

URBAN-RURAL INTERVENTION CATALOG

Vanessa Miriam Carlow, Chantal Karadag,
Olaf Mumm, Marie Scheer, Kristin Schöning

8. Urban-Rural Intervention Catalog

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8.1. Introduction

In this chapter, we provide an overview of all of the small, medium-sized, and large interventions proposed for our four scenarios and the three TOPOI. Sometimes, we have borrowed from real-world examples and adjusted them to our cases. Then, the real-world cases are documented in the appendix. Some of the solutions are generic, such as green roofs or street furniture so that no one in particular can be defined as the author of this idea.

The interventions are ordered according to their impact area: *Building Types, Mobility, Green and Blue Networks or Functions*.

We have also compiled them in a digital Urban-Rural Intervention Catalog accessible under uric.spacelab-isu.org, hoping that readers will add solutions so that we can extend this catalog of sustainability solutions.

8.2. Building Types (B)

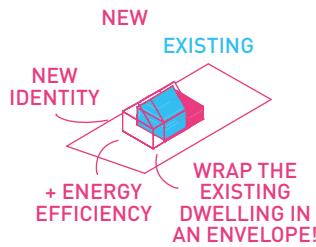


8.1

► B.1 ROOFTOP NEIGHBORHOOD

The TOPOI surveyed are teeming with flat roof buildings. By adding light-weight modular structures on top, we can develop “rooftop neighborhoods” with new apartments around a common outdoor space without increasing soil sealing.

(inspired by Sauerbruch Hutton Gesellschaft von Architekten mbH 2022; Sigurd Larsen Architekten GmbH 2022)

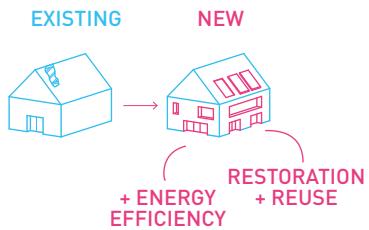


8.2

► B.2 THERMOHOUSE

As an upgrade for the existing building stock, the ‘thermohouse’ is an envelope wrapping around existing buildings, for example, single-family houses. More space is generated while the energy efficiency of the house is improved and solar energy can be harvested for various purposes in an efficient low-tech manner.

(inspired by BIG (Cogley 2018); MVRDV (Daily 2012); Praeger Richter Architekten GmbH 2022)

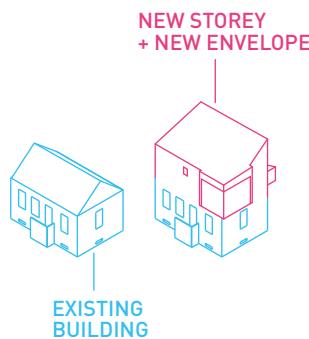


8.3

► B.3 NEW LIFE FOR OLD FARMS

Many of the farm buildings found in our study areas are currently not used but in good condition. Instead of letting them decay, they are refurbished and given a new use. Turning stables into apartments, offices, or studios can save a lot of gray energy.

(inspired by collaborative e.V. (Burke et al. 2019a); Spoeren Architekten und Partner mbB 2017)

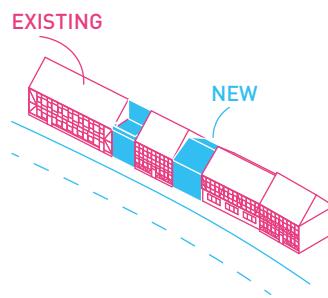


8.4

► B.4 LIMITED VERTICAL GROWTH

If an existing building has fewer square meters than required, it could be expanded vertically by adding a floor in place of the roof. With a good design, new living spaces can be created without extending the footprint.

(inspired by MVRDV 2022a; Woditsch 2018)

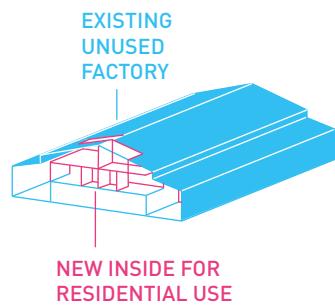


8.5

► B.5 CLOSE THE GAPS

For different reasons, in cities and villages alike, often times buildings are abandoned. And soon previously picturesque main streets are characterized by decay and vacancy, or gap sites in between buildings occur. However, these places offer great potential for densification. With the courage to close these gaps, it could become possible to avoid designating new building areas on the outskirts of settlements.

(inspired by Florian Nagler Architekten GmbH 2022)

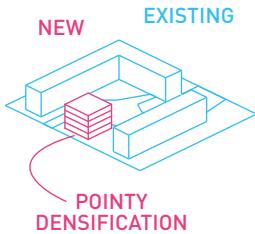


8.6

► B.6 FROM FACTORY TO HOUSING

Large old factories hold tremendous potential for conversion. Not only can people work in them, but they can also live there! The large floor area allows many different types of cohabitation, such as cluster apartments or large residential communities, as well as micro apartments.

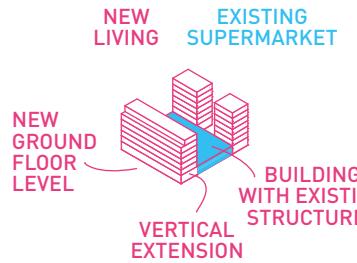
(inspired by Carlow 2022a, 2022d)



8.7 ► B.7 POINTY DENSIFICATION FROM WITHIN

The point type of densification works within an existing, loosely arranged ensemble of buildings. In some places, where there is usually a lot of open space, for example in the form of greened clearances or parking areas, additional housing space can be created where required. New types of housing, such as cluster or special-needs housing, can complement existing buildings where necessary.

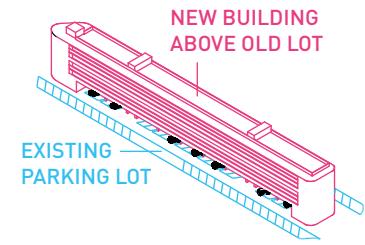
(inspired by LIN 2022)



8.8 ► B.8 SUPERMARKET LIVING

To date, most supermarkets are single-storey buildings with flat roofs built on their own plot of land – even in central locations. These typically large sites could be used more efficiently by adding housing or other functions on top of the building. Depending on how such additions are elaborated architecturally, wonderful open spaces can be created, which offer a great retreat for the residents due to their location above the street space.

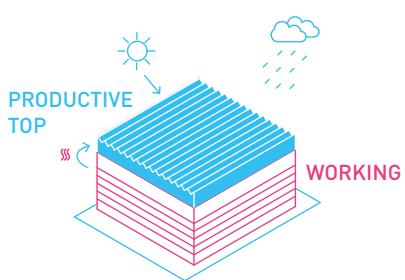
(inspired by zanderrotharchitekten gmbh 2022)



8.9 ► B.9 PARKING AND ELEVATED LIVING

The same principle can apply to parking lots. Above-ground parking takes up huge areas in cities, small towns, and villages alike. Instead, in some cases, buildings can be placed over existing parking lots to combine at least two uses without consuming more land. If there is no more need for parking, this sealed area can be used for other purposes.

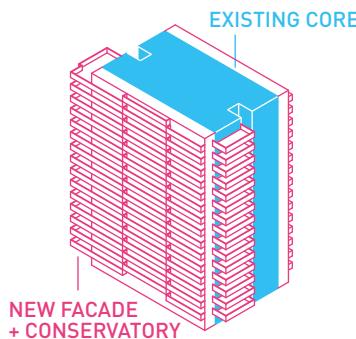
(inspired by Märkplan GmbH (Bundesstiftung Baukultur 2022k))



8.10 ► B.10 PRODUCTIVE ROOFTOPS

The nearby future requires us to think about the productive use of all vertical and horizontal surfaces. Productive roof spaces are an effective addition to existing and new buildings. Rainwater can be harvested; vegetables can be grown underneath lightweight greenhouse structures. These greenhouses can be heated with the waste heat of the building underneath, for example from the office floors or supermarkets.

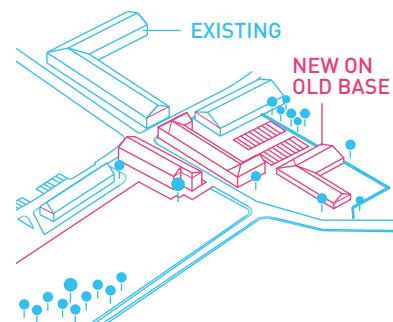
(inspired by BL Companies 2022; Kuehn Malvezzi [Schoof 2020])



8.11 ► B.11 NEW ENVELOPE, NEW OPPORTUNITIES FOR OLD BUILDINGS

By adding a new envelope to existing buildings, new opportunities open up in urban, suburban, and rural areas alike. The existing building stock is upcycled, optimized in terms of energy efficiency and space to meet today's standards and needs – thus gaining a new identity. The newly created space between the existing building and the new envelope can serve either public or semi-public purposes.

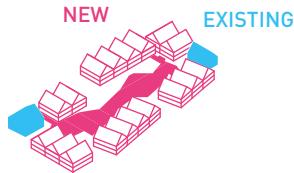
(inspired by Lacaton & Vassal Architects 2022; Carlow 2022c)



8.12 ► B.12 HERITAGE AS COMMUNITY GLUE

As they have existed for a long time and are often important landmarks in a village, town, or city, listed monuments in particular hold huge potential for the identification with a place. Reusing them, once their original purpose has ceased, thus bears great potential for communities.

(inspired by Libken e.V. (Burke et al. 2019b); Graf von der Schulenburg 2022)

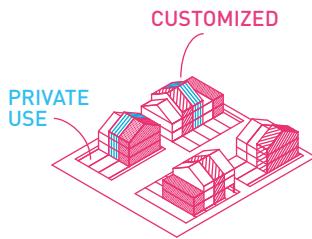


8.13

► B.13 COMMUNITY VILLAGE

The community village can be conceived as an addition to the existing building stock. With the consolidation of existing and new buildings in an open block arrangement, publicly usable space is created and new, communal forms of living can be established.

(inspired by Beer Bembé Dellinger (Bundesstiftung Baukultur 2022c); Wukania e.V. (Burke et al. 2019c))

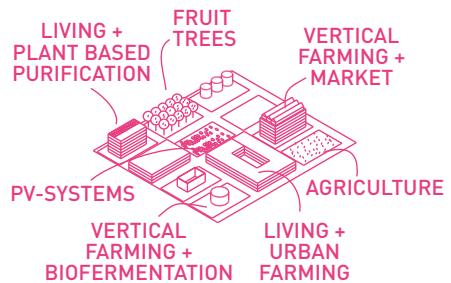


8.14

► B.14 MODULAR ROW HOUSING

This new approach to modular row housing breaks with the old-fashioned type where all houses are the same. This new building type can be described as a spatial envelope with a flexible interior. A handful of different modules are available that adapt to the needs of the residents, be it the number of bedrooms or the addition of a family greenhouse. As the houses vary not just in size but also in the layout and materials used, the occupants can choose how they want to live.

(inspired by MVRDV 2022b)

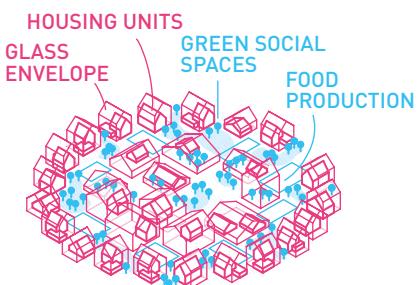


8.15

► B.15 PRODUCTIVE NEIGHBORHOOD

The productive neighborhood follows the principle of the Productive Roof-top on a neighborhood scale. With these different building types and uses, a new neighborhood emerges where living and urban production can be combined in manifold ways.

(inspired by MVRDV 2012)

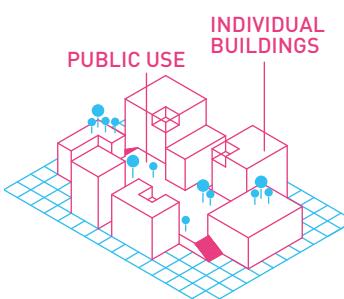


8.16

► B.16 SELF-SUFFICIENT NEIGHBORHOOD

The self-sufficient neighborhood also combines housing and production, but with a focus on self-sufficiency. Residential buildings are combined with greenhouses to promote local vegetable production. Energy generation, too, is organized locally and sustainably.

(inspired by EFFEKT Arkitekter ApS 2022a)



8.17

► B.17 MIXED DENSE LIVING

This building type connects individual buildings with a central element – the base. The first floor is dedicated to public uses, the green center can be both communal and private. Numerous functions can be accommodated in the base, such as parking, offices, child care, or cultural facilities.

(inspired by EFFEKT Arkitekter ApS 2022b)



8.18

► B.18 ECOVILLAGE

The ecovillage proposes a new kind of neighborhood that is completely dedicated to sustainability and circular economy. All buildings are built using renewable materials and in accordance with the cradle-to-cradle principle. Diverse housing types and mixed uses characterize the neighborhood.

(inspired by CITYFÖRSTER and Partnerschaft mbB Architekten 2022)

8.3. Streets, Mobility, Public Space (M)

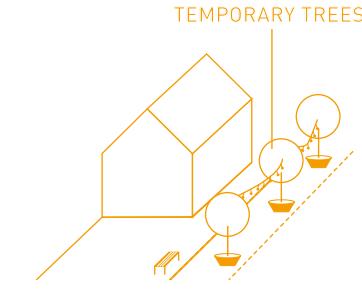


8.19

► M.1 STREET FURNITURE

Street furniture enriches public space and brings it back to a human scale. A bench invites to linger, it can become an informal meeting place, or a place for people to rest.

(inspired by TOPOTEK1 2018)

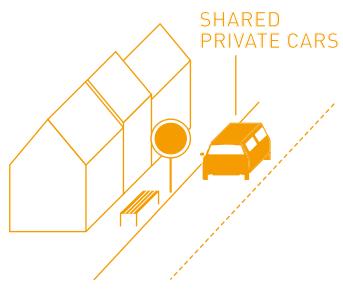


8.20

► M.2 TEMPORARY STREET GREENING

Temporary street greening also benefits the appearance of public spaces. This not only creates more green spaces, it also improves the ambience of the space intended for pedestrians and calms car traffic.

(inspired by Lokale Agenda 21 Wien 2021)

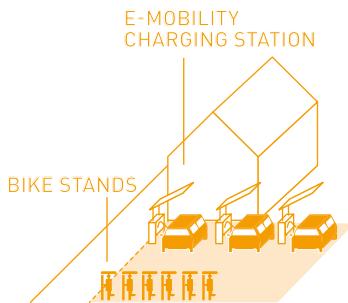


8.21

► M.3 RIDE-SHARE BENCH

This bench is not an ordinary bench. Preinstalled signs indicate the place in the area where you want to be taken. It is a mixture of public and individual transport. The ride-share bench is best placed at the main junctions.

(inspired by Kielregion GmbH 2022)

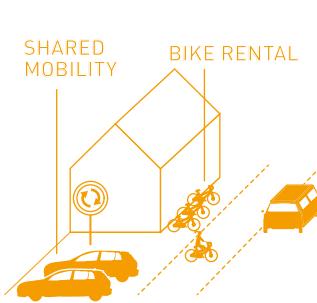


8.22

► M.4 MOBILITY HUB 'S' (SMALL SIZE)

This mobility hub brings together existing modes of transport at one location. Here, people switch from bicycles to buses to travel to the next larger town or back home. Electric vehicles can be charged or bicycles repaired while they are parked. At the same time, parking lots that are no longer needed are turned into flower beds or meadows.

(inspired by DB 2022)

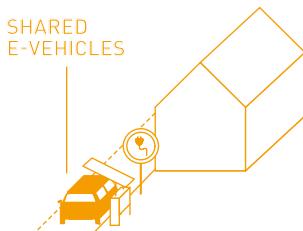


8.23

► M.5 SHARED CARS AND BIKES

Sharing cars (and bikes) not only saves material resources but also space. With the provision of shared vehicles, we could be moving directly towards a low-car society.

(inspired by GASAG AG 2022)



8.24

► M.6 E-VEHICLE CHARGING STATION

Charging stations are provided to advance the use of electric vehicles, preferably shared ones. These EVs can also be powered by solar energy at this charging station. However, a charging station can also become a meeting place that enriches the community on a social level.

(inspired by Stromnetz Hamburg (NDR 2021))

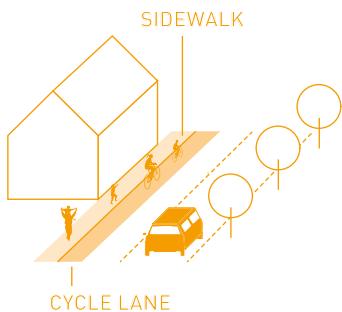


8.25

► M.7 PLAY STREET

By transforming a road into a play street, the street space can be shared equitably by all traffic participants. Drastically reducing the speed of cars to that of pedestrians not only reduces emissions, but also makes streets safer and more usable for all residents, including children who reclaim the street space with their play.

(inspired by BA Friedrichshain Kreuzberg (Berlin-Online Stadtportal GmbH & Co. KG 2021))

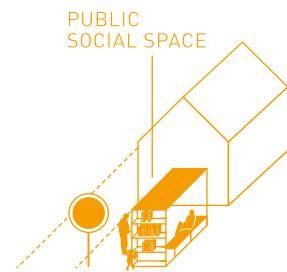


8.26

► M.8 VISIBLE SEPARATION

In villages, roads are often not divided into sidewalks and driveways. This is to the large disadvantage of pedestrians and frequently also cyclists. Creating at least a strong visual division makes it safer for pedestrians to use the streets.

(inspired by TOPOTEK1 2018)

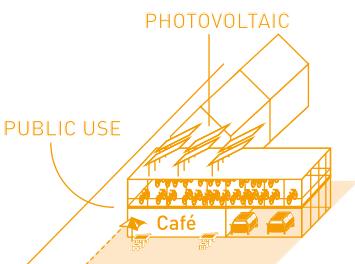


8.27

► M.9 BUS STOP LIBRARY

This combination of social meeting place and public transport stop can come in many different forms. The bus stop library makes public transport more attractive and additionally reclaims the public space as a meaningful meeting point.

(inspired by LAG AktivRegion Eider-Treene-Sorge e.V. 2017)

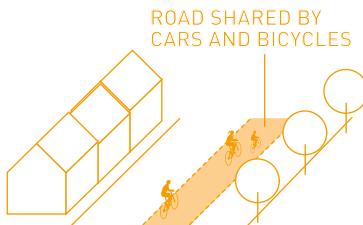


8.28

► M.10 MOBILITY HUB 'M' (MEDIUM SIZE)

This is an extension of the mobility hub 'S'. Several floors provide more space, for example, for a bicycle parking garage; at the same time, this place is enriched with publicly accessible uses such as a café or small shops. Solar panels on the roof generate electricity for the café and for charging the vehicles parked there.

(inspired by querkraft architekten 2022)



8.29

► M.11 POP-UP CYCLE LANE

The pop-up cycle lane is a cost-efficient solution to test the feasibility of bike lanes in villages. Even if there may not be much traffic in a village, it is important to create a good infrastructure for a more sustainable and comfortable local mobility.

(inspired by Stein and Klein 2020)

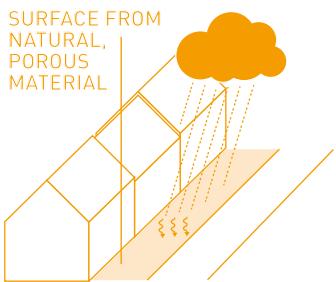


8.30

► M.12 INFILTRATION DITCH

Along the course of a road, it often makes sense to install an infiltration ditch. This adds greenery to the street space and creates an additional separation between private and road space. This decentralized drainage system also ensures that the roads are usable in the event of heavy rainfall.

(inspired by Rafanan 2019)

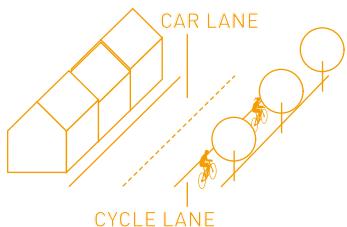


8.31

► M.13 PERMEABLE ROAD SURFACES

Sealing of land should be avoided, as this destroys the habitat for many creatures and increases the danger of local flooding in the event of heavy rainfalls. The permeable road surface is a solution to decrease gray areas, in particular in villages. Where asphalt surfaces disappear, streets built from natural materials such as stones are a good option to increase permeability.

(inspired by DAV 2007)



8.34

► M.16 CYCLE LANE

An additional cycle lane is intended to reduce car traffic in the village. Safe and convenient use will make it easy and attractive to switch from car to bike.

(inspired by Aichinger and Frehn 2017)



8.32

► M.14 TRANSFORMED PARKING LOTS

New uses can be envisioned for parking lots that are empty most of the day. A pocket garden, a place to play outdoor chess, an extension of the local bakery for outdoor seating, a bench to rest, bike stands etc.; on just 12.5 sqm of parking space, many uses can be imagined.

(inspired by Fabian Lippert, LKA Berlin, RBG (db 2014); Lokale Agenda 21 Wien 2021)



8.33

► M.15 AUTONOMOUS VEHICLES

Autonomous vehicles could be a solution to make traffic and space consumption as efficient as possible. These vehicles transport locally produced goods from A to B and can also be used by all inhabitants; they help transform streets into a safe space for pedestrians.

(inspired by Senatsverwaltung für Umwelt Berlin 2021)

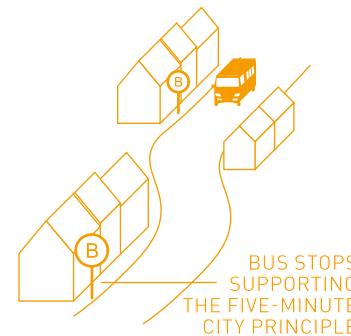


8.35

► M.17 RE-ACTIVATION OF RAILROAD LINES

Reopening old railroad lines shifts freight traffic back to rails, thereby reducing car traffic in towns and villages. Of course, local public transport around the villages can also benefit from this. This is a sustainable alternative to transporting goods by truck and to individual transport by car.

(inspired by Dostert 2021; MW 2022)



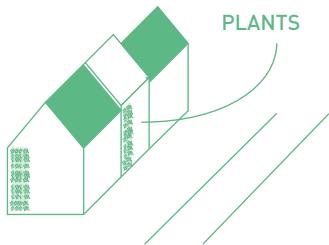
8.36

► M.18 SMART DISTRIBUTION OF PUBLIC TRANSPORT

With a clever distribution of bus stops, the principle of the five-minute city, where daily goods and services can be reached within a five-minute walk, can be transferred to rural areas, which often lack public transport options. On-call mobility solutions could also benefit from this.

(inspired by Carlow and Hong 2016; Carlow 2022b)

8.4. Green and Blue Networks (G+B)



8.37

► G+B.1 GREEN ROOFTOPS AND FACADES

Due to the shading and thermal buffer provided by plants, their insulating effect and evaporative cooling, green roofs and facades are an innovative solution for saving energy in buildings and cooling the immediate surroundings. In addition, these green spaces can serve as a habitat for animals.

(inspired by TOPOTEK1 2022)

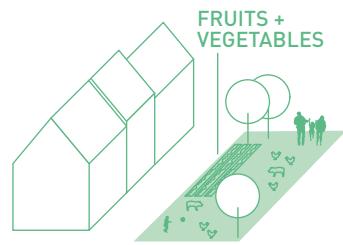


8.38

► G+B.2 PUBLIC PLAYGROUND

As a meeting place and play area, public playgrounds are an ideal retreat for children in cities, small towns, and sometimes also villages. By greening them, the relationship to nature can be strengthened and many things can be experienced and learned.

(inspired by LML 2022b)



8.39

► G+B.3 LOCAL FOOD PRODUCTION

Food is produced locally using green areas where fruit and vegetables can be grown and processed. If done in a sustainable way, this can decrease the ecological footprint of food production. (inspired by Prinzessinnengärten Kollektiv Berlin 2022)



8.40

► G+B.4 SPACES OF SOCIAL ENCOUNTERS

Places of social encounters can have many forms. They serve as meeting areas for residents and are important for a functioning community. Here, neighbors of all ages and backgrounds can engage in common outdoor activities such as gardening, barbecuing, or playing.

(inspired by LML 2022b; TOPOTEK1 2020)



8.41

► G+B.5 PUBLIC ACCESS TO WATER

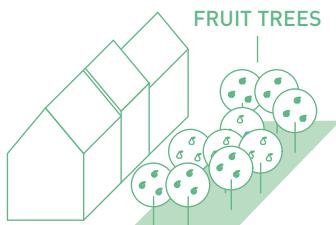
Where a watercourse exists, it should be made accessible to the general public as a recreational and play area. (inspired by Atelier Loidl, BPR (Bundesstiftung Baukultur 2022m))



8.42

► G+B.6 COMMUNITY GARDENING

To provide food locally, new green spaces are established where the community can grow seasonal fruit and vegetables for their own consumption. For this purpose, underused green spaces are detected. (inspired by Gemeinschaftsgarten Allmende-Kontor e.V. 2022)

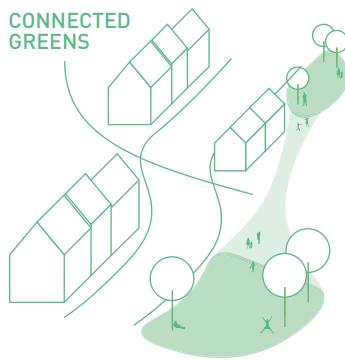


8.43

► G+B.7 MEADOW ORCHARD

The meadow orchards are scattered with a variety of fruit trees, which contribute significantly to biodiversity through environmentally friendly management by local residents and also serve as a habitat for many species of animals.

(inspired by BLE 2022)

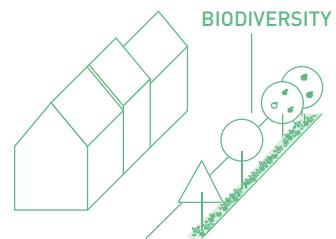


8.44

► G+B.8 EXTENSION OF PUBLIC GREEN SPACES

Extension of public green spaces allow plant, animal, and fungal species to flourish in a contiguous area. Unused areas can be naturalized and used for recreation. Additionally, green spaces serve to cool the surrounding area.

(inspired by LML 2022a)

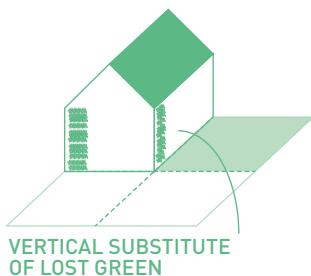


8.45

► G+B.9 INCREASE OF BIODIVERSITY

In order to ensure an intact nature, it is necessary to increase the biodiversity by providing appropriate open spaces, so that genetic diversity, clean air, and fresh water can be preserved. Small wild patches of green along streets or in private gardens can help.

(inspired by NABU 2022)

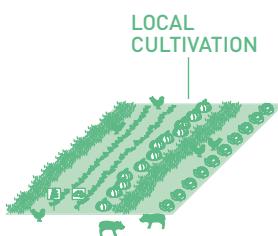


8.46

► G+B.10 NEW BUILDINGS – EQUAL GREEN

Usually, the construction of new buildings leads to the loss of open or green areas. In this approach, the area of green spaces that is lost through construction is replaced vertically on the facade or horizontally on the roof.

(inspired by LML 2022b)

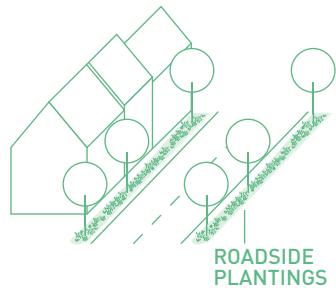


8.47

► G+B.11 COMMUNITY FARMING

As with community gardening, areas for growing fruit and vegetables for private use are cultivated on a communal basis. In addition, keeping some farm animals is also possible here.

(inspired by Common Grounds e.V. 2022)



8.48

► G+B.12 GREEN STREETS

Accompanying greenery and roadside plantings along roads or sidewalks increases biodiversity and can create a more appealing habitat and microclimate for humans and animals.

(inspired by A24 (Bundesstiftung Baukultur 2022))



8.49

► **G+B.13 LET NATURE RECLAIM**

Fallow land can be left to nature so that it can expand and flourish naturally, enlarging the habitat for many animals, plants, and insects in the long term.

(inspired by Groupement Superposition (BAFU 2019))



8.50

► **G+B.14 MULTIGENERATIONAL PARK**

This public green space offers active and recreational opportunities to people of all ages, bringing together different generations. It promotes physical and mental health, targeting the needs of all users, while being accessible to everyone.

(inspired by Atelier Loidl, Steinfeld und Partner (Bundesstiftung Baukultur 2022e); TOPOTEK1 2020)

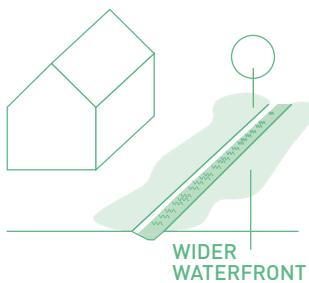


8.51

► **G+B.15 EDIBLE CITY**

In the edible city or village, the open space – public or private – is used for food cultivation and also animal products. No designated areas are needed as crops are simply planted and harvested randomly.

(inspired by Essbare Stadt e.V. 2022)



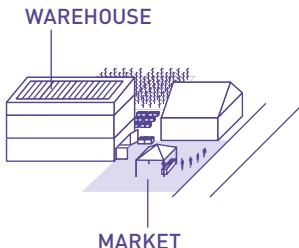
8.52

► **G+B.16 FLOOD PROTECTION**

Vegetated areas are added to extend the waterfront and to improve natural rainwater retention and flood prevention. In doing so, the plants and retention areas slow down the rising water and at the same time serve as valuable habitats.

(inspired by HWSTeam, Obermeyer, Rose Fisch, DeZwardeHond, Blasy Øverland (Bundesstiftung Baukultur 2022h))

8.5. Functions (F)

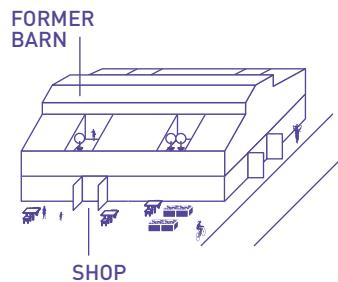


8.53

► F.1 INCREASE OF LOCAL SUPPLY

When more daily goods are available in the village, people do not have to drive miles to do their shopping. Items for daily needs are offered in the immediate vicinity, thus strengthening the local economy and saving time and emissions.

(inspired by Atelier Le Balto, Baubüro Lehniger, Lindig Herbst Lichtenheld, K2L (Bundesstiftung Baukultur 2022f))

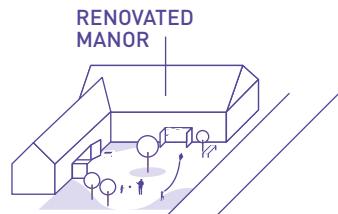


8.54

► F.2 TRANSFORMATION OF FUNCTIONS

After its renovation, the barn, where horses and cattle used to be kept, now serves as a residential building, office space, local supply shop, and as a community meeting place. Especially its size makes it ideal for these purposes.

(inspired by Atelier Le Balto, Baubüro Lehniger, Lindig Herbst Lichtenheld, K2L (Bundesstiftung Baukultur 2022f); Rolf Klärle (Bundesstiftung Baukultur 2022a))

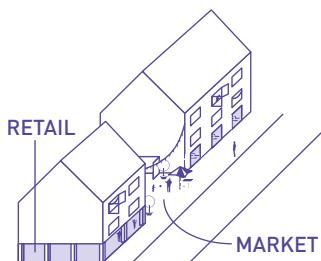


8.55

► F.3 RE-USE OF HERITAGE BUILDINGS

Through renovations in keeping with monument preservation requirements, unused listed buildings can be filled with a new meaning again. In this way, sustainable uses can be ensured and gaps in the townscape caused by vacancies can be reduced.

(inspired by Marc Flick (Bundesstiftung Baukultur 2022d); Böll Architekten GmbH 2017)

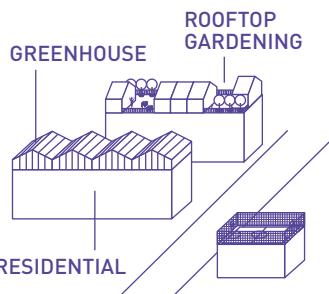


8.56

► F.4 MIXED-USE COMMON SPACES

The linking of functions has an added value for each neighborhood, because it means that errands can be done in one place and spaces can be used for different purposes. Meeting places can be created for joint indoor and outdoor activities.

(inspired by steidle architekten, Jühling & Partner, WGF Objekt (Bundesstiftung Baukultur 2022b))

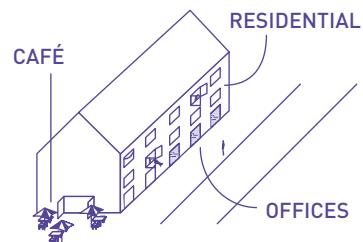


8.57

► F.5 VERTICAL DENSIFICATION

Existing buildings can be extended vertically so that the roof areas are used for housing or urban gardening. This means that no additional areas need to be sealed and the building footprint is not increased.

(inspired by Eyrich-Hertweck (Bundesstiftung Baukultur 2022g))



8.58

► F.6 MIXED-USE BUILDINGS

Combining working, housing, and public functions has many advantages. It reduces travel time and resource consumption and also makes optimum use of the available space.

(inspired by Kaden + Lager (Bundesstiftung Baukultur 2022j); steidle architekten 2015)

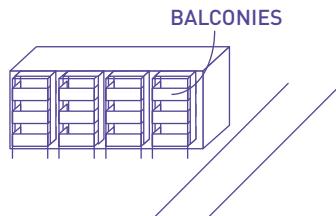


8.59

► F.7 TEMPORARY SMALL-SCALE USE

Vacant buildings can be brought back to life through temporary and small-scale uses. Often times, the size of unused buildings is considered a barrier for reuse. However, buildings can be subdivided into smaller units so that many different users share the available space. The individual units can be very diverse but share certain amenities, such as administration or kitchen.

(inspired by Gemeinde Ummendorf 2022; VorOrt e.V. [Land Sachsen-Anhalt 2022])

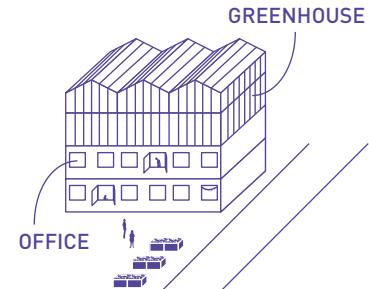


8.60

► F.8 EXTENSION OF FUNCTIONS

In order to counteract new construction and strengthen the existing building stock, existing buildings can be expanded and adapted in a sustainable manner to suit contemporary uses and make them fit for the future.

(inspired by Behles Jochimsen [Griffiths 2022]; Erbar Mattes [Astbury 2022])

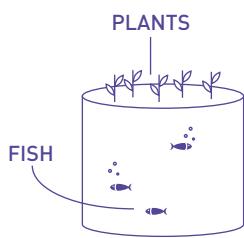


8.61

► F.9 AGRICULTURE AND MIXED-USE BUILDINGS

This new building type combines different functions such as office spaces and greenhouse. The waste heat from offices can be transferred to the greenhouses on the rooftop. There are areas both inside and outside where vegetables and fruit can be grown. The surfaces are large enough to generate a surplus – more than the users of the buildings can consume themselves. The harvest can therefore be processed directly in the building or sold in a small sales point.

(inspired by Biohofladen Overmeyer KG 2022)

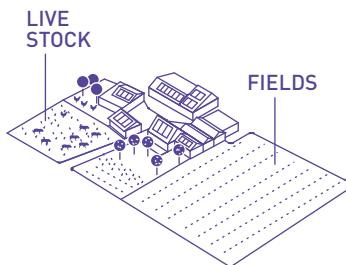


8.62

► F.10 AQUAPONICS

The breeding of fish, crabs, or shrimp in water tanks is combined with the cultivation of different plants, like vegetables, in a closed-loop system. The nutrients in the water are retrieved to grow and fertilize the plants, thus creating a symbiosis.

(inspired by bauchplan 2019)

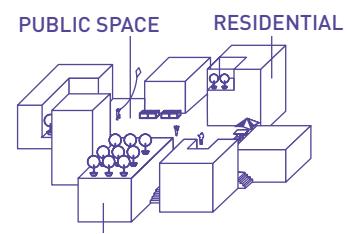


8.63

► F.11 ORGANIC AGRICULTURE+

Through environmentally friendly processes and animal husbandry, food and goods are produced ecologically. This is done using holistic production systems that promote biodiversity, soil fertility, and are adapted to regional conditions.

(inspired by Biohofladen Overmeyer KG 2022)

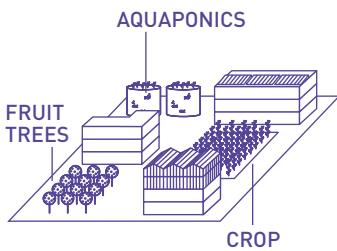


8.64

► F.12 DENSIFICATION OF FUNCTIONS

By condensing functions, it is possible to develop a well-functioning neighborhood with urban diversity and different uses. The existing uses benefit from new uses and development as they function well side by side. This reduces the need for transport and the overall resource consumption.

(inspired by Kaden + Lager [Bundesstiftung Baukultur 2022j]; Guhr Architekten [Bundesstiftung Baukultur 2022i]; steidle architekten 2022)

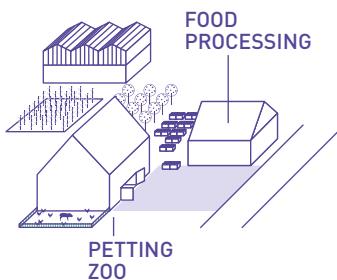


8.65

► F.13 GARDEN LIVING

Fruit and vegetables for one's own use can be grown and harvested right outside the front door or on the roof area. Linking these two functions spatially therefore reduces both the need for transport and land consumption.

(inspired by Graf von der Schulenburg 2022)



8.66

► F.14 LOCAL SMALL FARMS

Like the agriculture and mixed-use compound, the local small farm also enables the local production and processing of agricultural products. Additionally, small animals can be kept. This is much to the joy of children who can learn about different species and appreciate the value of wholesome food and all living creatures.

(inspired by Guhr Architekten (Bundesstiftung Baukultur 2022i))

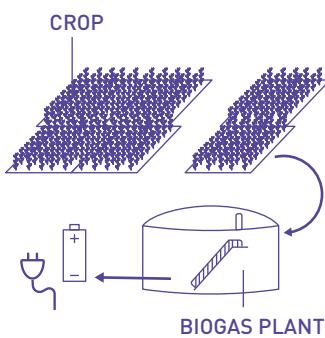


8.67

► F.15 VERTICAL FARMING AND GARDEN CENTER

This is another version of the productive rooftop. Plants are cultivated on top of the garden center and sold in the same place.

(inspired by Kuehn Malvezzi (Schoof 2020))

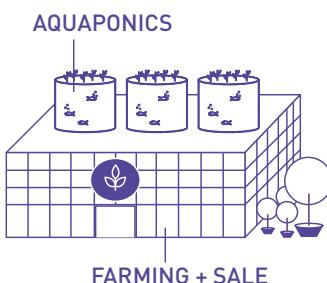


8.68

► F.16 MONOCULTURE AS ENERGY SOURCE

Monocultures have the advantage that large harvests can be achieved. In this case, the use of certain plant species such as wildflowers (instead of, for example, maize) can be restored in order to promote the ecosystem and biodiversity despite single-crop farming. After harvesting, the plants are fermented in biogas plants.

(inspired by Meier 2019)

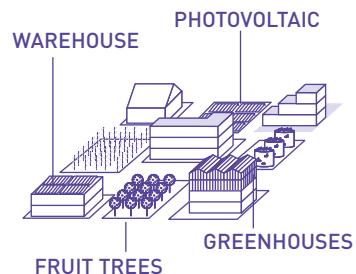


8.69

► F.17 AQUAPONICS GARDEN CENTER

This is yet another version of the Productive Rooftop. The products from the coupled system of fish farming and plant cultivation are produced and sold in one place.

(inspired by bauchplan 2019)



8.70

► F.18 SYNERGIES BETWEEN DIFFERENT FUNCTIONS

Functions and uses of buildings can complement each other wonderfully. By combining different functions, productive interaction can be achieved and synergies leveraged, which strengthens the interconnectedness of functions and ultimately the neighborhood. Many combinations are conceivable.

(inspired by steidle architekten 2022; Kaden + Lager (Bundesstiftung Baukultur 2022j))

