2 / Re-Territorialization

Genealogies:

Form / Operation / shape

“The existence of which we are most assured and which we know best is unquestionably our own, for every other object we have notions which may be considered external and superficial, whereas, of ourselves, our perception is internal and profound.
What, then, do we find?.”
Henri Bergson, 1944

“It is in this productive and active sense that ecology and creativity speak not of fixed and rigid realities but of movement, passage, genesis, and autonomy, of *propulsive life unfolding in time*.”

James Corner, Ecology and Landscape as agents of creativity,
1996

“Evolved rather than designed - within the hypermodern event-space of complex, sensitive, dynamical indeterminacy and change.... The design principle display a very clear orientation toward evolutionary, time based processes, dynamic geometric structurations - not structures per se, but forms that follow and fill the wake of concrete yet unpredeterminable events...”

Sanford Kwinter on Rem Koolhaas, 2015

The sentences all comes from a colleciton of essays in the book:
Projective Ecologies, Chris Reed and Nina Marie Lister, 2015

Open endededness / indeterminacy

On the right a section of the "instruction guide" that represent the part of the work which explore indeterminacy and open ended spatial configurations as a way to increase the inbuilt programmatic flexibility in the process of nature reintroduction.
As the genealogies exercise takes into considerations the socio-economic, climatic contingencies set by the scenarios, the visualization on the right set them together as the core work in the objective of *designing with time*.

o·pen-end·ed
adj.
1. Not restrained by definite limits, restrictions, or structure.
2. Allowing for or adaptable to change.

in·de·ter·mi·nate
adj.
1.
a. Not precisely determined, determinable, or established: a person of indeterminate age.
b. Not precisely fixed, as to extent, size, nature, or number: an indeterminate number of plant species in the jungle.
c. Lacking clarity or precision, as in meaning; vague: an indeterminate turn of phrase.
d. Not fixed or known in advance: an indeterminate future.
e. Not leading up to a definite result or ending: an indeterminate campaign.
2. Botany Not terminating in a flower and continuing to grow at the apex: an indeterminate inflorescence.
3. Mathematics Having more than one variable and an infinite number of solutions, such as the equation 5x2 + 3y = 10.

4

5

Designing with time*: Exploring the open ended and indeterminate dimension of the project to add flexibility in coping with changing dynamics and the question of implementation.*

Scenario exercise:

Exploring Landscape infrastructure matrix adaptation through multiple configurations

STEAM scenario

- Plan (LIM Adaptation)
- General considerations
- Values
- Strategies

BUSY scenario

- Plan (LIM Adaptation)
- General considerations
- Values
- Strategies

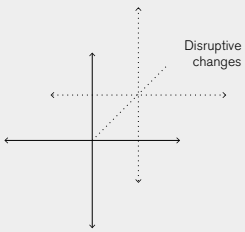
WARM scenario

- Plan (LIM Adaptation)
- General considerations
- Values
- Strategies

REST scenario

- Plan (LIM Adaptation)
- General considerations
- Values
- Strategies

DISRUPTION scenario



From Matrix to spatial operations.
A working method to programm urban fabric tranformations with g-b elements.

Form (spatial conditions) / operation (spatial operation) / shape (spatial adaptation)

Finding Form
Landscape infrastructure Matrix Pattern (similar spatia condition in the Urban fabric) to retrofitt

Projecting: Operation / shape
Operational gradients: Showing possibilities by different degrees of change: Addition and subtraction operations

Public areas

Ecological Corridors

Green

Linear intervention
Road, ***corridor***

linear+public space intervention
Road + green grey, ***Corridor / patches***

Linear intervention,
small Road, ***corridor***

Blue

Fluvial space, ***corridor***

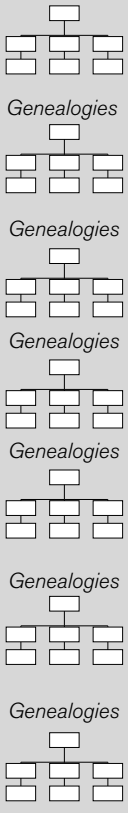
Open space, **patch**

Local green areas, **patch**

Semi - private, private

Private space intervention
Patch

Genealogies



Genealogies

From Meso to Nano scale.
The genealogies as a key component in the design process starts from the Meso scale by finding similar patterns of spatial conditions (Nano form), and then by appliyng a gradient of mutiple possible spatial operations. Thus it explores open ended and indetemrinate dimensions of transformations in time.
It makes visible, projects, anticipates in a flexible manner, the re-programming of nature in corrodors and patches according to various contingencies.

Genealogies

Similar to taxonomies, genealogy is an exercise dealing with classification, a design process with the aim to explore intederminacy and open endeddness in complex socio-ecological systems through multiple spatial transformations.

Indeed it deals and cope with the temporal dimension.
It wants to design and explore time.

Multiple Spatial operations ;

Flexible adaptation strategies for multiple futures.
Flexibility in governance (planning), i.e. implementation policies and flexibility in design (multiple options in time as plans and projects).

Genealogies becomes instrumental and operational in the manifestation of reterritorializaiton. Thus reintroducin nature, reactivating of ecosystem services.

How are the patterns defined:

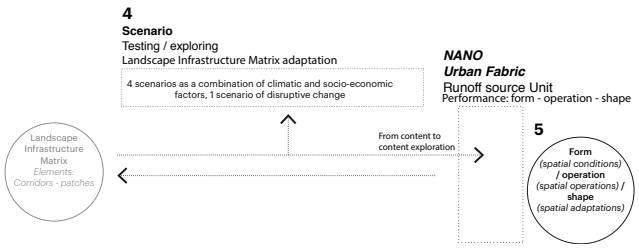
The patterns (gene) are definied Based on the Landscape Infrastructure Matrix corridors - patches spatial conditions, i.e. synthetising parameters related to dimensioning, alignments and importance (Matrix structural elements and hierarchy)
Once patterns have been defined (genes), the exercise projects multiple options of spatial transformations according to degree of alteration and specific contingencies

Genealogies Projection declinations :

Corridors; Linear (Conduit), matrix (Filter), patch (Source)
Patches; regional, local
Built up; GSI of different urban typologies

Eventually, genealogies are also the step in which the ideas and concept brought forward so far, i.e. re-territorialization and multiple synergistic infrastructures, starts to assume and take a spatial dimension.
As previously explained this has been done trough a design process / immagination of “multiple landscape in transformation” which will ideally attune and adapt to the multiple configurations (contingencies/scenarios) that the future might hold and present.

Relation between genealogies and the broader process of the methodology



Re-introduction of nature in urban mega region, theorethical and spatial implications:

The Genealogies project is most of all a strategic and flexible modus of reprogramming and reintroducing nature in critical / heterogenous and complex territories.
The theorethical and spatial implication of such project (Nature reintroduction) are further visualized and disclosed in the next two pages.

How to read it :

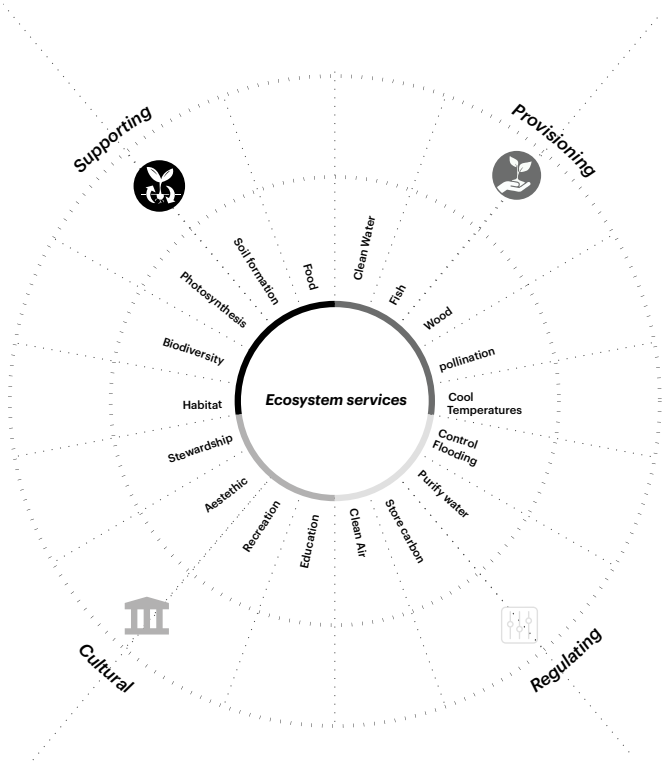
Two main operative actions are visualized throughout the genealogies (Next pages):

Addition (in red) and Subtraction (In violet).
These operations are fuly described (written) in the separate booklet of the genealogies.

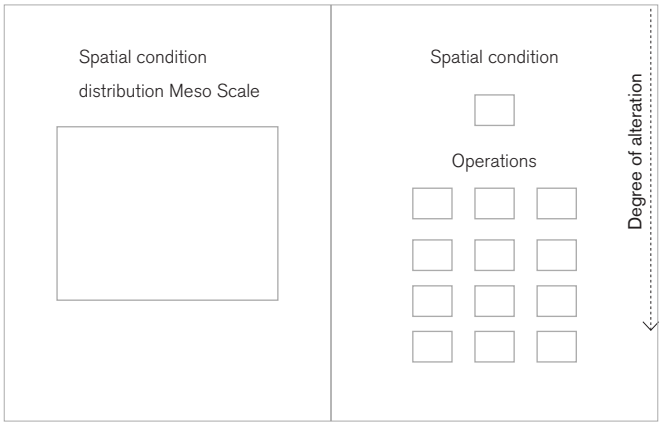
Operations

- Addition
- Subtraction

Ecosystem services diagramm

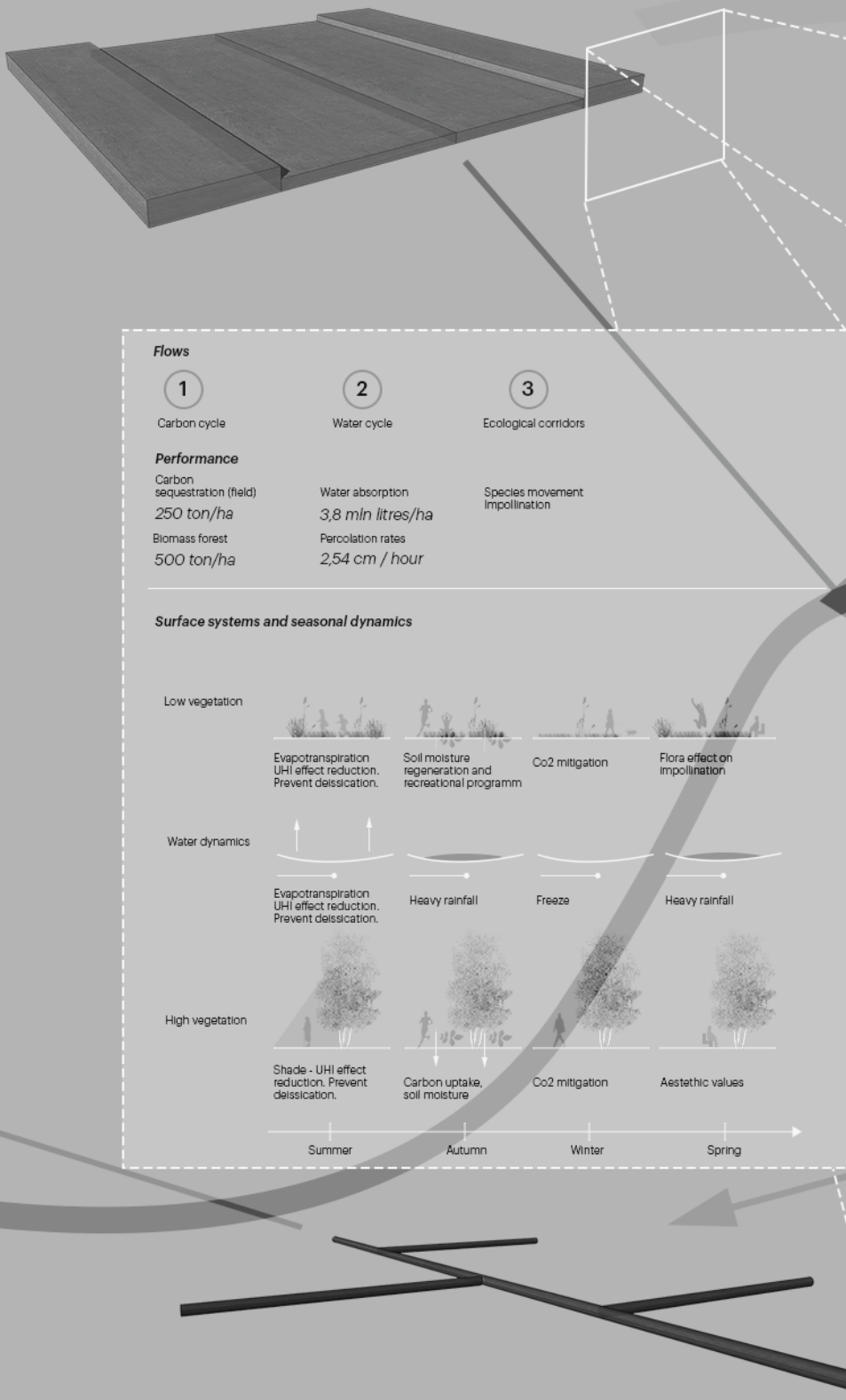


The Degree of alteration it's shown incrementally from top to bottom.



Urban Landscape Infrastructure: A theorethical drawing
operations - processes - dynamics

The drawing shows the hybridization between biophysical system and the mainstream current elements of water management.



A new software / operational system fot urban water management.

Re-activating Biophysical functions.

Reintroduction of landscape as a process of exploring potential spatial - temporal dynamics.

"Landscape becomes the operative platform of human existence; where landscape exists, so does infrastructure. Landscape is the medium through which culture, society, and the individual interact with biophysical, meteorological, and geological fluctuation or stasis. Landscape is a conduit, an exaggerator, a proliferator, an inhibitor, an enabler; herein lies its timeless operative capacity".

From Dan Carlson in Scenario Journal: The humanity of infrastructure: landscape as operative ground, September 2013

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1

3

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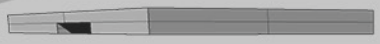
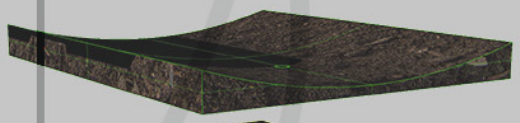
Urban Landscape Infrastructure

Vegetative layer



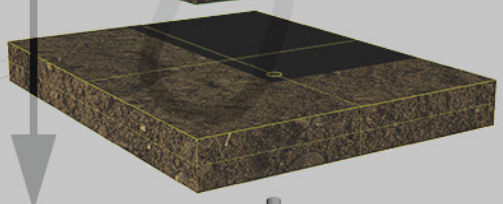
Curb cut:
Subtraction
Gravity

2

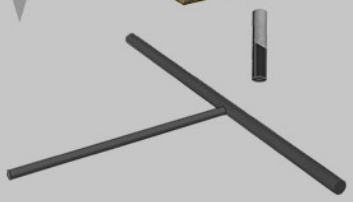


Topsoil:
Addition
Mulch soil layer

4:1

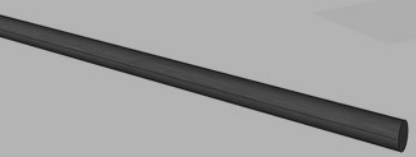


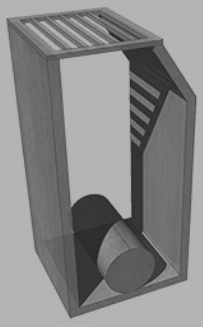
Biongineered soil



Vertical drain

Perforated subsurface drainage





Analysis of similar spatial condition in the local and regional corridors in the landscape infrastructure matrix

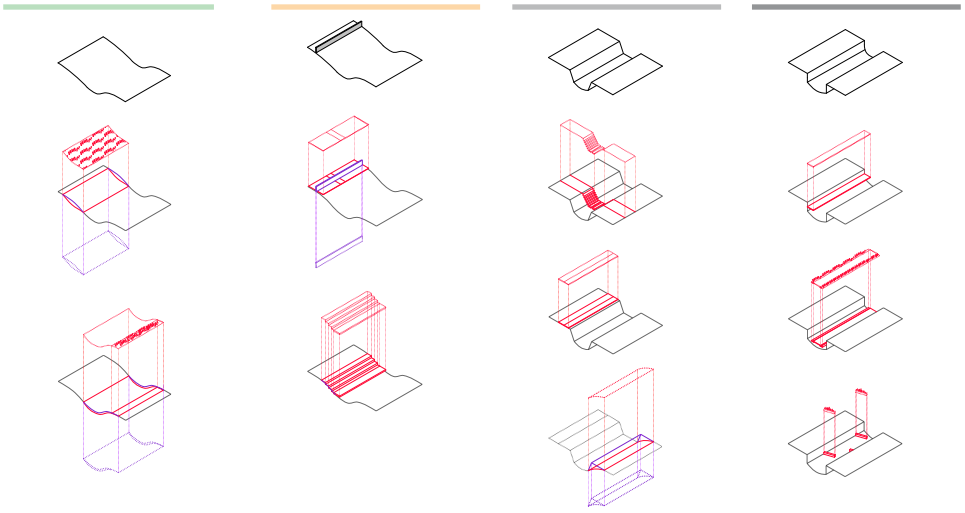
Legend

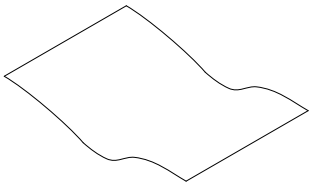
- linear+public space intervention road + green grey, **Corridor** and **Patches**
- Linear intervention, road, **Corridor**
- Linear intervention,small road, **Corridor**
- Fluvial space, **Corridor**: Hard edge
- Fluvial space, **Corridor**: Soft edge
- Fluvial space, **Corridor**: Urbanized edge
- Fluvial space, **Corridor**: Fenced
- Open space, **Patch**
- Local green areas, **Patch**: Sports field
- Local green areas, **Patch**: Public areas
- Private space intervention, **Patch**: Continuous urban fabric
- Private space intervention, **Patch**: Industries
- Private space intervention, **Patch**: Discontinuous urban fabric
- Private space intervention, **Patch**: Diffuse urban fabric
- Private space intervention, **Patch**: Dispersed urban fabric
- Municipal Green areas influence

Fluvial space (corridor)

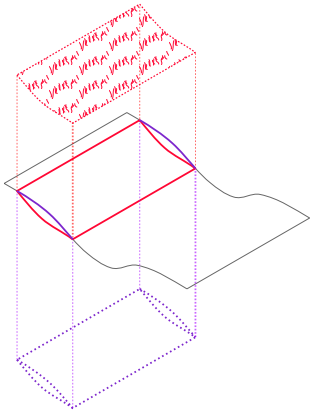
Soft edges
Fenced
Hard edge
Urbanized edge

Genealogies

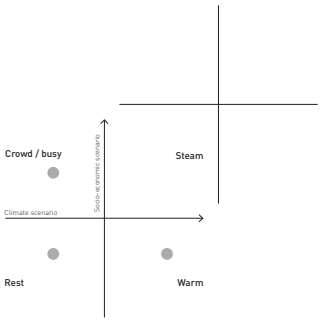




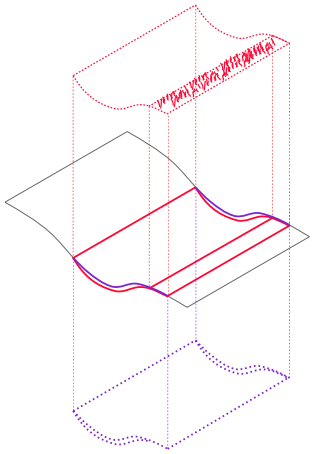
Soft edge



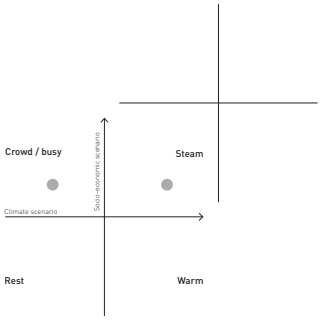
Re-vegetation strategy



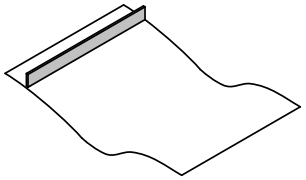
landworks



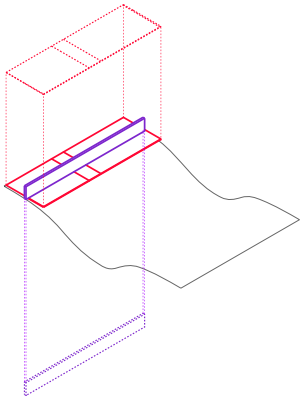
Landscape restoration and
re-vegetation strategy



Water bed cleaning

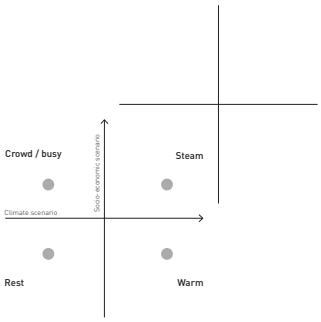


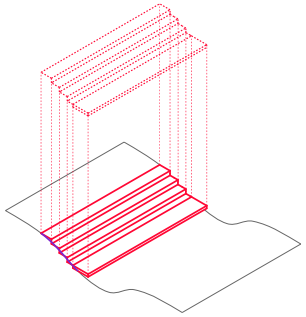
Fenced



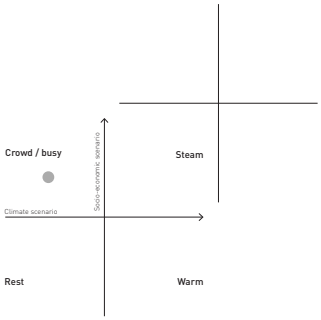
trail and permeability

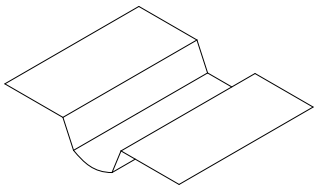
Fence Subtraction



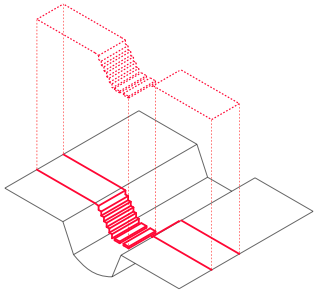


Public space

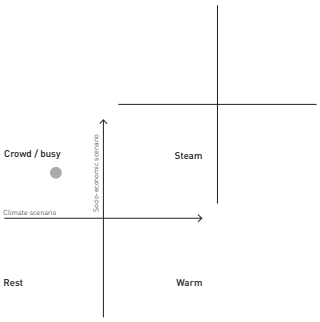


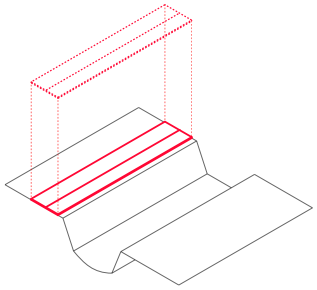


Hard edge

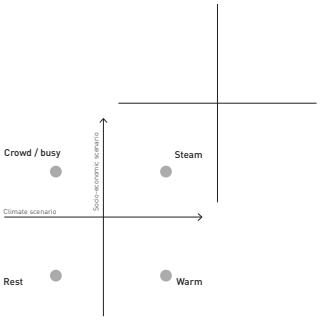


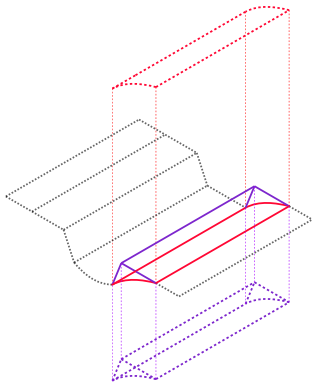
Physyical accessibility
permeability



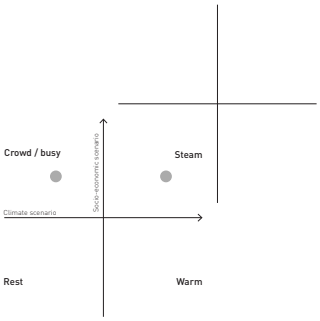


Trail based mobility

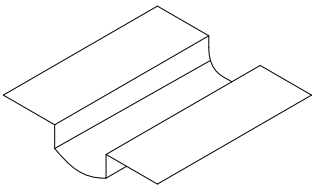




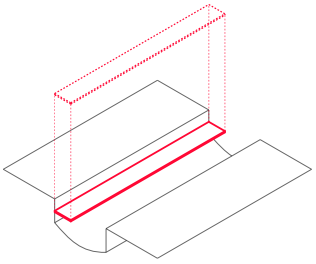
Landscape design



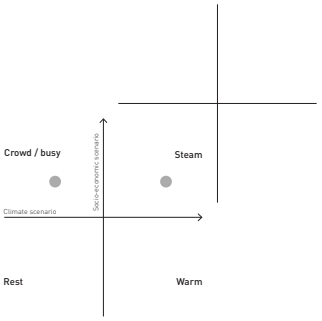
Lower Enbankment

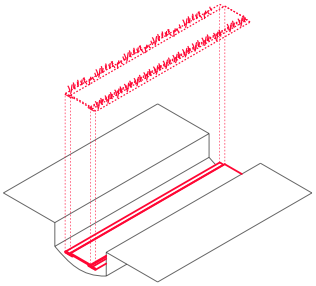


Hard vertical edge

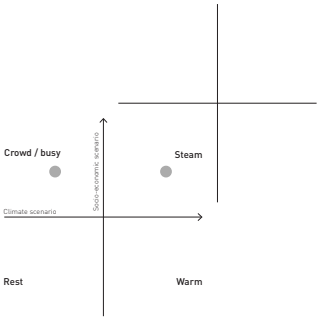


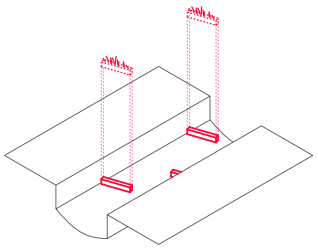
Physical (linear) connectivity



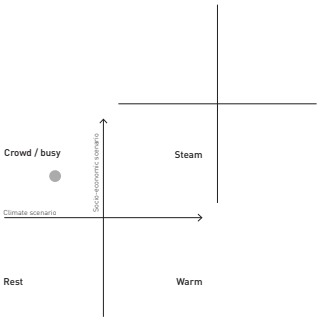


linear infrastructure + water cleaning vegetation



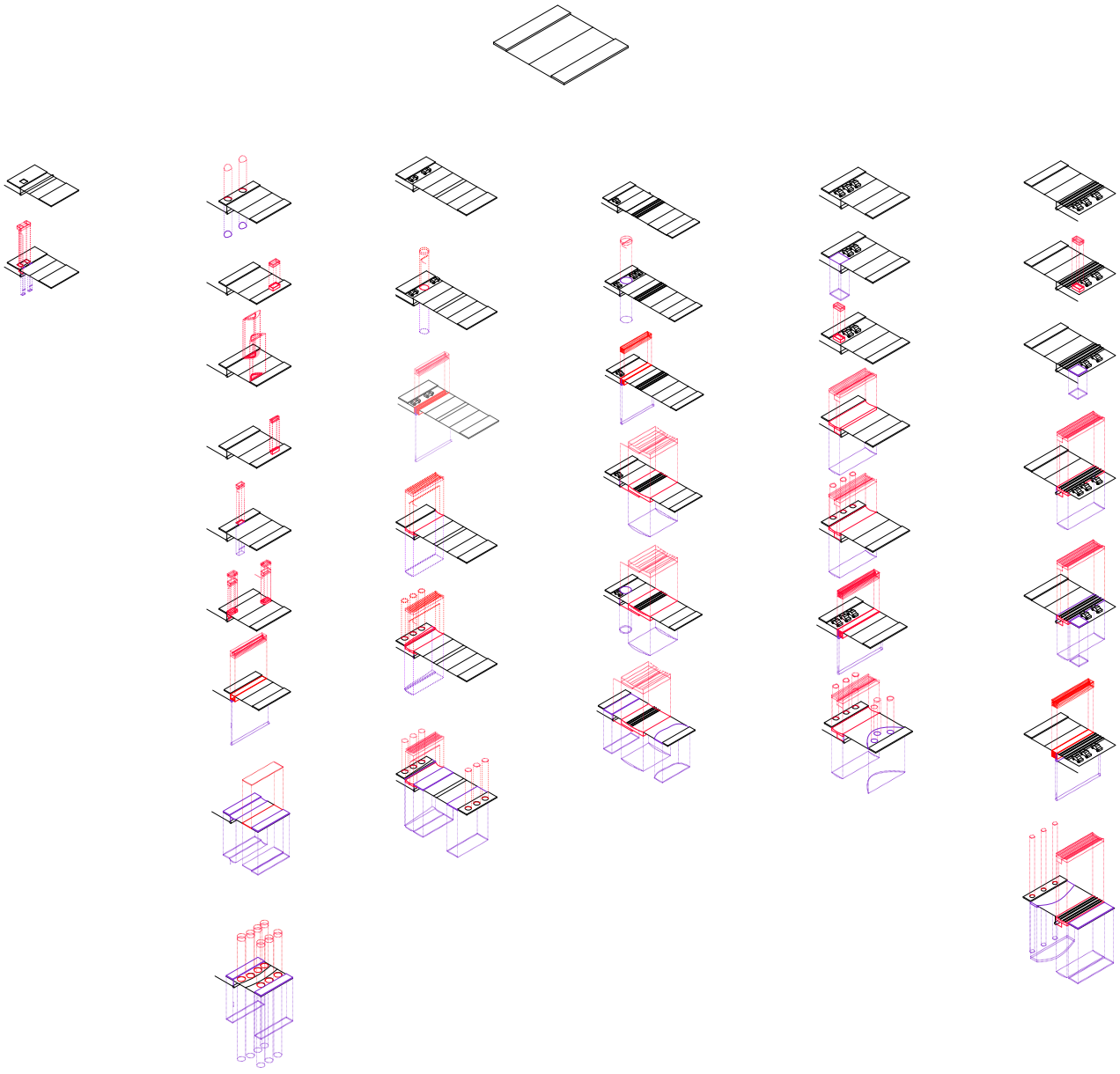


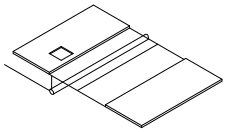
Water cleaning vegetation

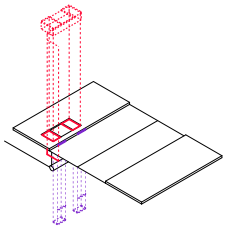


Linear intervention, road (corridor)

Genealogies corridor 1

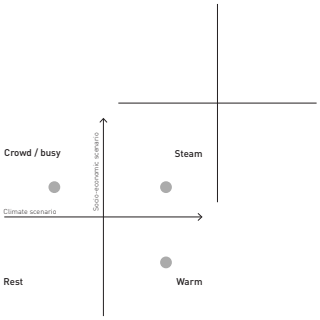


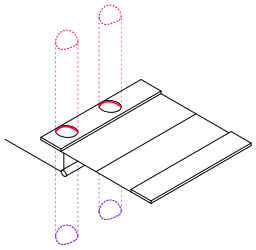




Soil layers
subsurface drainage

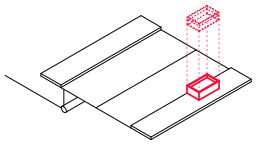
Concrete subtraction
curbcut



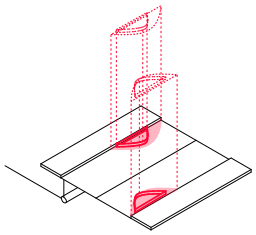


Soil Addition

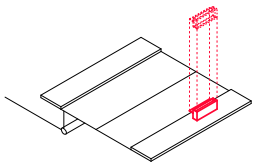
Concrete subtraction



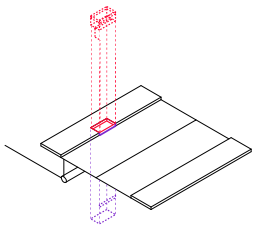
pot
soil addition



Traffic slower
soil addition

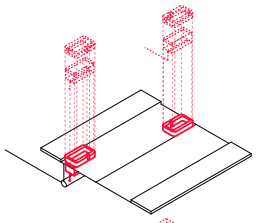


Bench

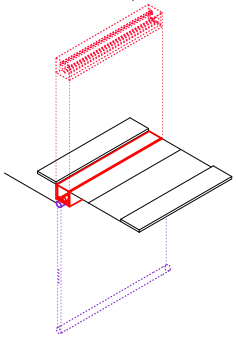


Soil layers
subsurface drainage

Concrete subtraction

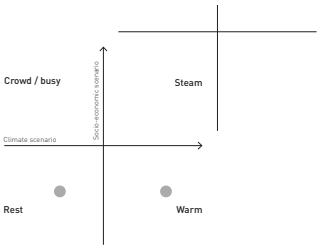


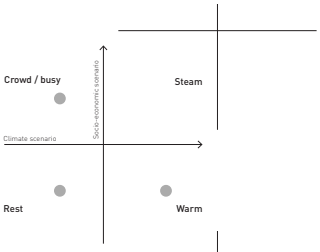
traffic slower
Soil layers
subsurface drainage

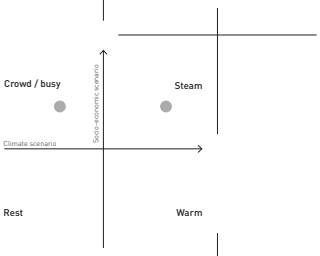


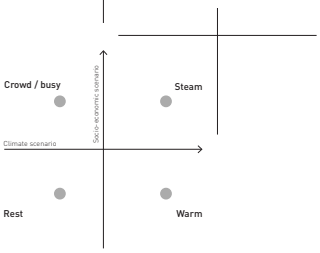
Multi Utility Tunnel

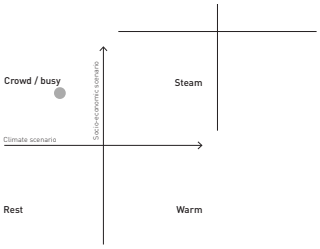
De-paving Curbcut

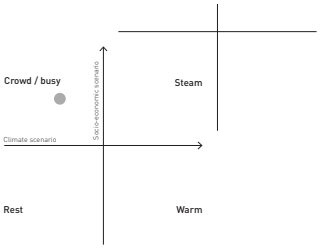


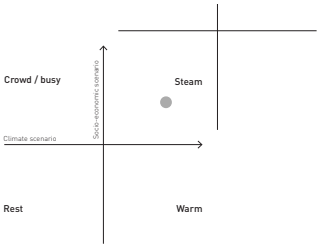


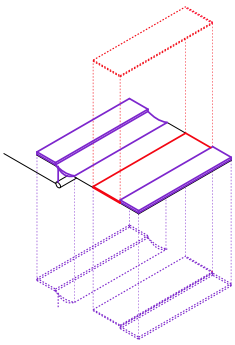






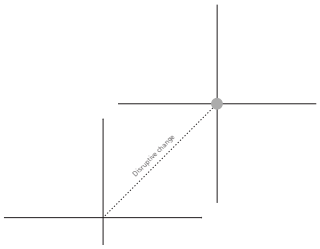


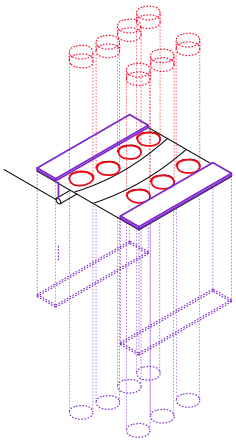




Soil layers
subsurface drainage

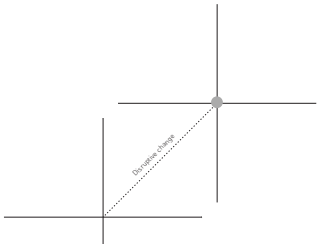
Subtraction of concrete

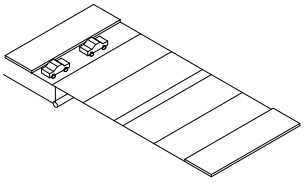


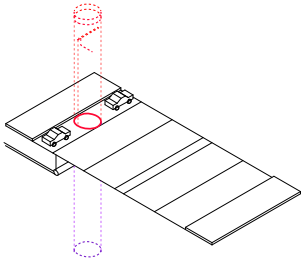


Soil layers
subsurface drainage

Subtraction of concrete

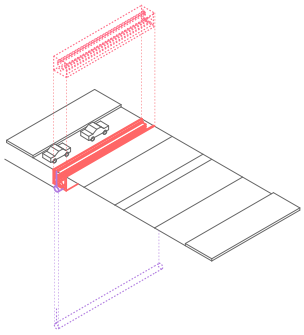




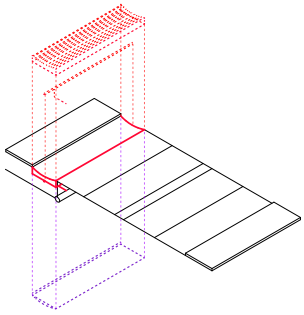


Soil layers
subsurface drainage

Subtraction of concrete

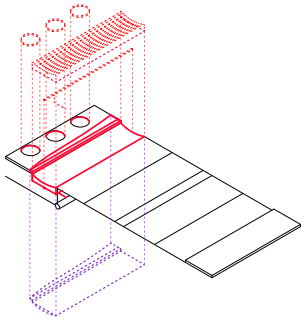


Multi Utility Tunnel



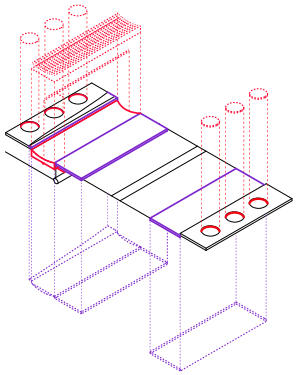
Soil layers
subsurface drainage

Subtraction of concrete



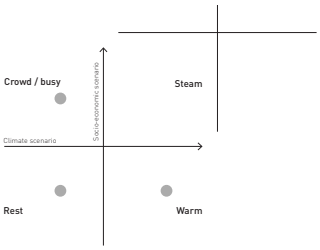
Soil layers
subsurface drainage
Re-vegetation

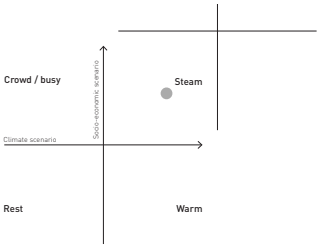
Subtraction of concrete

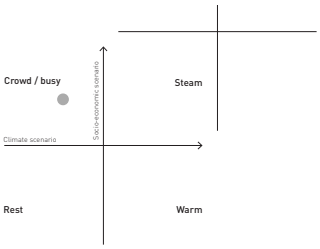


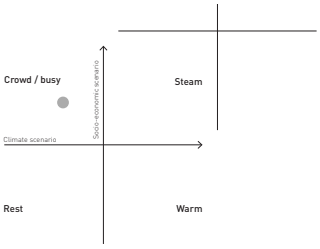
Soil layers
subsurface drainage
Re-vegetation

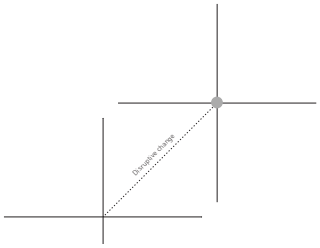
Subtraction of concrete

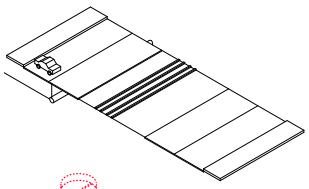


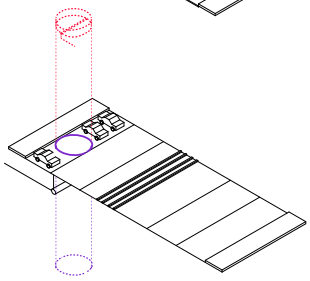






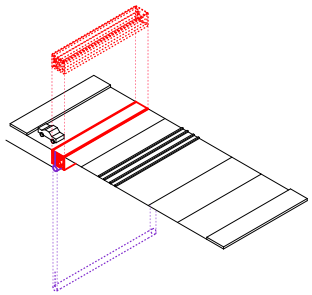






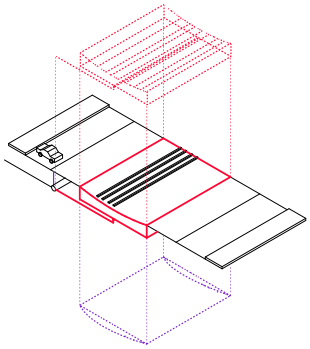
Soil Addition

Concrete subtraction



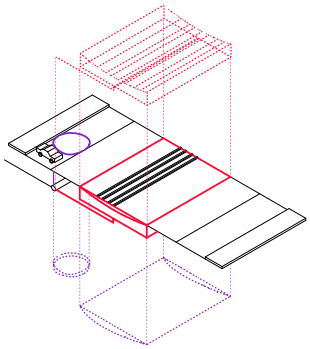
Multi Utility Tunnel

Old pipe



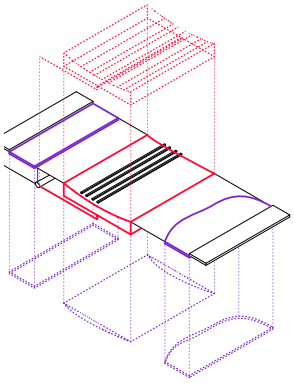
soil layers
subsurface drainage

curbcut
concrete subtraction



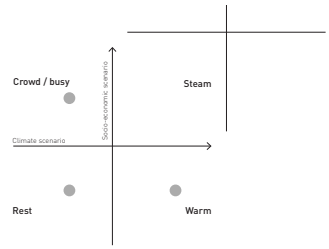
Soil layers
subsurface drainage

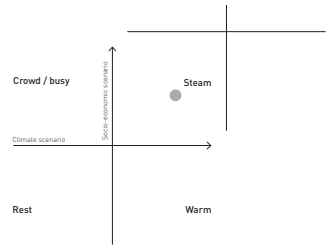
curbut
Concrete subtraction

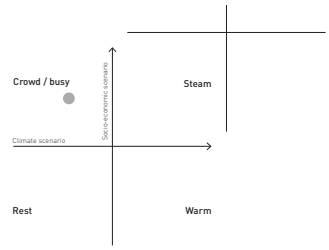


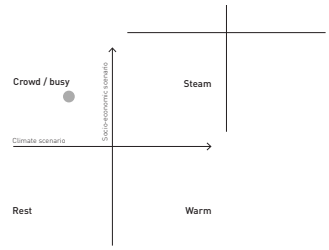
Soil layers
subsurface drainage

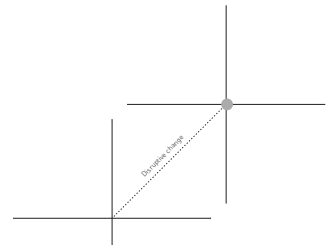
Curbcut
concrete subtraction

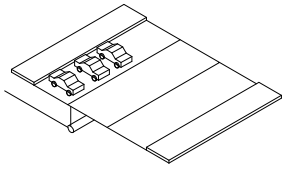


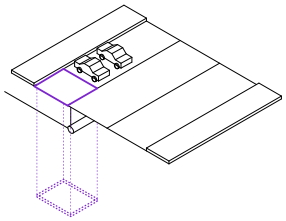




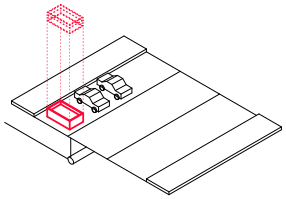




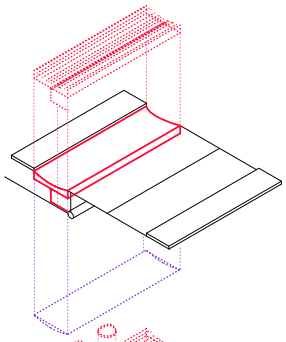




concrete subtraction

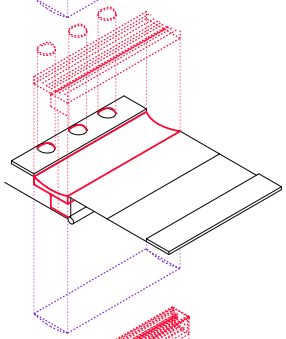


soil layer
equipment



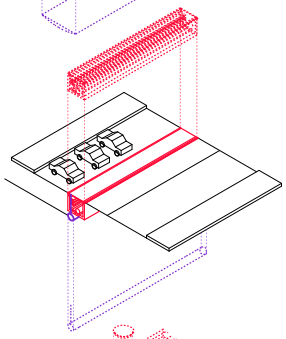
soil layers
subsurface drainage

concrete subtraction

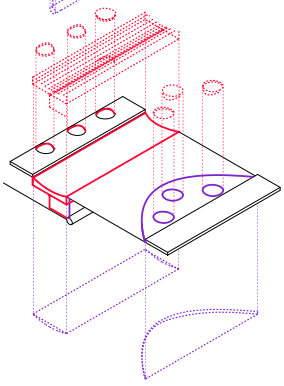


soil layers
subsurface drainage

concrete subtraction

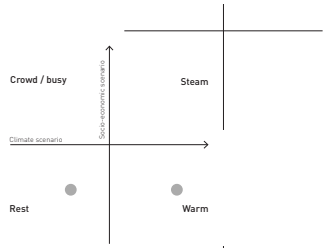


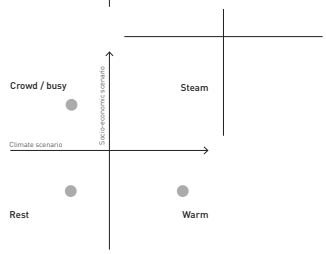
Multi Utility Tunnel

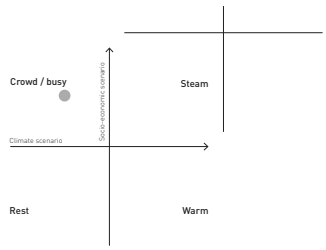


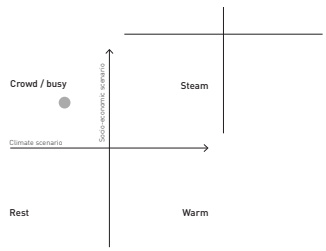
traffic claming
Soil layers
subsurface drainage

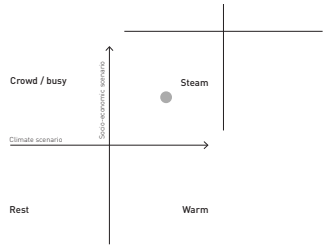
concrete subtraction

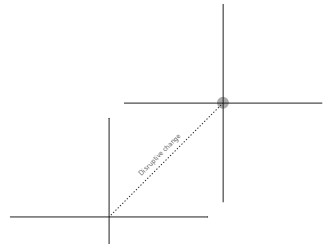


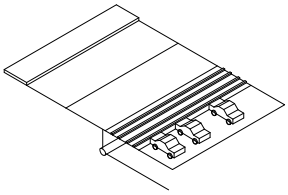


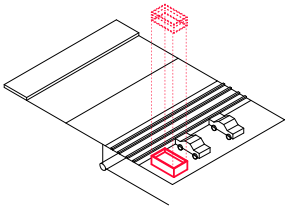




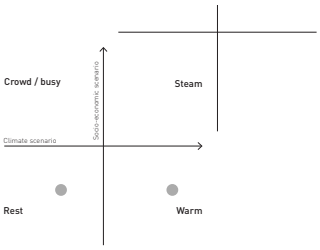


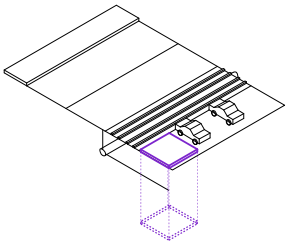




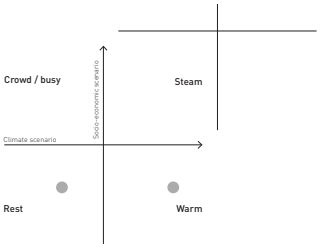


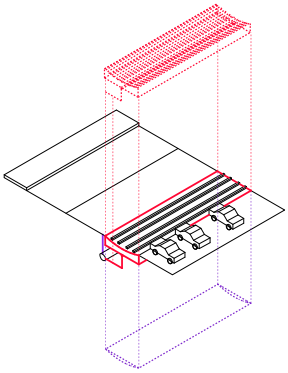
Soil layer
equipment





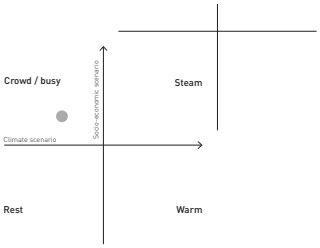
Concrete subtraction

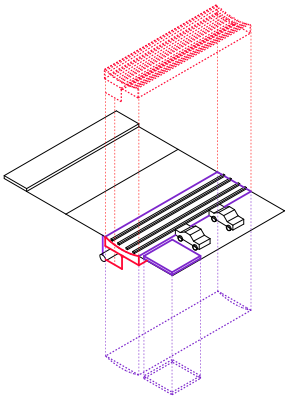




Soil layers
subsurface drainage

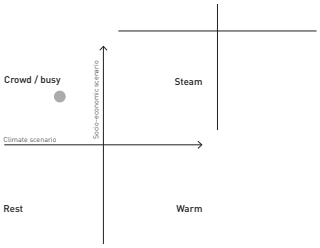
concrete subtraction

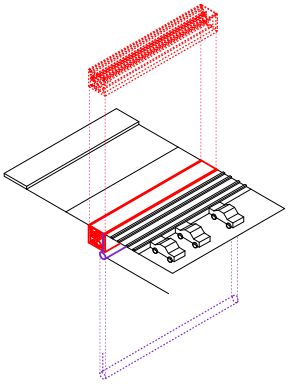




Soil layers
subsurface drainage

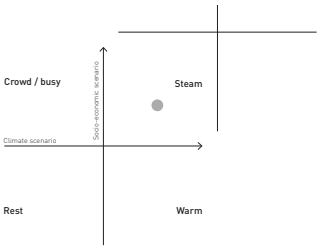
Concrete subtraction

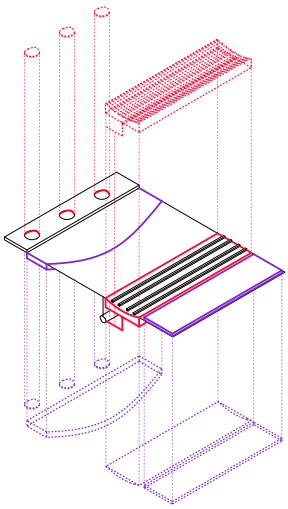




Multi Utility Tunnel

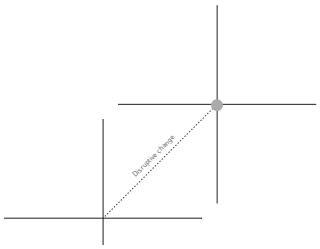
old pipe





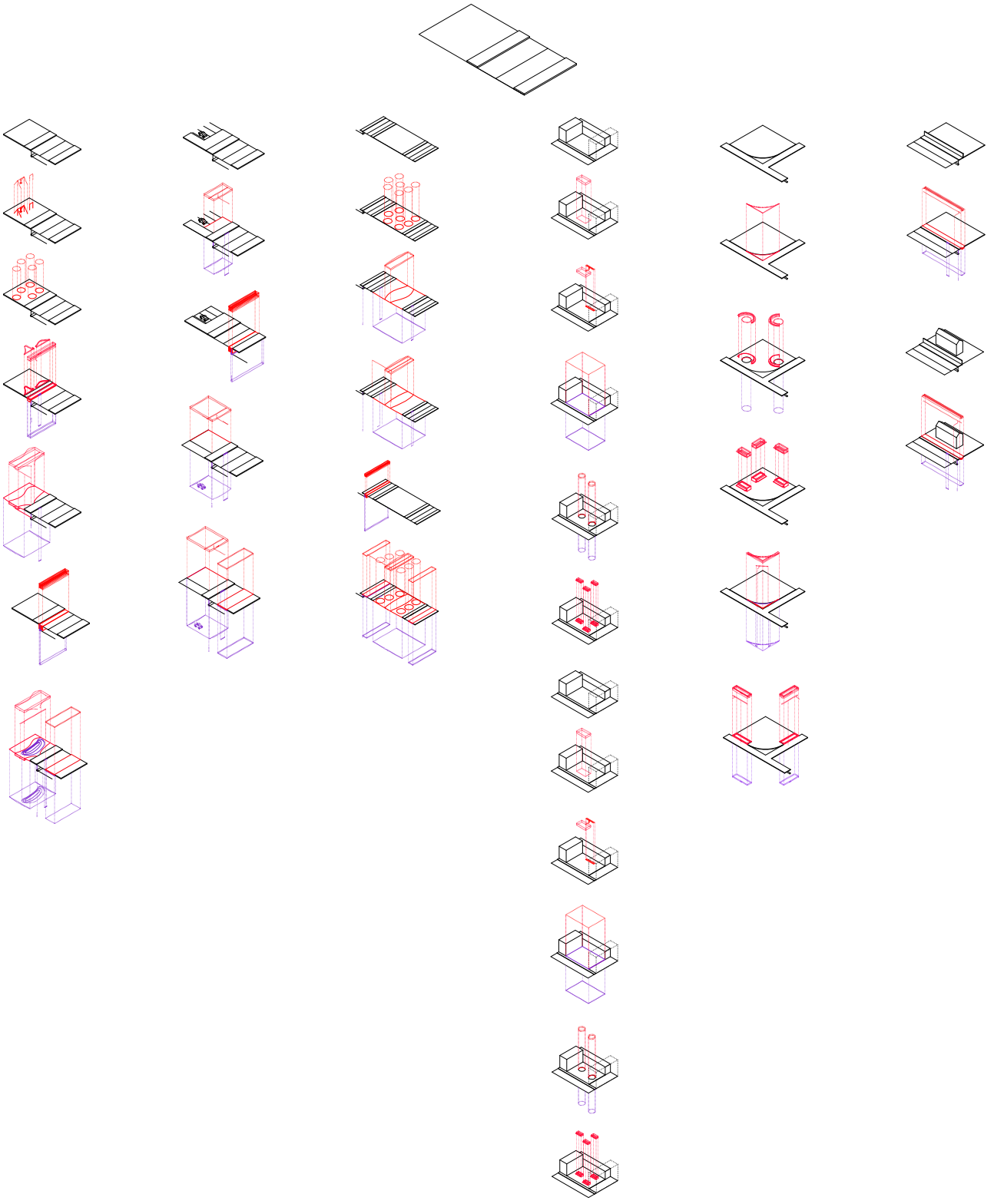
traffic slower
Soil layers
subsurface drainage

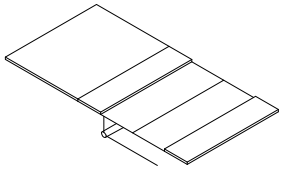
curbcut
concrete subtraction

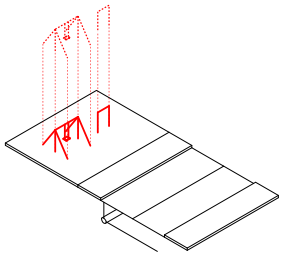


Linear + public space intervention, road (corridor + patches)

Genealogies corridor 2

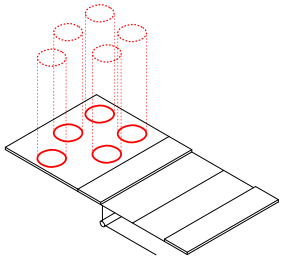




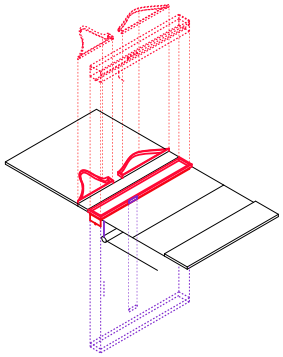


Soil Addition

Concrete subtraction

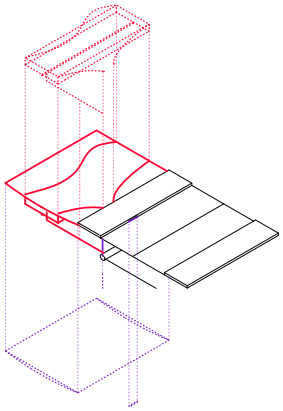


Re-vegetation



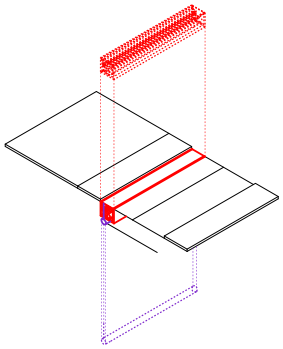
soil layers
subsurface drainage
re-vegetation

curbcut
Concrete subtraction



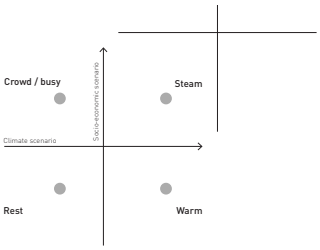
soil layers
subsurface drainage

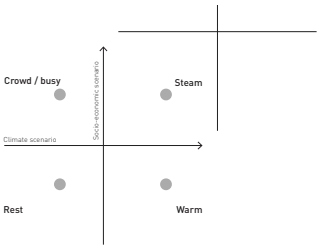
curbcut
Concrete subtraction

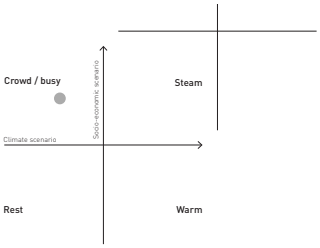


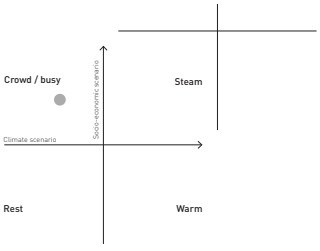
Multi Utility Tunnel

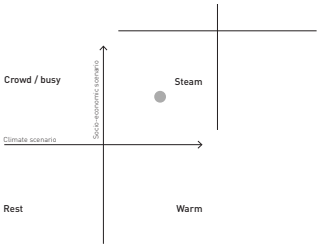
old pipe

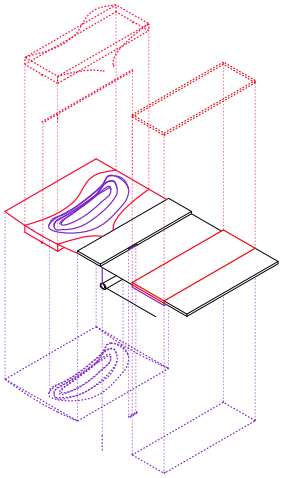






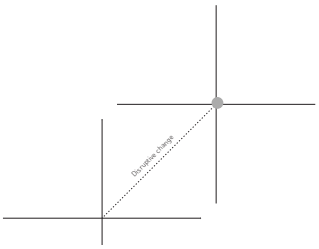


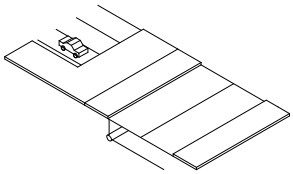


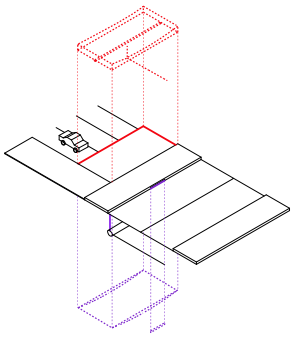


Soil layers
subsurface drainage

Curbcut
concrete subtraction

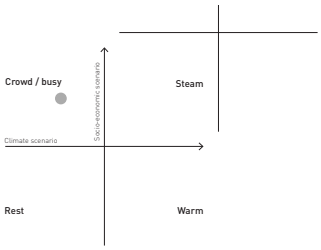


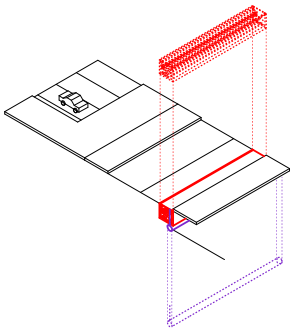




Soil layers
subsurface drainage

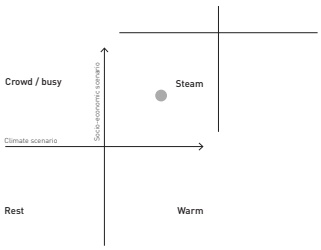
curbcut
Concrete subtraction

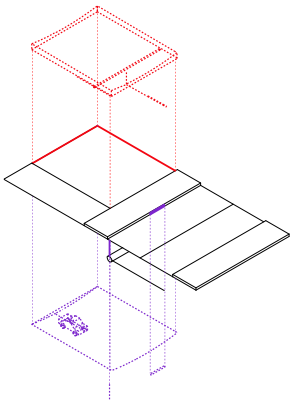




Multi Utility Tunnel

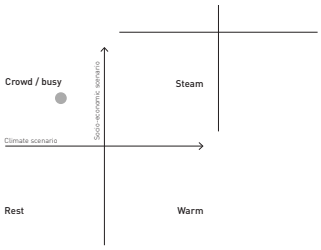
old pipe

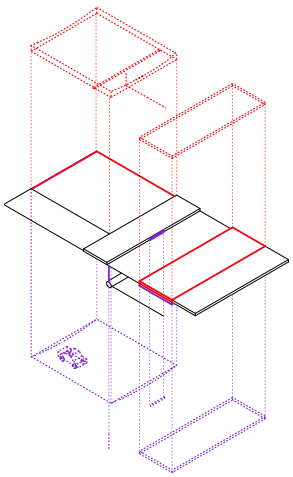




Soil layers
subsurface drainage

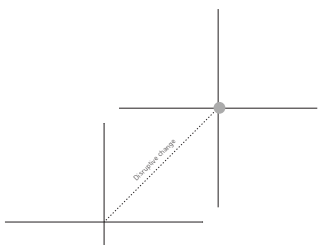
curbcut
Concrete subtraction

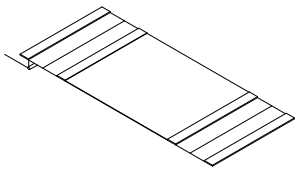


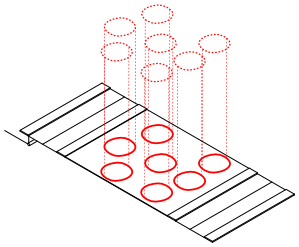


Soil layers
subsurface drainage

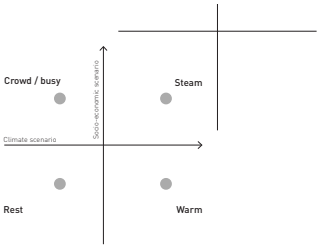
curbcut
Concrete subtraction

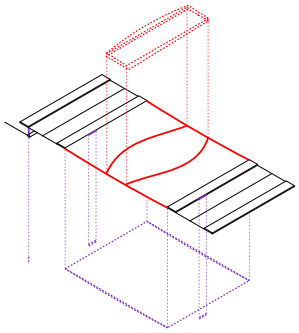






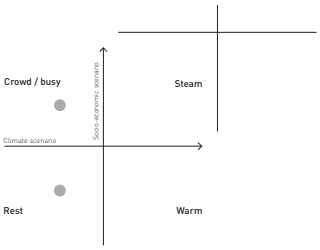
revegetation

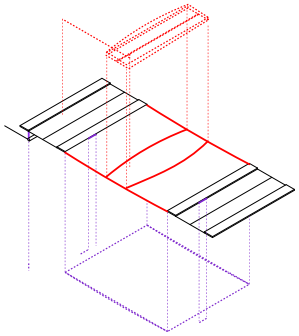




Soil layer

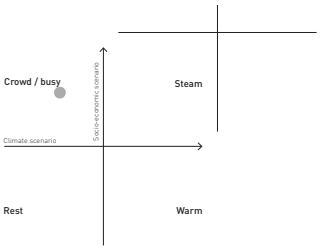
curbcut
Concrete subtraction

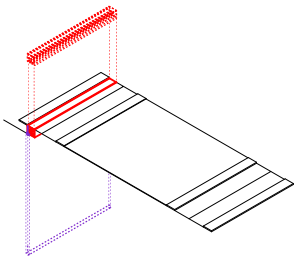




Soil layers
subsurface drainage

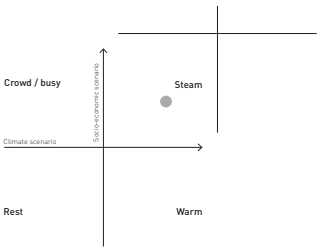
curbcut
Concrete subtraction

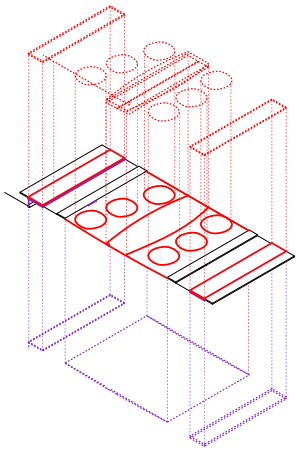




Multi Utility Tunnel

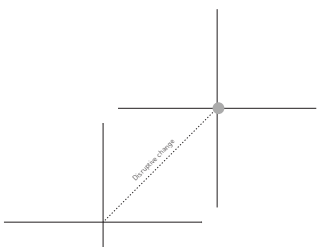
old pipe

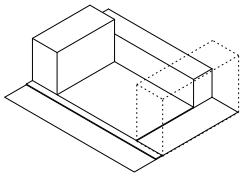


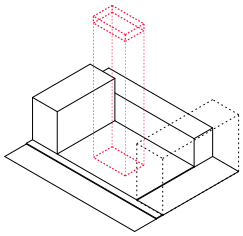


soil layers
subsurface drainage

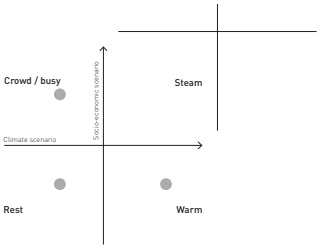
curbcut
concrete subtraction

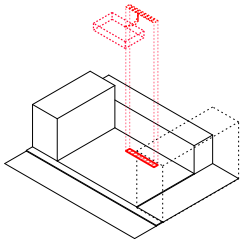






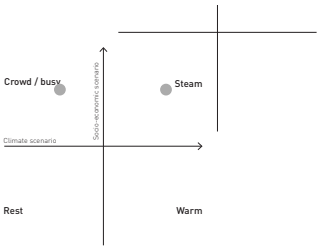
soil layer
equipment

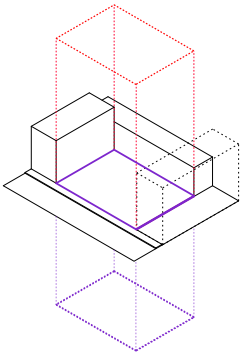




underground water tank
subsurface drainage

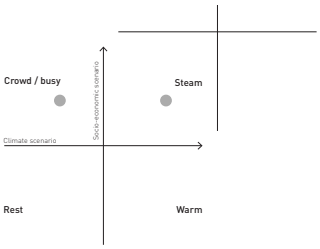
concrete subtraction

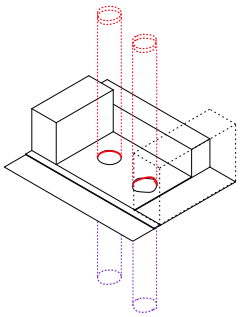




permeable pavement

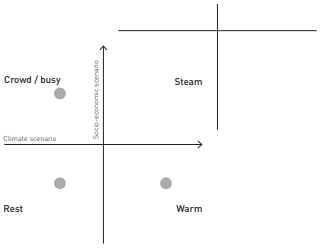
concrete subtraction

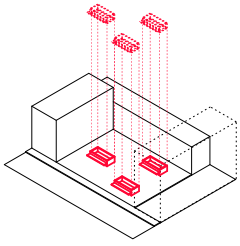




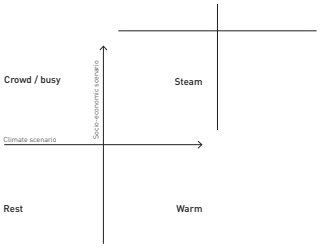
Soil layer
re-vegetation

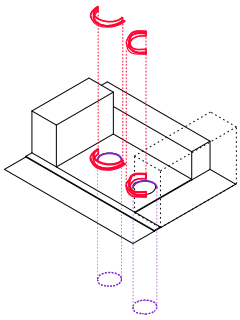
Concrete subtraction





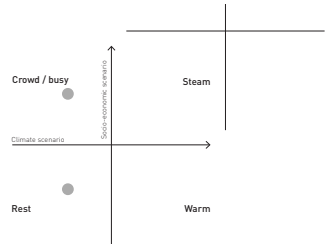
Soil layer
equipment

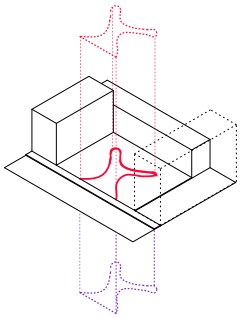




soil layer
equipment

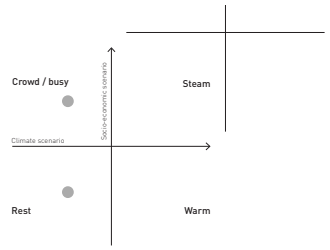
Concrete subtraction

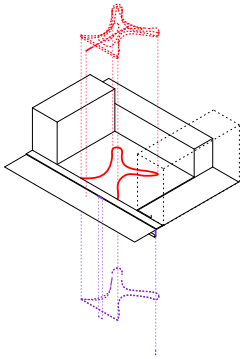




soil layer

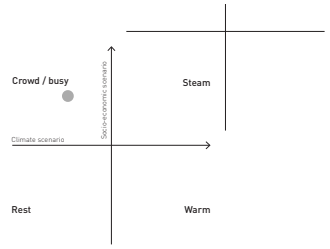
Concrete subtraction

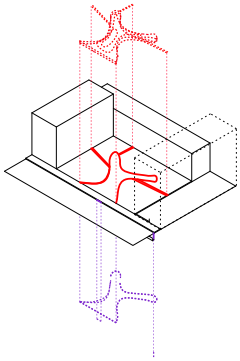




soil layers
subsurface drainage

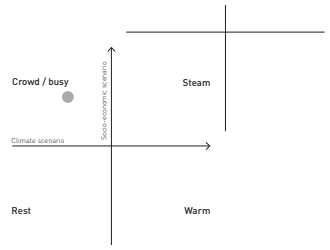
curbcut
Concrete subtraction

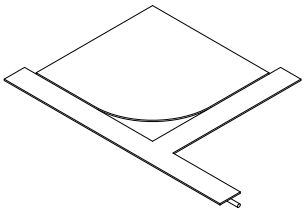


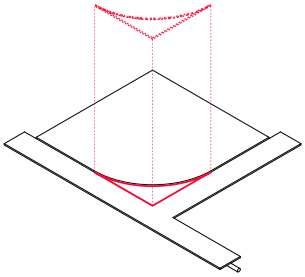


soil layers
subsurface drainage
surface drainage

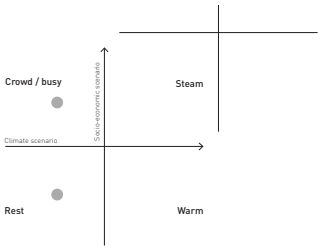
curbcut
Concrete subtraction

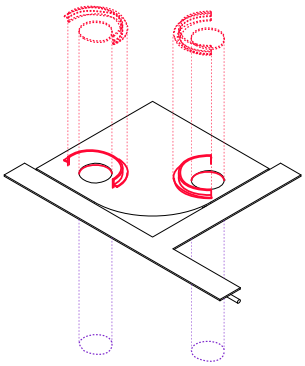




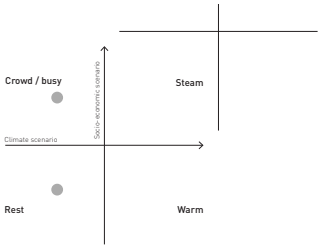


public space extension

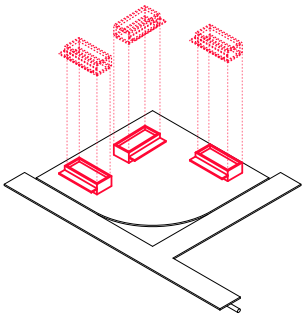




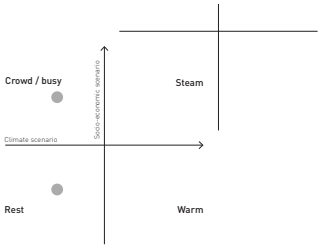
Soil layer
equipment

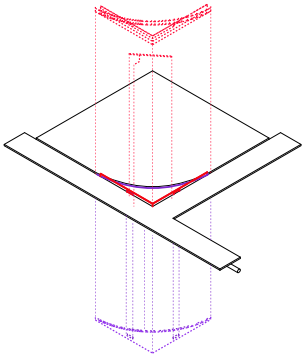


Concrete subtraction

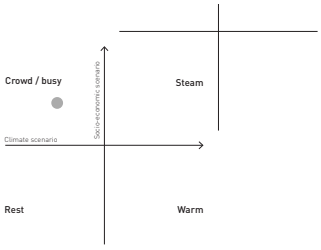


Soil layer
equipment

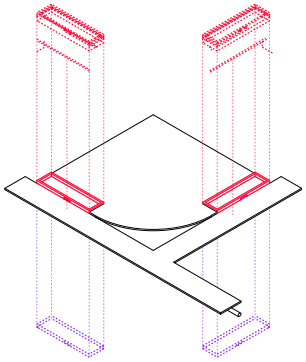




Soil layers
subsurface drainage

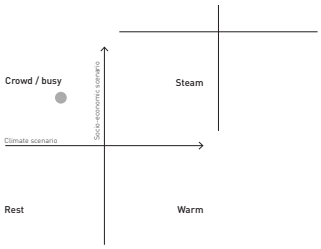


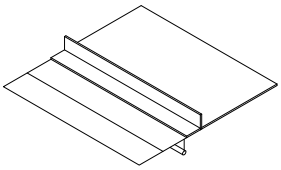
Concrete subtraction

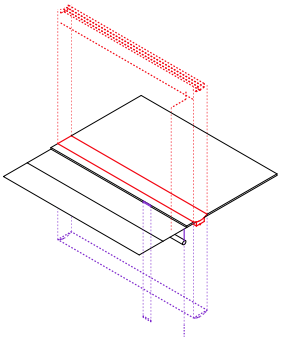


soil layers
subsurface drainage

Concrete subtraction

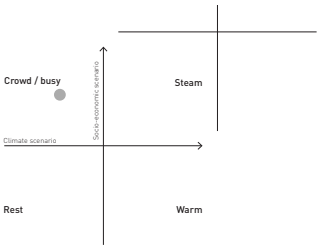


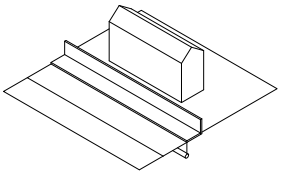


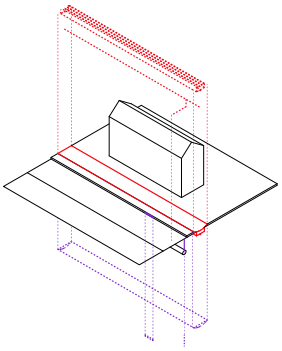


soil layers
subsurface drainage

de-fencing
curbcut
Concrete subtraction

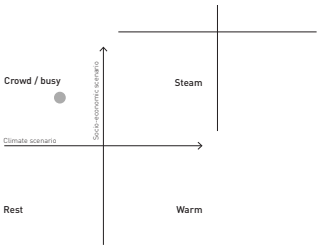






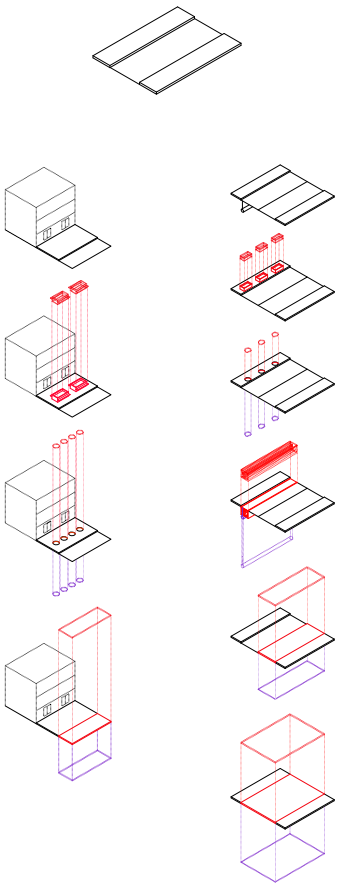
soil layers
subsurface drainage

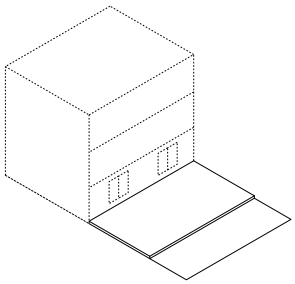
de-fencing
curbcut
Concrete subtraction

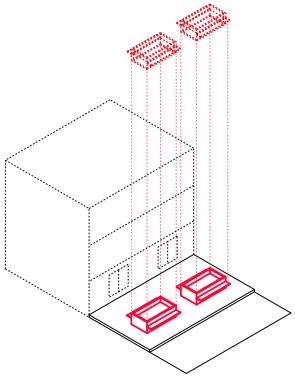


Linear intervention, small road (corridor)

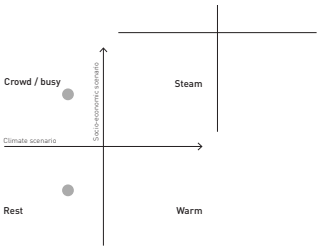
Genealogies corridors 3

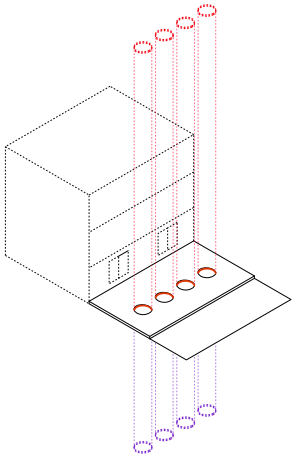






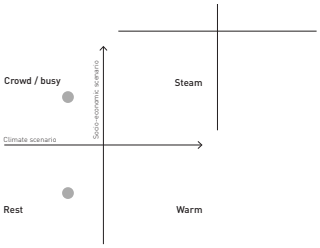
soil layer
equipment

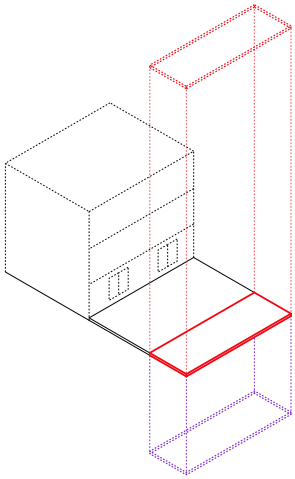




soil layer

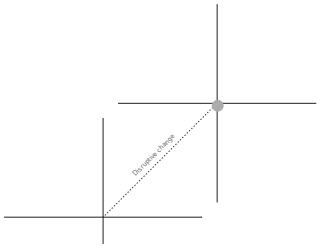
concrete subtraction

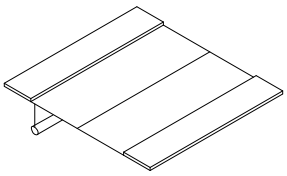


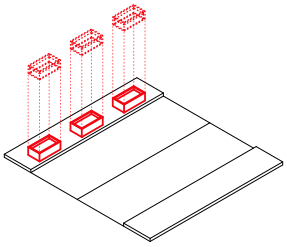


soil layer

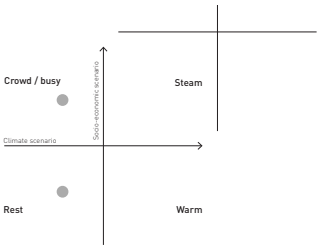
concrete subtraction

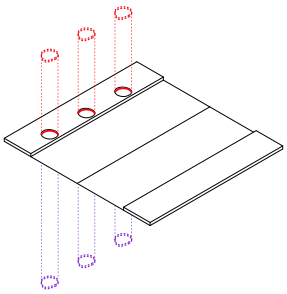






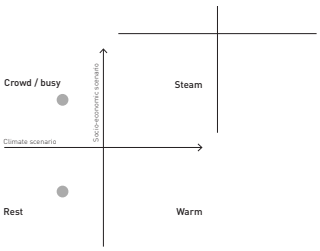
soil layer
equipment

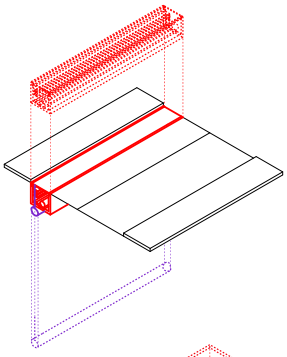




soil layer

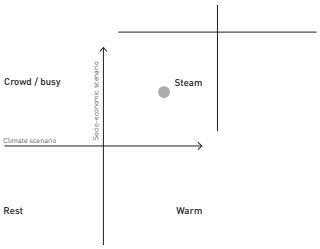
concrete subtraction

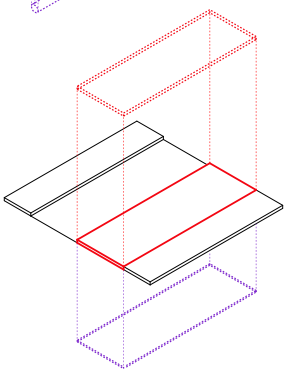




Multi Utility Tunnel

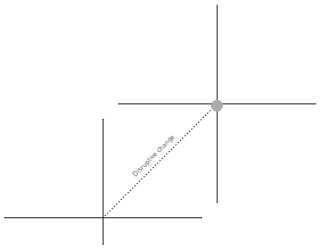
old pipe

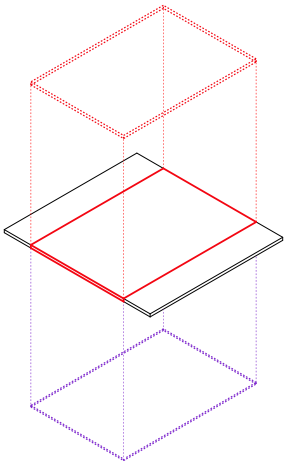




soil layer

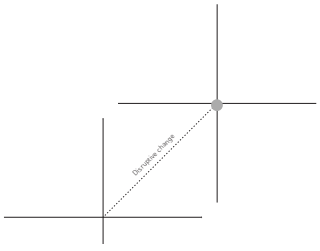
Concrete subtraction





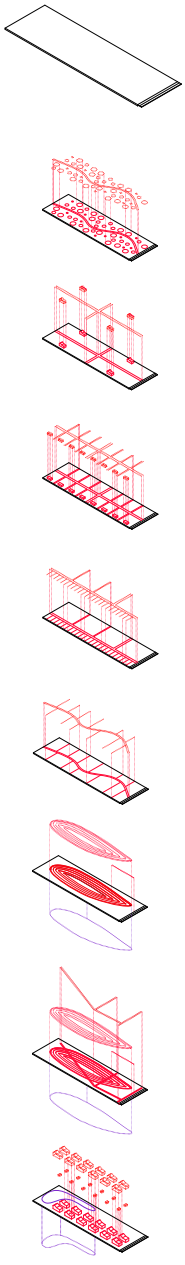
soil layer

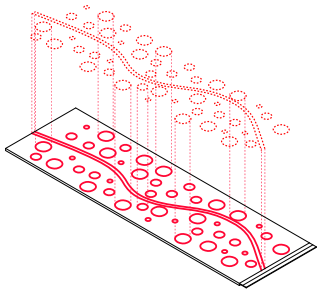
Concrete subtraction



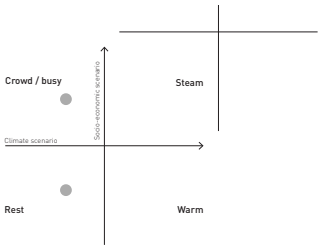
Regional open space, Patch

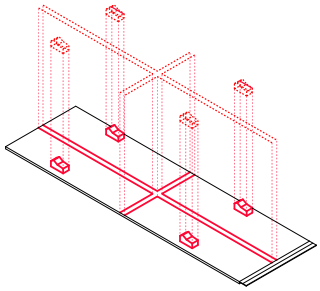
Genealogies open space



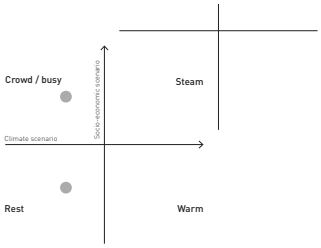


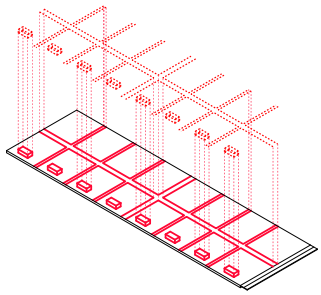
path
re-vegetation



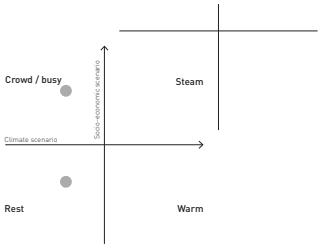


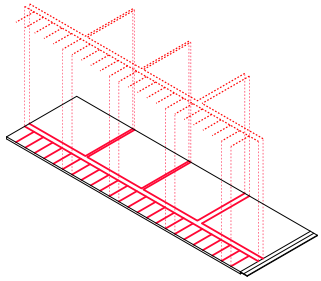
re-parcelization
farmshed



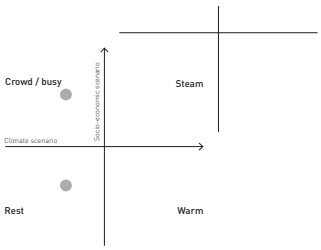


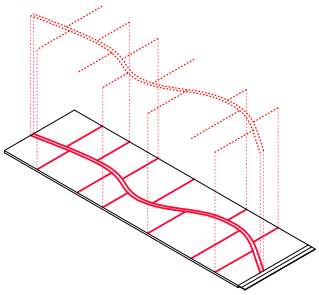
re-parcelization
shed



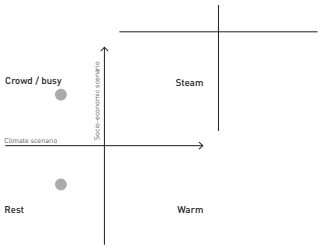


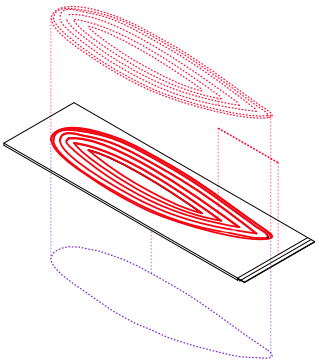
multiple re-parcelization





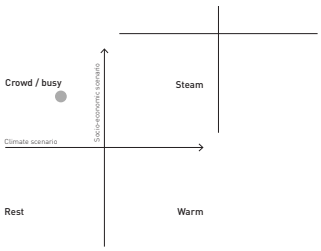
path
re-parcelization

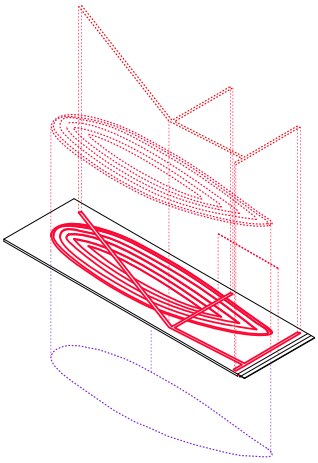




pipe ridirection for grey
water treatment

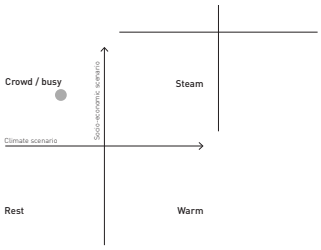
soil subtraction

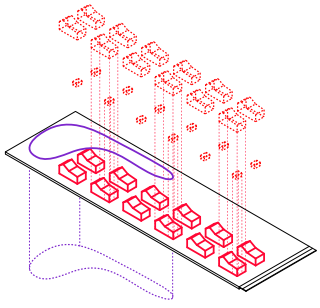




path
pipe ridirection for grey
water treatment

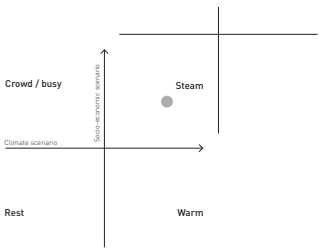
soil subtraction



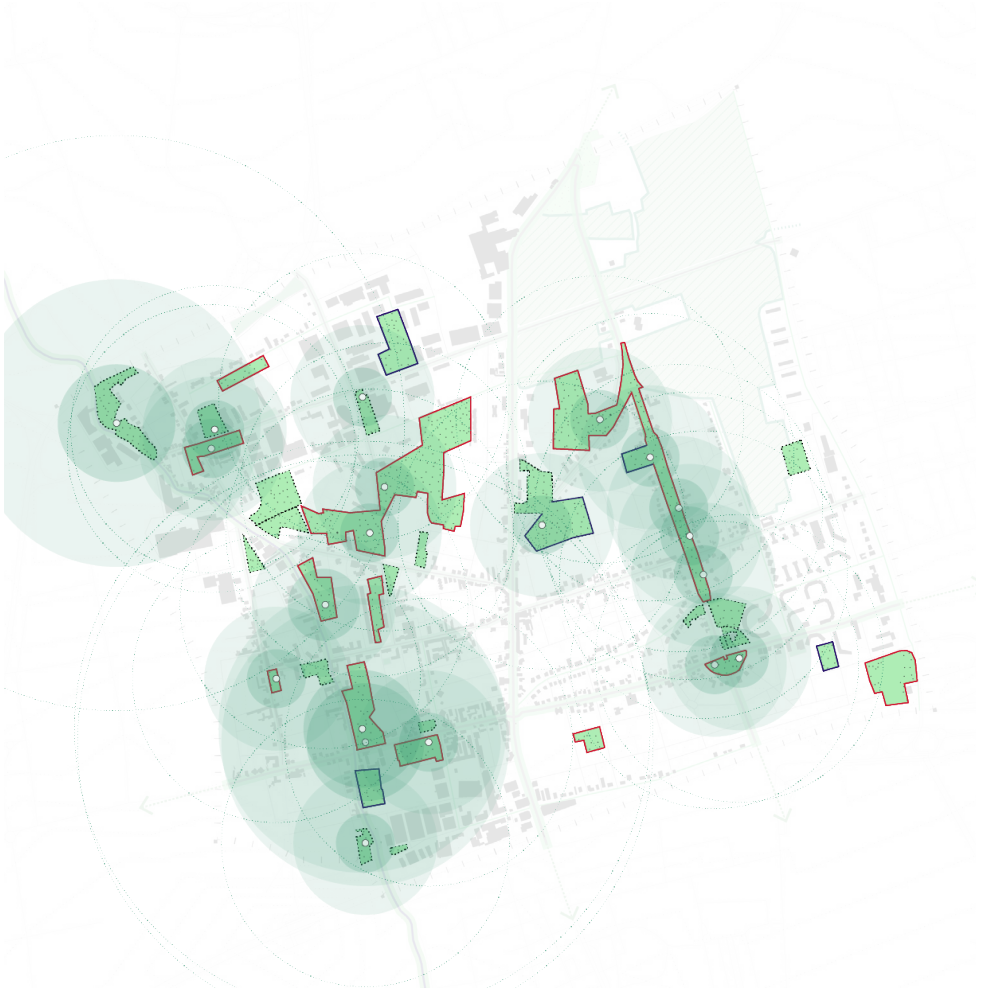


urbanization of the
countryside
infrastructural
decentralization

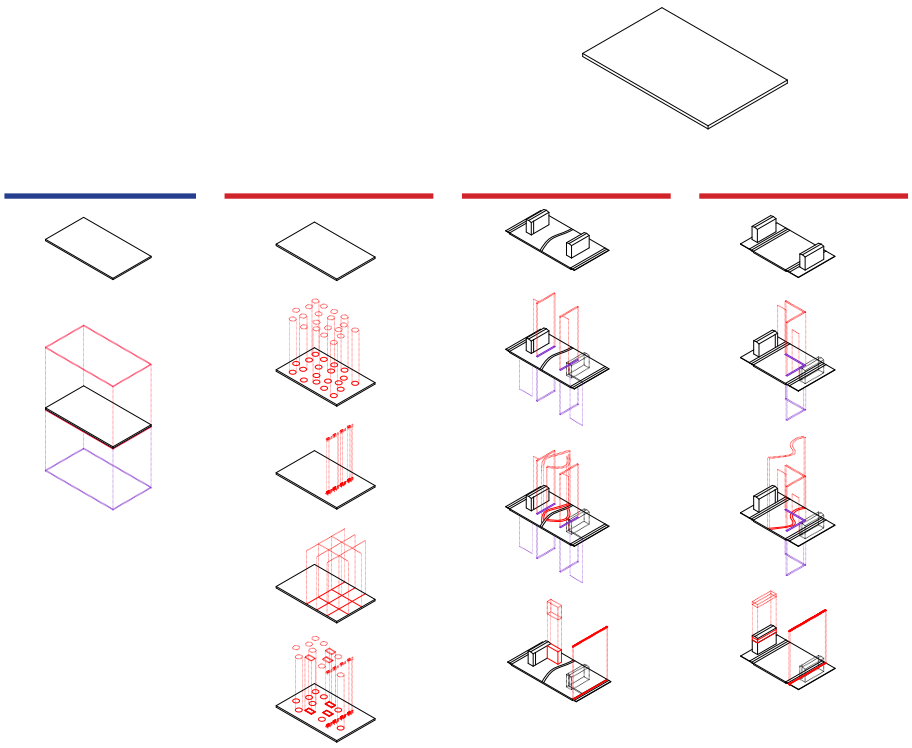
soil subtraction

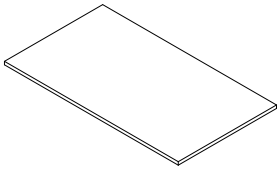


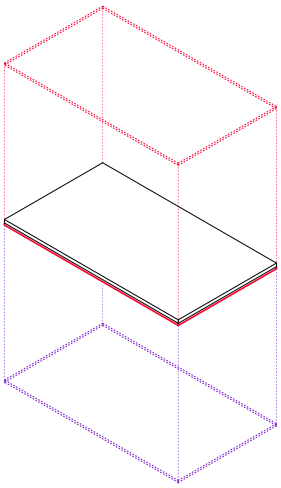
Local green areas (patch)



Genealogies municipal green areas

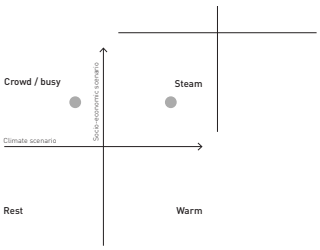


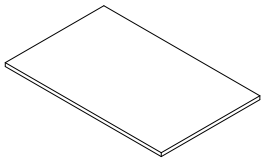


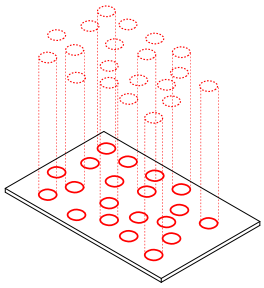


infiltration crates

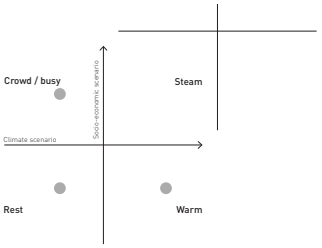
soil subtraction

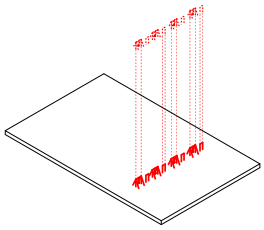




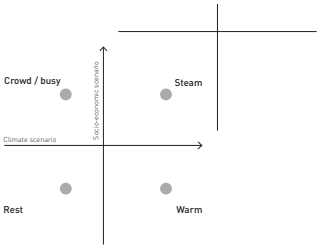


re-vegetation

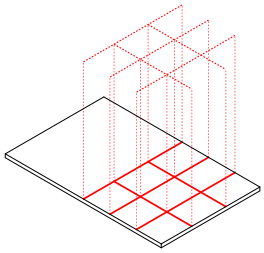




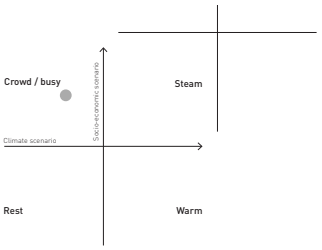
equipment

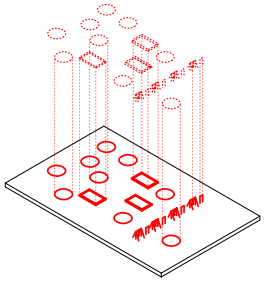


Soil Addition

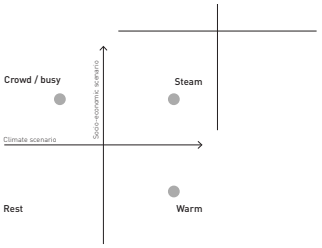


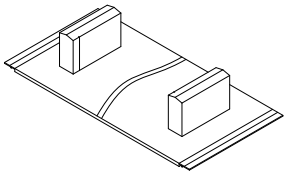
re-parcelization

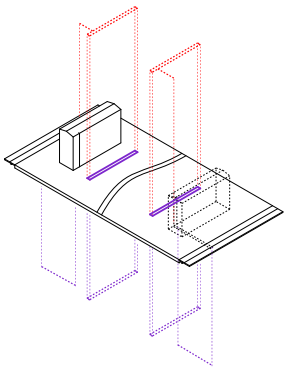




re-vegetation
equipment

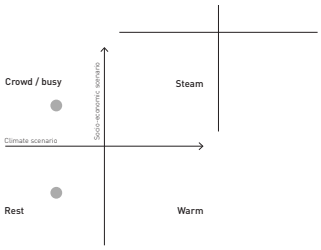


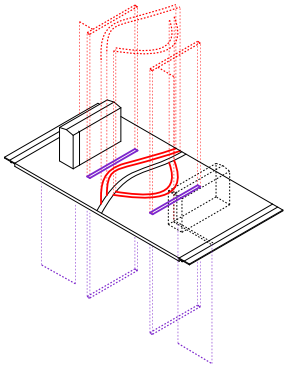




soil layers
subsurface drainage

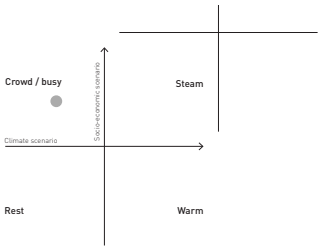
soil subtraction

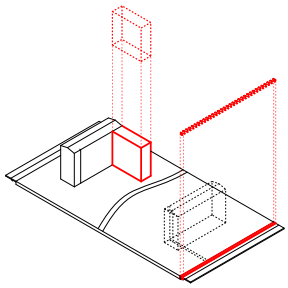




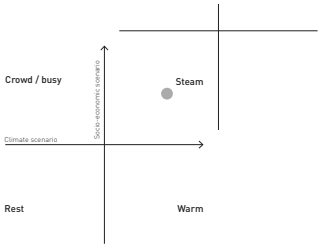
path
soil layers
subsurface drainage

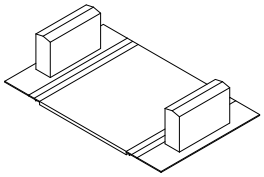
soil subtraction

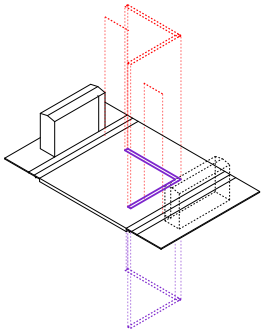




built addition
Multi Utility Tunnel

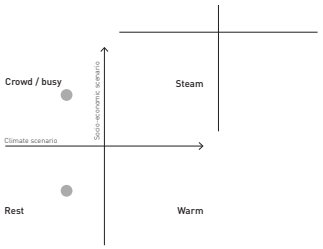


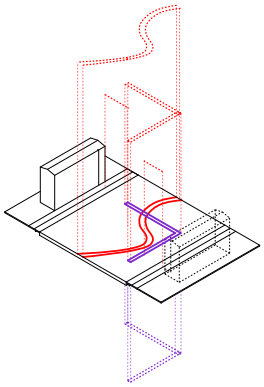




soil layers
subsurface drainage

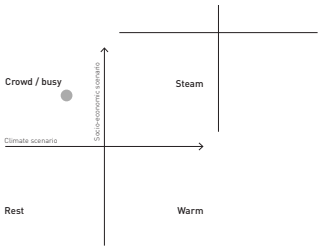
soil subtraction

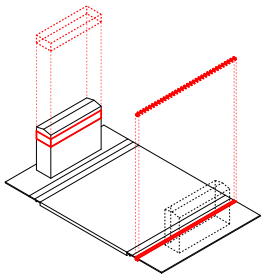




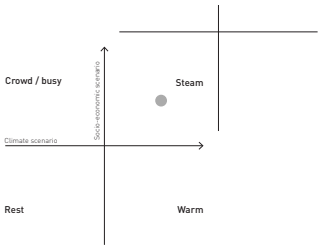
path
soil layers
subsurface drainage

soil subtraction





floor addition
Multi Utility Tunnel

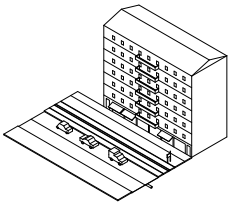


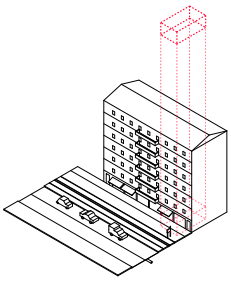
Private space intervention (patch)

Continuos
Discontinuos
Industrial
Diffuse
Dispersed

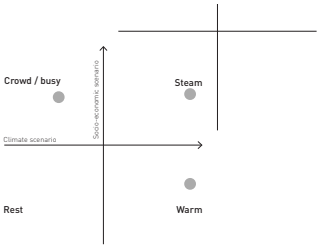
Built Up Typologies

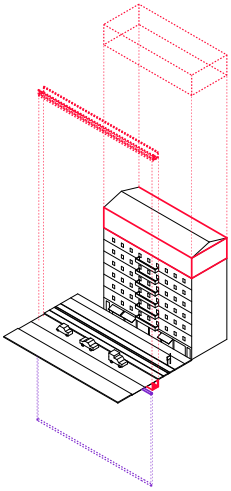
Continuous



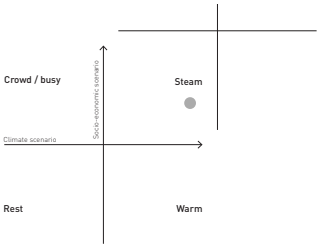


Underground water tank

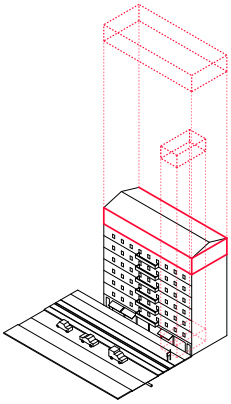




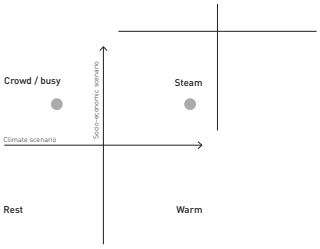
floor addition
Multi Utility Tunnel

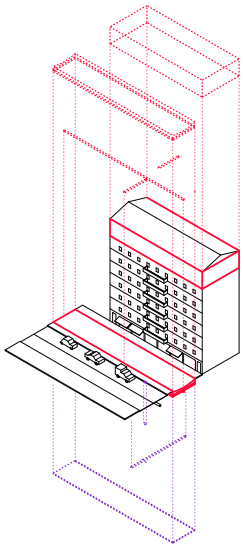


Pipes



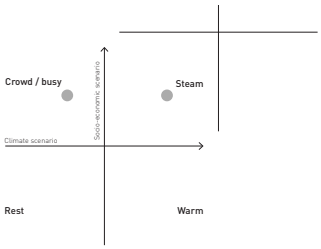
floor addition
Underground water tank

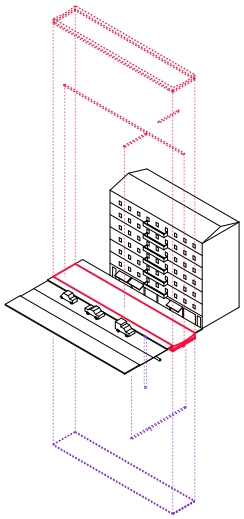




Floor addition
soil layers
subsurface drainage

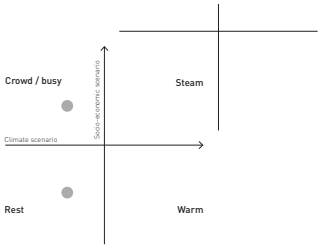
curb cut
concrete subtraction



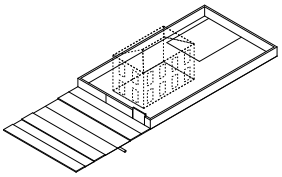


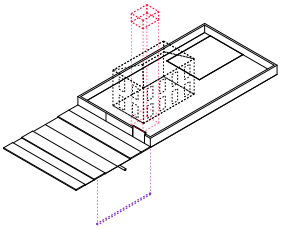
soil layers
subsurface drainage

curb cut
concrete subtraction

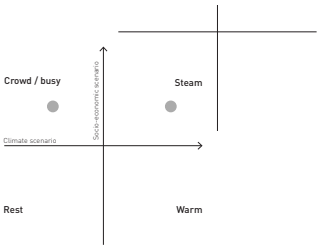


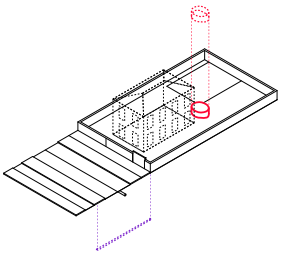
Discontinuos



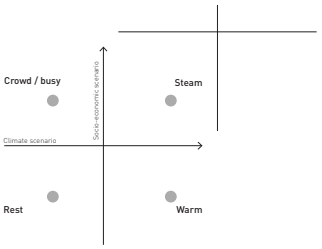


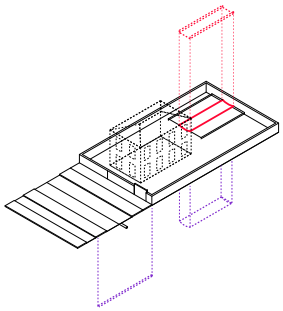
underground water tank





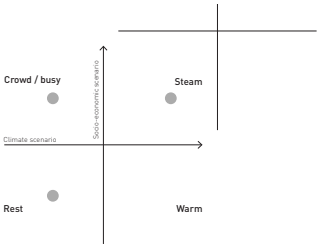
Cister water tank

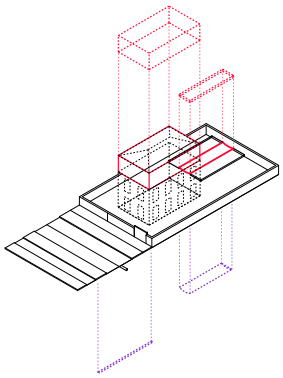




soil layers

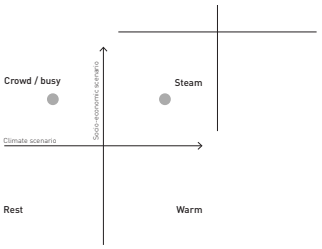
soil subtraction

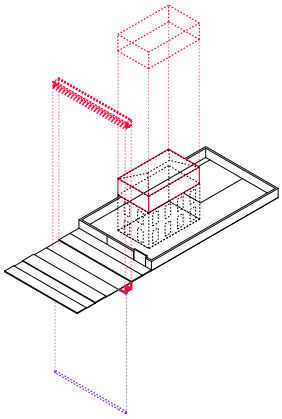




floor addition
soil layers

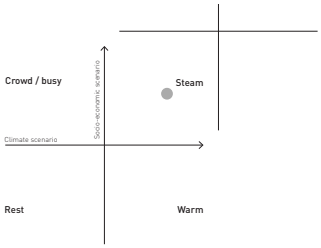
soil subtraction

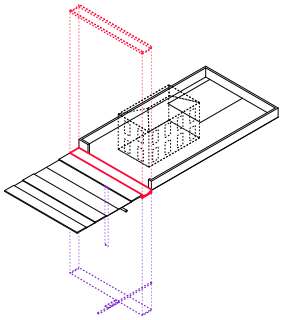




floor addition
Multi Utility Tunnel

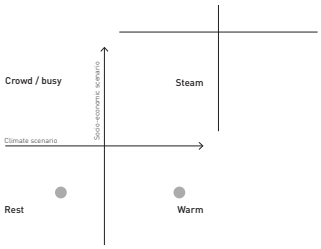
old pipe

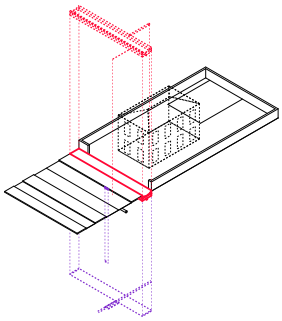




soil layers

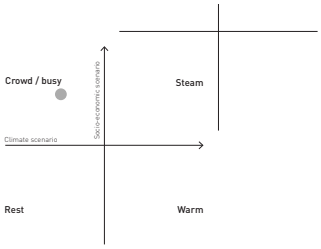
fence subtraction



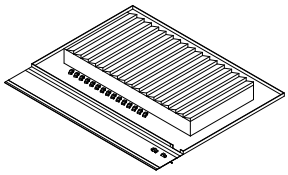


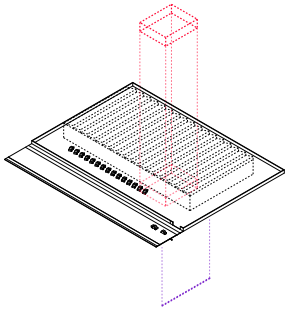
soil layers
subsurface drainage

fence subtraction

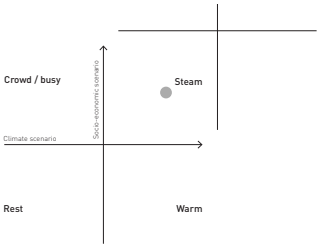


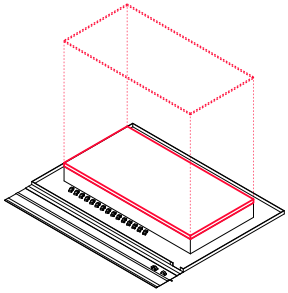
Industrial





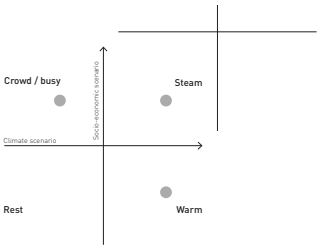
Underground water tank

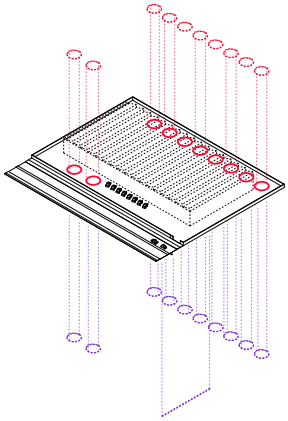




soil layers

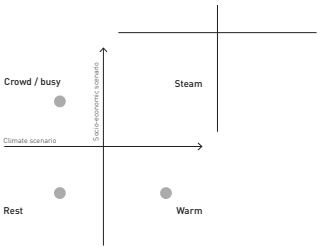
roof subtraction

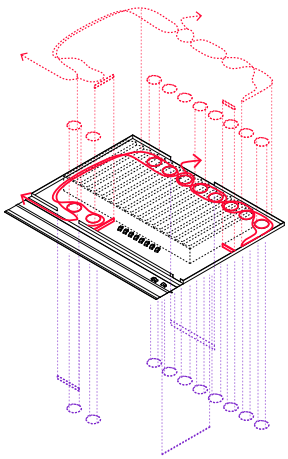




soil layers
revegetation

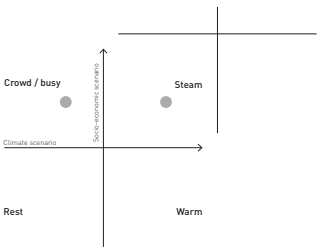
concrete subtraction

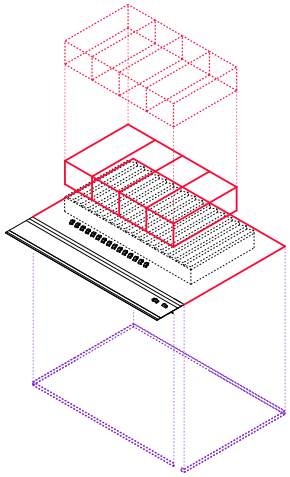




soil layers
revegetation
path
separation measure

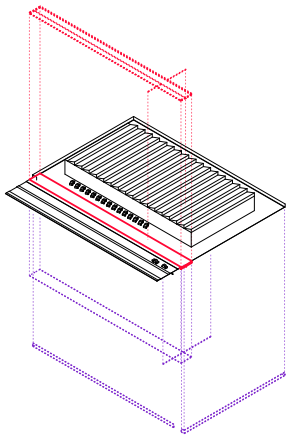
concrete subtraction





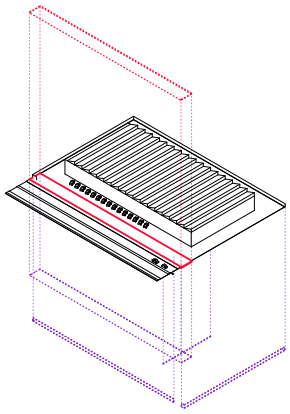
soil layers
Urbanization

concrete subtraction



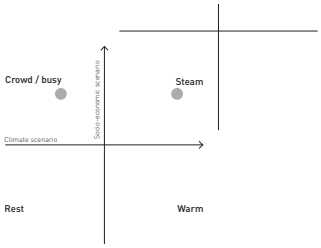
soil layers
subsurface drainage

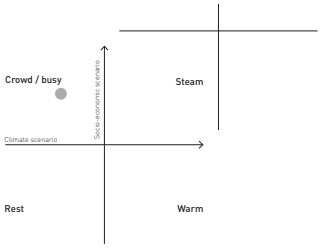
concrete subtraction

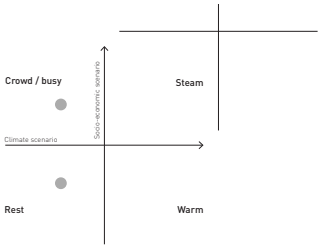


Soil layers

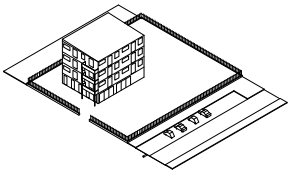
concrete subtraction

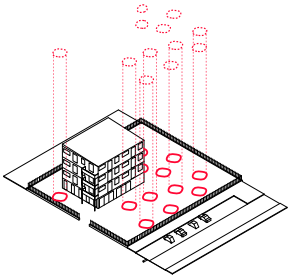




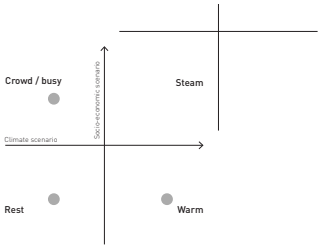


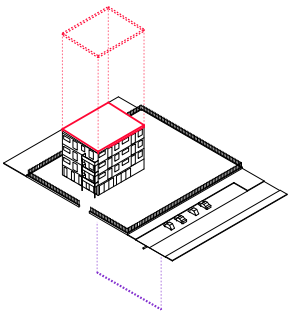
Diffuse





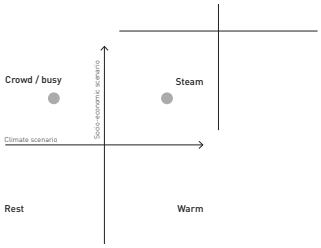
re-vegetation

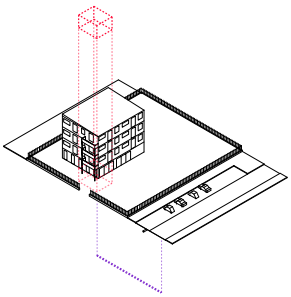




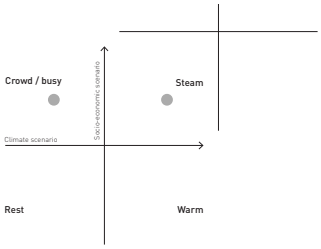
green roof

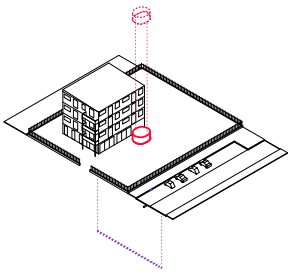
roof subtraction





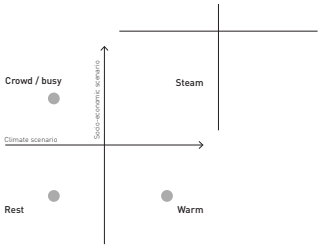
underground water tank

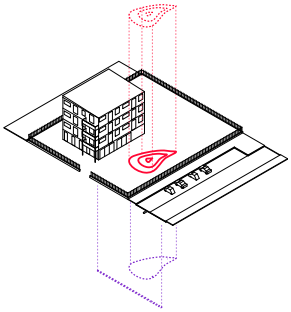




water cistern

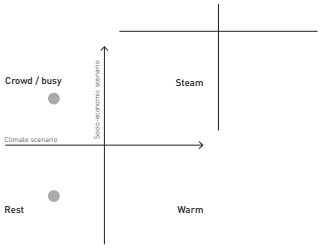
Soil Addition





soil layers

soil subtraction



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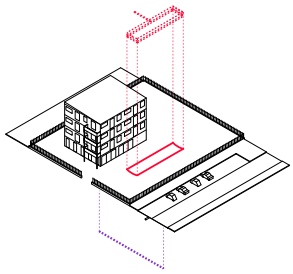
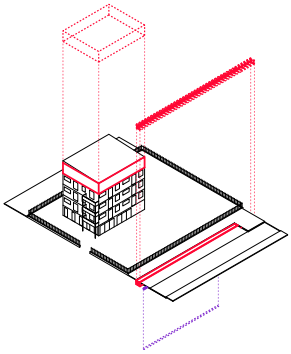


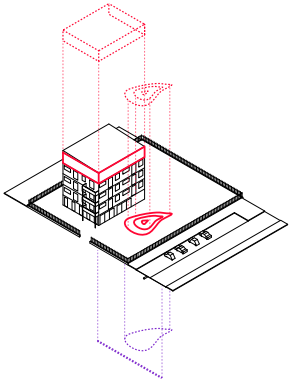
soil layers

Soil Addition



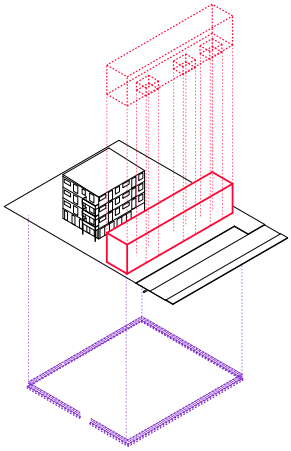
floor addition
Multi Utility Tunnel

Soil Addition



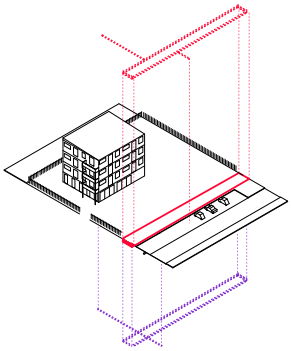
floor addition
soil layers

soil subtraction



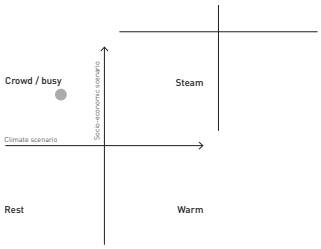
new urbanization
Underground water tank

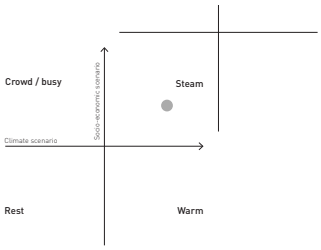
fence subtraction

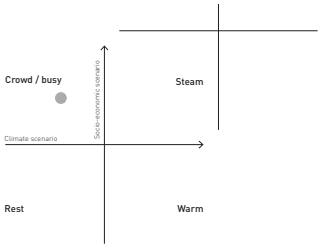


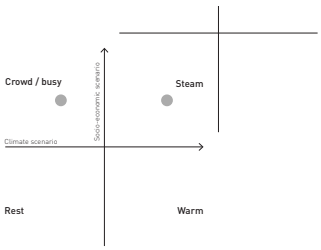
soil layers
subsurface drainage

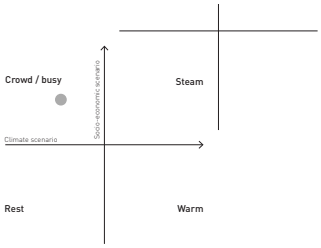
concrete subtraction
fence subtraction



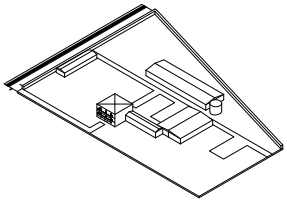


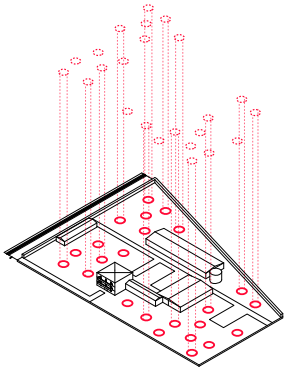




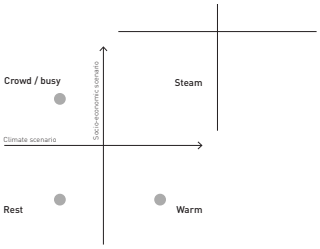


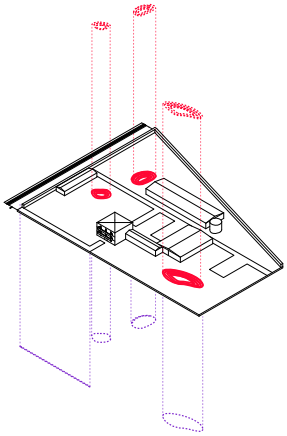
Dispersed





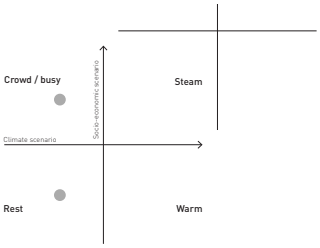
re-vegetation

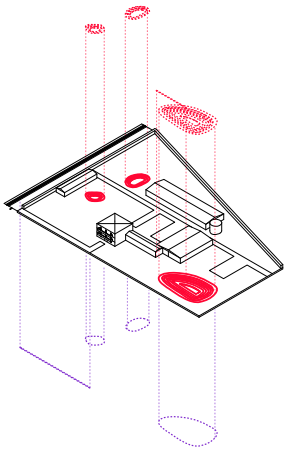




soil layers

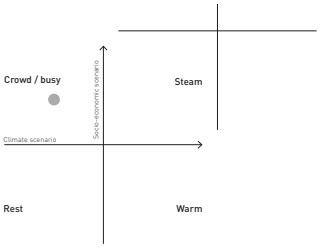
soil subtraction

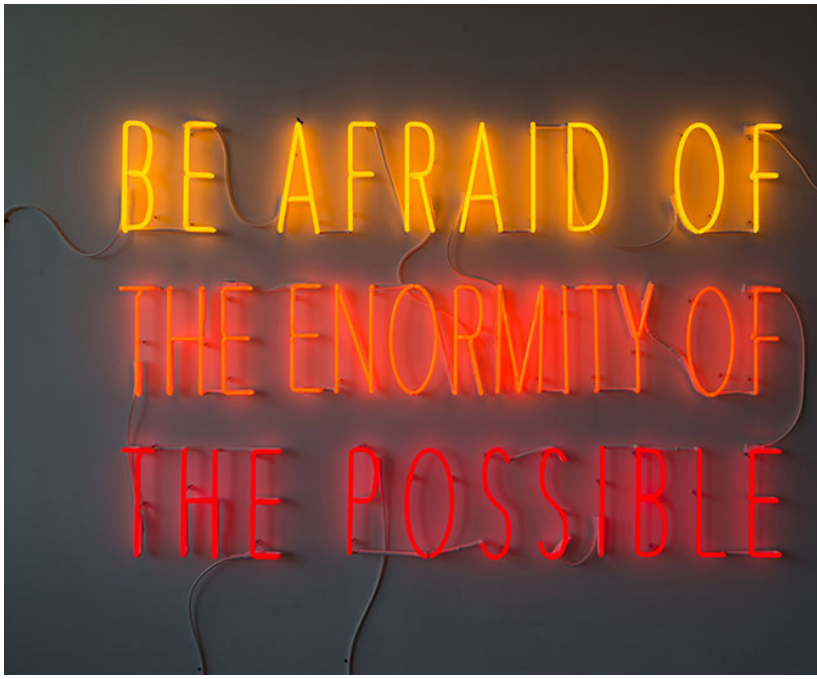




soil layers
revegetation

soil subtraction





Alfredo Jaar, Art Basel, 2016.