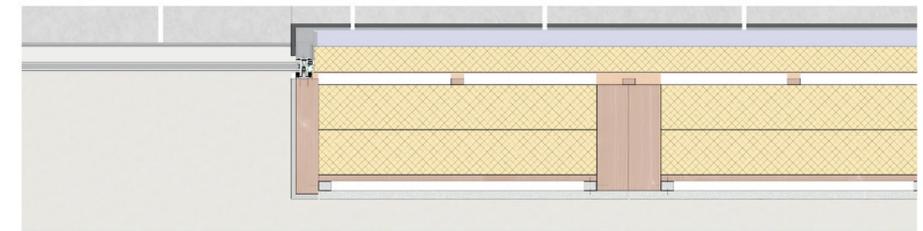
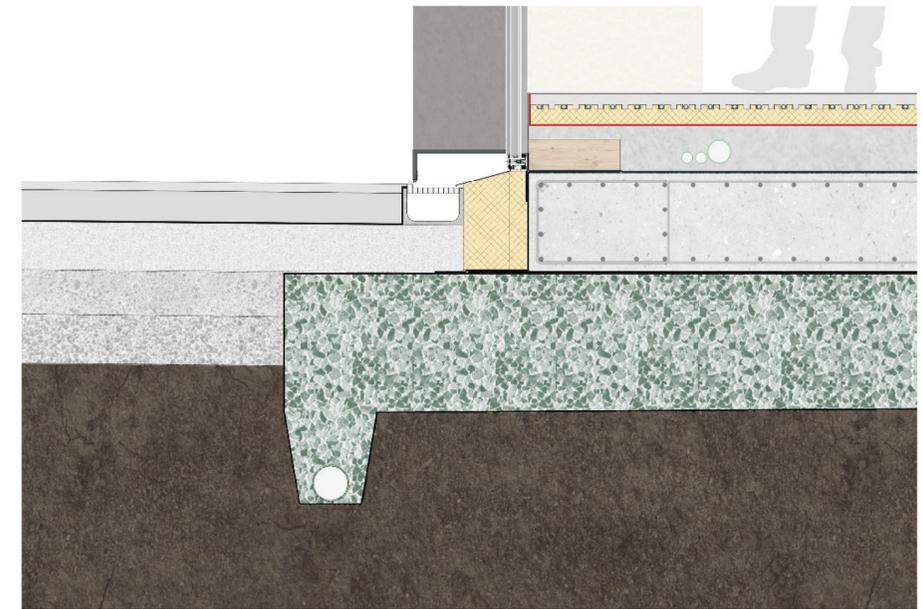
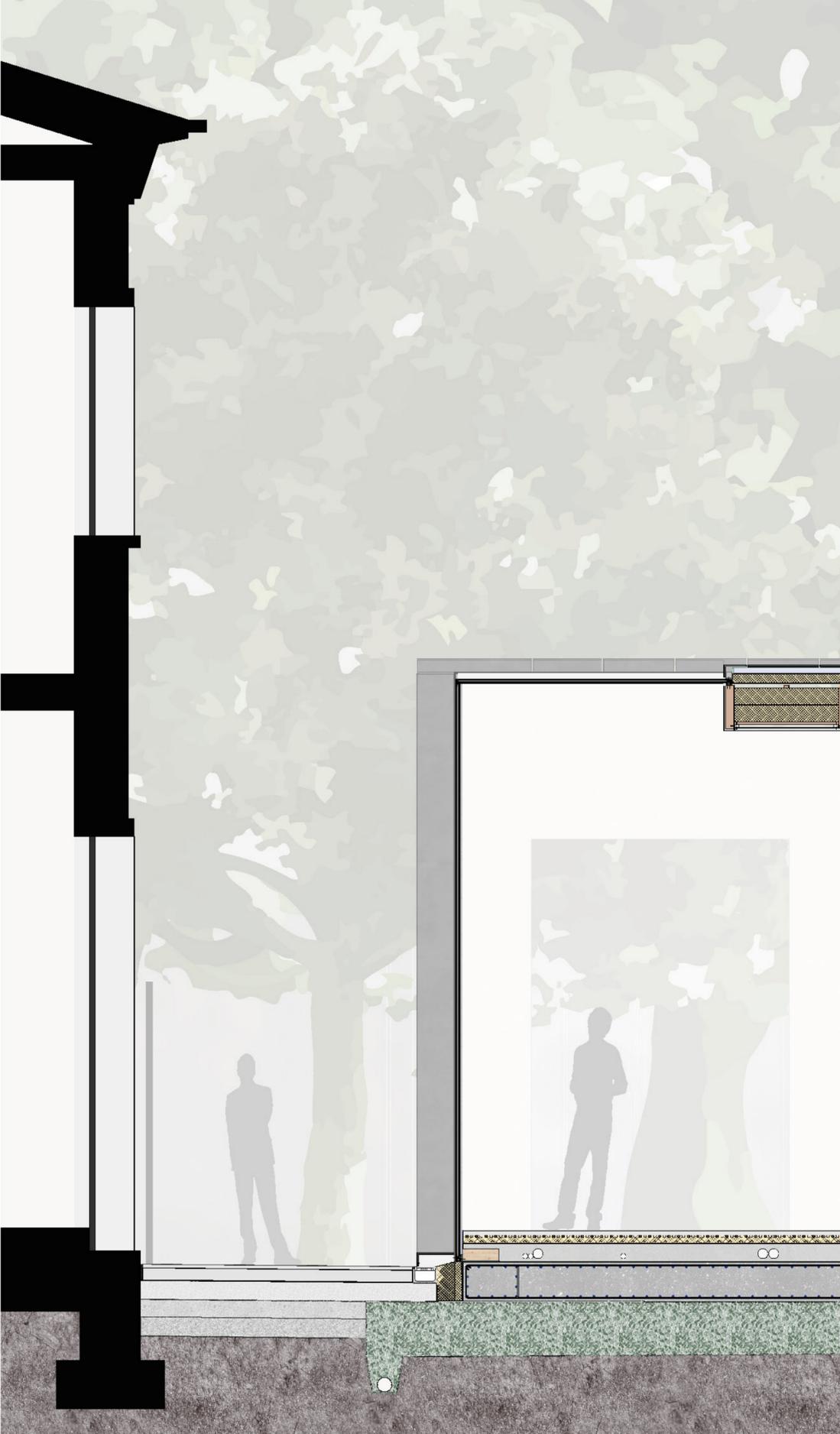
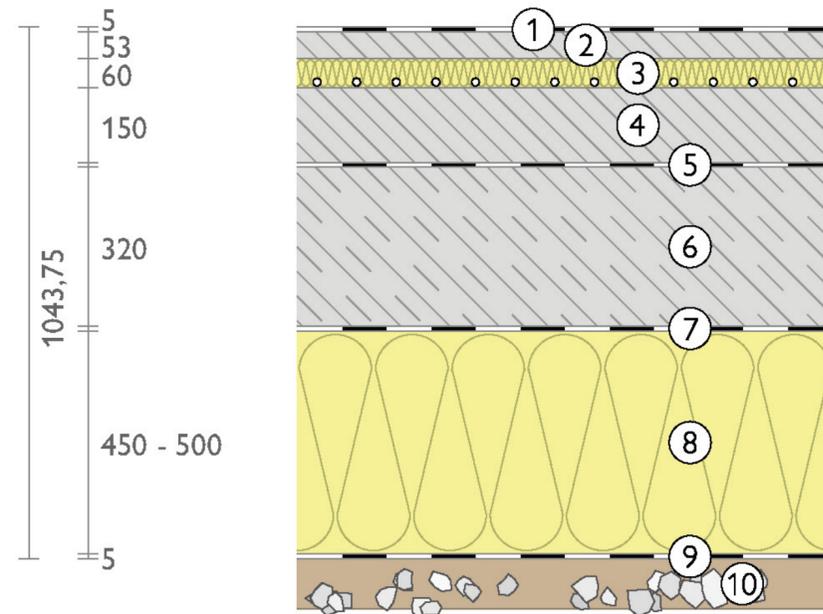
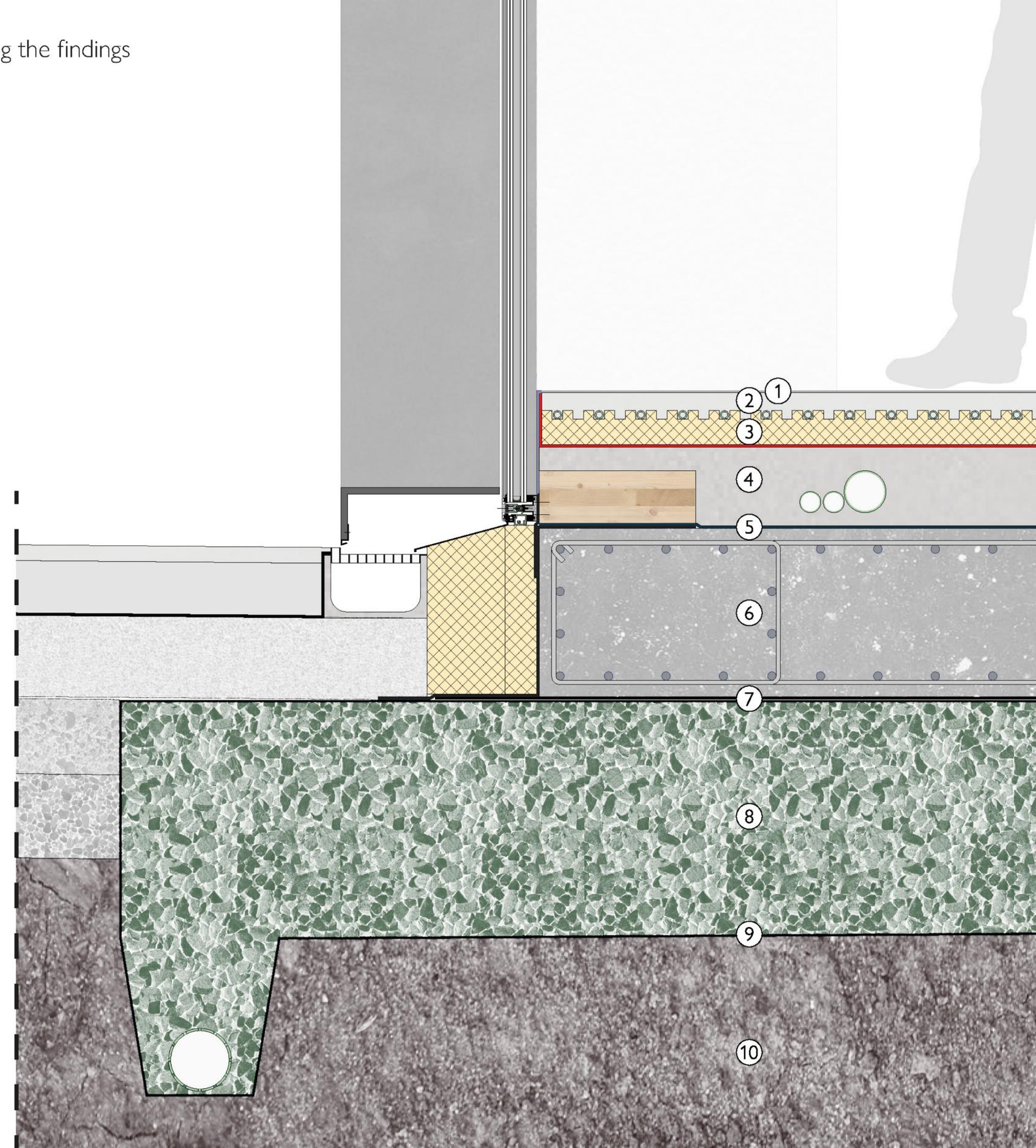


fig. 48: Facade and relevant details of the new constructions

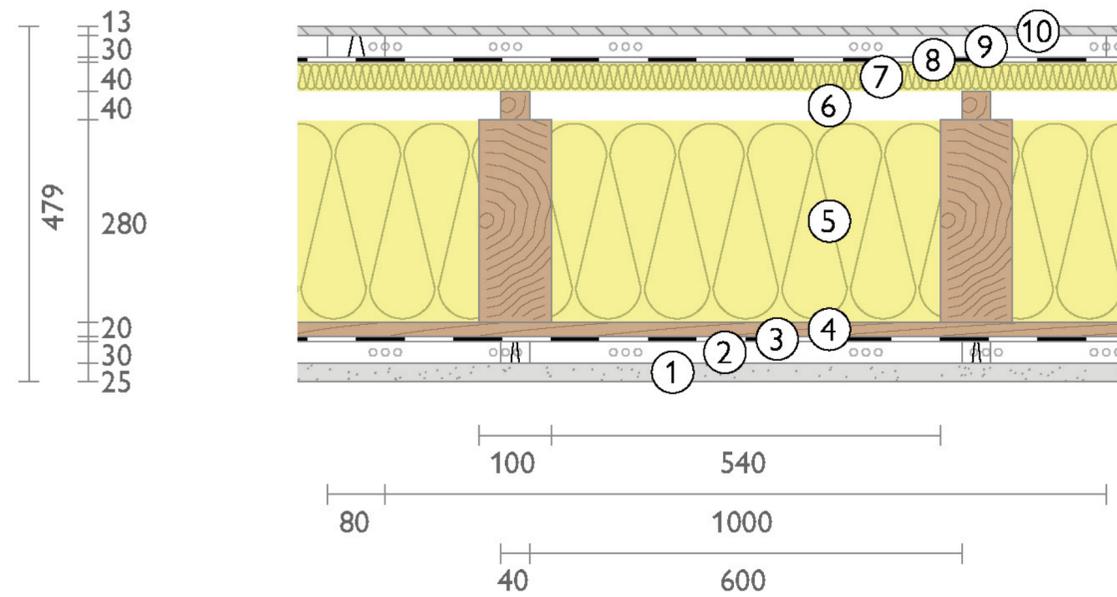
embodying the findings



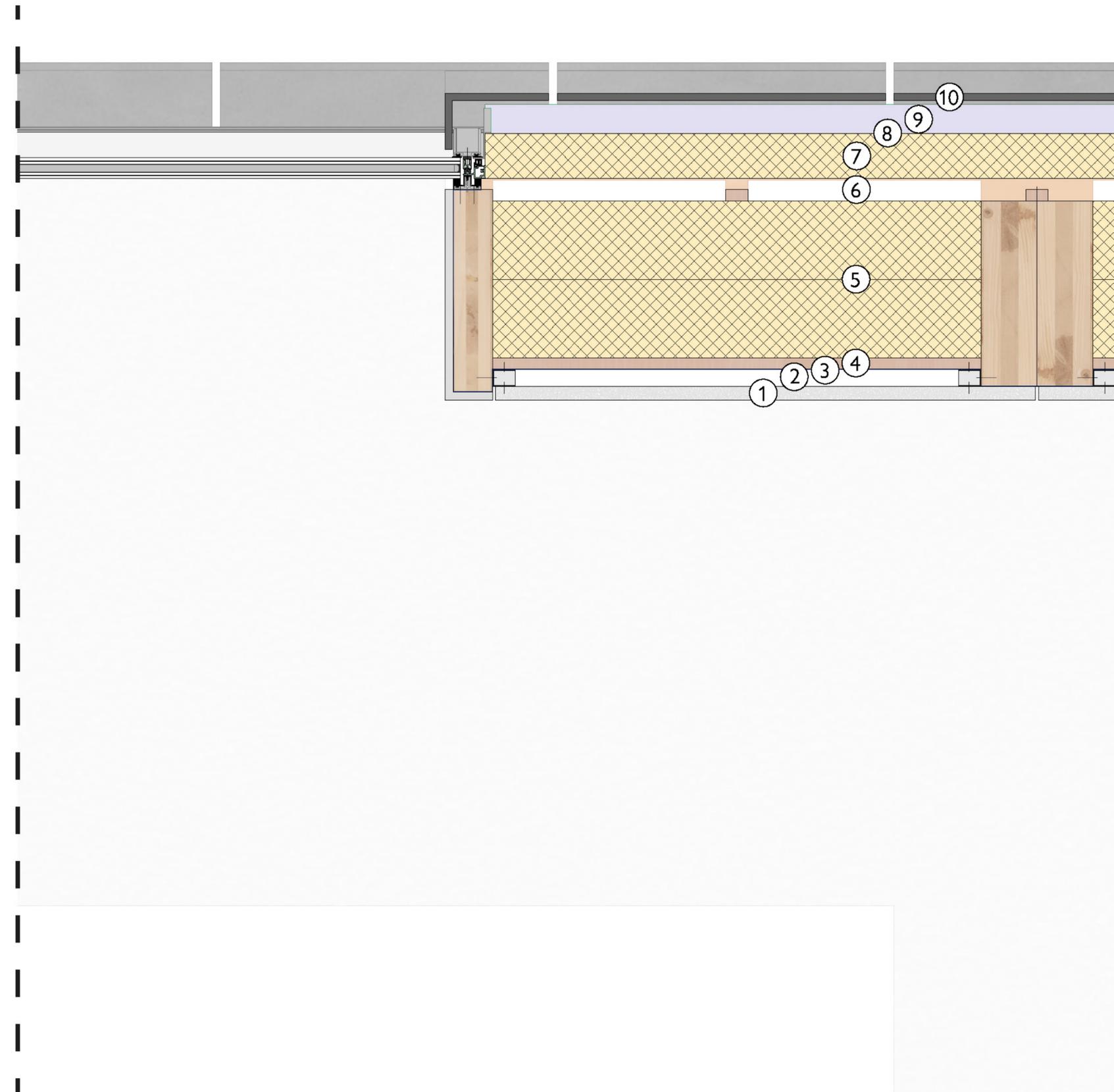
- ① Polished floor hard coating
- ② Anhydrite floor screed (53 mm)
- ③ Underfloor heating (60 mm)
- ④ Lightweight concrete (150 mm)
- ⑤ Variable vapour barrier
- ⑥ RC raft foundations (320 mm)
- ⑦ Polyethylen watertight membrane
- ⑧ Foamglass aggregate (450 - 500 mm)
- ⑨ Geotextile membrane
- ⑩ Soil



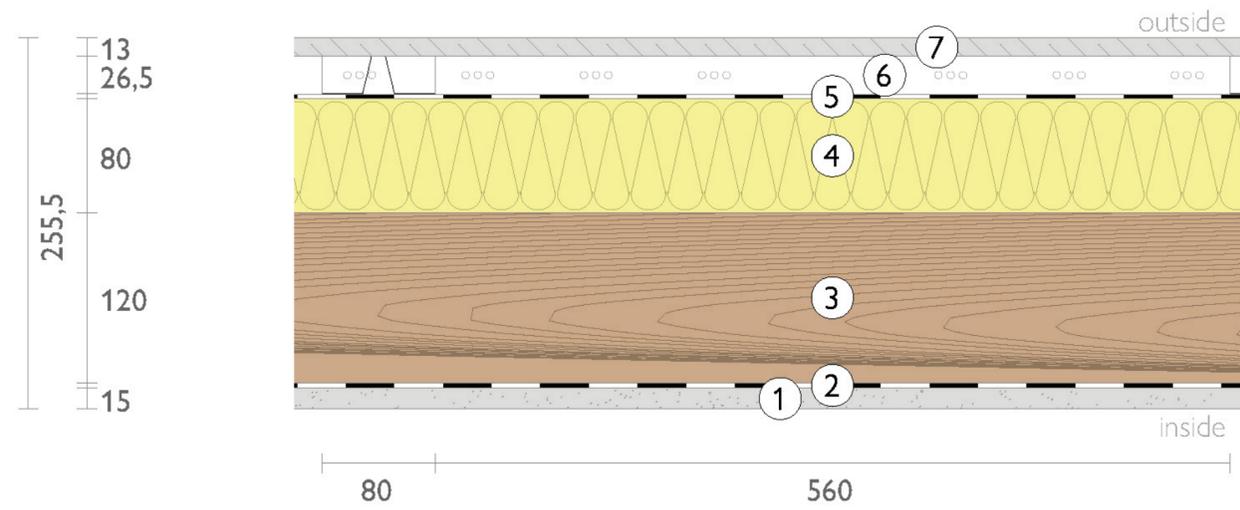
embodying the findings



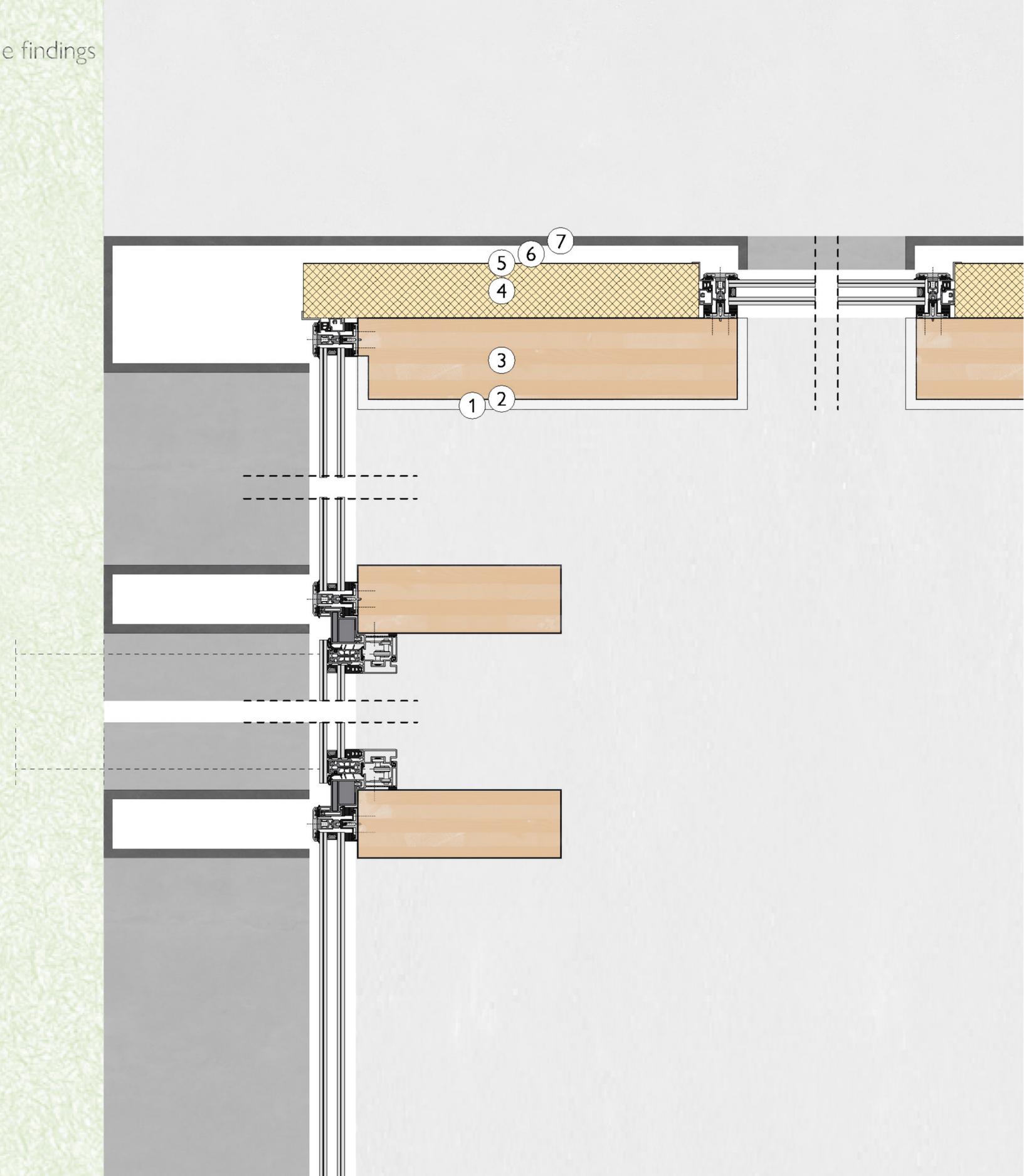
- ① Wood wool acoustic ceiling boards (25 mm)
- ② Internal cavity (30 mm)
- ③ Variable vapour barrier
- ④ Wooden ceiling panel (20 mm)
- ⑤ Woodfibre rigid insulation (280 mm)
- ⑥ Unventilated cavity (40 mm)
- ⑦ Woodfiber rigid insulation (40 mm)
- ⑧ Weather-resistive barrier
- ⑨ Cladding ventilated cavity (30 mm)
- ⑩ GRC cladding molded panels (13 mm)



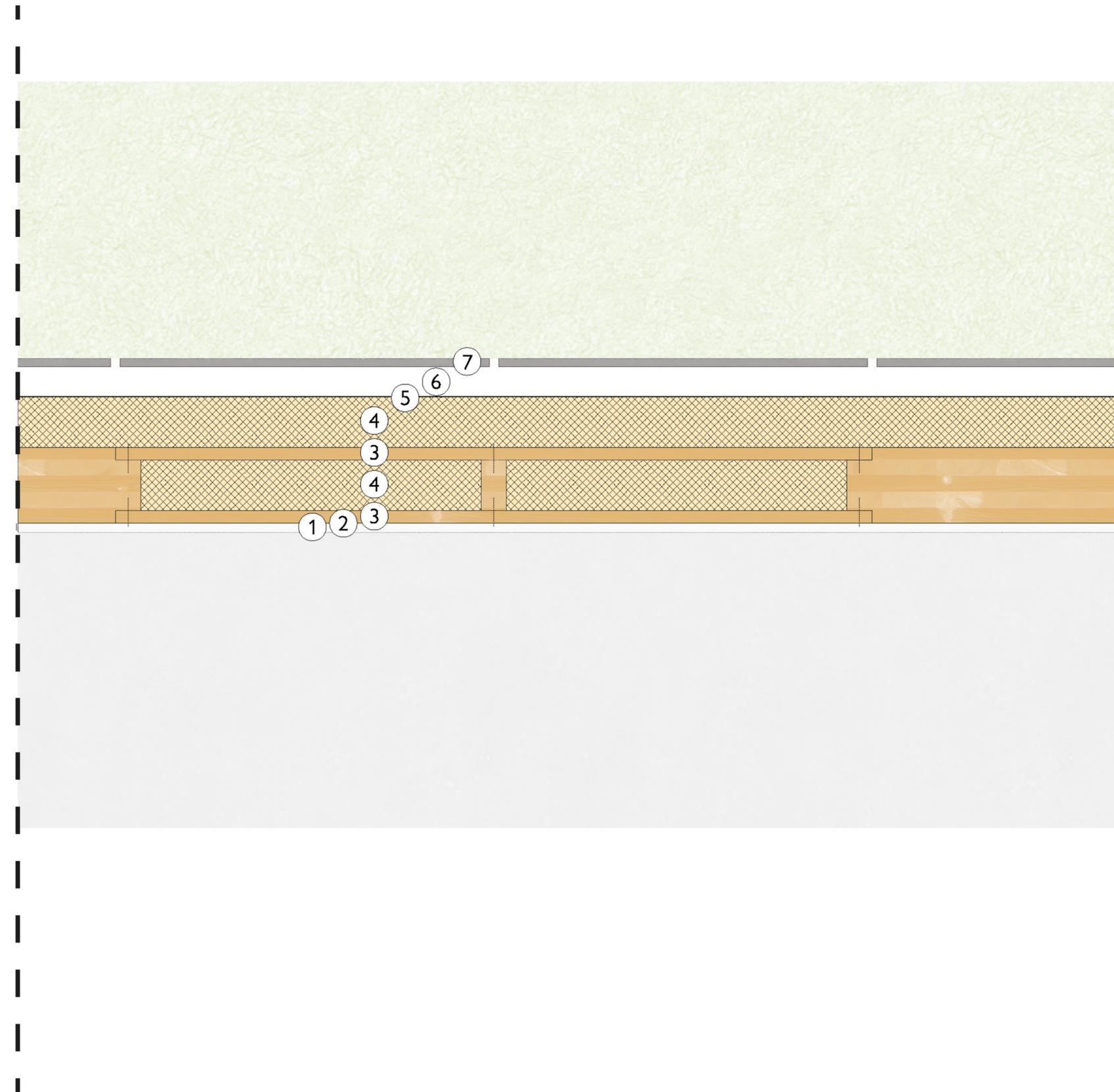
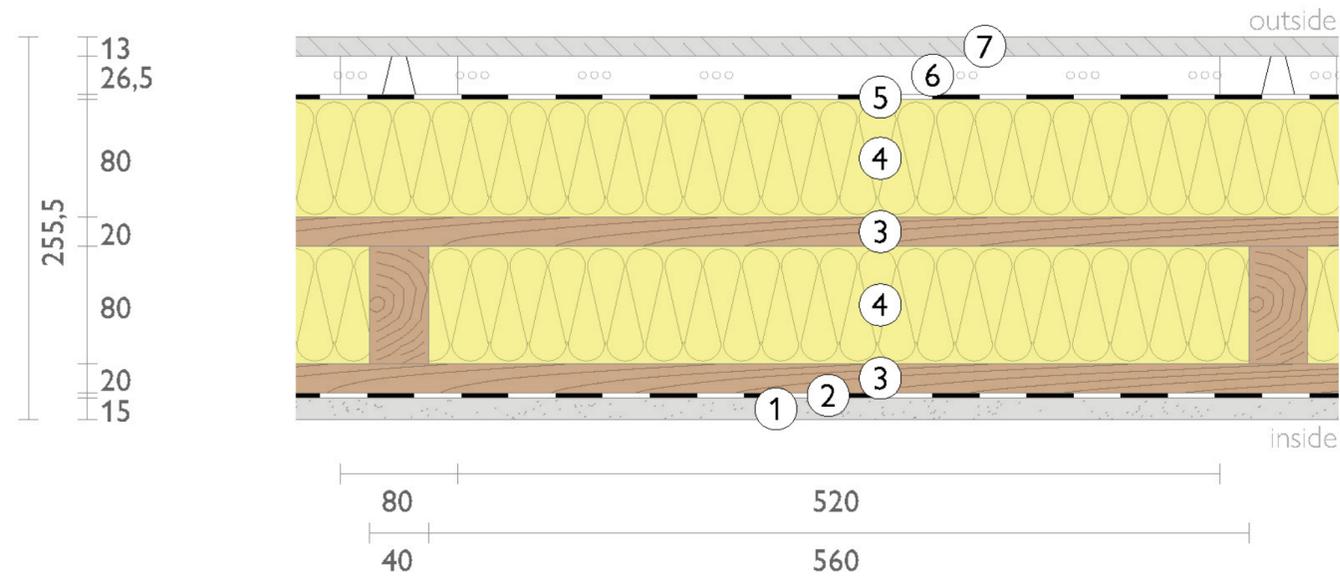
embodying the findings



- ① Interior surface finish (15 mm)
- ② Variable vapour barrier
- ③ CLT loadbearing panel (120 mm)
- ④ Woodfiber rigid insulation (80 mm)
- ⑤ Weather-resistive barrier
- ⑥ Cladding ventilated cavity (26,5 mm)
- ⑦ GRC cladding molded panels (13 mm)



embodying the findings



- ① Interior surface finish (15 mm)
- ② Variable vapour barrier
- ③ Wooden surface panel (20 mm)
- ④ Woodfiber rigid insulation (80 mm)
- ⑤ Weather-resistive barrier
- ⑥ Cladding ventilated cavity (26,5 mm)
- ⑦ GRC cladding molded panels (13 mm)

a story in Imola

analysing the impasse

researching the breakthrough

a methodological blueprint

embodying the findings

another walk in the Osservanza



fig. 49: Entrance to the courtyard of pavilion 6 and 8 from the parking avenue

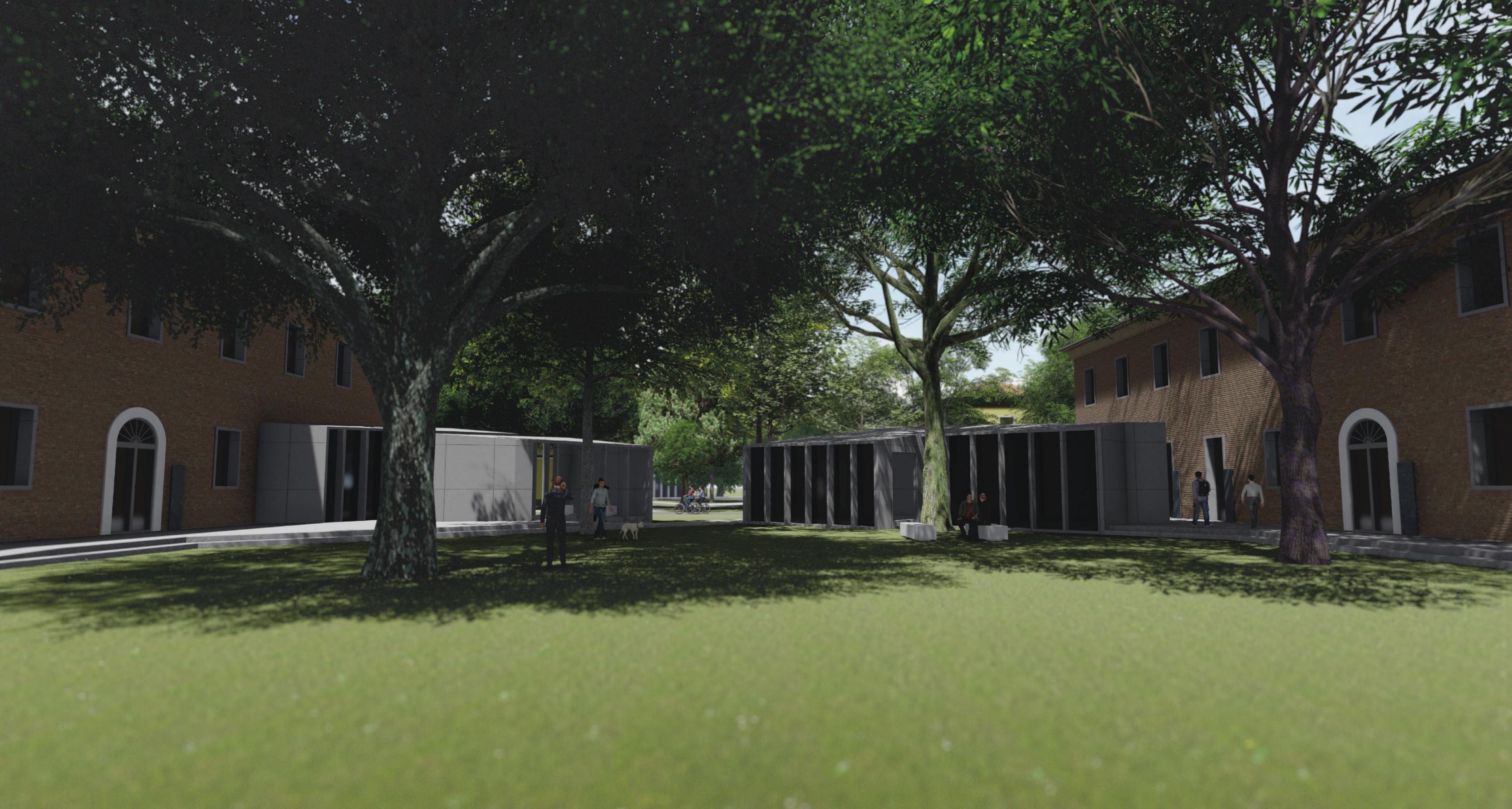


fig. 50: The courtyard between pavilions 5 and 7 as seen from the main avenue



fig. 51: The main avenue with the reception building and the courtyard between pavilions 5 and 7



fig. 52: The additions to pavilions 6 and 8 as seen from the main avenue



fig. 53: Pavilion 8 as visible from the entrance of pavilion 6

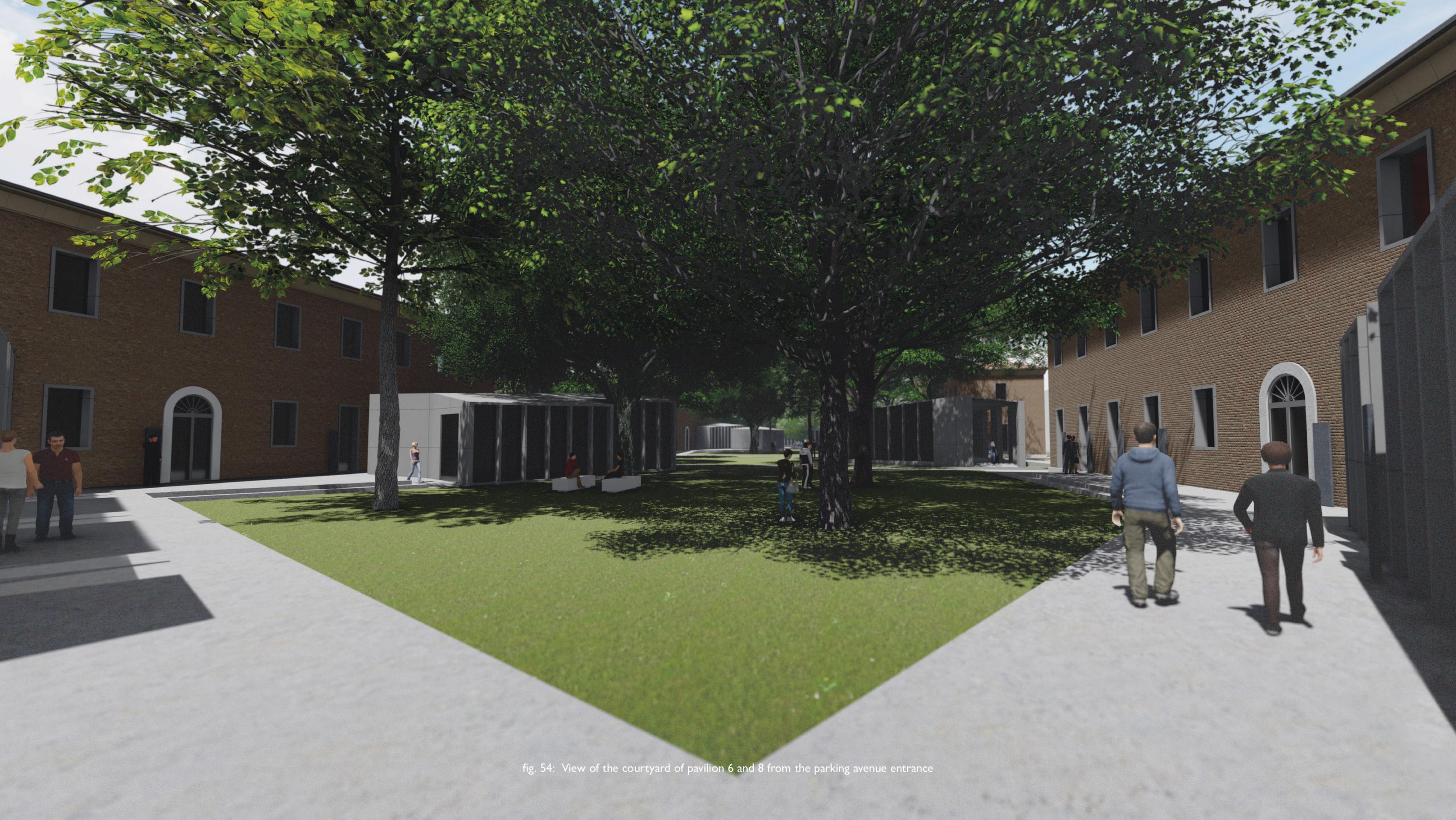


fig. 54: View of the courtyard of pavilion 6 and 8 from the parking avenue entrance

the Osservanza

the Osservanza

thank you

