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# Brno's review of practices: Sharing economy for the local community

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## Annotation

The so called sharing economy has in the last years become a worldwide trend, particularly in urban economies. The ICT and digital platforms provide a great potential in scaling up sharing and reciprocity of exchange (the traditional cohesive fundamentals in small and medium social groups) into bigger communities (cities, virtual communities) and diverse economy segments (e.g. mobility, housing, care economy, food production and distribution and even governance). On the other hand, those in opposition warn against the inappropriate embedding of sharing economy term in practices of global for-profit companies such as Uber or Airbnb, which provide services in unregulated settings with negative impacts on the communities and the market. Coincidentally, the needs for more participation, cooperation and socio-economically and environmentally-driven sharing of resources have been rising too, which lead to development of non-profit and not-only-for-profit citizens-led and resource-sharing practices. Finally, there are also voices referring to growing inequalities resulting from the uneven access to technologies and thus to sharing economy competencies and therefore many alternatives run their activities (also) offline.

While a lot of studies on sharing economy focus on the digital and business innovations (and problems) related to the global for-profit practices, this study provides a review of practices, which have a positive value on local communities; which are developed in a participatory way with local communities and in cooperation with different stakeholders; which are grassroots, bottom-up or top-down; commercial, cooperative and public. The practices are presented separately for the world and for the European context (with a special focus on the lighthouse cities of the RUGGEDISED project). The best identified examples are then discussed in the Brno Smart City context, including a discussion on risks and the replication potential.

Practices are divided in the following clusters: 1) Participatory housing; 2) Citizen-led public green maintenance & Smart food; 3) Work 4) Bike sharing and other mobility; 5) Other shared spaces and platforms.

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## Executive summary

The review *'Brno's review of practices: Sharing economy for the local community'* collects short profiles of **76 best practices**, including 21 in the world, 26 European, 10 in the lighthouse cities Rotterdam, Umeå and Glasgow, and briefly also 19 in the Czech Republic.

The review starts in the **Chapter 1** with short theoretical framework of the sharing economy. **Chapter 2** provides review at a global scale. **Chapter 3** presents a review at a European scale, with a special focus on three lighthouse cities of the RUGGEDISED project. Finally, **chapter 4** reflects on risks and replicable potential of the practices for Brno Smart City and exemplary Špitálka district and also add a short review of Czech best practices.

This study reviews practices, **which have a positive social, socio-economic or socio-environmental impact on local communities in cities, which are if possible co-created or co-used by local communities in a participatory way, which are developed in cooperation with different stakeholders and which could be in the best-case scenario replicable in Brno Smart City.**

The final selection of 76 practices includes comprehensive city plans, concrete policies, public services, for-profit companies, grassroots community-based initiatives, cooperatives, digital platforms, hubs and apps, non-profit and not-only-for-profit organizations, and above all cooperation of various of these partners in multi-stakeholder networks.

The review covers five areas **1) Participatory housing 2) Citizen-led public green maintenance & Smart food; 3) Work; 4) Bike sharing and other mobility; 5) Other shared spaces and platforms.**

***The study concludes that each of the area of sharing economy brings a lot of potential for Brno Smart City, but it recommends Brno policy makers taking into account synergies of different concepts in order to choose the right, preferably diversified trajectory and to pay a particular attention to the sectors of housing and work, since these categories of the sharing economy seem to be the least developed in Brno, the transition is financially demanding, while having a big impact on the lives of the local communities.***

The review was inspired by two theoretical frameworks; a narrow by (Frenken et al., 2015) positioning the sharing economy concept 'where it should be' and a broader by (Acquier et al., 2017) understanding the sharing economy as an umbrella construct.

(Frenken et al., 2015) aim defining it as **'consumers granting each other temporary access to underutilised physical assets.'** According to the authors it is about: **1) peer-to-peer platforms, 2) providing a temporary access and 3) more efficient use of physical assets.** (Acquier et al., 2017) suggest to position it on three foundational cores: **1) Access economy (sharing underutilized assets to optimize their use); 2) Platform economy (initiatives that intermediate decentralized exchanges among peers through digital platforms); and 3) Community-based economy (initiatives coordinating through non-contractual, non-hierarchical or non-monetized forms of interaction).** Sharing economy ideal then tries to balance the tensions of all three of the cores.



### Participatory housing

Participatory housing models such as **community land trusts**, **housing co-ops**, **cohousings**, **baugruppen**, and others have been already tested in different cities and by different groups. Therefore, participatory housing is a great opportunity for the new housing developments in Brno. Multiple areas in Brno could be devoted to **a) baugruppe housing projects**, **b) environmentally low-impact projects**, **c) social cohousing matching projects**. The area in Špitálka may be a modelled project, and may have a potential for even **d) an energetically low-impact housing** or **e) participatory social housing**. **Brno must take advantage of the energy emitted by the groups, support them and at best also integrate them with public social housing projects**. Sharing economy and collective ownership and financing models may be a great help in the transition.

There are several risks: an **outdated city plan** is not in favour of community building projects; **no experience with participatory housing** development; **missing several stakeholders** (such as ethical banks and ethical investors, architects specializing on community housing and social developers; the **reputation of collective ownership** models in housing is still not recovered.

### Citizen-led public green maintenance & Smart food

In Brno, **both bottom-up and top-down concepts are currently being recognized and established and also supported by the city government**. Despite of relatively small support, different initiatives have been developed in recent years. The overall benefits of the practices for the city are positive and relatively quickly reachable.

What is missing is **more profound use of digital technologies and platforms in the sector, particularly in terms of communication with the cities, or in distribution platforms in food coops and in food saving / sharing initiatives**. Also there is a **lack of experience with urban farming** (e.g. on roofs, greenhouses or in vertical farms). **The cities' support could be more comprehensive, digitally accessible and easy to follow for local citizens**.

**Opportunities in Špitálka** district may cover among others **a) establishment of a FabLab developing urban farming techniques and tools**, **b) an urban farming vertical greenhouses project, using waste heat from the heating station**, or for its central location, also **c) a distribution hub with food preparation facilities, which could serve food saving platforms and local charities** to distribute and prepare food.

### Work

The key risk is that the **infrastructure, policies and initiatives will not be developed quick enough** to be prepared for the future scenarios. The **poor reputation** of workers' **cooperatives** and other models of collective ownership and decision making, persist in the country. The **innovation centres do not reflect future problems of the less-qualified population**, of those who miss skills, opportunities and will miss the access to the new economy.

The suggestion for Brno Smart City and eventually for Špitálka district would be to **a) create incentives for new worker-owned Brno-based cooperative enterprises in various sectors, incl. manufacture**; **b) support or initiate makerspaces and training centres of various skills related to the new digital economy, particularly from the perspective of needs of citizens who are not yet familiar with the concept**.

### Mobility



The risks of mobility in Brno cover e.g. **affordability of the tickets for all, traffic congestions, and train station moving from the centre, the future of private ride-hailing provider, and the lack of biking infrastructure.**

On the question of how to incorporate bikesharing, **it is recommended to support one station bikesharing system at the public-private-partnership scheme and also support cargo-bikesharing system.** In terms of **carsharing**, it is recommended to support the providers e.g. by free parking spots or by incentives. **The “mobility as a service” approach then could provide the needed integration.** It is suggested to think of integration of the modes of transport into one platform (incl. carsharing, bikesharing).

#### **Other shared spaces and platforms**

**Sharing of spaces shall not become exclusive only for the innovation ecosystem, for production and for work.** Likewise, **important are also shared storage rooms, garages or shops for various sharing initiatives.**

The innovation sector has been developed with various stakeholders involved. **What is missing is a community-oriented project house,** a place, where also different not-only-for-profit enterprises and initiatives could build their projects together.

Above all, the sharing economy in the city may be all connected with online hubs, maps, discussion portals, and also e-governance portals.



## 1 Study specification

### 1.1 Short introduction to sharing economy

Sharing of goods, services, spaces or tasks and reciprocity of exchange have been fundamental for the economy of small social groups in traditional rural communities (Mauss, 2002; Polanyi, 1944). In the last years, in the era of market based individualism, sharing has become a worldwide trend radiating from big cities in Europe, the U.S. as well as Southeast Asia. There are at least three main reasons for the so called **sharing economy** becoming a global phenomenon. Firstly, the development of digital platforms and networks has provided a great potential to scale up sharing into bigger communities in cities and in virtual communities, and in general among people who did not know each other before (Frenken and Schor, 2017). Secondly, with the speed of emergence of a new digital on-demand and access sectors, the definition of what sharing economy actually is was left behind, while many companies have used the positive connotation of sharing to provide their services under the new umbrella term (Cockayne, 2016; Frenken and Schor, 2017). Thirdly, the importance of local communities in cities has been rising with the needs for more participation, cooperation and socio-economically and environmentally-driven sharing of resources and with market and state failures of their just redistribution (Böcker and Meelen, 2017; Martin et al., 2015).

Sharing penetrates in diverse economy segments, e.g. in mobility, housing, care, food, finance as well as in city governance. The sharing economy advocates highlight the positive impact of the innovations on social cohesion, empowerment of citizens, on new jobs provisioning and on environment (Böcker and Meelen, 2017). Those in opposition warn against the inappropriate embedding of the term in practices of global venture capital backed for-profit companies such as Uber or Airbnb, which provide services in unregulated settings with potentially negative impacts on market, labour conditions, as well as the planet (Cockayne, 2016; Gruszka, 2017; Murillo et al., 2017). There is also a hot debate on whether the technology-based innovation which is typically at the core of sharing economy, enable better access to goods and services, or quite contrary create growing inequalities resulting from the actual uneven access to technologies and from lacking of competencies of the newly defined roles (Kerschner et al., 2015).

It will not be far from truth to say that sharing economy is so widely used term that it cannot have other than wide-open definition. According to (Murillo et al., 2017), the defining debate ends up with blurred boundaries. According to (Acquier et al., 2017), to add to the confusion, many neighbouring concepts from different positions have been proposed incl. platform capitalism (Cockayne, 2016), collaborative consumption (Belk, 2014; Botsman and Rogers, 2010), access economy (Bardhi and Eckhardt, 2012), peer-to-peer economy (Bauwens, 2005), platform and open cooperativism (Bauwens and Kostakis, 2017), or social and solidarity economy (Poirier, 2014).

Many authors complain about the confusing situation and suggest positioning **the sharing economy** concept 'where it should be', based on normative characterization of sharing. An example of this approach is work of (Frenken et al., 2015), who aim defining it as '**consumers granting each other temporary access to underutilised physical assets ("idle capacity")**', possibly for money.' This enables them to distinguish sharing economy from other economic forms (*see Figure 1, left*). According to the authors 1) it is about **peer-to-peer platforms** and not about renting goods from a company (business-to-peer). Thus, sharing shall not include e.g. a car rental business. 2) It is about





providing a temporary access and not about a transfer of ownership. Thus, sharing economy shall not include second-hand business. And 3) it is about **more efficient use of physical assets**, not about private individuals delivering each other a service. Therefore, it shall not include platforms like, Uber or Airbnb except of situations when individual drives to a destination anyway and share a ride, or if individual has a spare room, which could be occasionally used for hosting.

Narrow understanding has a great value for analyses and interpretations, but has its limits when arguing between different disciplines and positions. In this sense, quite surprisingly, even European Parliament uses a narrow definition of the sharing economy, and include only for-profit and digital platforms, while exclude non-technological, commons-based or social and solidarity economy practices (Goudin, 2016; Murillo et al., 2017), while the European Commission includes also non-profit practices (EC, 2016) and uses even a different term (collaborative economy).

Therefore, other authors argue that in such a multi-faceted landscape sharing economy cannot be anything else but an umbrella construct. For example (Acquier et al., 2017) suggest to position it on three foundational cores (see Figure 1, right): 1) **Access economy**, which is about **sharing underutilized assets to optimize their use**, thus promising to move towards post-ownership society; 2) **Platform economy**, which is a set of **initiatives that intermediate decentralized exchanges among peers through digital platforms**, thus promising to move towards post-bureaucratic society; and 3) **Community-based economy**, which refers to **initiatives coordinating through non-contractual, non-hierarchical or non-monetized forms of interaction**, thus promising to move towards post-market society. However, we may find potential tensions of each core position. For the access economy it is a moral hazard of using things ‘without the right care’ and a Jevons paradox (overusing resources instead of saving them as a result of higher effectiveness). For the platform economy it is the political and market power of platforms as new intermediaries. For the community-based economy, it is a limited scaling potential (community bonds and trust are needed).

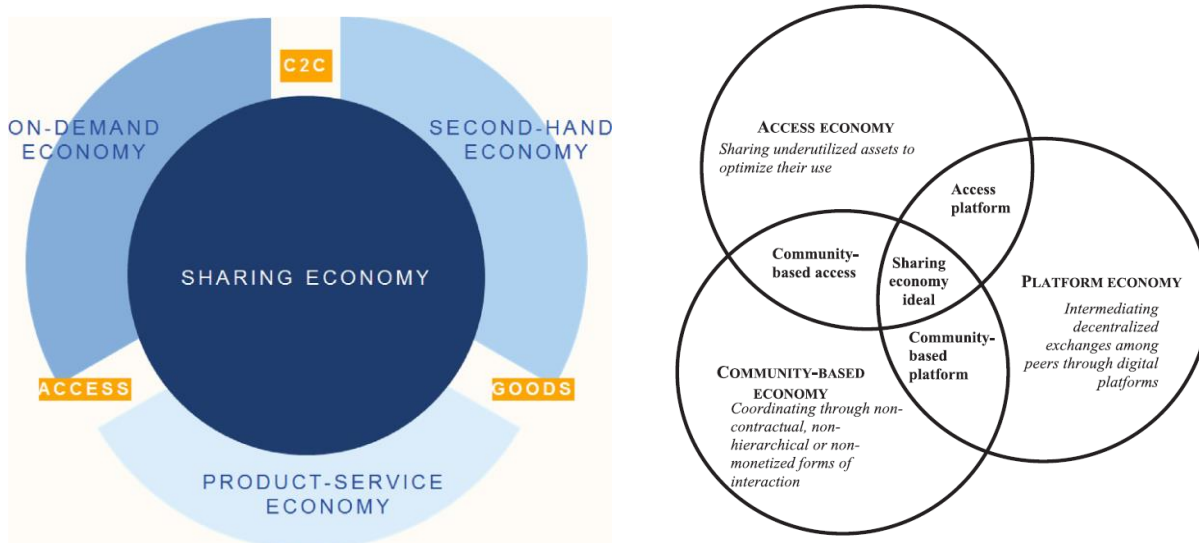


Figure 1 Sharing economy and related forms of economy. Source: Left - (Frenken et al., 2015); Right - (Acquier et al., 2017)



According to (Acquier et al., 2017) many initiatives of the sharing economy are then positioned in the intersection of two or even all three of the cores. While Airbnb (and better Couchsurfing) or Blablacar can be described as **Access platforms**, Brno-based carsharing cooperative Autonapůl is a **community-based platform**, while community bikerepair is a **community-based access**. Sharing economy ideal then tries to balance the tensions of all three of the cores.<sup>1</sup>

## 1.2 Scope of the review

There are many questions to confront the sharing economy concept with, such as who has the decision rights; who owns the production factors; who control the platforms; what happens with responsibility, risk, profit, workers' rights, taxes, etc. But it is neither in the scope of this review to answer these questions nor is it to join the conceptual discussion of the sharing economy. We will instead use the two landscapes presented above. The narrow, designed by (Frenken et al., 2015), enables us 'to keep the right track', i.e. navigate us towards the sharing economy ideal. The broader, designed by (Acquier et al., 2017) allows mapping of 'what is really out there' from various positions.

The main task of this study is to review best practices, **which have a positive social, socio-economic or socio-environmental impact on local communities in cities, which are if possible co-created or co-used by local communities in a participatory way, which are developed in cooperation with different stakeholders and which could be in the best-case scenario replicable in Brno Smart City**. Whether the practices are for-profit / non-profit / not-only-for-profit, technological / non-technological or grassroots / top-down are not definite selection criteria of this study, but rather good descriptive characters.

It shall be stated upfront that not necessarily all practices presented in this review are closely associated with the sharing economy concept, respectively, they may be in opposition to some of the major interpretations of the concept. Similarly, some of the practices may be in opposition to the Smart City concept. It is the author's will to include the selected practices into the discussion about both concepts and their manifestations for the best purpose of the citizens and local communities of Brno city, and elsewhere. Based on the appeal of (Bauwens and Kostakis, 2017), the goal of this review is to find out, **how can we transform the renting economy of Uber and Airbnb into a genuine sharing one?**

The structure of the study is as follows: Firstly, it provides a reflection on current trends and a review of best practices on a global scale. Then we move to Europe with a special focus given to Umeå, Rotterdam and Glasgow, the three 'lighthouse' cities of the RUGGEDISED project. In the last section, the best identified concepts and practices are discussed in the Brno Smart City and Špitálka District context, including a discussion on risks as well as of their replication potential.

The practices included in this review have been clustered in the following categories: 1) Participatory housing 2) Citizen-led public green maintenance & Smart food; 3) Work; 4) Bike sharing and other mobility; 5) Other shared spaces and platforms. Some readers may miss another category 'Finance', but it is an area, which could easily fill one separate review.

<sup>1</sup> THE OFFICE OF THE GOVERNMENT OF THE CZECH REPUBLIC WORKS WITH ANOTHER MODEL OF THE SHARING ECONOMY DEVELOPED BY (VEBER ET AL., 2016).



This review collects 76 best practices (21 in the world, 26 European, 10 in Lighthouse cities and 19 in the Czech Republic).



## 2 Trends in worldwide context

This chapter provides a brief overview of the worldwide trends in the sharing economy and a presentation of several key best practices for each of the category. Rather than full listing of world best practices, this chapter serves as an introduction to understand ‘what is possible’ in different categories in which we consider the sharing economy practices are important. The focus is on non-European practices, the European ones will be explored in chapter 3. Concrete application of the practices and concepts to Brno Smart City context will be discussed in chapter 4.

### 2.1 Main characteristics of the world trends

The sharing economy is still very new. The most known companies of today have been established less than a decade ago, while first scholarly visions date back to around 2004 (Benkler, 2004; Benkler and Nissenbaum, 2006; Botsman and Rogers, 2010). Although many types of practices related to access economy or community-based economy were not new back then, they escalated with the digital platform development. As a beginning of a new trend is often understood the 2012 event of the Sharing Economy Working Group of the city of San Francisco and the Shareable initiative. In the event, local entrepreneurs from Airbnb, Getaround or TaskRabbit, which soon turned to global phenomenon, were giving speeches, which influenced many others worldwide. This event also helped to create a concept called Sharing City (Bollier, 2012), on which we will look a little closer.

#### 2.1.1 Sharing city

Still in 2012, the City of Seoul launched an ambitious program<sup>2</sup>, which converted Seoul into the sharing capital of the world. They used three strategies a) changing the laws; b) providing financial and advisory support to start-ups; and c) facilitating citizen participation (Cohen and Muñoz, 2016). In the next years other world cities a) presented policies to deal with concrete challenges or b) they developed comprehensive programmes, which represented a paradigm shift towards sharing economy (e.g. commons-based policies in Barcelona; or Bologna’s regulation on urban commons care, see both in Chapter 3). In 2013, U.S. cities signed a Sharing City Resolution to make them more shareable. In 2015, the first sharing city in Europe was launched in Amsterdam. Finally, in 2017 the international Sharing Cities Alliance was founded.<sup>3</sup>

There have been also a lot of grassroots efforts to develop and disseminate fair, community-based and sustainable practices within cities. An example is **Sharing Cities Network**<sup>4</sup>, a grassroots movement connected by the Shareable initiative, in which currently almost 60 cities are involved (from which 35 in the U.S and 12 in Europe, incl. Prague). Some of the most inspiring grassroots initiatives are presented in collections, such as in (Shareable, 2017), from which this review draw particularly in the ‘World chapter’, or in (McLaren and Agyeman, 2015).

Nevertheless, for many, the sharing economy evolution in the years after 2012 was a big disappointment. Few big companies are fishing big profits in unregulated environments, having impact on the economy not exactly the way it was expected, while lot of followers would love to gain

2 [HTTP://ENGLISH.SEOUL.GO.KR/POLICY-INFORMATION/KEY-POLICIES/CITY-INITIATIVES/1-SHARING-CITY/](http://english.seoul.go.kr/policy-information/key-policies/city-initiatives/1-sharing-city/)

3 [HTTPS://SHARINGCITIESALLIANCE.COM/THE-STORY/](https://sharingcitiesalliance.com/the-story/)

4 [HTTPS://WWW.SHAREABLE.NET/SHARING-CITIES-NETWORK](https://www.shareable.net/sharing-cities-network)



this position too. Lot of critique was heard already in 2014 SHARE conference in San Francisco<sup>5</sup>, and later on an annual OuiShare conference in Paris was even said that “the sharing economy is over”, since it did not live up its initial promises (Frenken and Schor, 2017). However, this review provides a proof that this is not necessarily true, at least not for the community-based and not-only-for-profit sharing economy sector. For example (Shareable, 2017) is a collection of 133 worldwide case studies, which have a positive impact on the local communities.

Typically, within the borders of one ‘sharing city’, we can come across the market-driven for-profit sharing economy, and independently also the commons-based, not-only-for-profit and social entrepreneurial sharing economy. Both sides of the coin may possibly collaborate with the city governments and other public and private partners, and eventually with each other. However, it would not be fair to say that all community-based initiatives that are less or more linked to the sharing economy are in opposition to the global for-profit platforms. Many local start-ups would have certainly chosen a similar path paved with global success as for example Uber, if they could. In this review, being also linked to the one provided by (Shareable, 2017), we argue in favour of commons-based initiatives, i.e. in favour of value creation and value circulation in local economies over revenue extraction on a global scale. In other words, **‘why should a city risk dependence on a start-up that extracts money from the local economy when it can cultivate options that keep money circulating in it?’** Neal Gorenflo, (Shareable, 2017, p. 28).

## 2.2 Concepts and practices in the world

This review contains of five categories, which were created and agreed on in the pre-mapping period. But they cover most important sectors of the sharing economy, except of technical fields and energy (which are studied by other review teams of this project) and finance, which was identified to be a too extensive category for this review and shall be studied separately. Each category will be further explained and discussed over their replication potential for Brno Smart city in Chapter 4.

### 2.2.1 Participatory housing

#### 2.2.1.1 CHAMPLAIN HOUSING TRUST

CITY: BURLINGTON VERMONT, U.S.

SOURCE: ANNA BERGREN MILLER (SHAREABLE, 2017, P. 156)

Community Land Trusts (CLTs) are non-profits, with an origin in the U.S., dedicated for community control of real property outside land and housing markets. CLTs are typically designed for affordable housing for low-income individuals and families, but they may also serve to steward agriculture land. The trust is typically organized as a non-profit steered by a board of directors comprised of homeowners, area residents, and other stakeholders, it maintains permanent ownership of the land while the homeowner owns the house and any improvements. Champlain Housing Trust is the biggest of over 250 community land trusts in the U.S. It oversees 565 owner-occupied homes plus 2,200 rental apartments.

<sup>5</sup> [HTTP://SHARECONFERENCE.US/](http://shareconference.us/)



### 2.2.1.2 COABODE: MATCHING COMPATIBLE SINGLE MOTHERS FOR COHOUSING

COUNTRY: U.S.

SOURCE: SHARON EDE (SHAREABLE, 2017, P. 46), [HTTP://WWW.COABODE.ORG/](http://www.coabode.org/)

CoAbode is a service that matches compatible single mothers for shared housing, as well as services and support to make parenting less challenging. Cohousing can result in mothers sharing their food and child care; it reduces financial costs, frees up time, and enables mutual support. Membership is free, and with 120000 members registered, there are CoAbode members in many U.S. cities including Brooklyn, San Diego, and Washington DC.

### 2.2.1.3 EQUITABLE REGULATION OF SHORT-TERM RENTAL

CITY: OAKLAND, CALIFORNIA, U.S.

SOURCE: (ESKANDARI-QAJAR AND ORSI, 2016; SHAREABLE, 2017, P. 50)

The Sustainable Economies Law Center in Oakland, California, has produced a guidebook for equitably regulating short-term rentals. The guide covers areas of concern for hosts, guests, communities, and local governments, including protection of affordable housing supply, ensuring the well-being of guests, the rights of neighbours or that tax revenues are maintained in a fair way.

## 2.2.2 Citizen-led public green maintenance & Smart food

### 2.2.2.1 VANCOUVER URBAN AGRICULTURE GUIDELINES

VANCOUVER, CANADA

SOURCE: (KRYLOVÁ AND BLAŽEK, 2016; MORRIS AND TAPP, 2008)

The City of Vancouver decided to create comprehensive guidelines for different types of urban gardening and farming activities. The City believed to support local food networks, community gardening, educational, social and art gardening, but also productive gardens, which focus on traditional varieties, on orchards, apiculture, edible public landscapes, etc. Successful applicants with plots bigger than 250 sqm receive consultancies in planning and financial support. The projects must be transparent and accessible on a communication forum, which serve as a desk for proposals and comments from neighbours. The policy includes also guidelines how to manage overlapping functions, e.g. in an area which is close to public school, the garden must include a playground.

### 2.2.2.2 P-PATCH COMMUNITY GARDENS

SEATTLE, U.S.

SOURCE: (KRYLOVÁ AND BLAŽEK, 2016),

[HTTP://WWW.SEATTLE.GOV/NEIGHBORHOODS/PROGRAMS-AND-SERVICES/P-PATCH-COMMUNITY-GARDENING](http://www.seattle.gov/neighborhoods/programs-and-services/p-patch-community-gardening)

In Seattle, the City organizes the P-Patch gardens. They provide plots; give consultations to the gardeners and co-run educational and social activities. As a result, the gardeners produce food on 60000 sqm of gardens and take care of another 75000 sqm of edible and non-edible public spaces. Based on 2012 research, the gardeners cumulated around 33 000 voluntary hours and donated 19 tonnes of food to local food banks.



### 2.2.2.3 CITY FRUIT SEATTLE

SEATTLE, U.S.

SOURCE: (KRYLOVÁ AND BLAŽEK, 2016), [HTTPS://WWW.CITYFRUIT.ORG](https://www.cityfruit.org)

City Fruit is a non-profit organization financially supported by the City of Seattle and the State Washington. The NGO organizes distribution of fruit from trees in private possessions as well as from public orchards. The organization cares of the trees, map them and educate the owners. In 2014, more than 300 individual owners and 15 public orchards were involved in the City Fruit and about 25 tonnes of fruit was collected and distributed to private families, food banks and social programmes.

### 2.2.2.4 596 ACRES: RECLAIMING PUBLIC LAND FOR COMMUNITIES

NEW YORK CITY, U.S.

SOURCE: 596 ACRES (SHAREABLE, 2017, P. 148), [HTTP://596ACRES.ORG](http://596acres.org)

In every city lie vacant public lots, typically in brownfield areas. One such 2-acre area in New York City became a community space project in 2010. The project leaders identified that another 596 acres of vacant land is available in the city. They created an interactive map, a web-tool called [LIVINGLOTSNYC.ORG](http://Livinglotsnyc.org) and signs with information about the concrete area, which they put on fences and around the properties. The 596 Acres' staff then supports residents through bureaucracy in order to gain access to the spaces. Since 2011, neighbours have begun campaigns to transform over 200 sites.

### 2.2.2.5 COMPOST PEDALLERS

AUSTIN, TEXAS, U.S.

SOURCE: DARREN SHARP, (SHAREABLE, 2017, P. 166), [HTTPS://COMPOSTPEDALLERS.COM/](https://compostpedallers.com/)

Compost Pedallers is 100 % a bike-powered compost recycling enterprise in Austin that collects compostable organic waste from homes and businesses and takes it to local urban farms and community gardens. Each cargo-bike can carry 500-800 pounds of food waste. Compost Pedallers now serve more than 600 residential members and 30 commercial members, and have turned over 700000 pounds of organic waste into compost. Residential members pay \$16 per month and commercial members pay \$30-\$200 each month.

## 2.2.3 Work

### 2.2.3.1 ENSPIRAL: THE OPEN VALUE NETWORK OF SOCIAL ENTREPRENEURS

WORLDWIDE

SOURCE: [HTTP://WWW.ENSPIRAL.COM/](http://www.enspiral.com/)

Enspiral is a global alliance of enterprises that offer people to allocate their time to various social enterprises and collaborative platforms.

### 2.2.3.2 PLATFORM & OPEN COOPERATIVES MOVEMENT

WORLDWIDE

SOURCE: (BAUWENS AND KOSTAKIS, 2017; UTRATEL, 2017), [HTTPS://PLATFORM.COOP/](https://platform.coop/); [HTTPS://FAIR.COOP/](https://fair.coop/)

A growing movement of platform cooperativism with shared democratic ownership, open source coding and shared governance has been developed partly as a response to platform capitalism,



partly alongside with it, and partly as a logical next step of the cooperatives movement going digital. An example of decentralized and diverse environment of the platform coops is simply called Platform.coop, which links to different environments. Another ambitious example concentrating on development of decentralized cooperative economy using blockchain technology is FairCoop.

### 2.2.3.3 FAB LABS: PEER PRODUCTION FOR A NEW COMMONS ECONOMY

WORLDWIDE

SOURCE: KHUSHBOO BALWANI, (SHAREABLE, 2017, P. 106)

Fab Lab is a distributed international network of scientific researchers and community inventors who define, conduct, and apply new discoveries and inventions for the benefit of both researchers and the local community. The members design, code, share knowledge, and create digital instruction manuals using open-source principles. What gets designed in one lab can theoretically be fabricated in another lab, anywhere in the world. Today there are some 665 Fab Labs in 65 countries.

### 2.2.3.4 WORKER COOPERATIVE BUSINESS DEVELOPMENT INITIATIVE

NEW YORK CITY, U.S.

SOURCE: DARREN SHARP, (SHAREABLE, 2017, P. 115)

In 2015, the New York City launched the Worker Cooperative Business Development Initiative as a way to reduce poverty and income inequality through support of worker-owned cooperatives. The council allocated \$1.2 million to support existing worker cooperatives, kick-start the creation of new worker cooperatives, and assist small businesses conversion to worker-owned models. As a result, 21 new worker cooperatives were created and another \$2.1 million were allocated the year after.

### 2.2.3.5 A MAKERSPACE IN A PUBLIC LIBRARY

MELBOURNE, AUSTRALIA

SOURCE: DARREN SHARP, (SHAREABLE, 2017, P. 111)

To give people a chance developing creative and critical thinking and IT skills, the city of Melbourne has created its first makerspace located inside a public library. It runs a range of free classes to help the community learn 3D printing, video editing, or introductory coding.

## 2.2.4 Bikesharing and other mobility

### 2.2.4.1 COOP TAXI: GIVING THE POWER BACK TO DRIVERS

SEOUL, SOUTH KOREA

SOURCE: LEILA COLLINS (SHAREABLE, 2017, P. 64), [HTTP://COOP-TAXI.KR/](http://coop-taxi.kr/)

In order to drive a taxi in South Korea, drivers are required to pay \$105 in daily fees to independent companies. With introduction of the KakaoTaxi in 2015, a platform that connects drivers to passengers directly, the drivers had to lower prices significantly. Coop Taxi is a system that brought together 184 cooperative members who invested \$3.3 million. There are no daily fees and it allows drivers to be owners of the system itself.

### 2.2.4.2 WALKING SCHOOL BUS: SHARED JOURNEYS TO SCHOOL

WORLDWIDE





SOURCE: SHARON EDE, (SHAREABLE, 2017, P. 66), [HTTP://WWW.WALKINGSCHOOLBUS.ORG/](http://www.walkingschoolbus.org/)

More students are being driven to school, which results in more traffic, further eroding students' ability to make their way to school safely. The Walking School Bus is an agreed, set route to and from school supervised by adult volunteer "drivers" (often parents) who collect students from stops. The bus is free, and every child is welcome, whether or not they have a parent who can be a driver.

#### **2.2.4.3 RIDE AUSTIN: A NON-PROFIT RIDESHARING ENTERPRISE**

CITY: AUSTIN, TEXAS, U.S.

SOURCE: LEILA COLLINS, (SHAREABLE, 2017, P. 70), [HTTP://WWW.RIDEAUSTIN.COM/](http://www.rideaustin.com/)

In 2016, Uber and Lyft pulled their operations from Austin, Texas, out of protest after the city council new tax regulation. Since then, new ride-sharing alternatives began to thrive. One of them is RideAustin, a local non-profit whose objective is to pay its drivers well and keep costs low for riders. Their app has a feature to enable paying users to round their fare up to the nearest dollar, with the difference donated to a local charity of their choice. As of March 2017, the service had generated over \$100000 to Austin-based charities.

#### **2.2.4.4 SAN FRANCISCO PRIORITIZES PARKING FOR CAR SHARING**

SAN FRANCISCO, CALIFORNIA, U.S.

SOURCE: SHARON EDE, (SHAREABLE, 2017, P. 72)

In 2010, the city of San Francisco decided to support carsharing through city planning. New buildings with residential uses or existing buildings being converted to residential use must provide a certain number of permanent carshare parking spaces. Specific non-residential developments must also dedicate a percentage of their parking spaces to carsharing. City also announced to allocate 900 parking spaces solely to carsharing. A 2017 report found that as a result, car-share vehicles were used dramatically more (six hours per day versus one) and by more people (19 versus 2 per month) than private vehicles.

#### **2.2.4.5 BIKE SHARING FOR ALL, INCLUDING THE DISABLED**

PORTLAND, OREGON, U.S.

SOURCE: LEILA COLLINS (SHAREABLE, 2017, P. 76)

In most cities, biking is only accessible for those who can ride traditional bikes, or the physically disabled who can afford special bikes. In Portland, riders lobbied the city government to think about disabled riders in designing a bike-sharing system. The city will eventually offer adaptive bikes for the physically disabled as part of the 1000-bike and 100-station bike sharing system that launched in July 2016. The city first conducted a series of interviews with disabled riders to understand their needs (e.g. a variety of bikes, storage options for wheelchairs and assistance at bike share systems).

### **2.2.5 Other shared spaces and platforms**

#### **2.2.5.1 THE COWORKING MANIFESTO**

WORLDWIDE

SOURCE: [HTTPS://COWORKINGMANIFESTO.COM/](https://coworkingmanifesto.com/)

Coworking centres have been developed in most world cities. At the first sight, it looks like a bunch



of individual freelancers share an office desk. But the authors of Coworking manifesto describe that it is much more. Inspired by the participatory culture of the open source movement, the coworking movement is a group of connected individuals and small businesses creating an economy of innovation. As they say: “We have the talent. We just need to work together.” Their values include for example: collaboration over competition; community over agendas; participation over observation; friendship over formality; learning over expertise; "value ecosystem" over "value chain".

### **2.2.5.2 SHAREHUB CONNECTS RESIDENTS TO SEOUL'S LOCAL SHARING ECONOMY**

SEOUL, SOUTH KOREA

SOURCE: (SHAREABLE, 2017, P. 215)

The heart of “Sharing City Seoul” program is ShareHub, an online platform that connects users to sharing services, publishes sharing related news, and is the online information hub for the project. After nearly five years in existence, ShareHub, has served several million visitors.

### **2.2.5.3 KITCHEN SHARE**

PORTLAND, OREGON, U.S.

SOURCE: MARION WEYMES AND MAIRA SUTTON, (SHAREABLE, 2017, P. 90), [HTTPS://KITCHENSHARE.ORG](https://kitchenshare.org)

With the rising costs and shrinking space in cities, it becomes challenging to store all the kitchen equipment in place. Kitchen Share, which launched in 2012, acts as a tool library, allowing community members to borrow from a wide variety of kitchen and cooking appliances. It supports people in moving away from personal ownership and embracing the benefits of sharing.



### 3 TRENDS IN EUROPE & LIGHTHOUSE CITIES

This chapter provides a presentation of several key best practices in Europe. A special focus is on practices of the three lighthouse cities of the RUGGEDISED project, Rotterdam, Umeå and Glasgow.

#### 3.1 Main characteristics of the European trends

In a recent study by a thinktank related with the European parliament, the author navigates towards deregulation of sharing economy in Europe, arguing that a potential economic gain in currently unused capacities of the sharing economy in annual consumption across the EU-28 is €572 billion (Goudin, 2016). However, as many European countries realized already, some regulation seems to be imperative due to impact of the big companies related to the sharing economy concept on the markets (typically Uber on the taxi sector, Airbnb on the tourism sector and on real estate). Taking the speed of innovations and lack of definitions into account, countries seem to so far regulate the businesses on a case to case basis.

At the same time, several European cities have been actively supporting local communities in urban gardening, participatory housing or bikesharing. Many cities took a big step forward in providing open data to their citizens or in devoting funds for participatory budgeting. Unfortunately, the best practices seem not to disseminate as quickly and heavily across European cities as desirable.

#### 3.2 Concepts and practices in Europe

##### 3.2.1 Participatory housing

###### 3.2.1.1 CITY-OWNED SOCIAL HOUSING

VIENNA, AUSTRIA

SOURCE: (BLAŽEK, 2017), NIKOLAS KICHLER (SHAREABLE, 2017, P. 55)

The city of Vienna has continually made housing for all its residents a top priority. Vienna e.g. allows non-profit co-ops to enjoy tax reliefs – while making it mandatory for them to reinvest profits back into housing; provides financial support for the construction of buildings; or regulates the maximum rent that may be asked for an apartment by private providers. The city owns and manages roughly 220000 apartments, and is home to further 136000 subsidized residences by non-profit cooperatives.

###### 3.2.1.2 PLATFORMS FOR SELF-ORGANIZED HOUSING PROJECTS:

GERMANY, AUSTRIA

SOURCE: (BLAŽEK, 2017; MIETSHÄUSER SYNDIKAT, 2013), [HTTPS://HABITAT.SERVUS.AT/](https://habitat.servus.at/), [HTTPS://WWW.SYNDIKAT.ORG/](https://www.syndikat.org/)

Mietshäuser Syndikat (the apartment-house syndicate) is a platform, which connects and supports self-organized housing projects in Germany. The Syndikat, established in 1992, currently consists of 128 house projects and 20 project initiatives. Each of the house projects is autonomous and has the legal status of a limited liability company. But the limited company consists of two partners - the project and also the Mietshäuser Syndikat. Based on the concept, similar platform called habiTAT has been currently developed in Austria.

The main principle of the Syndikat is that the rent shall never grow. First of all, a new project receives



consultancies on building law, accounting or on community-building. In theory it also receives financial injection, helping to buy the property. After the new project is financially stabilized, it starts sending every month a small part of the rent to the Syndikat in the form of a solidarity fee. By the time, the proportion of bank loans in the rent decrease, while the part of the rent available for the solidarity fee grows. Old and well established projects will be after paying off the debts able to pay most of their rent in the form of solidarity fee.

### 3.2.1.3 BAUGRUPPEN: BUILDING TOGETHER, LIVING TOGETHER

VIENNA, AUSTRIA

SOURCE: (BLAŽEK, 2017; KERBLER, 2017)

Usually baugruppe (building group) is created in the beginning and organize the process with an architect, a developer, a building company, city, bank, and other stakeholders. The baugruppe housing usually differ from regular stock because of the emphasis on the collective features, sharing spaces, and sharing attitudes. In Vienna, the City decided after seeing successful examples (such as SargFabrik or Wohnprojekt Wien) to support development of new baugruppen via urban planning, incentives, competitions, cheap loans, guarantees, etc. Vienna allocated space for baugruppe development in some of the newly built areas, including Seestadt Aspern, where a cluster of projects was developed (numbers 1, 6, 7, 8, 15 and 16 in the Figure 2 below). Some of the projects also succeeded to provide housing for diverse income groups and cooperated with public social services in renting for social housing. The groups are also active in the local neighbourhoods, providing space for various social enterprises, while creating also different sharing platforms (car and bikesharing, food coops, libraries of things, etc.).

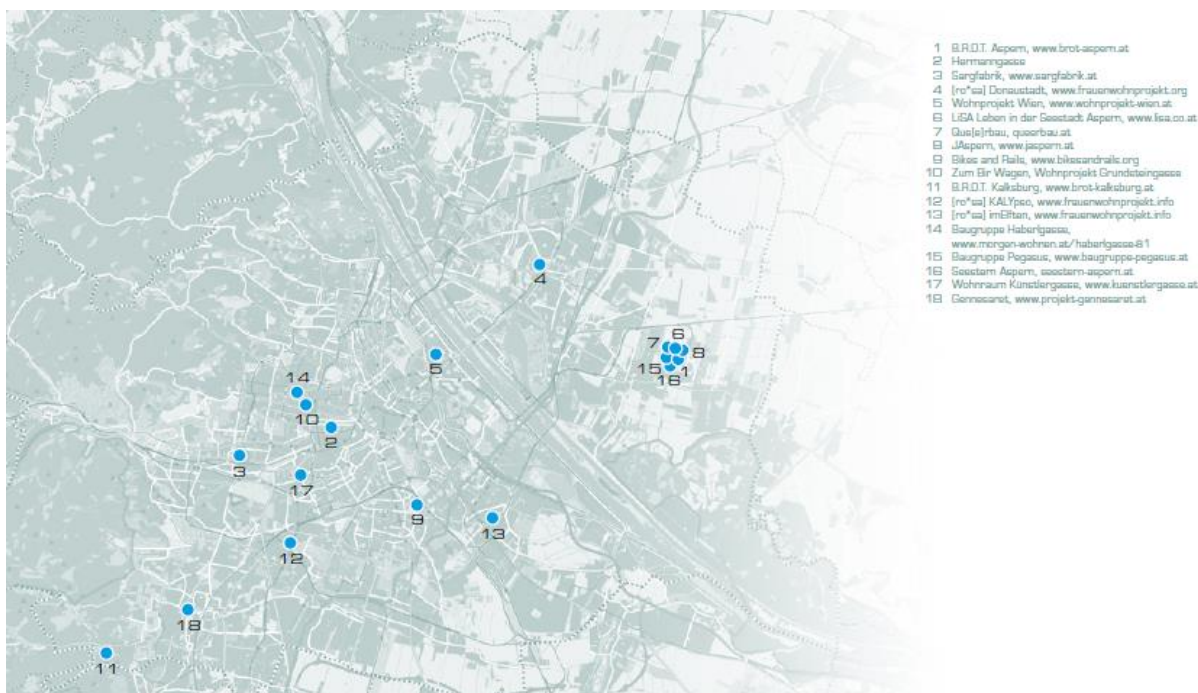


Figure 2 Baugruppen projects in Vienna. Source: (Kerbler, 2017)



### 3.2.1.4 HUMANITAS: SHARED INTERGENERATIONAL LIVING

DEVENTER, NETHERLANDS

SOURCE: SHARON EDE, (SHAREABLE, 2017, P. 40)

Humanitas Retirement Village offers free accommodation to students in exchange for 30 hours of their time per month to help the older residents. This arrangement provides a mutual benefit: rent-free accommodation for the young to help support the care of, and foster interactions with the elders. Students teach residents various skills related e.g. to IT, and provide companionship.

### 3.2.1.5 BEDZED SUSTAINABLE COMMUNITY LIVING

LONDON, UK

SOURCE: (PICKERILL, 2011; ZHU ET AL., 2012), [HTTPS://WWW.BIOREGIONAL.COM/BEDZED/](https://www.bioregional.com/bedzed/)

BedZED is the UK's first large-scale, mixed use sustainable housing community with 100 homes, office space, a college and community facilities. Completed in 2002, this pioneering project in south London suburbia remains an inspiration for sustainable neighbourhoods across the world. The project was initiated by Bioregional, developed by The Peabody Trust. Peabody is one of the largest providers of social housing in London. Half of the homes were sold on the open market, one quarter were reserved for social rent by Peabody and the remaining quarter for shared ownership.

### 3.2.1.6 WIKIHOUSE: OPEN-SOURCE HOME-BUILDING PROJECT

WORLDWIDE

SOURCE: HARRY KNIGHT, (SHAREABLE, 2017, P. 47), [HTTPS://WIKIHOUSE.CC/](https://wikihouse.cc/)

WikiHouse is an open-source building project that aims to simplify for anyone design, manufacture, and assemble of sustainable homes. The goal is to help cities shift from a reliance on a centralized industrial economy to a more distributed, democratic, and scalable industry. The WikiHouse community created an open and shareable building system called "Wren."

### 3.2.1.7 THE ARRIVERS COLIVING

BERLIN, GERMANY

SOURCE: (MARIN, 2017), [HTTPS://WWW.THEARRIVERS.COM/](https://www.thearrivers.com/)

Coliving is third-party provided house-sharing. It is meant mainly for temporary housing. There are already tens of for-profit projects anywhere the digital nomads tend to move (big cities, holiday resorts). The young nomads are offered service packages from housecleaning to cooking, social baking, etc. The Arrivers, a not-profit-driven coliving in Berlin provide housing for a reasonable price, particularly to expats. arriving to the city. In a long-term, the project wants to provide housing also to people in need, e.g. refugees since they are also 'the arrivers'.

## 3.2.2 Citizen-led public green maintenance & Smart food

### 3.2.2.1 THE CARE AND REGENERATION OF THE URBAN COMMONS

BOLOGNA, ITALY

SOURCE: LABGOV, (SHAREABLE, 2017, P. 252)

In 2014, the city of Bologna launched "the city as a commons" project. It initiated with two years of field experiments applying co-governance methods to the management of urban commons. The



output of the research was the world's first regulation and administrative process outlining how cities and citizens can collaborate to co-manage urban commons.<sup>6</sup>

A key tool supporting the regulation is a “collaboration pact”, which defines the specific commons in question and the rules for collaboration between stakeholders. Collaboration pacts can be designed and signed by individuals, informal groups, communities and non-profits. They regulate both short-term and long-term care of the urban commons. The regulation also fosters the creation of local institutions for urban co-governance like community cooperatives, neighbourhood foundations, and block consortia. The regulation supports the transfer of technical and monetary support from the city government to citizens. More than 180 collaboration pacts have been signed already.

### 3.2.2.2 THE CITY OF STRONG TREES

LEIPZIG, GERMANY

SOURCE: (KRYLOVÁ AND BLAŽEK, 2016), [HTTPS://WWW.MOUDRAMESTA.CZ/I-STROMY-NEKDY-POTREBUJI-ADOPTOVAT/](https://www.moudramesta.cz/i-stromy-nekdy-potrebuji-adoptovat/)

‘Baumstarke Stadt’ (The City of Strong Trees) is a project of City of Leipzig, which enables patronage of trees by citizens of the city in urban parks and public land. The campaign points at individuals to donate 250 Euros for one tree, which is then planted by the city services. The tree patrons receive a certificate and each tree receives a dedication table. Since the beginning in 1997 around 4000 citizens joined the campaign to plant trees for a total of 1 mil €. Information on all trees, including available spaces for patronage is presented in an online map.

### 3.2.2.3 FOODCLOUD: REDISTRIBUTING SURPLUS FOOD BY CLOUD APP

DUBLIN, IRELAND

SOURCE: ANNA DAVIES, (SHAREABLE, 2017, P. 82), [HTTP://FOOD.CLOUD/](http://food.cloud/)

Having identified the mismatch between organizations with surplus food and organizations that provide food for people experiencing food poverty, FoodCloud developed a “smart-simple” app to facilitate an exchange. Participating businesses post details of their surplus food and identify a time period for its collection. The charities then simply reply. FoodCloud has also introduced a food rescue team of volunteers, who use an electric vehicle to facilitate pickup and drop-offs between businesses and charities during the nights. In 2014, FoodCloud announced a partnership with Tesco chain to roll out its app across 146 stores in Ireland.

### 3.2.2.4 THE FOOD ASSEMBLY

WESTERN EUROPE

SOURCE: [HTTPS://THEFOODASSEMBLY.COM/](https://thefoodassembly.com/)

Since 2014, the Food Assembly enables the general public to purchase high-quality food while supporting small-scale producers, who create jobs and foster social well-being. There are currently few hundreds of assemblies across Europe. Each assembly is organized by a local assembly host, who search for and deals with producers, organizes an online shop and the local pick-up market. The food assembly platform then provides the online environment, starter kits, consultations, etc. The

<sup>6</sup> Regulation on Collaboration Between Citizens and the City for the Care and Regeneration of Urban Commons



business model is simple: 80% of price stays with the producer, 10% goes to the local host and 10% to the Food Assembly platform. This project enables dissemination of ideas embedded in practices of community food coops and community supported agriculture, to people, who cannot or do not want to be part of a self-managed community group scheme, but rather of a community-based service.

### 3.2.3 Work

#### 3.2.3.1 PROCOMUNS: CITY POLICIES FOR THE COMMONS COLLABORATIVE ECONOMY

BARCELONA, SPAIN

SOURCE: MAYO FUSTER MORELL, (SHAREABLE, 2017, P. 116) [HTTP://PROCOMUNS.NET](http://procomuns.net)

Barcelona city government believes that the commons collaborative economy is better for city residents than the commercial-oriented collaborative economy; hence it is promoting it as such. The city formed BarCola, a working group between Barcelona City Council and the city's commons collaborative economy sector, represented by 20 enterprises. It also supported the Procomuns, a forum for policy co-creation. Procomuns has developed and proposed over 120 policy recommendations for Barcelona with a goal to promote fair, respectful and non-exploitative working conditions, particularly in collaborative economy projects.

#### 3.2.3.2 CZYWRK

CITY: BERLIN, GERMANY & WORLDWIDE

SOURCE: [HTTP://WWW.CZYWRK.COM/](http://www.czywrk.com/), [HTTPS://SUPERMARKT-BERLIN.NET](https://supermarkt-berlin.net)

The individual need for self-employment and flexibility and the urge for emancipation, participation, sense-making and self-realization keep many workers in doubt. At the entrepreneurial cooperative CZY WRK (Cozy Work) digital workers, freelancers, and artists share mutual work assignments, profits, knowledge, infrastructure and certain securities to overcome down-periods, while remaining independent. Externally, CZY WRK acts as a network of digital creators, who are strengthened by being a member of the cooperative through transparent pricing, brand building and new sales models. The cooperative is closely entangled with the coworking space SUPERMARKT in Berlin which is recognized as one of the key players of the German platform cooperative movement.

### 3.2.4 Bikesharing and other mobility

#### 3.2.4.1 WHIM: MOBILE PLATFORM FOR BOTH PUBLIC AND PRIVATE TRANSPORTATION OPTIONS

HELSINKI, FINLAND

SOURCE: SHARON EDE (SHAREABLE, 2017, P. 69), [HTTPS://MAAS.GLOBAL/](https://maas.global/)

Whim, a startup from Helsinki, launched in 2016 the world's first mobility-as-a-service (MaaS) platform. It uses mobile technology to coordinate a range of public and private modes of transport, enabling access to cars, taxis, buses, trains, and bike shares. The app handles ticketing and payments, and helps find the best route.

#### 3.2.4.2 COMPREHENSIVE SHARED MOBILITY STRATEGY

MILAN, ITALY

SOURCE: SHARON EDE (SHAREABLE, 2017, P. 78)



Milan has implemented one of the most comprehensive mobility plans in the world. The City introduced bike sharing in 2008, adding 1000 electric bikes to its fleet in 2014, followed by a scooter-sharing scheme in 2015. In 2013, the city offered space for carsharing operators, and three providers now offer almost 2000 shared cars, including 100 electric cars. There are currently over 200000 subscribers to the carsharing schemes, and 37000 subscribers to the bikesharing program. Moreover, the city introduced a congestion charge, which generates 2 million Euros per year for the city to continue to invest in shared-mobility infrastructure.

### 3.2.4.3 BYCYKLEN - CITY BIKE COPENHAGEN

CITY: COPENHAGEN, DENMARK

SOURCE: (SEDAKOVÁ, 2017, P. 66), [HTTPS://BYCYKLEN.DK/EN/](https://bycyklen.dk/en/)

Copenhagen is the best cycling city in the world with more than 450 kilometres of cycling paths. City Bikes (or Bycyklen) is a bike sharing scheme, which is financed on the basis of advertising. Since 2016, the City Bikes project was enlarged to cover also electric bikes with around 1900 electro-bikes and 105 docking stations. Each of the bikes includes navigation panel, paying device, etc.

### 3.2.4.4 CITYBIKE WIEN & CARGO-BIKESHARE

Vienna, Austria

SOURCE: (SEDAKOVÁ, 2017, P. 60), [HTTPS://WWW.CITYBIKEWIEN.AT/EN/](https://www.citybikevien.at/en/)

[HTTPS://WWW.MOUDRAMESTA.CZ/NAKLADNI-KOLA-MISTO-DODAVEK/](https://www.moudramesta.cz/nakladni-kola-misto-dodavek/)

Citybike Wien is operated by private company Gewista and includes 1500 bikes in 121 stations. The registration is possible only with an Austrian bank card. The first hour is for free, every next hour costs 1€. Around 95% of rides are for free, with an average time of usage 10 minutes.

Moreover, together with citizens, Vienna elaborated a plan for cargo-bike mobility. The city financially supports communities and individuals in purchasing cargo-bikes to develop P2P sharing between citizens.

The City bikesharing plan also regulates other non-station bikesharing systems. The main regulation is to avoid that broken bicycles lay around (under a fee). On the other hand, the City provides up to 42000 bikeracks across the city for private bikes, as well as non-station bikesharing bikes.

### 3.2.4.5 OV-FIETS

AMSTERDAM, THE NETHERLANDS

SOURCE: (SEDAKOVÁ, 2017, P. 70), [HTTPS://WWW.NS.NL/EN/DOOR-TO-DOOR/OV-FIETS](https://www.ns.nl/en/door-to-door/ov-fiets)

In Amsterdam the bike sharing scheme is unified under one national system called OV-fiets with about 8500 bikes in more than 250 locations. The system is connected with the OV-chipkaart, a multifunctional mobility card. The cost is 3,85€ for every day of rent. The success of this system is that it is connected to the public transport system (the bike stations are at the railway stations), so users can use bike sharing as part of their multimodal transportation.





### 3.2.4.6 VELOGISTICS

WESTERN EUROPE

SOURCE: [HTTP://WWW.VELOGISTICS.NET/EN/](http://www.velogistics.net/en/)

This is a very simple free cargo-bike sharing map and platform for direct share between people who have a cargo-bike and who need to use them occasionally.

### 3.2.4.7 BIKESURF

EUROPE

SOURCE: [HTTP://WWW.BIKESURF.ORG/](http://www.bikesurf.org/)

This P2P bikesharing project enables to search and borrow bikes in several European cities (including Brno) directly from members. The whole project is run by volunteers and is 100% funded by the donations from users, with recommendations of 1€ a day for regular users.

### 3.2.4.8 IOMOB – BLOCKCHAIN MULTIMODALITY

BARCELONA, WORLDWIDE

SOURCE: (COHEN, 2018), [HTTPS://WWW.IOMOB.NET/](https://www.iomob.net/)

The current shared mobility marketplace requires that each start-up build their own underlying tech for handling payments, user registration, reputation management, etc., while also spending their scarce resources to build their brand and user base. How can the shared mobility start-ups compete with the larger and multinational mobility companies (Uber, Cabify), larger peers like Zipcar or with municipally run sharing schemes?

Blockchain technology may engage a range of mobility stakeholders and an open-source set of technologies for start-ups. Any shared mobility service operator, once validated as complying with local laws, could be made visible to any user. Instead of requiring each mobility provider to launch their own apps, the Internet of Mobility (IoM) allows for an open ecosystem of operators to share access to infrastructure and user bases.

## 3.2.5 Other shared spaces and platforms

### 3.2.5.1 THE REPAIR CAFÉ FOUNDATION BUILDS COMMUNITY BY FIXING THINGS

AMSTERDAM, NETHERLANDS, WORLDWIDE

SOURCE: DARREN SHARP, (SHAREABLE, 2017, P. 170), [HTTPS://REPAIRCAFE.ORG](https://repaircafe.org)

The Repair Café in Amsterdam, which connects people who are skilled in fixing things with community members who need items to be fixed, are organized once a month since 2009. There are now over 1500 Repair Café groups operating in 29 countries around the world. On average there are around 25 repairs made with a 70 percent success rate. That counts to 200000 products like clothing, textiles, bicycles, toys or household appliances repaired every year under the Repair Café Foundation. The business model is simple. The Foundation sells a starter kit and consulting services.

### 3.2.5.2 LEILA – GIVE, SHARE OR TAKE

BERLIN, GERMANY

SOURCE: [HTTP://LEILA-BERLIN.DE/](http://leila-berlin.de/)



The community-based sharing store concept LEILA has already inspired at least 10 other cities to launch similar projects. Members of the community donate and share items that can be borrowed by others. To ease drop-off and pick-up, the store established a reliable infrastructure run by its members – an online environment as well as a shop in Berlin Prenzlauer Berg. The initiative is based on donations (1, 2 or 3€ per month per user).

### 3.2.5.3 SMARTAKARTAN

GOTHENBURG, SWEDEN

SOURCE: [HTTP://SMARTAKARTAN.SE/](http://smartakartan.se/)

Smarta Kartan (The Smart Map) aims to make it easier to live sustainably in Gothenburg by encouraging a sense of community, facilitating new ways of linking up, and promoting access rather than ownership, renting, sharing, exchanging, borrowing and giving. It highlights upcoming activities and networks throughout the city. The Smart Map has been created as part of civil-public partnership between the association Collaborative Economy Gothenburg and the City of Gothenburg. What is presented online is decided through joint consultation between the association and the City. The City won the Eurocities 2017 Circular Economy Participation Award with the Smarta Kartan.

### 3.2.5.4 KPH – COMMUNITY PROJECT HOUSE

COPENHAGEN, DENMARK

SOURCE: [HTTP://KPH-PROJECTS.DK/EN/](http://kph-projects.dk/en/)

Projekthus, or KPH is a community house for innovative start-ups and small growing enterprises. It is a co-location, designed to providing space for collaboration between the residential enterprises of the house. The residents must be locally, community, socially or environmentally oriented.

### 3.2.5.5 LIQUIDFEEDBACK: FREE AND OPEN-SOURCE CIVIC ENGAGEMENT SOFTWARE

WUNSTORF, GERMANY

SOURCE: RYAN CONWAY, (SHAREABLE, 2017, P. 261), [HTTP://LIQUIDFEEDBACK.ORG](http://liquidfeedback.org)

Many cities have successfully implemented e-governance systems to give people access to ongoing policy discussions, provide input on local policies, or even make proposals for official consideration. LiquidFeedback is collaborative decision making software that is both free and open-source. Several cities in Germany and Europe have incorporated LiquidFeedback into their digital systems.

## 3.3 Lighthouse cities

This chapter presents several best practices from the three lighthouse cities of the RUGGEDISED project. While in Rotterdam, the main focus is on projects related to food, in Umeå on special features resulted in several nominations on the European Green Capital, and in Glasgow on participatory housing.

### 3.3.1 Rotterdam

Rotterdam is famous for its port, business or universities. It has very vibrant local community and social and environmental movement. Together with The Hague it encompasses a metropolitan area with 2.2 mil inhabitants. The two cities together created a very progressive transition strategy called



(Roadmap NEXT Economy, 2016), which covers various areas of smart, shareable and sustainable city. Rotterdam is known for its image of green city and great support of urban agriculture.

### 3.3.1.1 ROTTERDAM URBAN AGRICULTURE SYSTEM

SOURCE: (FOOD & THE CITY, 2012; KRYLOVÁ AND BLAŽEK, 2016)

One of the most comprehensive systems of urban agriculture in Europe exists in Rotterdam. The system was developed together with community initiatives, farmers and entrepreneurs and it is written down in two strategic documents – Agenda for Sustainable Rotterdam from 2011 and Food & the City from 2012. Urban agriculture is part of the city image. City is greener and more attractive. The system provides space for voluntary community gardening, business food production as well as social projects. It is well connected with farms in the bigger agglomeration. The dense urban green is less fragmented with positive impact on the ecosystem and urban heat island reduction and decrease of food miles and CO<sub>2</sub> emissions. The city also facilitated a development of a multi-stakeholder network, which is now organized in a platform called Regional Food Council. The urban agriculture system is then part of the city ‘Next Economy’ strategy (Roadmap NEXT Economy, 2016).

The city identified key goals of the system, such as improving health of citizens, strengthening local food systems, and improving quality of public spaces. It aims to empower local communities and individuals to participate in the public green care and urban gardening, e.g. by emitting special vouchers, which are used for free expert consultancies; or by special donations for roof gardening and roof greening, or on apiculture. Today, the city is full of community projects, entrepreneurial projects (e.g. the biggest urban farm in the Netherlands Uit je Eigen Stad; or DakAkker, a roof gardening enterprise, which covers roofs of several high office buildings). Rotterdam is also aware that the local food needs a functioning distribution system. The Regional Food Council therefore helps developing different types of distribution channels.

### 3.3.1.2 ROTTERDAM FOOD CLUSTER

SOURCE: [HTTPS://WWW.ROTTERDAMFOODCLUSTER.COM](https://www.rotterdamfoodcluster.com)

As a concrete project of The Roadmap Next Economy is the Rotterdam Food Cluster (see Figure 3). It concentrates on the food business by stimulating innovations, collaboration, investments, etc. It represents around 8000 businesses and 43 000 jobs with €25 billion turnover over the radius only 30 km from the city centre. It connects entrepreneurs, research centres and universities for studying new business models, calculating environmental impacts of the sector or developing new techniques such as vertical farming. The stakeholders from the Rotterdam Food Cluster have received 21000 patents.



Figure 3 Map of food production in Rotterdam in 2017.  
Source: <https://www.rotterdamfoodcluster.com/facts-figures/>

### 3.3.1.3 HOF VAN HEDEN COHOUSING

SOURCE: <http://www.urbangreenbluegrids.com/projects/hof-van-heden-hoogvliet-rotterdam/>

Hof van Heden is one of Rotterdam’s cohousing projects. The project was realized in 2009 in cooperation with Vestia, a social housing cooperative. The houses were defined by Vestia (in total 85 homes), but the future residents took part in many workshops during the building process. The city was also involved from the beginning, and due to the city support, the project could realize several environmentally-friendly solutions.

### 3.3.2 Umeå

Umeå is one of Europe fastest growing cities with 120000 citizens (expected 200000 by 2050). The city was a European Capital of Culture in 2014 and is one of the finalists of the European Green Capital competition (in the years 2015, 2016, 2017 and 2018).<sup>7</sup> Umeå’s environmental ambitions are supported by the active involvement of its citizens, communities and local businesses. The city communicates and demonstrates the benefits of green mobility and sustainable lifestyle through initiatives such as ‘Be Green Umeå’. According to benchmarking for Smart Cities<sup>8</sup>, Umeå has the Europe’s most environmentally aware citizens.

But Umeå has the digital sharing sectors underdeveloped yet, although of the city world leading

<sup>7</sup> <http://ec.europa.eu/environment/europeangreencapital/winning-cities/previous-finalists/umea/>

<sup>8</sup> <http://www.smart-cities.eu/>



internet access rates, fast connection and digital literacy of the population (May et al., 2017). Locally, sharing of things in delbar.se or transportation in sendoo.se are popular platforms. In addition to some typical barriers such as state and city regulations, which are not very much in favour of the platform economy in Umeå, a potential conservatism when it comes to pro-change behaviour and trust may also be strong factors. However, the city sees the development of sharing economy as one of its priorities. The city is part of the national program Sharing Cities, which will last 2018-2020.<sup>9</sup>

### 3.3.2.1 EVERYBODY SHALL TAKE PART, CO-CREATION OF THE CITY AND THE FREE-ZONE

SOURCE: (EGCA 2018, UMEÅ, SWEDEN, 2018)

Inclusivity and participation are one of strategic goals of the city of Umeå. Everybody shall take part, Co-creation of the city is a comprehensive plan to achieve it. One of the areas of the plan is gender planning, see e.g. (Sidorová et al., 2016) for explanation. One of the gender planning projects is The Free-zone, which is focusing on groups of young girls and women's experiences of equal public spaces in the urban environment. Based on this project was built for example the Season park in 2016. Umeå has more than 20 years of experience with gender equality policies, gender budgeting or mapping social landscape values when exploiting new or existing residential areas.

### 3.3.2.2 HELP LONELY CAR DRIVERS

SOURCE: (EGCA 2018, UMEÅ, SWEDEN, 2018), [HTTP://WWW.SKJUTSGRUPPEN.NU/](http://www.skjutsgruppen.nu/)

In mobility, one of Umeå's campaigns was to encourage carsharing. With Skjutsgruppen, a Swedish carsharing non-profit movement the campaign called 'Help lonely cardrivers' helped to make carsharing in and around Umeå popular.

### 3.3.2.3 BIKE & FLY

SOURCE: (EGCA 2018, UMEÅ, SWEDEN, 2018)

In biking, Umeå is a typical Scandinavian city, which focuses on extensive bicycle infrastructure incl. super-cycle highways and good winter maintenance, bike-sharing services, which include electro bikes, and even electro cargo bikes. Umeå was ranked 3rd in Europe and best in Sweden at The Bicycle Battle, a contest and a campaign between 39 European cities. A city specific feature is though slightly paradoxical in terms of environmental awareness. Bike & Fly is a bicycle garage at the Umeå Airport, which is connected with the city centre with less than 5 km long bike line. Park & Bike (with car) and Bike & Ride (with train) are another multimodality features that are of high relevancy.

## 3.3.3 Glasgow

Glasgow is a vibrant post-industrial city with a strong art scene, entrepreneurial scene and also strong technological scene (part of the Silicon Glen technological area).

### 3.3.3.1 FUTURE CITY GLASGOW

SOURCE: [HTTP://FUTURECITY.GLASGOW.GOV.UK](http://futurecity.glasgow.gov.uk)

In 2013 Glasgow won funding of £24 mil from the Technology Strategy Board to explore innovative ways to use technology and data to make life in the city safer, smarter and more sustainable. One of

<sup>9</sup> [HTTP://WWW.UMU.SE/ENGLISH/ABOUT-UMU/NEWS-EVENTS/NEWS/NEWSDETAILPAGE/SHARING-CITY-COLLABORATION-STARTED-IN-UMEA.CID287105](http://www.umu.se/english/about-umu/news-events/news/newsdetailpage/sharing-city-collaboration-started-in-umea.cid287105)



the areas of data collection is ‘Community Mapping’, which is about getting data on local communities by local communities. An example could be a social enterprise mapping, young city mapping, etc. One of the areas of data use is ‘MyGlasgow app’, a prototype of a citizen app, which should improve customer service in public agencies, engagement of citizens in the community activities, empowering them in technology skills, etc.

### 3.3.3.2 PENINGTON COHOUSING – SENIOR COHOUSING FOR ABOVE 50

SOURCE: [HTTP://WWW.PENCOHOUSING.ORG.UK/](http://www.pencohousing.org.uk/)

Penington CoHousing is Glasgow’s first senior cohousing development. It is a not-for-profit project for people over 50. The members intend to establish a community which shares decision-making and tasks, based on their skills and abilities. They seek to combat the isolation and loneliness experienced by many older people. They are at the forefront of a global movement of Senior CoHousing projects.

### 3.3.3.3 CLACHAN COHOUSING – COHOUSING FOR ALL INCOME GROUPS

SOURCE: [HTTPS://WWW.DIGGERSANDDREAMERS.ORG.UK/COMMUNITIES/FORMING/CLACHAN-COHOSUING](https://www.diggersanddreamers.org.uk/communities/forming/clachan-cohousing)

Clachan Cohousing aims to self build a project using energy efficient construction techniques, and renewable energy sources to create homes with low carbon footprint and low energy bills. The project will be accessible to people on different incomes, since they are using a mutual home ownership model. Residents will pay a 10% deposit towards the build cost and then pay 35% of their income to pay off the equity. Everyone pays the same proportion of their income.

### 3.3.3.4 GLASGOW BIKESHARING

SOURCE: [HTTPS://WWW.NEXTBIKE.CO.UK/EN/GLASGOW/](https://www.nextbike.co.uk/en/glasgow/)

Glasgow has a public cycle hire scheme provided by nextbike. The scheme offers 500 bikes at 53 locations across the city (with a plan for 900 bikes in 100 locations). Members can use the nextbike schemes in other cities. Customers in Glasgow can choose between several fares, from casual (£1 per 30 min), monthly (£5 per month) to annual (£60 per year). A community initiative called The Bike Share 4 All then played a key role to enable using the bikesharing for only £3 per year to residents of Glasgow’s deprived communities.<sup>10</sup> Nextbike is originally a Leipzig-based company with 15 years of experience. They serve in 25 countries and 150 cities in the world. They provide dock-less and station-based bikesharing, as well as hybrid systems, which combine both. They run the schemes in public-private-partnerships, but they also provide B2B solutions for employees, special campus offers to universities, while some of their B2C business models are also based on advertising and sponsoring on their fleets.

<sup>10</sup> [HTTPS://WWW.CARPLUSBIKEPLUS.ORG.UK/BIKE-SHARE-4-ALL-LAUNCHES-IN-GOVANHILL-BRIDGETON/](https://www.carplusbikeplus.org.uk/bike-share-4-all-launches-in-govanhill-bridgeton/)



## 4 BEST CASES FOR THE BRNO CITY AND ŠPITÁLKA DISTRICT

The aim of this chapter is to look at the presented World and European practices again from the context of Brno and the locality Špitálka. The practices, respectively their framing concepts are in this chapter discussed in terms of risks and their replicable potential in the local context. In addition, some Czech practices are also presented, where available.

### Main characteristics of the trends in the Czech Republic

Similarly as at the European level, also the Czech Republic struggles with defining what sharing economy actually is and how (and whom) to eventually regulate. Regulations are developed on a case to case basis. For example ridesharing company Uber has been continuously under pressure, which finally led to signing a memorandum between the Czech Republic and Uber in April 2018.<sup>11</sup> Debate over Airbnb regulation started later and yet it seems that the regulation will be way lighter than in other European cities and countries (Smejkalová, 2018).

An analysis of current trends in different sectors of sharing economy in the Czech Republic provide e.g. (Kruliš and Rezková, 2016; Marek et al., 2017). In a narrow definition, the sharing economy sector is relatively small yet, since only few global companies have reached the market (e.g. Uber, Airbnb, Blablacar). However and therefore, many local start-ups had time to develop (e.g. Jízdomat – sold to Blablacar in 2016; a babysitting platform Hlídačky.cz; carsharing companies AJo, Car4Away and a carsharing cooperative Autonapůl, which together created a Czech carsharing association of in total 344 cars fleet<sup>12</sup>, etc). To defend the interest of sharing economy companies, a new body was established in 2017 - ČASE - the Czech association of the sharing economy (ČASE, 2017), with currently 10 members.<sup>13</sup> The association agrees that the rules in the sharing economy shall be corrected, particularly in terms of taxes and workers rights, suggesting e.g. that for individuals with any income from the sharing economy lower than a minimal wage, the tax and insurance rules could be simplified in order not to create barriers for casual users.

Also participants of the May 2017 roundtable “Sharing economy: challenges for the South Moravian region” (Kruliš, 2017) agreed that one of the first steps is to have a concrete definition of the sharing economy. The definition then could be used on concrete actors, as well as their business models. Typically, some parts of a business could be defined as P2P sharing, while other as regular B2C model. The eventual regulations (and support) shall then point to a concrete direction.

Looking at the members of ČASE association though, it is obvious that the local definition of sharing have the same trouble as there are globally. The current members are for example:

- portal for advertisers renting a space *sdilejprostor.cz*;
- portal for advertisers renting short-term housing *Flatio*;

<sup>11</sup> [HTTPS://WWW.VLADA.CZ/ASSETS/MEDIA-CENTRUM/AKTUALNE/MEMORANDUM-O-POROZUMENI-PRI-ZAJISTOVANI-PREPRVNICICH-SLUZEB-NA-UZEMI.PDF](https://www.vlada.cz/assets/media-centrum/aktualne/memorandum-o-porozumeni-pri-zajistovani-prepravnicich-sluzeb-na-uzemi.pdf)

<sup>12</sup> [HTTP://CESKY-CARSHARING.CZ/](http://cesky-carsharing.cz/)

<sup>13</sup> [HTTP://WWW.SHARINGECONOMY.CZ/](http://www.sharingeconomy.cz/)



- *Hoppy Go*, a Škoda Auto car sharing service, currently being merged with *SmileCar*<sup>14</sup>, a carsharing service run by Leo Express, a train and bus operator;
- *Zonky*, a community lease broker, which is part of the PPF group, owned by Petr Kellner, the wealthiest Czech businessman;
- *Zavezu.cz* and *bringr.cz*, two P2P ridesharing companies for things;
- a babysitting, cleaning and caring P2P platform *hlídačky.cz*.

In this multi-faceted reality, diverse questions arise when investigating the functions, ownership or purpose of some of the profit-driven companies, particularly looking at them from the local community-building perspective. However, it is important to address the great difference between the companies. While e.g. Hoppy Car in reality tends to connect customers with car rental agencies, rather than with individual owners; Hlídačky.cz has created a pro-community business model, based on membership fee (not on commission) paid only by the customers, not the babysitters.

On the other hand, coming back to the scope of this review, there are also several community-based initiatives in the country. Some of them have been recently mapped by the team of researchers from the Faculty of Social Studies, Masaryk University in Brno, as they were included in the **research on economic alternatives in the Czech Republic**.<sup>15</sup> More information particularly on initiatives focusing on citizen-led public green maintenance in the Czech Republic, as well as more about best practices from Berlin or Vienna can be found also in a new web **Moudramesta.cz**, created by Brno-based non-profit NESEHNUTÍ.

<sup>14</sup> [HTTPS://WWW.SKODA-STORYBOARD.COM/EN/PRESS-RELEASES/SKODA-AUTO-DIGILAB-ADDS-CARSHARING-PORTAL-HOPPYGO-JOINT-VENTURE/](https://www.skoda-storyboard.com/en/press-releases/skoda-auto-digilab-adds-carsharing-portal-hoppygo-joint-venture/)

<sup>15</sup> [HTTP://ALTERNATIVNIEKONOMIKY.FSS.MUNI.CZ/](http://alternativniekonomiky.fss.muni.cz/)



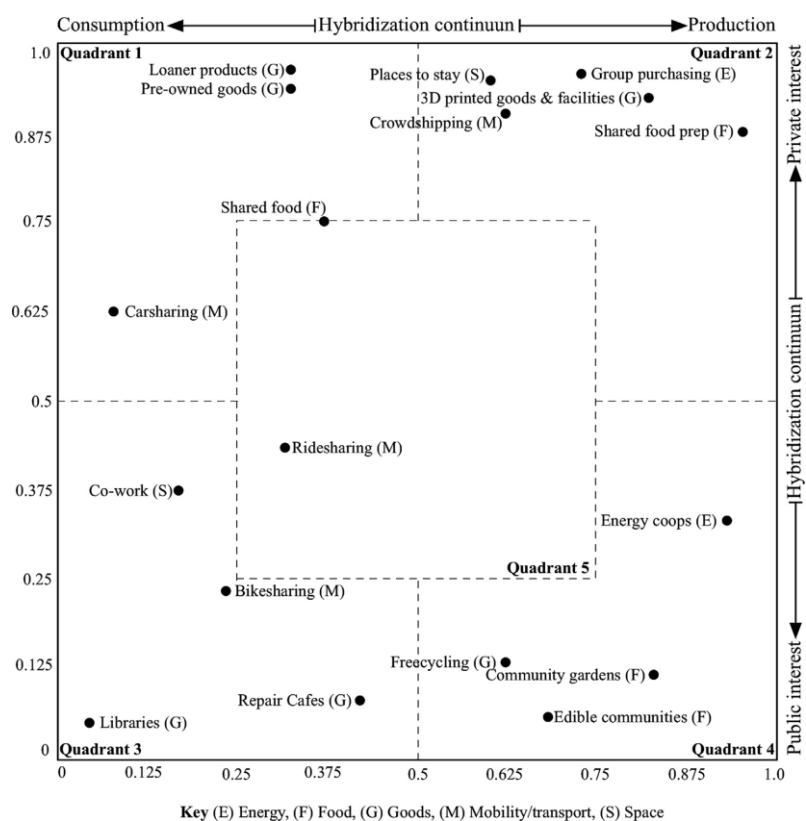


Figure 4 Types of sharing practices identified by (Cohen and Muñoz, 2016)

In our review, we have described more than 50 best practices and various concepts, which we clustered into five categories: **Participatory Housing; Citizen-led public green maintenance & Smart food; Work; Bikesharing and other mobility; Other shared spaces and platforms.** (Cohen and Muñoz, 2016) in their study worked with 19 types of practices, which they clustered into five main categories - energy, food, goods, mobility/transport and space. They positioned the types in four quadrants, depending whether they are based more on consumption or production and on public or private interest (see Figure 4). We could similarly position the identified world and European concepts in our review. But this kind of analysis is more suitable to make at a city scale, or regional scale. More importantly, we will look, whether some of the identified concepts are materialized in practices in the Czech Republic and what is the potential for replication of the concepts in Brno.

## 4.1 Participatory housing

### 4.1.1 Replication potential

When speaking of housing crisis, respectively decreasing affordability of housing, sharing economy may not only be part of the problem (Airbnb), it can also be part of the solution. The need for sustainable, participatory, self-organized and socially inclusive community living is nothing new and has been regularly vibrating through the European countries. While the 90s can be characterized by growing cohousing movement, which radiated from Denmark and U.S. to other countries (Blažek, 2016a; Chatterton, 2013; id22: Institute for Creative Sustainability, 2012); the current generation



manifests their effort in Baugruppe developments and self-organized eco-community projects, e.g. in Germany or Austria, making also use of newly built p2p finance infrastructure and ethical banking.

In addition to the participatory housing, clearly, house sharing is becoming a new trend also in the mainstream. **Couchsurfing** has turned from an alternative way of travelling to a mass lifestyle. **Coliving** as a house sharing third party business that provides a sense of a community for individuals is in the boom now and will reach Czech cities soon. Moreover, house sharing will reach soon also manufacturers and the building market, as we can estimate e.g. from IKEA research and design concept development called 'One shared house 2030'<sup>16</sup>.

Participatory housing models such as **community land trusts, housing co-ops, cohousings, baugruppen**, and others have been already tested in different cities and by different groups (Blažek, 2016b). However, because of the ultimate importance of regulations in the housing sector, without smart and keen local governance, the practices would have been developed much harder. Cities such as Vienna or Amsterdam realized this need and provide pro-participatory housing building plans, incentives, cheaper loans, guarantees or facilitations of multistakeholder networks. The cities then collaborate with groups in new ecologically designed developments, and to lesser extent also in renovations of old non-residential brownfield objects to participatory housing.

In short, **cities must take advantage of the energy emitted by the local groups, support them and at best also integrate them with public social housing projects**. Housing is a key sector. Sharing economy and collective ownership and financing models may be a great help in the transition.

#### 4.1.2 Risks and opportunities for Brno Smart City and Špitálka district

Participatory housing is a great **opportunity** for the new housing developments in Brno. An analysis of a modelled cohousing development process provides a thesis of (Orlová, 2017). **Multiple areas in Brno, such as at the South Centre, could be devoted to a) baugruppe housing projects, b) environmentally low-impact projects, c) as well as social cohousing matching projects. The area in Špitálka may be a modelled project, and may have a potential for even d) an energetically low-impact housing** such as in the project BedZED in South London. In Špitálka district can also positively resonate city efforts in **e) participatory social housing**.

Moreover, Brno has comparing to other cities in the Czech Republic a vibrant community of active citizens. The city has also technologically advanced entrepreneurs and progressive architects. Citizens and particularly university graduates are in the Czech Republic (and Brno) experienced in flat sharing. The city can build on examples from Vienna, where are currently dozens of new projects being established.

However, there are several **risks** to take into account. At first, the current building situation with unclear plans in the South Centre and other areas and the **outdated city plan** is not in favour of

<sup>16</sup> [HTTP://ONESHAREHOUSE2030.COM/](http://onesharedhouse2030.com/)



community building projects. Secondly, there is basically **no experience with participatory housing** development, which may create tensions during establishment of new groups, but also between groups and other partners of the multi-stakeholder networks. Thirdly, there are currently **missing several stakeholders**, which are very important part of the participatory housing ecosystem (with Vienna as a great example, such as ethical banks and ethical investors, architects specializing on community housing as well as social developers, who keep the price of building accessible). Finally, the **reputation of collective ownership** models in housing is in the Czech Republic still not recovered.

Sooner or later, the participatory housing will reach Brno and the Czech Republic. It is a great challenge for the city to prepare the ground by providing a land, setting up rules and supportive policies, and eventually stimulating the sector with a model project. Špitálka is a good location for an exemplar environmentally low-impact project or social housing project.

### 4.1.3 Selected practices in the Czech Republic

#### 4.1.3.1 PRÁZDNÉ DOMY

SOURCE: [HTTP://PRAZDNEDOMY.CZ/](http://prazdnedomy.cz/)

Prázdné domy is a collaborative map and database of vacant houses and land in the Czech Republic providing link to publicly accessible information about ownership and other layers.

#### 4.1.3.2 SYMBIOS BRNO

SOURCE: [HTTP://SYMBIOSBRNO.WIXSITE.COM/SYMBIOSBRNO](http://symbiosbrno.wixsite.com/symbiosbrno)

Symbios Brno is a housing project matching students of social work from Masaryk University with young people leaving children houses. Both sides pay affordable rent. The young people may also work in a bistro, which will be part of the house.

#### 4.1.3.3 SDÍLENÉ DOMY

SOURCE: [HTTPS://SDILENEDOMY.CZ/](https://sdilenedomy.cz/)

Sdílené domy is an initiative, which seeks to create a network of self-organized housing groups, based on an example of Mietshäuser Syndikat.

## 4.2 Citizen-led public green maintenance & Smart food

### 4.2.1 Replication potential

Public green is in comparison to other types of urban land seen as less productive. However, green has direct impact on the environment (ecosystem services) and therefore on the local communities (health). Its functions can be recognized in education and community-building, but also the economic impact of urban agriculture and gardening shall not be underestimated.

In the previous chapters, we have learned from examples of urban green maintenance, in which the local community actively participated. **The top-down approach is typically represented as special programmes of cooperation between the cities, non-profit sector and local communities**, beyond the general public green maintenance service and with multifaceted social, environmental and economic goals. This includes **support of concrete segment of public green care** or food such



as in Vienna or Leipzig, **or comprehensive policies** such as in Vancouver, Bologna or Rotterdam. **The bottom-up practices are then popular trendsetters worldwide and include community gardens, food waste initiatives, local food distribution networks or urban farm enterprises.**

#### 4.2.2 Risks and opportunities for Brno Smart City and Špitálka district

In the Czech Republic, **both bottom-up and top-down concepts are currently being recognized and established and also supported by the city governments. The support is relatively small if we compare the sector for example to participatory housing. The overall benefits of the practices for the city are positive and relatively quickly reachable.**

In the Czech Republic and in Brno there is a long tradition of food provisioning and sharing in allotment gardens (Jehlička and Daněk, 2017; Sovová, 2015). The concepts may be understandable for the citizens. Moreover, the current trend of fresh local food has reached also the Czech Republic and Brno. There have been already some practical examples of non-conventional food practices and citizen-led public green care in the city and the region. What is missing is **more profound use of digital technologies and platforms in the sector, particularly in terms of communication with the cities, or in distribution platforms in food coops and in food saving / sharing initiatives.** Also there is a **lack of experience with urban farming** (e.g. on roofs, greenhouses or in vertical farms). **The cities' support could be more comprehensive, digitally accessible and easy to follow for local citizens.**

**Opportunities in Špitálka district may cover among others a) establishment of a FabLab developing urban farming techniques and tools, b) an urban farming vertical greenhouses project, using waste heat from the heating station, or for its central location, also c) a distribution hub with food preparation facilities, which could serve food saving platforms and local charities to distribute and prepare food.**

#### 4.2.3 Selected practices in the Czech Republic

##### 4.2.3.1 NA OVOCE

SOURCE: [HTTPS://NA-OVOCE.CZ/WEB/](https://na-ovoce.cz/web/)

Na ovoce is a map and also an offline application of non-private fruit and nuts trees, berries and other plants in the Czech Republic, which are accessible to harvest. In addition the initiative also organizes planting workshops of old tree varieties in Prague and around the country.

##### 4.2.3.2 BIOSPIŽÍRNA TIŠNOV

SOURCE: [HTTP://ALTERNATIVNIEKONOMIKY.FSS.MUNI.CZ/ITEM/DETAIL/50/](http://alternativniekonomiky.fss.muni.cz/item/detail/50/)

Biospižírna Tišnov is an informal food coop between several participating families, which together order and distribute food and share their own surpluses.

##### 4.2.3.3 ČSOP POZEMKOVÉ SPOLKY

SOURCE: [HTTP://WWW.POZEMKOVESPOLKY.CSOP.CZ/](http://www.pozemkovespolky.csop.cz/)

This is a land trusts movement of the Czech Union for Nature Conservation with currently 58 land trusts that focus on land restoration and renovation.



#### 4.2.3.4 CZECH COMMUNITY GARDENS

SOURCE: (KRYLOVÁ AND BLAŽEK, 2016),

[HTTPS://WWW.MOUDRAMESTA.CZ/TAK-TROCHU-JINE-ZAHRADNICENI/](https://www.moudramesta.cz/tak-trochu-jine-zahradniceni/), [HTTPS://WWW.MAPKO.CZ/](https://www.mapko.cz/)

Za(o)hrada in Olomouc is one of the oldest community gardens in the country. Kokoza and Zahrada Smetanka are running community gardens in Prague. Plecinkáry, Rajská zahrádka and Komunitní zahrada pod ořechem are in Brno. These and other gardens are covered in a map called Mapko.

#### 4.2.3.5 COURTYARD REVITALIZATIONS

SOURCE: (KRYLOVÁ AND BLAŽEK, 2016), [HTTPS://WWW.MOUDRAMESTA.CZ/NAVRHNOUT-SVUJ-ZELENY-VNITROBLOK/](https://www.moudramesta.cz/navrhnout-svuj-zeleny-vnitroblok/), [HTTPS://WWW.VNITROBLOKY.CZ/](https://www.vnitrobloky.cz/)

There are examples of courtyard revitalizations fully provided by the cities in the Czech Republic. The latest trend is then to collaborate with local citizens in planning and designing, and/or in care. We may see both examples e.g. in Brno or Prague. Bieno is an association, which empower the local groups with planning skills, consultancies, etc.

#### 4.2.3.6 ZAŽÍT MĚSTO JINAK

SOURCE: [HTTP://ZAZITMESTOJINAK.CZ/](http://zazitmestojinak.cz/)

A laboratory of participatory approach of citizens in the public space (not only related to green and food) is Zažít město jinak, community-based festivals, which were initiated by Prague NGO Auto\*Mat. These festivals include presentation and implementation of many practical examples of active citizenship and sharing economy in the public space such as exchange shops, makerspaces and FabLabs, bikesharing or public space gardening, as well as theoretical discussion and trainings. Similar events in Brno are known under the name Týden města.

#### 4.2.3.7 KPZ INFO

SOURCE: [HTTP://KPZINFO.CZ/](http://kpzinfo.cz/)

KPZ Info is an information portal about community supported agricultural scheme, including a map of groups in the Czech Republic. In community supported agriculture, groups of clients are organized around a concrete farmer, who provides them with regular deliveries of fresh season food. The groups are self-organized, they decide on price, delivery methods, etc. The system is also based on regular volunteering of groups at the farms.

### 4.3 Work

#### 4.3.1 Replication potential

In the last years, we simultaneously witness emergence of the platform cooperatives movement in the U.S., India, Spain and other countries; while we analyze how will the development of new technologies, pre-fabricated materials, 3D-printers, but also AI, affect business models and labour markets in the near future. The democratization and decentralization of work, production and consumption seems inevitable for the sake of progress as well as a protection from it.

The previous chapters presented practices, which are developed to create and keep value in the local economy, while assuring equitable wages and fair working conditions. They are often developed by local entrepreneurs, start-up innovators, collectives of freelancers and workers cooperatives.



There have been some efforts of cities and regional governments to create infrastructure for meetings of multi-stakeholder networks, provide consultations and trainings to individuals and groups and organize events in order to develop innovation centres (incl. South Moravian Innovation Centre<sup>17</sup>) or support innovation hubs (such as Impact Hub Brno<sup>18</sup>). But there is also a strong need to support the creation of fair business models, to develop new social and labour policies at the governmental level and to support creation of community-based initiatives.

### 4.3.2 Risks and opportunities for Brno Smart City and Špitálka district

The key **risk** of the sector is that the **infrastructure, policies and initiatives will not be developed quick enough** to be prepared for the future scenarios. One of the problems, which may slow things in the Czech Republic and other post-communist countries, is the **poor reputation of workers cooperatives**, labour unions and other models of collective ownership, decision making and negotiating, although these models are very popular in the Western Europe and the U.S. Last but not least, there has been some reaction of cities (incl. Brno) to create innovation centres (innovation ecosystem). But these **innovation centres do not reflect future problems of the less-qualified population**, of those who miss skills, opportunities and will miss the access to the new economy. Deep structural change is needed to avoid deep structural problems. Taking these risks into account and building on the world and European practices, a suggestion for Brno Smart City and eventually for Špitálka district would be to **a) create incentives for new worker-owned Brno-based cooperative enterprises in various sectors, incl. manufacture; b) support or initiate makerspaces and training centres of various skills related to the new digital economy, particularly from the perspective of needs of citizens who are not yet familiar with the concept of innovation centres.**

### 4.3.3 Selected practices in the Czech Republic

#### 4.3.3.1 BAJKAZYL BRNO

SOURCE: [HTTP://WWW.BAJKAZYLBRNO.CZ/](http://www.bajkazyibrno.cz/)

*Bajkazyl* is a community bike repair space in Prague, Brno or Olomouc. In Brno, the space is run as a café bar, a kitchen and a bike repair workshop.

#### 4.3.3.2 SDÍLNA

SOURCE: [HTTP://WWW.SDILNA.CZ/](http://www.sdilna.cz/)

*Sdílna* is a makerspace based on membership fees in Prague. People can create individual and collective DIY projects, sharing skills, tools or time.

#### 4.3.3.3 OPRAVÁRNA

SOURCE: [HTTPS://WWW.OPRAVARNA.CZ/](https://www.opravarna.cz/)

*Opravárna* is a community web that connects skilled people with those in need in repairing things.

## 4.4 Bikesharing and other mobility

<sup>17</sup> [WWW.JIC.CZ](http://www.jic.cz)

<sup>18</sup> [HTTPS://WWW.HUBBRNO.CZ/](https://www.hubbrno.cz/)



#### 4.4.1 Replication potential

The shared mobility space is huge. We have witnessed in recent years all kinds of models for shared mobility, such as bikesharing (municipal or P2P), carsharing, carpooling or parking space sharing. Most of them were presented in previous chapters. However, as Sharon Ede points out (Shareable, 2017, p. 59), many cities still struggle to provide comprehensive transportation systems. The sharing economy innovation has been dominated by companies, which provide apps to pair drivers with passengers, but they are not integrated with other private and public services to cover the mobility needs as a whole. **The “mobility as a service” approach could provide the needed integration. Modes of transport are then integrated through a digital platform. The development of blockchain may become the needed technological solution.**

In terms of bikesharing, this scheme has finally arrived in the Czech Republic, to Prague, Brno and other cities. Starting with Rekola, a non-station service, also the station system is slowly being developed by several companies. For example Prague has already discussed to include bikesharing to ‘Lítačka’ mobility card and therefore to create the public-private-partnership. But until now, there are two initiatives running bike sharing in Prague without the full support of the city – Homeport, and Rekola, and it does not seem to change towards the system used in Glasgow, Vienna or Copenhagen.

#### 4.4.2 Risks and opportunities for Brno Smart City and Špitálka district

**The public transportation system in Brno** (and in the Czech Republic in general) **is typically complimented**, particularly due to 24/7 access to all areas of the city. Every system has its limits and **risks** in Brno are related to **affordability of the tickets for all, traffic congestions** from the personal car transport, the **future of Uber** or other private corporations, and the **train station moving from the centre** further south. What is particularly clear is the **lack of biking infrastructure** in comparison to many European cities starting with Copenhagen and ending with Ljubljana. In terms of digital future and mobility as a service, the main question is **how to incorporate bikesharing in the system**, and **whether to support one bikesharing system at the public-private-partnership scheme (recommended), or to leave the game for more providers**. Also, the city could **support cargo-bikesharing system** on the Vienna example. In terms of **carsharing**, the question is similar – **how to incorporate the system into an integrated service. The city could provide incentives to carsharing companies in order to develop extensive fleets or to provide secure and free parking spots.**

#### 4.4.3 Selected practices in the Czech Republic

##### 4.4.3.1 AUTONAPŮL

SOURCE: [HTTPS://WWW.AUTONAPUL.ORG/](https://www.autonapul.org/)

Autonapůl is a Brno-based carsharing cooperative, launched in 2003, currently operating in 10 cities with 73 cars. The tariffs start on 3,90 CZK per km and 27,20 CZK per hour. Each member has a card for opening the selected car of the fleet after the reservation.

##### 4.4.3.2 REKOLA BRNO

SOURCE: [HTTPS://WWW.REKOLA.CZ/](https://www.rekola.cz/)



Rekola is a non-station community start-up bikesharing since 2014, operating in 7 cities in the Czech Republic. Now, after an investor support, the company and the bikes' fleet are fully professionalized. There are around 50 bikes in Brno. Annual fee is 1200 CZK. The bikes can be returned in any place in the centre zone. For single rides, the costs are 18 CZK, but the bikes must be return in so called Repoints. Everything is covered by a smart phone app or even by SMS for phones without internet.

#### 4.4.3.3 VELONET

SOURCE: [HTTPS://VELONET.CZ/](https://velonet.cz/)

Velonet is station bikesharing in Brno with 16 stations and 50 bikes. Soon it shall be operating also in Prague. First 15 minutes are free, after that every hour is for 29 CZK, eventually, the monthly tariff is 260 CZK. One typical problem of the station bikesharing can be experienced also in Brno – there are several stations with very limited or even no bikes, particularly at the edges of the zone. The solution is dual – transportation of bikes to areas with limited numbers; more bikes in the system in total.

## 4.5 Other shared spaces and platforms

### 4.5.1 Replication potential

The public space in cities is typically shared. Other than that, companies share the so called co-locations (e.g. multi-tenant non-profit centres), individual freelancers share coworking spaces. Many are getting used to diverse community hubs, start-up incubators or social innovation centres (Centre for Social Innovation, 2010). However, sharing of spaces shall not become exclusive only for the innovation ecosystem, for production and for work. Likewise important are also shared storage rooms, garages or shops for various sharing initiatives. Above all, the sharing economy in the city may be all connected with online hubs, discussion portals, and also e-governance portals, which would enable future developments of the practices. Some of the practices such as in South Korea, Gothenburg or Barcelona may serve as an example.

### 4.5.2 Risks and opportunities for Brno Smart City and Špitálka district

The innovation sector has been developed with various stakeholders involved. What **is missing is a community-oriented project house**, a place, where also different not-only-for-profit enterprises and initiatives could build their projects together, sharing parts of the needed infrastructure, workshops, etc. Such a place could certainly be developed in Špitálka, possibly together with the FabLab idea or makerspace idea. There is a risk that such a place will not be fully occupied and will overlap with the purpose, which provides e.g. Industra (see below) or Otevřená zahrada, an exemplary passive house and office space for the non-governmental sector. But the space could be designed in a very flexible way, so that it could also accommodate a public coworking space, a youth house, etc.

### 4.5.3 Selected practices in the Czech Republic

#### 4.5.3.1 HEARTH.NET

SOURCE: [HTTPS://WWW.HEARTH.NET/](https://www.hearth.net/)

**Hearth.net** is a gift economy portal, creating a community, which shares non-monetary exchanges





#### 4.5.3.2 NEVYHAZUJTO

SOURCE: [HTTPS://NEVYHAZUJTO.CZ/](https://nevyhazujto.cz/)

**Nevyhazujto.cz** or **Všezaodvoz.cz** are portals that advertise giving away unused things *for free*.

#### 4.5.3.3 INDUSTRÁ

SOURCE: [HTTPS://INDUSTRÁ.SPACE](https://industria.space)

Industra is a space which supports projects with cultural, social and economic impact on Brno. It is a multifunctional space with a gallery, café, theatre. It currently develops its labs, ateliers, makerspace and coworking centre. It is financed from public and private donors, from crowdfunding, from renting the space and from their activities.



## CONCLUSIONS

This review '*Sharing economy for the local community: Review of practices for Brno Smart City*' has provided short profiles of 76 best practices, including 21 in the world, 26 European, 10 in the lighthouse cities Rotterdam, Umeå and Glasgow, and in addition 19 in the Czech Republic. The review was inspired by two theoretical frameworks; a narrow by (Frenken et al., 2015) simply to understand 'what sharing economy should be' and a broader by (Acquier et al., 2017) to understand 'what is really out there' and 'what is possible'.

The main selection criteria for the review was that the practices should have a positive social, socio-economic or socio-environmental impact on local communities in cities; should be if possible co-created or co-used by local communities in a participatory way; should be developed in cooperation with different stakeholders; and could be in the best case scenario replicable in Brno Smart City. In this sense, the review is inspired by many concepts starting with social and solidarity economy, commons collaborative economy or circular economy, in which sharing is often at the core.

The final selection of 76 practices includes comprehensive city plans, concrete policies, public services, for-profit companies, grassroots community-based initiatives, cooperatives, digital platforms, hubs and apps, non-profit and not-only-for-profit organizations, and above all cooperation of various of these partners in multi-stakeholder networks.

It is obvious that not all of the presented practices could and should be replicated in the context of Brno Smart City, in Špitálka district or elsewhere. With the speed of technological, business and community innovations, the future development of these and other practices is highly unpredictable. Deeper look at concrete practices will need to happen before eventual implementation. But still, this review is able to tell, which directions and trends are currently inspiring thousands of people worldwide, in Europe, lighthouse cities and in the Czech Republic to actively participate in developing solutions to combat environmental, social and economic threats or to simply make better living and quality of their lives. Whether it is housing, public space, work, mobility or various platforms, sharing have become crucial pattern of the 21st century and it must be embedded in the practices of local communities, to avoid exploitations from multinational corporations. This review recommends Brno policy makers taking into account synergies of different concepts from the five categories in order to choose the right, preferably diversified trajectory. It is recommended to pay a particular attention to the sectors of housing and work, since these categories of the sharing economy seem to be the least developed in Brno, while having a big impact on the lives of the local communities.



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