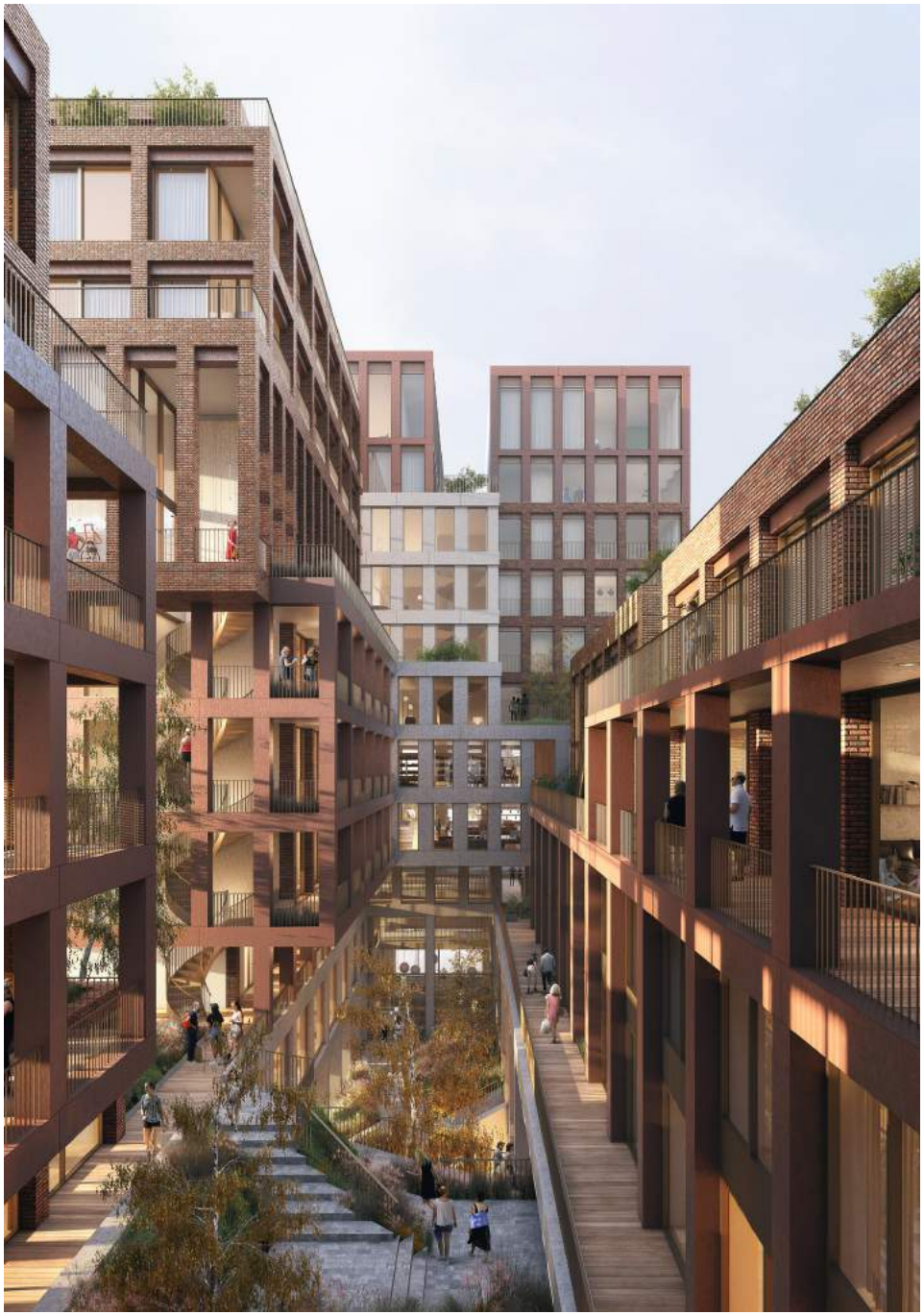

Active design in buildings

forum bâtir + planifier: villes en pleine santé!

BETA office for architecture and the city
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Active Design
in Buildings
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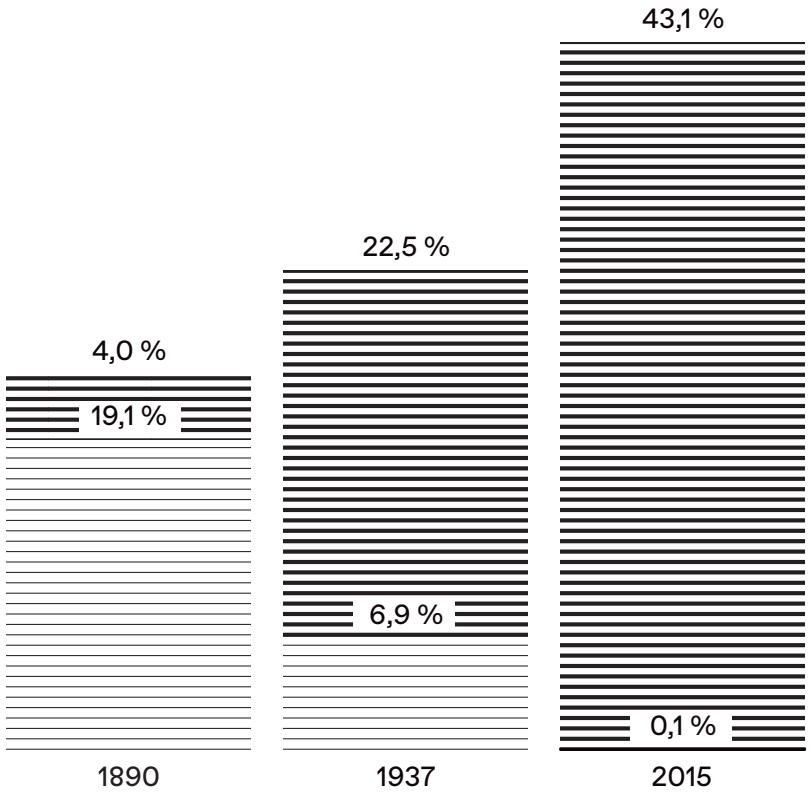
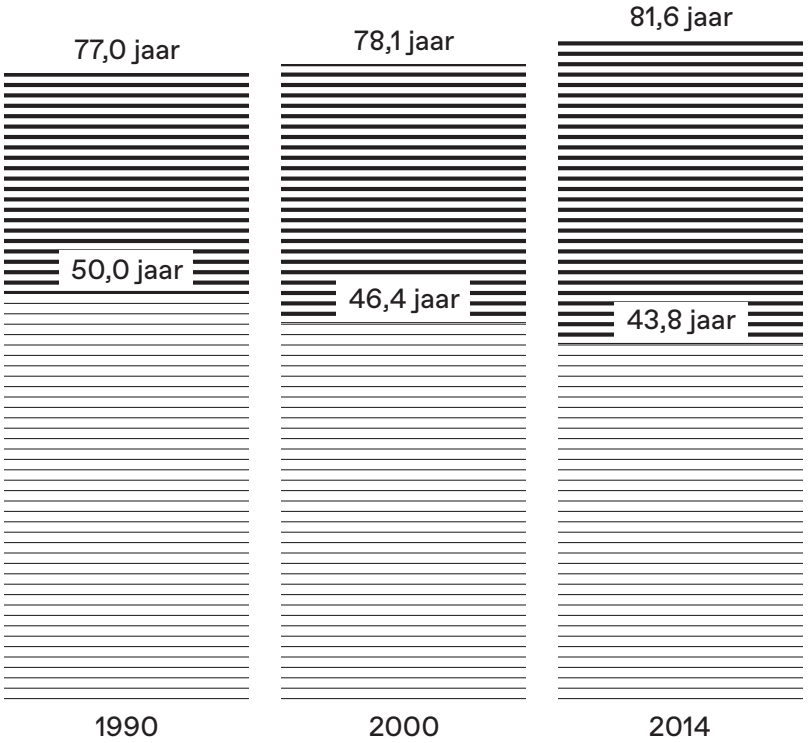
INFECTIOUS VS. CHRONIC DISEASE IN AMSTERDAM



HEALTHY LIFE EXPECTANCY IN THE NETHERLANDS




OV-fiets.nl

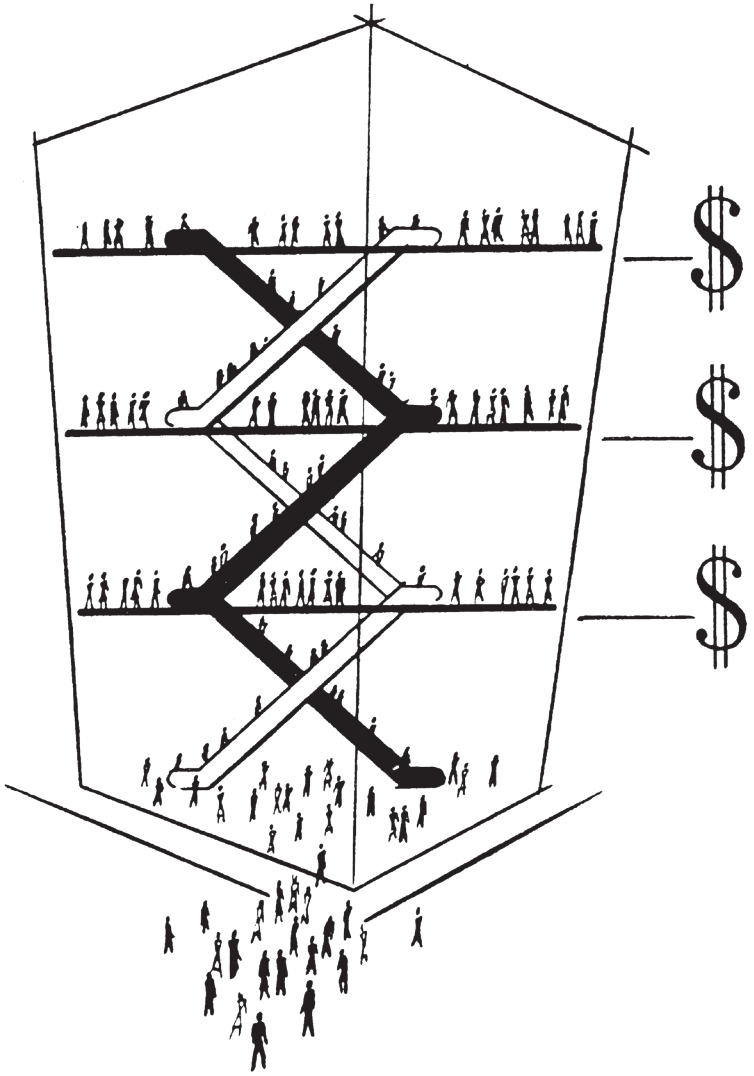

Activity
12:04
12AM
12PM
TOTAL STEPS
576
TOTAL DISTANCE
0.25 MI


VISA
ING


foodora
DE BEZORGSERVICE
VAN JE FAVORIETE
RESTAURANTS


NETFLIX


ADMIRALTY
7
BAD PLANNING MEANS LONG JOURNEYS
THICKNESS OF THE COLOURED LINES IS PROPORTIONATE TO NUMBER OF JOURNEYS
PLANNING SAVES FATIGUE
THESE TWO KITCHENS ARE THE SAME SIZE
C COOKER
D DRESSER
S SINK
St STORE
T TABLE



from ‘Atmospheres’, Peter Zumthor

‘The Social Life of Small Urban Spaces’ (1980), William Whyte









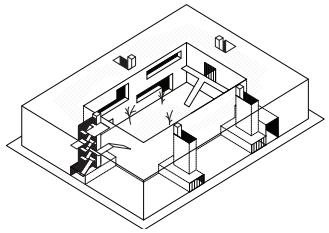
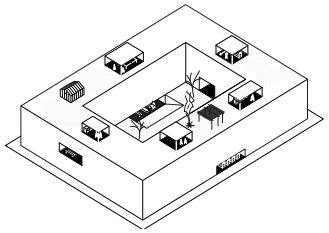
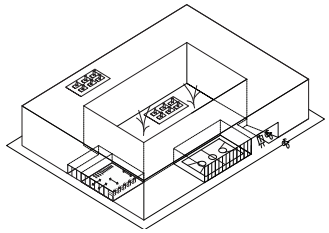
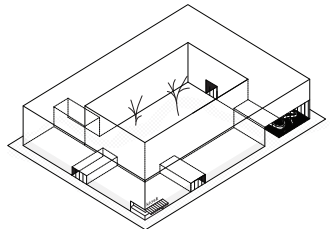


‘The Infinite Happiness’ (2015), Bêka & Lemoine

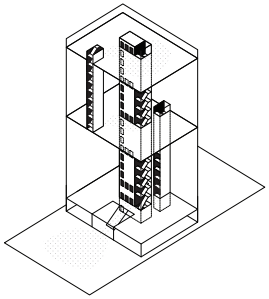
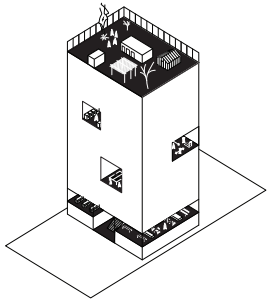
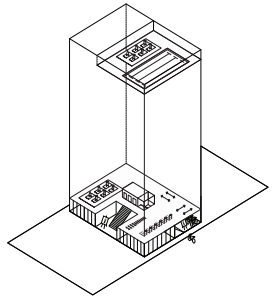
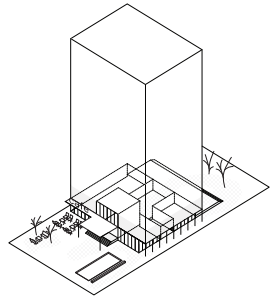
THE FOUR DOMAINS OF ACTIVE DESIGN

ROUTES | DESTINATIONS | ACTIVITY PROGRAMME | BUILDING SURROUNDINGS

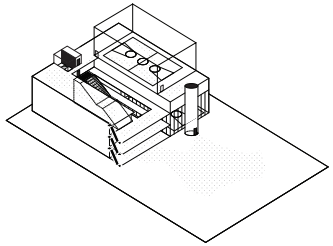
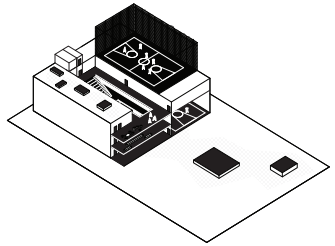
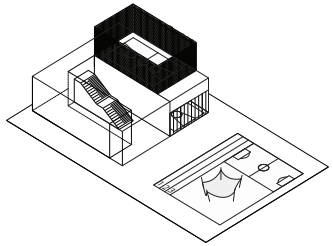
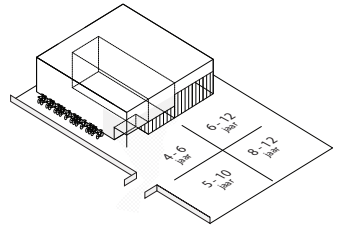
residential block

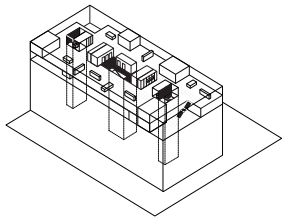
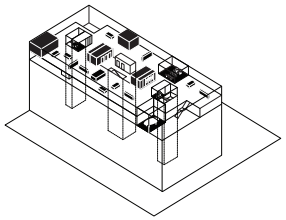
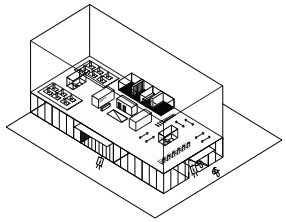
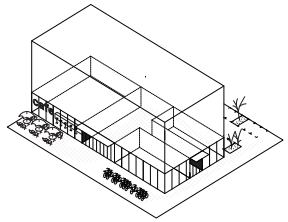
high-rise

school

office

S/M/L PRINCIPLES

Some active design principles are easy to apply, even in the operational phase of a building. Others must be incorporated into the earliest sketches due to their large impact on the building structure. As such a distinction has been made between far-reaching and less far-reaching principles with the aim of creating a system applicable to various levels of ambition and for both new and existing buildings.

We define three categories in this regard: small, medium and large. It is important to note that this classification refers solely to the implications for a building's structure and not to the impact a principle might have. A 'small' principle with limited structural implications can nevertheless have a profound effect on physical activity. Some extra attention is given to the two most comprehensive domains; Routes and Destinations.

(S) SMALL

A small principle is not connected to the structure of a building. It is often an intervention that involves colour, material, furnishings, fittings or lighting (including daylight). Though relatively inexpensive, these principles can have a major effect on walkability and can often be deployed in the operational phase of a building.

(M) MEDIUM

A medium principle involves limited modification to the spatial structure with a view to encouraging physical activity. Such interventions often evoke activity through horizontal or vertical variations or the strategic ordering of programme. These can often be realized with a minimal change to the building's structure or its detailing.

(L) LARGE

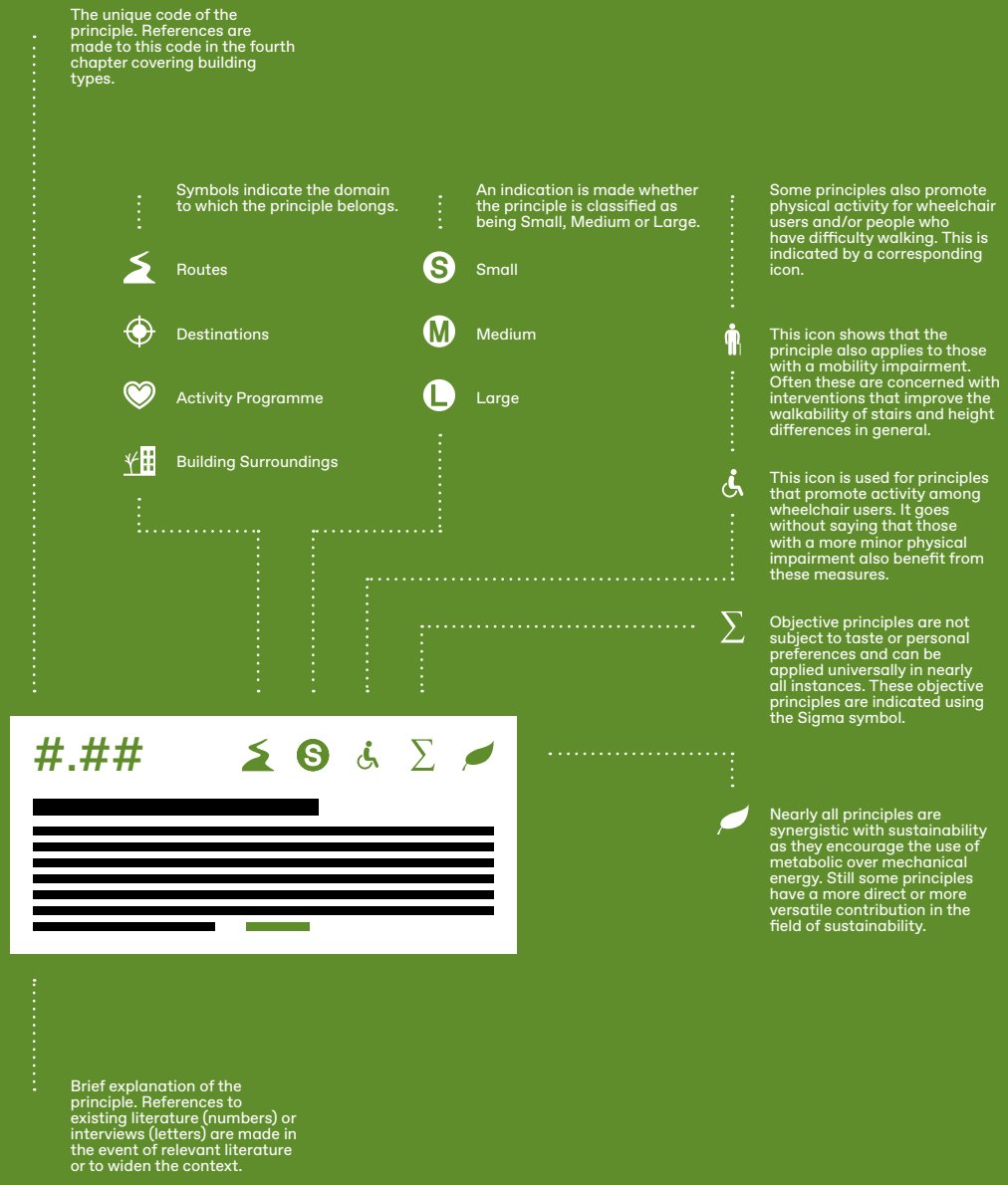
A large principle has a major influence on the building's structure and must therefore be incorporated into architect's earliest ideas. They determine the spatial organization of the building and include aspects such as the configuration of access systems, creating views within a building or combining Routes and Destinations.

The Toolkit and the Dutch Building Code

Bouwbesluit 2012 (the Dutch Building Code) determines to a large extent how buildings in the Netherlands can be configured. In the Toolkit some extra attention is given to the safety issues in the domains Routes and Destinations as these domains have a direct relationship with the emergency evacuation of a building. The points listed should be used as additional notes to the relevant articles of the building code.

TOOLKIT 'CARD' EXPLANATION

Each principle encouraging physical activity is described as a card and follows a fixed pattern.



1.12

VISIBLE STAIR ENVIRONMENTS STIMULATE USE

Fire stairs in particular are often not visible from a building's main spaces because they are encased in opaque fire-resistant material. Replacing this with transparent materials such as fire-resistant glass makes a stair environment visible and encourages stair use. Open staircases between floors (within a single fire compartment) are another way to increase stair use. (14)

1.13

HIDDEN ELEVATORS ARE USED LESS FREQUENTLY

Make elevators subordinate to stairs. Ensure the elevator is not directly visible upon entering the building, for example by placing the elevator entrance at a ninety degree angle. Remember to use signage to guide physically challenged users to the elevator. (14) (22)

1.14

WIDE STAIRS ARE MORE APPEALING

Research indicates that wider staircases are more frequently used. Stairs wider than 120 cm can accommodate people travelling in two directions. Wider stairs make it possible to walk side by side, turning the staircase into a place for social interaction. (14) (23)

1.15

STAIRS WITH A LOWER INCLINATION ARE EASIER TO CLIMB

Stairs with fewer steps per flight are not only more pleasant to climb; they are also safer and more accessible. Research indicates that the ideal stair ratio is approximately 30 degrees. A riser of approx. 17 cm and a tread of approx. 29 cm results in 10 cal. being burned per kg/m. Provide landings at regular intervals to give physically challenged users an opportunity to rest. (14) (23)

Medium Routes and the Building Code

> The Building Code sets minimum requirements for the dimensions of stairs, including measurements for risers and treads, and the height between landings. These requirements represent the lower limit with regard to safety and are not optimal from an ergonomic perspective.

> Interventions that involve making stairs wider or less steep, or the addition of more landings, can improve evacuation capacity and boost accessibility in a building.

> Increasing the visibility of stairs promotes their use. This also familiarizes users with the escape routes in a building. Although not measurable in the Buildings Code, frequent stair use has a favourable effect on safety in the event of an emergency.

> In the interests of smoke control, some emergency stairwells are pressurized relative to the surrounding spaces. In such cases, special requirements apply and the stairwells cannot be ventilated naturally.


Burn Calories,
Not Electricity.
Take the Stairs!
Walking up the stairs just 2 minutes a day helps prevent weight gain. It also helps the environment.
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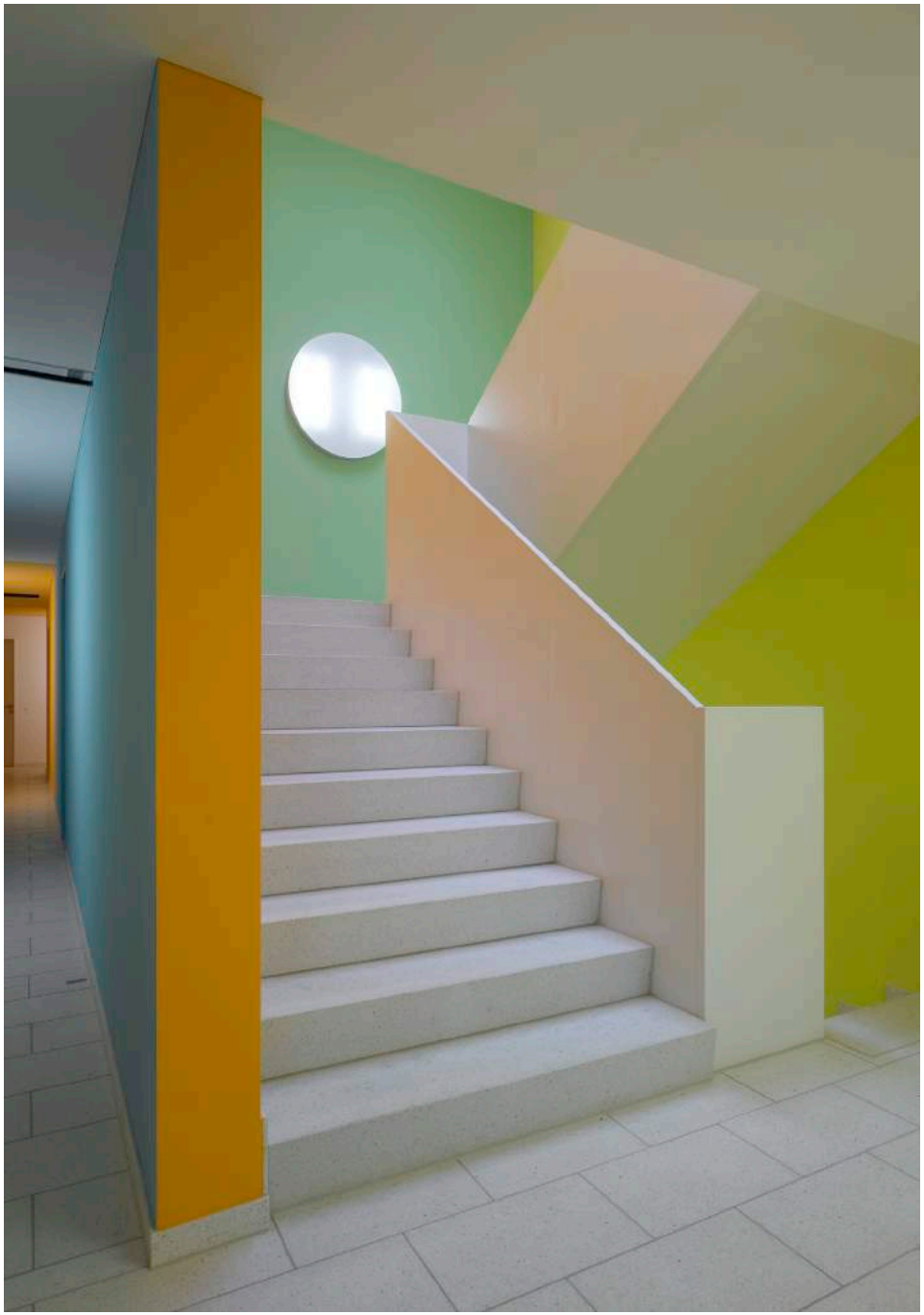
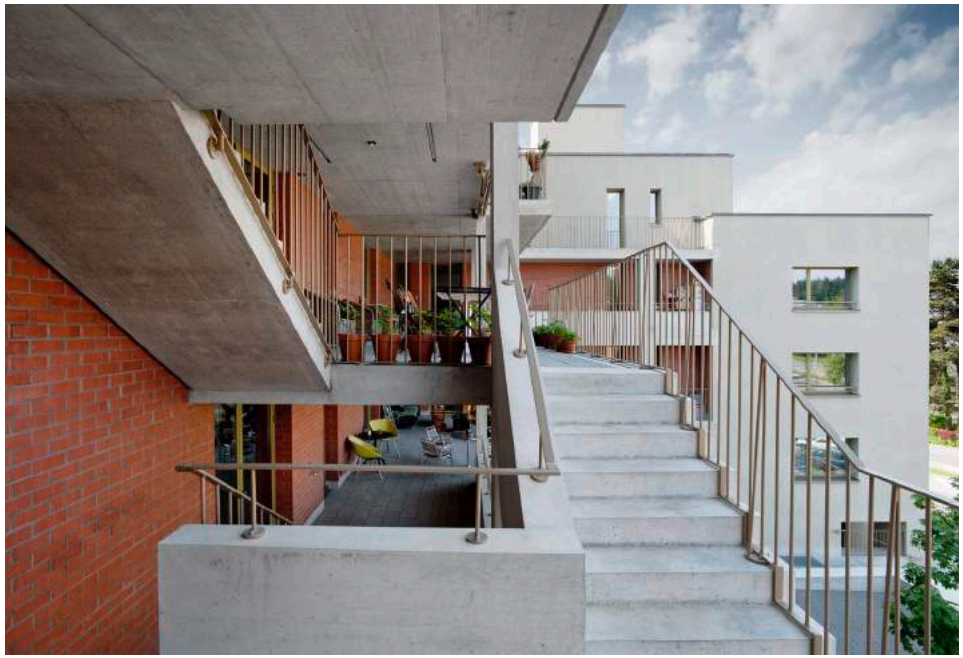
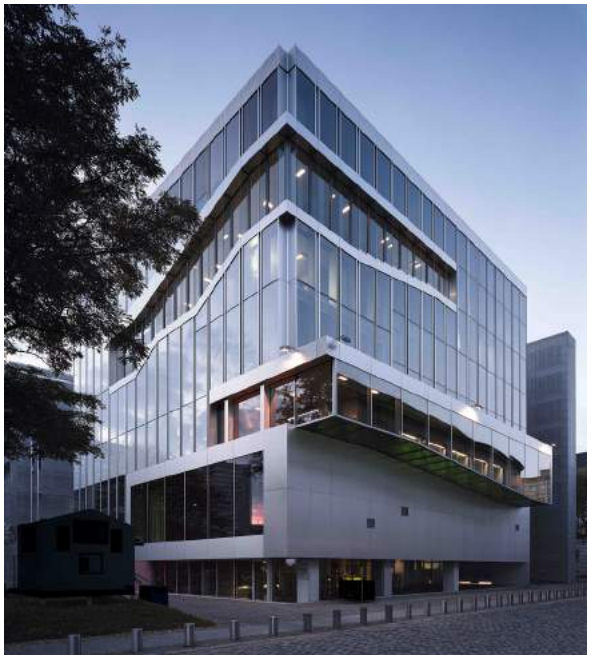





Fruites i Verdures Conchin



SOCIAL

community / collectivity
balance privacy / exchange
mixed generations
sharing concepts
adresses loneliness

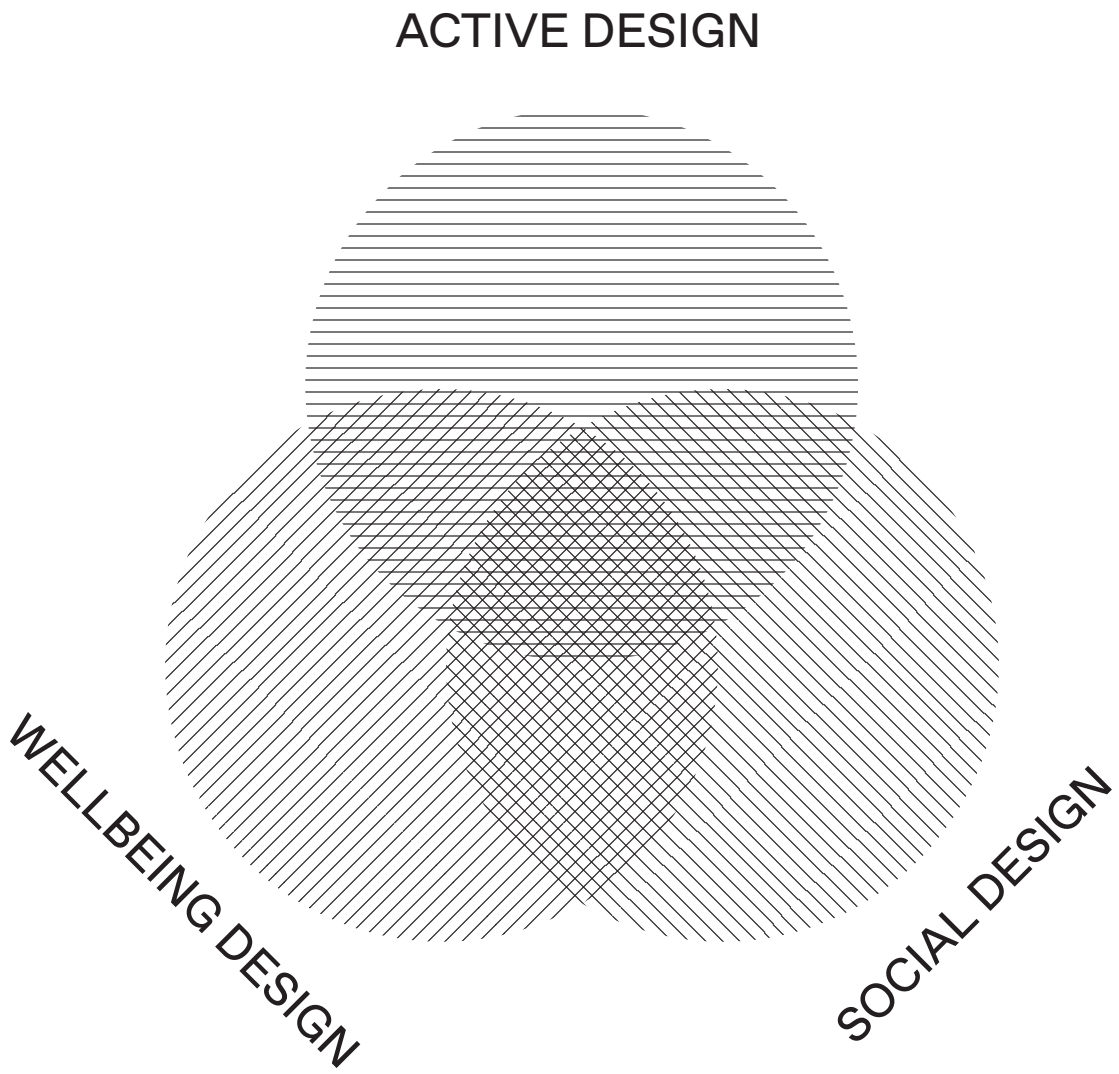
ACTIVE

movement / sports / play
walking / biking
public transport / carsharing
education for an active lifestyle
encouraging active behaviour
nudging

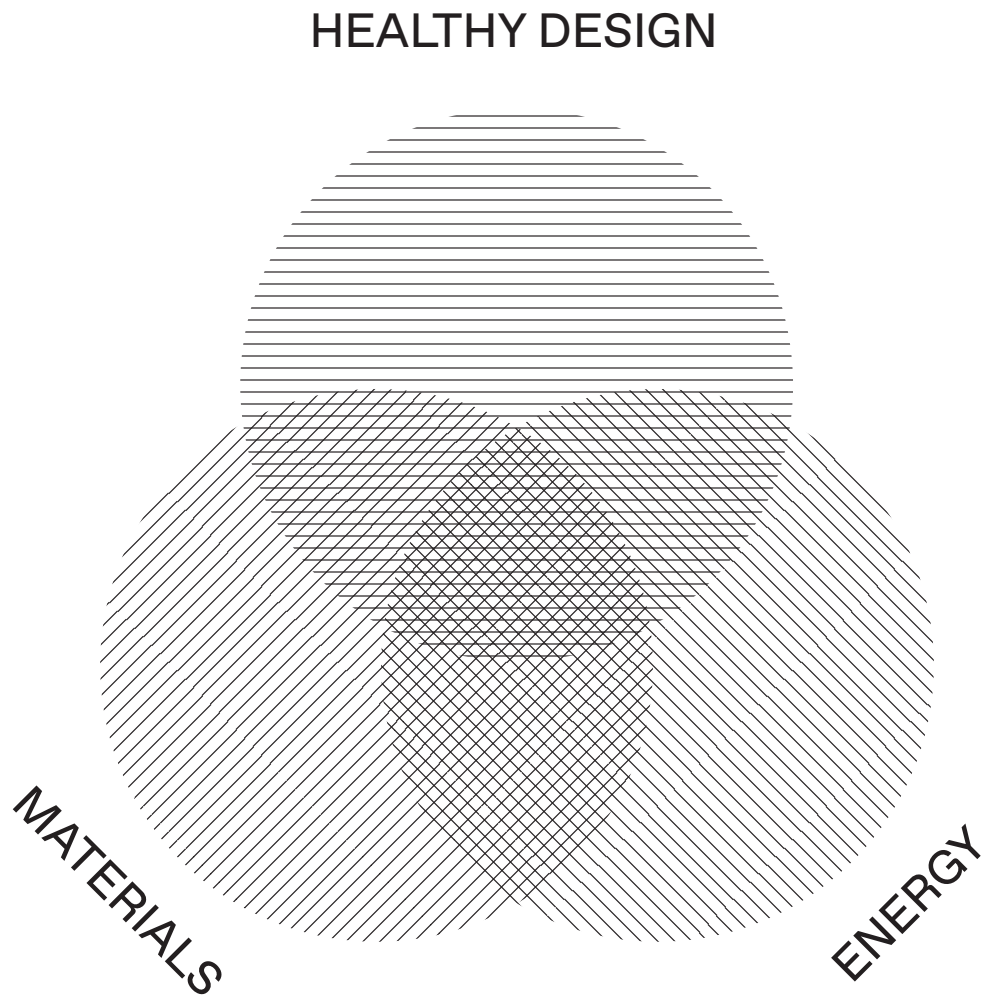
WELLBEING

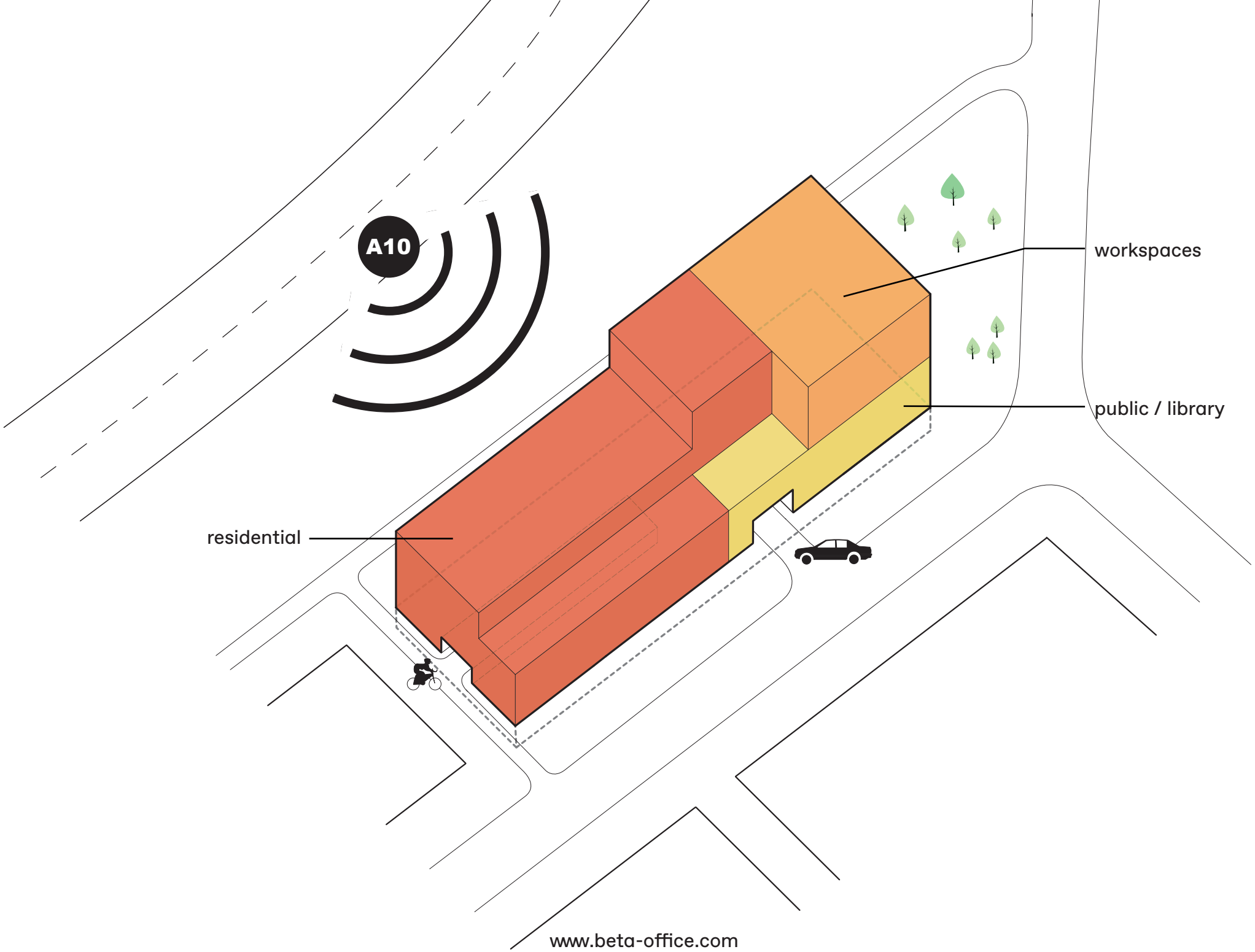
healthy building and materials
education about food
green spaces

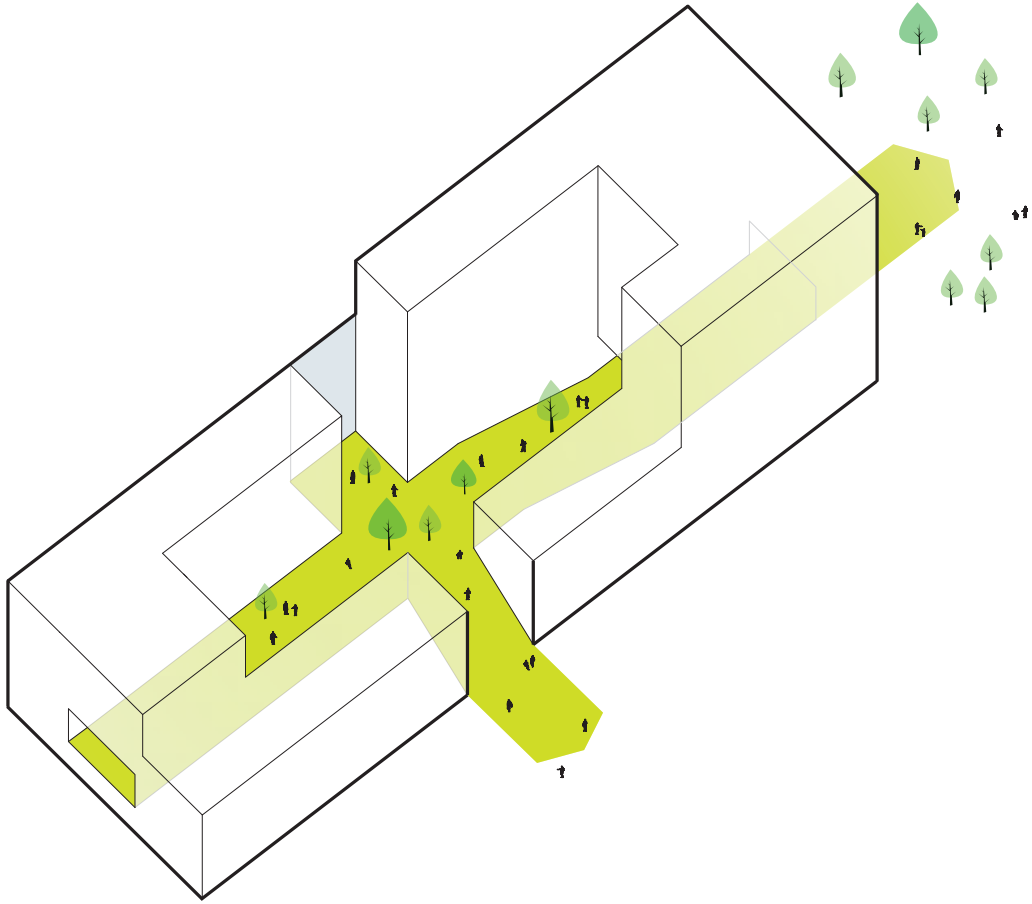
SYNERGETIC HEALTHY DESIGN

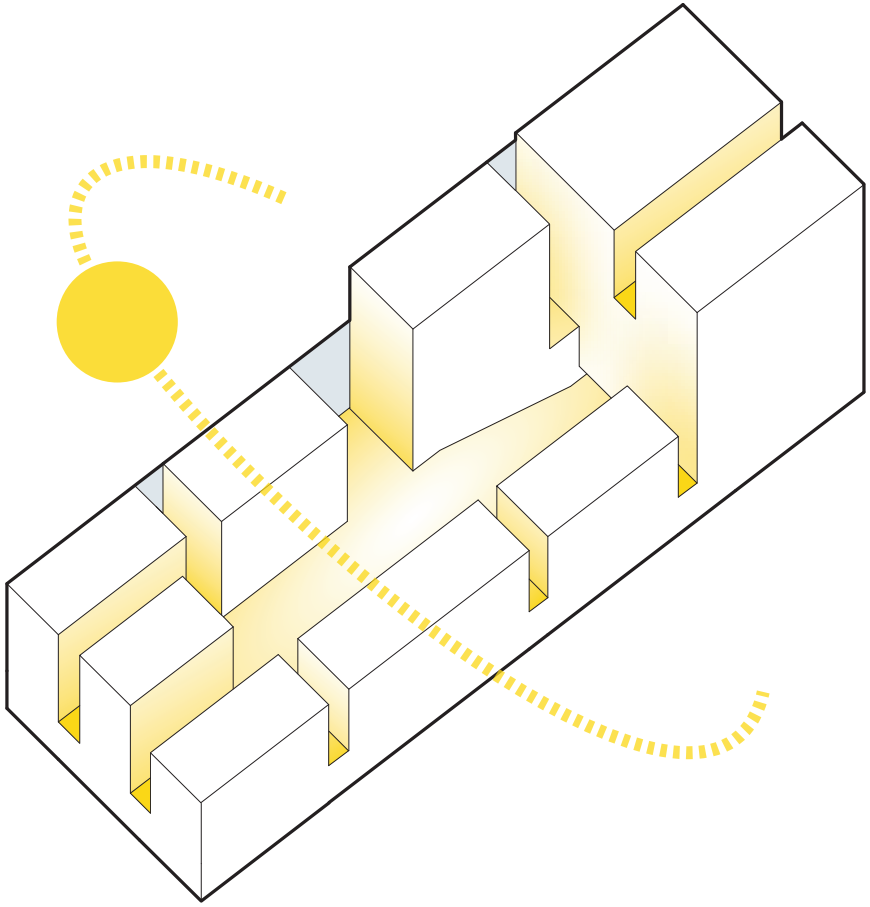


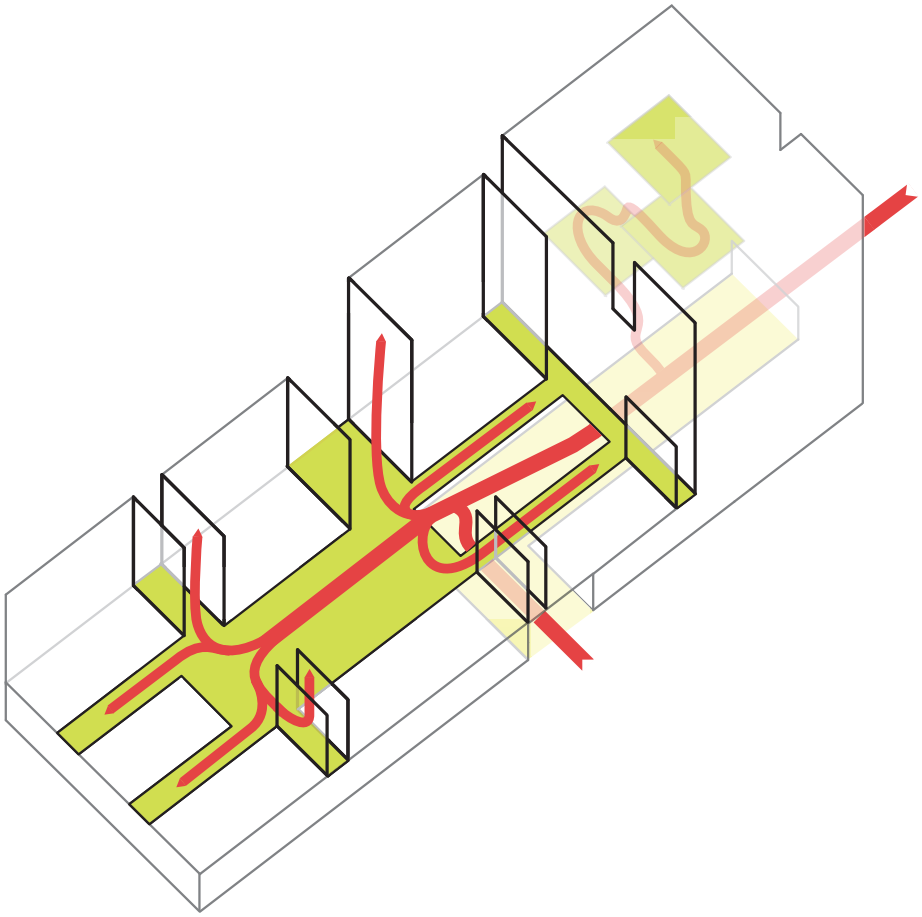
SYNERGETIC SUSTAINABLE DESIGN

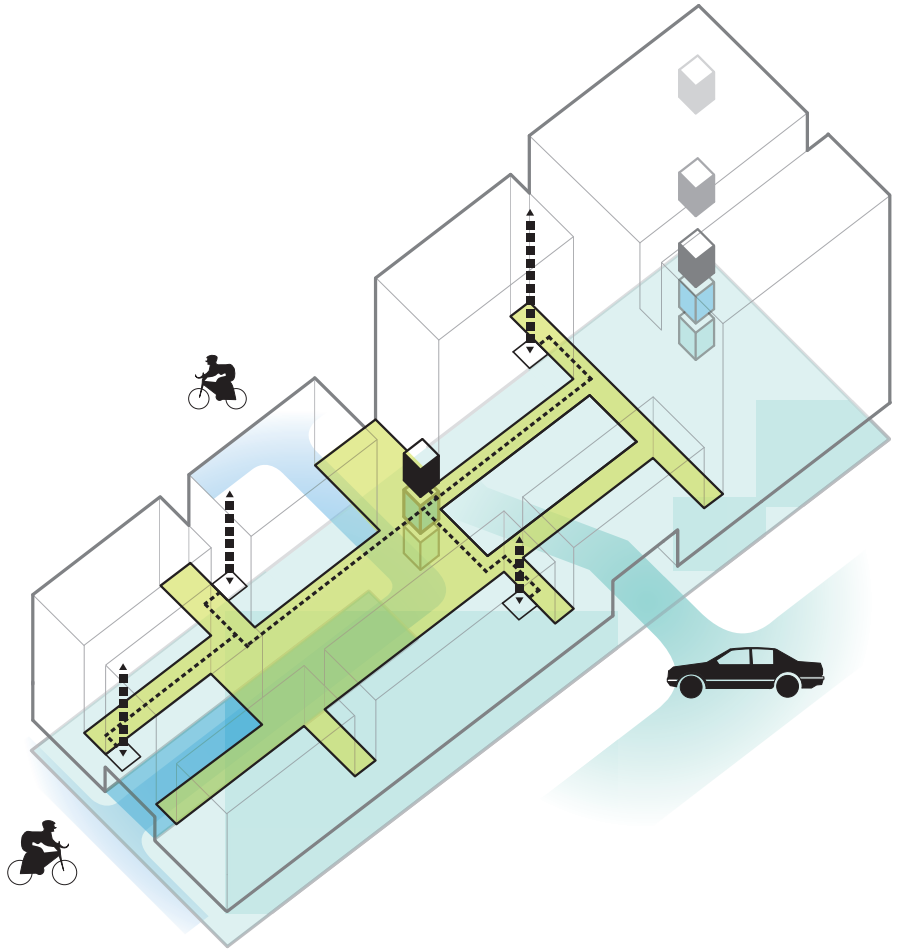


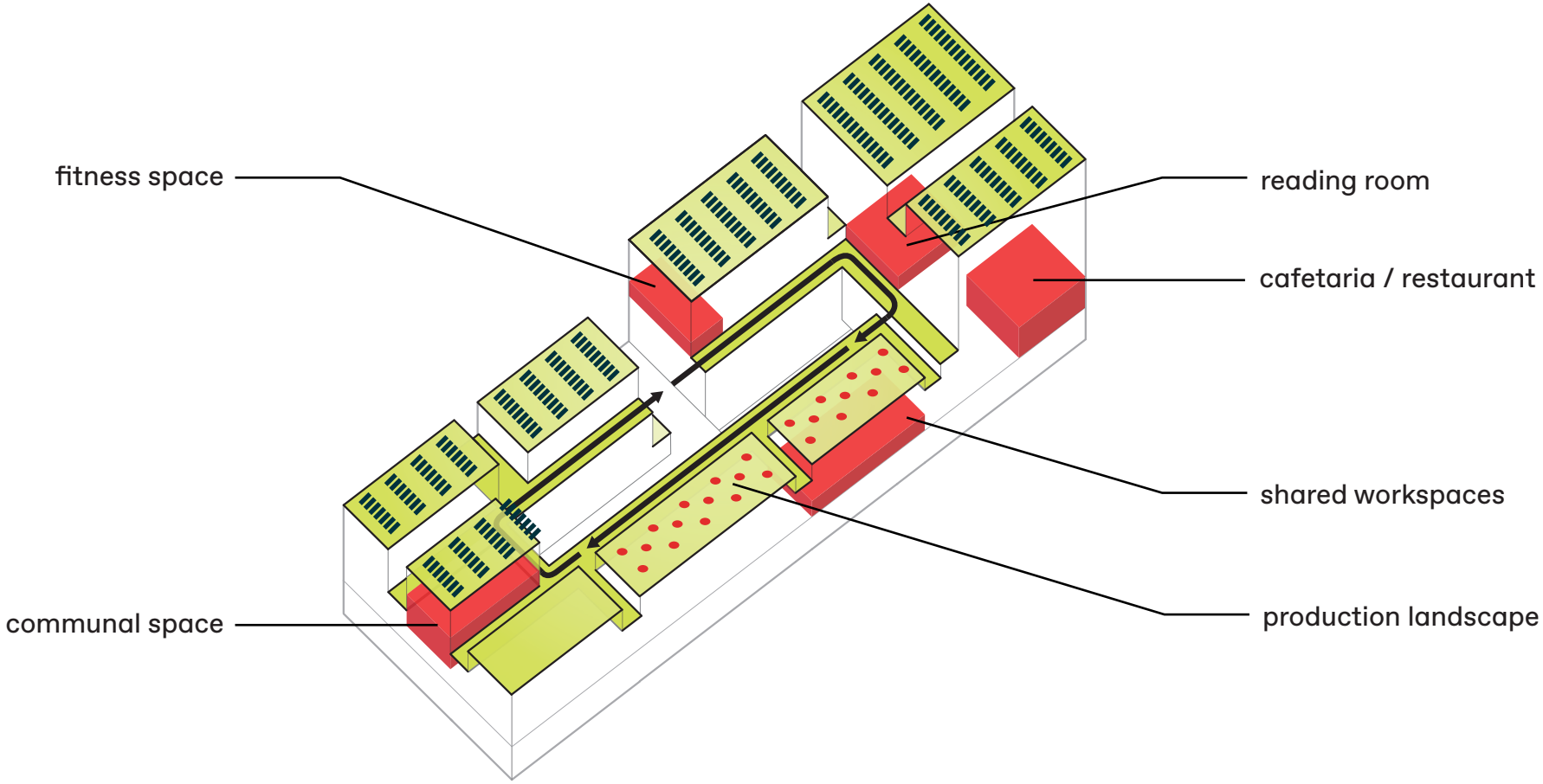

A10
workspaces
public / library
residential










fitness space
reading room
cafetaria / restaurant
shared workspaces
communal space
production landscape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