Design Framework
for Neighbourhood Resilience

Bridging human and other-than-human perspectives in urban design

CONCEPT VERSION 1.2

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Bridging human and other-than-human perspectives in urban design

Introduction

This leaflet showcases a design framework for building community resilience in urban neighbourhoods. At its core, the framework challenges designers and other professionals to not only consider resilience in human communities, but also in other-than-human communities, including plants and animals. The framework proposes a set of five concepts that help bridging these two perspectives; each concept describes an important condition for community resilience to emerge for both humans and non-humans.

Urban resilience, Public space and civic engagement

A growing portion of the human population lives in urban environments. These environments, and the citizens that reside in it, have to face various shocks and stressors. The **Covid-19 pandemic** is a striking example, impacting people's daily lives in ways unimagined before. Besides these recent and ongoing developments, other challenges are at the horizon. The impacts of **climate change** are already clearly visible, through

issues such as urban heat and flooding, while the effects of **biodiversity loss**, such as food and resource accessibility, are not clearly visible yet.
The framework in this leaflet offers directions for urban designers to address these various shocks and stressors, with a particular focus on building more resilient communities through **public space** and **civic engagement**. Furthermore, it challenges designers to look beyond **human communities**, and also contribute to the resilience of **other-than-human communities**.

Reading guide

The framework is presented in two parts. First, the framework, its rationale and its key concepts are introduced. This offers designers an initial understanding of resilience in **human** and **other-than-human communities**. Second, the leaflet offers concrete directions for designing according to this understanding; here, each of the concepts is supplemented with both **spatial** and **civic** design examples and strategies.

COMMUNITY RESILIENCE IN URBAN NEIGHBOURHOODS

HUMAN RESIDENTS

OTHER-THAN-HUMAN RESIDENTS

Considering 'other-than-humans' in building more resilient neighbourhoods

Resilience in urban neighbourhoods is generally considered from a human perspective; how to withstand, adapt or transform the various shocks and stressors that humans may face in their neighbourhood? But besides humans, other organisms also reside in urban neighbourhoods, and these are considered in the framework for both inclusive and pragmatic reasons. From an inclusive point of view, we consider other-than-humans as worthy of consideration and appropriate care in their own right. Neighbourhoods should be designed to allow these residents to form resilient communities. Pragmatically, we propose that building resilient other-than-human communities is a good way of taking proper care of public green spaces – spaces that play an important role in mitigating and adapting to the shocks and stressors related to pandemics, climate change and biodiversity loss.

Distinguishing 'human' and 'other-than-human' communities

Why separate the 'human' from the 'other-than-human'? Increasingly, humans are seen as being interconnected with, and dependent on, the natural world. Contrastingly, the framework creates an artificial divide between human and other-than-human residents. The reason for this is that issues of resilience in these different communities tend to be distinct. Furthermore, professionals with different disciplinary backgrounds and expertise attend to these issues. By emphasizing two different kinds of communities in urban neighbourhoods, the framework invites urban designers to bring together expertise from both social and ecological perspectives, and to find potential synergies that address neighbourhood resilience in an integral way.

Five concepts that bridge 'human' and 'other-than-human' perspectives

The framework outlines five concepts, of which each is considered an important condition for resilience to emerge in both human and other-than-human communities. The concepts form links or bridges between human and other-than-human perspectives, setting the stage for dialogue between different disciplines, as well inviting designers to integrally tackle issues of resilience when designing public spaces and forms of civic engagement.

AGENCY

Neighbourhood resilience requires its residents to express a level of agency. Residents need to be given the space to act in line with their shared needs and interests.

For human residents, agency means having opportunities to appropriate elements of public space, to feel a sense of ownership, and to have a say in local developments. An ultimate expression of such agency is when local residents show leadership in trying to improve their neighbourhood.

For other-than-human residents, agency means having a place to settle in a neighbourhood, to display natural behaviours, and to receive the right forms of 'care' and 'maintenance'. Ultimately, other-than-humans are recognized by human residents, and have their needs represented in decision-making processes.

CONNECTION

Neighbourhood resilience requires residents to build and maintain relevant connections. Residents need to be able to encounter one another to form a community.

For human residents, connection means having access to places and activities to encounter one another, to identify or articulate shared goals and interests, and to establish meaningful relationships. Ultimately, such connections create a sense of belonging and a basis for collective action.

For other-than-human residents, connection means being able to migrate, to encounter other residents that they depend on, and to exchange and communicate. Ultimately, residents are able to make relevant connections that contribute to more robust ecosystems and populations.

DIVERSITY

A resilient neighborhood requires communities in which a diversity of residents can contribute in their particular ways. Residents need to find particular niches in which these contributions can be made.

For human residents, diversity requires having an open and inclusive mindset, in which people of different age groups, cultural backgrounds, and disciplines feel welcome to express their views and make their contributions. Ultimately, such diversity leads to various ways in which a community can act and respond in times of difficulty.

For other-than-human residents, diversity means fulfilling or creating particular ecological niches and playing an integrated role in urban ecosystems. Ultimately, they together form biodiverse ecosystems and a genetically diverse populations, which are capable of adaptation in the face of shocks and stressors.

RHYTHM

A resilient neighborhood requires its residents to take part in rhythms, which offer continuity in their relations and in their shared efforts. Residents need to create these rhythms, or synchronize with those that are already present.

For human residents, rhythm means organizing daily, weekly, monthly or seasonal rhythms, depending on the type of activity. Ultimately, these rhythms maintain and strengthen the relationships in a community and serve as a basis for long term efforts.

For other-than-human residents, rhythm means that they attune to natural as well as urban rhythms in which their interdependencies with other residents play out. Ideally, other-than-human residents are able to perform their acts of foraging, migration, and reproduction, without their rhythms being disturbed.

ABILITIES

A resilient neighbourhood relies on the abilities that its residents can contribute to the community. Residents can use these abilities as important resources for anticipating and responding to shocks and stressors that their community is facing.

For human residents, abilities mean having relevant skills and knowledge, obtained through personal or professional experience. These skills and knowledge can consciously be developed for particular purposes. Ultimately, such abilities are connected to relevant situations and efforts in the community.

For other-than-human residents, abilities means having the ability to adapt and thrive in the often dynamic urban environments that they reside in. Ultimately, abilities of other-than-human residents can play a role in promoting resilience in the community as a whole. These abilities can be consciously selected for by human residents.

...

Besides the concepts outlined above, designers bring their own experience and expertise to the table. Therefore, the framework encourages to add other relevant qualities or conditions for community resilience to emerge. These may apply to either human or other-than-human communities, or both.

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CIVIC DESIGN

HUMAN RESIDENTS

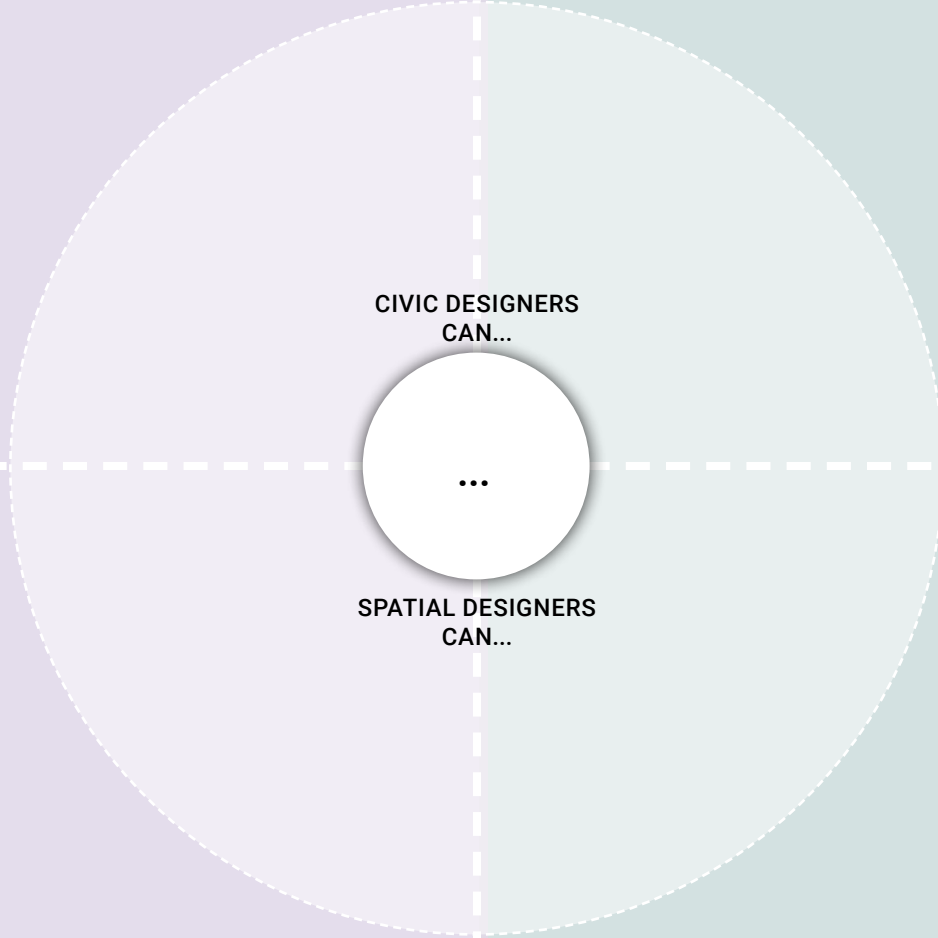OTHER-THAN-HUMAN RESIDENTS

CIVIC DESIGNERS
CAN...

...

SPATIAL DESIGNERS
CAN...

SPATIAL DESIGN

For contributing to the five conditions outlined above, useful starting points for intervention are public space and civic engagement. Two design disciplines that correspond to these focal areas are: *spatial design* and *civic design*.

Spatial design is concerned with the (re)design of spaces, and how spatial elements and qualities can play a meaningful role in addressing societal issues. The shaped physical space literally sets the stage, hence it involves a sensitivity for how space and its users interact. **Civic design** aims to contribute to meaningful social relations in public life and to new forms of living together that are appropriate in light of societal issues. It is a collective affair, in which the designer works together with communities, governments and non-governmental organizations.

While spatial and civic design may overlap in several ways – in practice, each can contain elements of the other – their emphases are distinct and connect well with the purpose of the framework. The spatial aspects of public space play an important role in facilitating public life of local residents, while civic initiatives are important in enabling local residents to be represented and to organize themselves in the face of shocks and stressors. As such, civic and spatial design hint at different possibilities to tackle issues of community resilience.

On the backside of this leaflet, some of these possibilities are presented, using the model depicted above. The model consists of four quadrants, based on the distinctions between human versus other-than-human and spatial versus civic design. By placing each of the five key concepts of the framework at the centre of these quadrants, designers can explore the framework more in-depth and generate and collect ideas.

CIVIC DESIGN

Huasipichanga is an urban consultancy that uses co-design methods to develop urban solutions with and for people. This project in Bolivia involves children within the design of a space, later on becoming a town square for the community to gather.

Opzoomer mee is an organisation that supports citizens to take initiative to improve their neighbourhood environment.
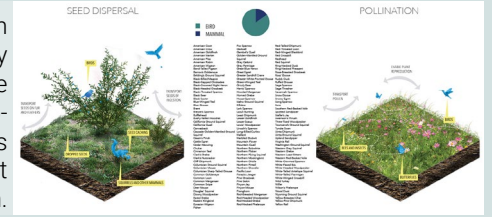
HUMAN RESIDENTS

Desire paths created are unplanned paths formed by the wishes of pedestrians.

The project co-creation with animals proposes a typology of animal functions that enable humans and non-humans to co-create urban landscapes. Functions include seed dispersal, nutrient cycling, and water filtration.

The 'Ministry of Multispecies' invites humans to wear animal or plant masks and take an other-than-human perspective.

The 'Growing Codesign' project uses sensing technology to invite plants to become co-designers. It explores methods and required sensibilities to design for a 'more-than-human' world.

OTHER-THAN-HUMAN RESIDENTS

...organise participatory activities to empower and give agency to public space users

...find ways to involve other-than-humans in design and decision making processes

CIVIC DESIGNERS CAN...

...involve other-than-human as 'stakeholders' within their design process

...leave room for citizens' own goals, ambitions, etc.

AGENCY

...create spaces that can be adapted and changed by the community

...create green space that gives particular shelter to other-than-humans

SPATIAL DESIGNERS CAN...

... leave room for people to appropriate their local public spaces

...develop porous building elements that leave room for plants to settle and grow on

'Geveltuinen' (façade gardens) give citizens the possibility to appropriate a part of the sidewalks adjacent to their façade and to green their streets.

'The Recycled Park' is a floating aquatic park that allows birds, fish and micro-organisms to find shelter on top or underneath hexagonal blocks.

The facade of the House like Garden from Marc Koehler Architects is designed with the intention to allow plants to grow, settle in and appropriate the facade surface.

Various companies produce bricks or other building elements that are permeable or porous, either for rain water to run through and plants to settle, or for particular insects to settle such as wild bees.
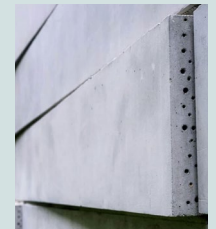
SPATIAL DESIGN

The project "Wilde chefs" connects local residents through cooking and enjoying food together. The chefs are women with various cultural backgrounds, who collaborate and learn through their shared efforts. Other local residents get to enjoy the food and the pleasure of eating together.

In the Netherlands, citizens are allowed to create 'geveltuinen' - narrow gardens adjacent to frontal façades. Facilitated by the municipalities, residents can remove a number of tiles or bricks, creating space for small gardens with preferably native species. The gardens can form stepping stones for various insects to migrate.

HUMAN RESIDENTS
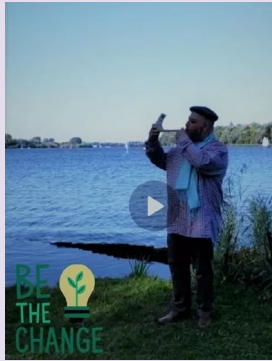
The platform Wij Amsterdam allows residents to search for and join grassroots activities taking place in their neighbourhood. The weekly walk of "Wandelgroup Oud Zuid" is an opportunity to connect with fellow residents in a corona-proof way.

... organise activities that facilitate shared learning between people with different cultural or socio-economic backgrounds

...create opportunities for residents to learn about each other's interests, ideas and activities

CIVIC DESIGNERS CAN...

...organise participatory community activities to create, expand or maintain ecological corridors, stepping stones and common green-blue spaces

Community gardens created by residents often feature flowering plants, which offer pollen and nectar for bees and other insects, and seeds and nesting material for birds and other small critters.

OTHER-THAN-HUMAN RESIDENTS

CONNECTION

The Barcelona Superillla project pedestrianises 50% of the street space. Thereby new local pedestrian connections are established as well as space for communal activities and encounters.

...promote soft mobility and local connections

...create spaces for sharing and exchange

SPATIAL DESIGNERS CAN...

...contribute to ecological networks, allowing non-humans to migrate

Wildlife bridges are infrastructures that allow animals cross human infrastructures safely. The image depicts red crab migration on Christmas Island.


... create spaces that require joint maintenance or care

...facilitate interspecies connections that particular species depend upon

Little libraries invite people to share books with fellow residents. Volunteer stewards work together to make sure the library keeps functioning.

...trigger social interaction and facilitate dialogue

By creating water streams and rain water storage areas that connect to the nearby water bodies, the green-blue network through which fish and water insects can migrate is expanded.

The see-saw bench triggers social interaction by shifting the balance based on how many people use it. It invites users to interact and coordinate.

Pollinator gardens support the natural process of pollination. They enable foraging bees to connect to flowering plants that need their pollens to be disseminated.
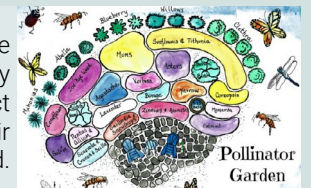
SimeriLab is a co-creation initiative to reactivate and regenerate an almost abandoned town in South Italy. Activities are organized to build a stronger community. One of the activities is a movie night that includes facilitating a conversation between local residents of different age groups.

The 'Ministry of Multispecies Communications' includes a walking activity while human participants wear animal masks. It invites humans to take the perspective of various other-than-humans in a particular neighborhood.

Tú También Construyes Cuenca ('You also build Cuenca') is a co-creation project that considers the perspectives of the underrepresented local youth of Cuenca city.

Native plants in a neighborhood provide botanic learning opportunities. Tagging plants with their names and growth requirements, makes residents aware of these plants and perceive the immense diversity of species living in their neighborhood.

...include diverse perspectives in the design process (cultural, socio-economic, age, gender, minority, vulnerable groups)

...organize community activities to discover the diverse perspectives of other-than-humans

CIVIC DESIGNERS CAN...

...support educational projects about (bio)diversity

DIVERSITY

... make the space physically accessible for people of different ages and abilities

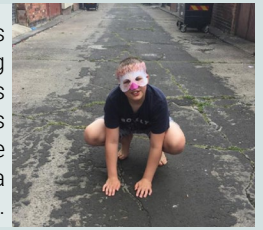...create spaces for local species to take over, thereby strengthening local biodiversity

SPATIAL DESIGNERS CAN...

...create a multifunctional space that accommodates various activities

... become aware of the various local species to take informed decisions about integrating habitat

... create an accessible space that resonates with diverse audiences

The Schouwburgplein in Rotterdam is a square that serves various needs and functions. It is a playground, a space for outdoor events, a place for meeting, chatting, and listening to music.

Dutch artist Herman de Vries has created different versions of a 'nature sanctuary', which demarcates a particular area for plants to spontaneously settle without human interference.

The Barcelona Superillla project pedestrianizes 50% of the street space. The newly created public spaces facilitate diverse functions and activities, such as yoga sessions and play areas.

The Dutch Bird Protection Agency ('Vogelbescherming'), has a service that allows you to enter a postal code and get an overview of what birds are active in that area. It gives additional tips on how to improve their habitat, for example, by selecting particular plants for cover or food.

The local chefs from 'Wilde Chefs' prepared dinners every Thursday for local residents.

The Tulsa Community Trust group organises annual FruitFest and an occasional SpringFest every April since 2012, celebrating food growing and making a good use of the local apple harvest.
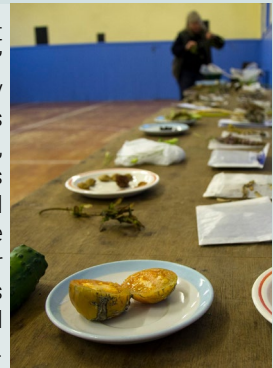

The 'water square' in Rotterdam is a public space that is a playground, while also serving as a water collector in case of heavy rain.

The urban art installation "greetings to the sun" allows users to experience two very different atmosphere of the public space during day and during night. In particular, during the night when generally outdoor spaces are perceived as less safe, this area becomes extremely playful and full of children, thus, safer than during the day.

"The Urban Growth" is a social enterprise that improves Londoners' well-being by collaborating with them to create & maintain beautiful, biodiverse spaces. Here it is shown how the phase of maintenance is important as much as the design, and how it is a recurring activity.

'People Learning About Nature in Tayport' (PLANT) is a community group that organizes activities to grow food, reduce carbon emissions and enhance the natural environment. One workshop in September focuses on saving seeds of local plants, fruits and vegetables.

Different wild bee species are active at different times of the year. By selecting plants with different times of flowering, nectar and pollen can be provided throughout the year. There are calendars that can help in this regard.

In Lille's Parc de la Citadelle, a nocturnal corridor was created, in which the light colour changes according to the seasons and according the presence of human pedestrians.

... organise an activity or event on a particular day of the week or month, creating a sense of continuity and regularity

...attune collective maintenance activities to ecological cycles

CIVIC DESIGNERS CAN...

...organise recurring annual events to engage a community over the long term

...plan workshops and community activities based on seasonal opportunities

RHYTHM

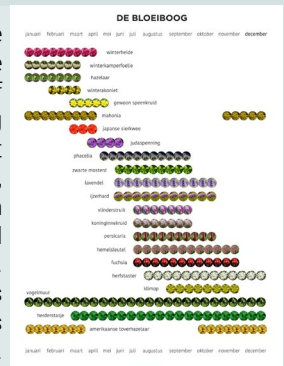...design spaces that can be experienced differently over time

...be aware and respond to the seasonal needs of various other-than-humans

SPATIAL DESIGNERS CAN...

...consider how the experience of public space users can change between day and night

... take into account circadian rhythms of other-than-humans, and be particularly careful with light pollution in relation to nocturnal animals

In the project T uit West, The Beach organizes workshops to teach local residents how to grow tea herbs, and process them into finished products to sell.

'Warm in wijk' is a local cooperation aiming at making a particular neighbourhood in The Hague more sustainable. Their cooperation includes three 'energy coaches' who can advise local residents for their particular home situation.

Little libraries can be place in public place where people have the opportunity to share books and learn.

A skate park allows children to gain skills and to exchange and express them, leading to a sense of pride and belonging.

Community gardens allow local residents to build and practice their botanical skills.

A group of researchers from the UK organized several workshops, investigating how to cooperate other-than-humans such as bees, plants, dogs and water. In their workshop on honey bees, they explored what concerns bees have, what choices they can make.

Animals such as swifts, swallows and bats are good at catching insects; a single swift may catch up to 20.000 insects a day. Their diet includes mosquitoes, thereby controlling populations that otherwise might form a nuisance for humans.
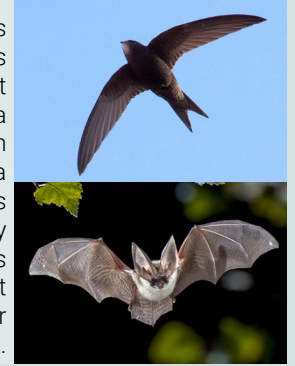
This project includes an in-depth analysis of different animals functions to initiate ecological restoration of urban areas.
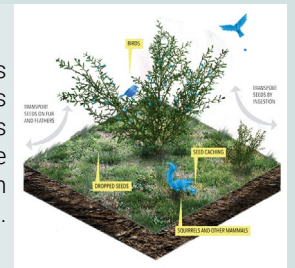
Maxi Nirschl prototyped an interactive installation for public space, which makes the connection and communication between trees perceivable.

Central diagram

ABILITIES

CIVIC DESIGNERS CAN...

...organise activities, such as workshops, that enable residents to gain new skills

...inform or educate people about the possibility to interact and work together with other-than-humans

...create a network of local (volunteer) coaches or consultants that can help other residents in particular efforts

... create awareness about the 'skills' that other-than-humans can contribute to neighbourhood resilience

SPATIAL DESIGNERS CAN...

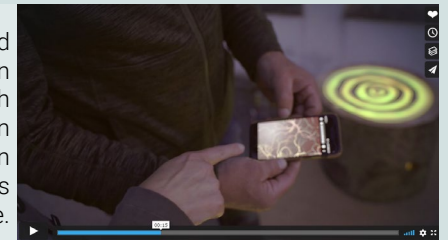...create spaces for people to gain new knowledge

...consider how to capitalize on certain abilities of other-than-human when designing public spaces

...incorporate spatial elements that challenge the skills of local residents

... raise awareness in human residents about what the abilities of other-than-humans are