Interreg CENTRAL EUROPE
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NiCE

How to link sustainable e-commerce with city centres

A guide for SMEs and municipalities to bring retail channels together for the benefit of all.

Part of the NiCE D.2.4.1 Solution Box

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NICE GUIDES OVERVIEW

This document is a part of the NiCE Solution Box – a set of four guides offering practical and interconnected approach to advancing circular lifestyles and sustainable development in cities. Though each guide addresses a specific area, together they provide a complete toolbox for organizations, businesses, authorities, and citizens seeking to make urban spaces more resilient, resource-efficient, and community-oriented. All guides can be accessed on the NiCE Knowledge Platform: https://circularlifestyle.eu/resources.

Methodology Kit on stakeholders' engagement in circular lifestyles

This guide focuses on the human and organizational dimension of circular development. It provides step-by-step methods for NGOs, schools, and public authorities to initiate participatory processes, re-activate spaces, and encourage behavioral changes toward sustainability. It emphasizes scaling successful initiatives and sustaining impact over time. The kit combines theory with good practices from Central European cities (Bologna in Italy, Brzeg Dolny in Poland, Budapest in Hungary, Graz in Austria, Jihlava in Czechia, Košice in Slovakia, Ptuj in Slovenia, and Würzburg in Germany), offering versatile tools that can also be applied in other areas of sustainable urban development.

Guide: How to build, run and sustain a multifunctional resource centre

This guide focuses on transforming underused urban areas into dynamic hubs supporting circular practices. It provides a framework for planning, designing, and managing spaces that encourage the sharing, repair, and reuse of materials. Targeted mainly at NGOs and SMEs, this guide emphasizes the importance of stakeholder engagement, financial planning, and day-to-day operations. It also includes case studies from the NiCE Project that show how such centres can become economic and social anchors for city centres in Brzeg Dolny (Poland), Graz (Austria), Košice (Slovakia), and Ptuj (Slovenia).

How to link sustainable e-commerce with city centres. A guide for SMEs and municipalities to bring retail channels together for the benefit of all.

This guide responds to the growing influence of e-commerce on local economies. It offers SMEs actionable strategies to connect their online business activities with physical urban spaces, ensuring that city centres remain vibrant and economically relevant. This includes exploring localized delivery systems, creating synergies between digital and physical marketplaces, and encouraging sustainable practices that align with circular lifestyles. The guide also identifies opportunities for collaboration with logistics providers, technology developers, and community groups, positioning SMEs as key drivers of sustainable urban commerce.

Circular Water Kit addressing water re-use and water saving in cities

This guide highlights water as a critical resource in urban environments. It explains how local authorities and citizens can improve water efficiency, integrate reuse technologies, and enhance climate resilience. The guide's focus is both educational and applicative: it raises awareness about the value of water and provides policymakers and planners with tools to implement circular water strategies. Real-world examples from Bologna (Italy) illustrate the benefits of collaboration between public authorities and communities, showing how saving and reusing water can strengthen sustainability efforts across cities.

Content

1 INTRODUCTION

1.1 Context: about the NiCE Project

The NiCE (From Niche to Centre - City Centres as Places of Circular Lifestyles) project is a transnational initiative aimed at revitalizing urban centers by promoting circular and sustainable lifestyle and consumption. In response to challenges such as the COVID-19 pandemic and the rise of e-commerce, which have led to the decline of traditional retail spaces, NiCE seeks to inspire the transformation of towns and city centers into vibrant hubs of circular lifestyles.

Central to the project's vision is the promotion of sustainable consumption habits and the establishment of strategic frameworks to support circular lifestyles. Through innovative urban development approaches, NiCE encourages the repurposing of spaces for reuse, repair, and sustainable consumption initiatives. The project also emphasizes education and collaboration, offering inspiration and practical tools to municipalities, citizen associations, and policymakers to foster sustainable behaviors and practices.

NiCE operates across eight Central European countries – Austria, Czechia, Germany, Hungary, Italy, Poland, Slovakia, and Slovenia – bringing together a diverse group of partners to share knowledge, implement pilot projects, and scale successful models.

Building on these objectives, the following guide outlines practical strategies and insights for linking sustainable e-commerce with city centers, offering actionable steps to help achieve NiCE's vision.

1.2 Target group & purpose of the guide

The purpose of this guide is to provide practical strategies and insights for cities and small and medium-sized enterprises (SMEs) on how to link sustainable e-commerce with city centres. It inspires for the promotion of vibrant urban spaces that thrive economically, socially, and environmentally. The overarching goal is to create towns and city centres that are not only competitive and innovative but also align with the principles of sustainability and inclusivity, ensuring long-term resilience in the face of economic and environmental challenges.

As e-commerce continues to grow, it presents both opportunities and challenges for city centres. This guide aims to address these dynamics by offering ideas, actionable steps and encouraging stakeholders to try and test new solutions that promote circular lifestyles, reuse of urban spaces, and collaborative efforts between local businesses and e-commerce companies.

In addition, this guide demonstrates how **SMEs** can effectively link their e-commerce activities with city centres, creating opportunities to strengthen their local presence while benefiting from sustainable practices. By connecting online operations with urban spaces, SMEs can tap into new customer bases, enhance delivery efficiency through localized solutions, and contribute to revitalizing city centres as hubs of economic activity. The guide emphasizes strategies that not only support business growth but also align with broader goals of sustainability and community engagement. The guide also addresses the specific challenges and opportunities faced by SMEs and offers practical tools to drive positive change in city centres through sustainable e-commerce integration.

Cities, in turn, can learn about the opportunities and challenges SMEs face when dealing with e-commerce and what they can do to bring both retail channels together in their city.

Additionally, the guide will be useful for **further stakeholders** such as logistics providers, technology developers but also for non-profit and community organizations, working in the urban area on the topic of circular lifestyles. Their collaboration with SMEs and city authorities is crucial for creating efficient, sustainable systems that benefit businesses, residents, and the broader urban ecosystem.

1.3 Key recommendations

- **Think ambitiously and multifunctionally:** Develop creative solutions that go beyond traditional retail models and combine multiple uses, such as retail, logistics, services and community functions.
- **Pilot and test ideas at a small scale:** Experiment with new concepts through small-scale pilots to minimise financial risk, learn quickly, and adapt solutions before wider implementation.
- **Enable adaptive reuse of urban spaces:** Repurpose vacant or underused buildings for flexible uses such as pop-up stores, micro-hubs or local fulfilment centres, treating existing buildings as valuable resources.
- **Strengthen cooperation across the logistics chain:** Foster collaboration between SMEs, logistics providers, municipalities and other city stakeholders to ensure integrated, efficient and sustainable solutions.
- **Use digital solutions to enhance urban life:** When applied strategically, e-commerce and digital tools can support vibrant city centres by improving accessibility, services and local economic activity.

2 UNDERSTANDING THE LINK BETWEEN E-COMMERCE AND CITY CENTRES

2.1 The rise of e-commerce and its impact on urban areas

The digital transformation of retail is not a story of online versus offline, but of convergence and mutual reinforcement. Across Europe, e-commerce has become an integral part of everyday consumption: in 2023, EU e-commerce turnover reached approximately €900 billion, representing a continuous growth trend with online retail now accounting for over 15% of total retail turnover in countries such as the UK, Germany, France, and the Netherlands (HDE Online Monitor 2025, Ecommerce Europe Report 2024). While individual growth rates vary, most EU countries have seen double-digit annual increases in online sales over the past five years, with Southern and Eastern Europe catching up rapidly.

The COVID-19 pandemic further accelerated this shift: across Europe, millions of consumers switched to online shopping, and this behaviour has largely persisted post-pandemic. According to Ecommerce Europe, over 75% of internet users in the EU made at least one online purchase in 2023, with particularly strong growth in sectors such as clothing, electronics, and household goods (Ecommerce Europe Report 2024). However, most consumers do not draw strict lines between channels. Many people research products online before making a purchase in a physical store (a behaviour known as ROPO = Research Online, Purchase Offline), while others discover products in-store and later buy them online.

A recent development is the surge of ultra-low-cost international platforms. These new market entrants have rapidly gained traction across Europe by offering vast product ranges at extremely low prices, made possible through direct imports from global manufacturers and aggressive digital marketing. The dominance of such platforms has driven up advertising costs, intensified price competition, and placed additional pressure on both local businesses and established European online retailers (HDE Online Monitor 2025). These platforms are especially popular among younger, price-sensitive consumers, further accelerating the shift of spending away from local city centre businesses to global, online-only models. Concerns regarding product quality, sustainability, labour conditions, and the environmental impact of cross-border shipping and high return rates are increasingly discussed.

One of the impacts of this transition is the declining footfall in city centres across Europe. In many major cities, visitor numbers in shopping streets remain below pre-pandemic levels, and retail vacancy rates have risen. As more people shop online, the physical role of city centres

as commercial and social hubs is eroding. The connection between stationary retail and urban space, once seen as inseparable, is being weakened (Ecommerce Europe Report 2024).

2.2 Challenges of integrating e-commerce with city centres

Integrating e-commerce with city centres is challenging. One of the primary concerns is the displacement of local businesses due to the competitive advantages of online retailers, particularly large international platforms. These companies benefit from lower overhead costs, global supply chains, and the ability to offer a vast assortment at highly competitive prices. City centres in many European countries also face high rental prices, making it difficult for innovative retail concepts, circular offers and start-ups to establish a physical presence.

Logistical and environmental challenges are also pronounced at the European level. The increase in parcel deliveries, especially the so-called “last mile”, has led to higher traffic congestion, noise, and emissions in urban areas across the continent. According to the European Environment Agency (EEA), transport emissions from e-commerce deliveries are a growing concern, particularly as same-day and next-day delivery become standard consumer expectations. The proliferation of single-use packaging and high return rates, which often exceed 30% in sectors such as fashion, further exacerbate environmental pressures (European Environment Agency, 2024, HDE Online Monitor, 2025).

In 2020 the German Environment Agency (UBA) also identified positive environmental effects of e-commerce. The study suggests that online shopping often produces fewer greenhouse gas emissions than traditional retail. However, this depends on specific factors like transport methods, energy use in shops, and customer travel. In some cases, physical shopping may still be more eco-friendly. When comparing the two systems, the last mile is of particular importance in online retail, while in stationary retail the emissions from the market/shop (electricity and heating) and the shopping trip made by customers are of particular significance. (Umweltbundesamt 2020)

3 OPPORTUNITIES AND STRATEGIES FOR LINKING SUSTAINABLE E-COMMERCE WITH CITY CENTRES

For e-commerce SMEs, engaging more actively in city centres can open new customer segments, increase trust through physical presence, and enable new business models such as pick-up points, repair services, or rental hubs. Conversely, stationary retailers who establish or expand their online presence can reach customers beyond their immediate urban area, offer click-and-collect or home delivery, and participate in local online marketplaces. The key is to recognise that today's successful retailer is often both: present online and offline, offering a seamless, customer-centric experience (HDE Online Monitor, 2025).

Moreover, commerce is not limited to selling new products. City centre businesses and online shops can offer repairs, upcycling, rentals, and sharing services and further blur the boundaries between traditional and digital retail. This hybrid approach not only meets changing consumer demands but also supports sustainability and community engagement.

3.1 Reuse of space with pop-up stores, showrooms and micro hubs

3.1.1 Diverse concepts for the reuse of vacant urban spaces

One of the most promising strategies linking e-commerce with the revitalisation of city centres is the adaptive reuse of vacant or underused urban spaces for new functions such as pop-up stores, micro-hubs or fulfilment centres. These multifunctional spaces can foster community engagement, support local economies, and reduce environmental impacts by enabling more efficient, localised logistics (Ecommerce Europe Report 2024).

Pop-up stores and showrooms allow online retailers to establish a temporary physical presence, enhancing brand visibility and enabling direct interaction with consumers. Pop-up concepts also enable the promotion of repair, rental, or upcycling services beyond traditional selling. Organisations or businesses can use Pop-up Stores as a flexible and cost-effective tool for market testing. By allowing multiple brands to share temporary retail spaces, city centres can offer a more diverse and dynamic retail mix while reducing the environmental footprint of retail operations. Pop-up concepts also make it easier for sustainable brands and start-ups to gain visibility, and for city centres to remain vibrant and relevant despite changing consumer habits (Umweltbundesamt 2023).

Showrooms and physical touchpoints can significantly reduce return rates. When customers can see and try products in-store before purchasing online, unnecessary returns

and the associated emissions from reverse logistics are minimised. This synergy not only benefits the environment but also improves customer satisfaction and reduces operational costs for retailers (Umweltbundesamt 2023). All these concepts are not limited to traditional retail units. Creative formats such as tents, shipping containers, mobile trucks or buses, the towns market place, and immersive installations can serve as engaging retail environments as well. These experiential retail setups often enhance the shopping experience and attract public attention through their novelty and visual impact.

Returned goods and remaining stock present another opportunity for sustainable urban commerce. Rather than being disposed of, these items can be resold through **outlet stores** or dedicated platforms within city centres. This approach supports the circular economy, reduces waste, and provides affordable access to goods for a wider range of consumers.

Local logistics (micro) hubs and resource/space-sharing schemes can make the “last mile” more efficient by consolidating shipments and using city centre pick-up points. When using reusable packaging solutions or integrated systems, these hubs can also support the reduction of packaging waste. Finally, located at the city centre or set-up as multifunctional space, these hubs not only makes urban logistics more sustainable but also offers the opportunity to bring foot traffic back to city centres, supporting local businesses (Umweltbundesamt 2023).

3.1.2 Zoom-in: benefits of pop-up stores

One of the main advantages of pop-up stores is that there is a **limited financial risk**. Businesses and initiatives can use a vacant space for a limited time and often for a lower rent as usual in similar locations.

In addition, Pop-up stores can **raise awareness** (for circular economy, repair, brands, etc.) in locations with a high concentration of the target audience, typically in city centers or busy shopping districts. Beyond visibility, these temporary retail spaces offer a unique opportunity for direct customer engagement, which is especially valuable for brands focused on sustainability and the circular economy. Visitors can touch and try the products while learning more about their origin and production process, for example, that they were made from secondary raw materials, repaired, upcycled, or locally produced with a minimal environmental footprint.

Pop-up concepts often **incorporate experiential and experimental elements**, such as themed installations, repair-focused workshops, creative reuse studios, or exhibitions of sustainable brands. That way they making the visit a unique and inspiring experience. For

brands embracing circular practices, this format can serve not only as a powerful marketing tool, but also as a means of educating the public.

The pop-up concept can be tailored to various objectives, such as:

- Launching a new circular brand, e.g., fashion designers working with deadstock fabrics or upcycled textiles.
- Showcasing products made from secondary materials, such as recycled packaging, furniture from pallets, or refurbished electronics.
- Seasonal campaigns focused on reuse and sustainable gifting (e.g., “sustainable Christmas”).
- Community and educational events, such as public workshops (e.g., clothing repair, waste-based crafting), or shared showrooms for local producers.
- Integrated circular projects that combine multiple services (e.g., rental services, refill stations, repair hubs, and a retail store in one).
- A couple of self-employed people share a Pop-up room to showcase their work and test, whether they can imagine having their own store.

This model enables (online-only) brands with a focus on sustainability to bring circular economy principles closer to everyday consumers through hands-on experience, dialogue, and inspiration. By doing so they fostering awareness and interest in sustainable consumption.

Extra: Integrating online and offline sales channels for a seamless customer experience

At a time when customers expect maximum convenience and a seamless experience across all sales channels, pop-up stores offer a unique opportunity to bridge the online and offline worlds. Many brands in these temporary retail spaces **combine traditional in-store shopping with digital tools**, for example, allowing customers to order products online and pick them up on-site, or enabling them to easily order items they tried in-store via QR codes for home delivery. This kind of integration enhances the shopping experience, reduces logistics costs, and helps brands build stronger, cross-channel customer relationships.

Digital platforms that connect online and offline retail can also create seamless customer experiences and make sustainable products and services more accessible to a broader audience. These enable retail cooperatives and local businesses to seamlessly connect their physical shops with digital marketplaces. Thus local retailers can display real-time product availability, allow customers to research online, purchase offline and coordinate bundled deliveries for local pick-up (Platoyo, 2025).

3.1.3 Zoom-in: benefits of micro hubs and pick-up points

Repurposing abandoned or underutilized urban spaces as sustainable logistics hubs, pickup points, or community retail spaces offers multiple benefits. Above all, it helps **reduce traffic load and greenhouse gas emissions** by bringing supply chains and last-mile delivery closer to consumers. When goods are stored or dispatched at a micro hub from within the city, more sustainable modes of transport like cargo bikes, walking couriers, or zero-emission electric vehicles, can be used. This leads to less large delivery vans (less noise, fumes, congestion) in build-up areas and narrow streets. Furthermore, pick-up points reduce the number of stops for delivery vehicles and when set-up at locations which are easily accessible by public transport or located at places that are visited anyway (e.g. supermarkets) they help to reduce emissions of the last mile.

Interest in these forms of urban logistics is growing thanks to the rise of e-commerce, quick commerce (fast delivery of small parcels), and emerging models of urban entrepreneurship. Local businesses or shared platforms can use these spaces to **operate community shops**, smart parcel lockers, shared storage facilities, or multi-carrier micro-hubs. These models not only support sustainable transport and space reuse, but also help to revitalize underused urban areas, enhancing their social and economic appeal.

Technology plays a key role, since modern inventory management systems, smart lockers, and mobile app integration allow these solutions to **operate effectively even in small-scale** urban locations. Automated storage and micro-depots can run with minimal or no on-site staffing, adapting flexibly to shifting demand.

In areas at risk of depopulation or spatial marginalization, adaptive reuse can provide new momentum. **Communities** can be actively involved through participatory planning and interim or shared use of vacant buildings.

Cities and municipalities can support this trend by providing access to suitable properties, adopting flexible zoning policies, funding pilot projects, or adjusting regulations to enable logistics and retail use outside traditional commercial zones. Public-private partnerships can also be highly beneficial.

Extra: Encouraging environmentally friendly delivery options

Urban parcel delivery has become an integral part of everyday daily life, in cities, towns, and rural areas alike. **However**, with the growing number of online purchases and the demand for fast delivery, pressure on transport infrastructure and the environment is also increasing. Conventional delivery methods using fossil-fuel vans contribute to traffic congestion, air pollution, and greenhouse gas emissions. This opens the door for **eco-friendly delivery alternatives**.

One of the most effective solutions is the use of **cargo bikes**. They are ideal for delivering small parcels over short distances, particularly in densely populated urban areas. They produce no emissions, take up minimal space, and often reach destinations faster than conventional vans by using bike lanes, pedestrian zones (if permitted), or narrow routes inaccessible to regular vehicles. When combined with a micro-hub, cargo bikes can become a key element of last-mile delivery.

Another option are **electric vehicles**, such as electric vans or small e-cars. These vehicles significantly reduce CO_2 emissions, improve air quality in cities, and decrease noise pollution and that way directly contributing to residents' well-being and quality of life.

Support for these delivery modes can take many forms: from **developing infrastructure** for parking, charging, and maintenance, to providing incentives for green carriers within urban logistics systems (e.g. access exemptions for city centers, financial subsidies, reduced fees, etc.). Some cities are introducing low-emission or zero-emission zones, encouraging companies to transition to cleaner technologies.

Digital technologies also play a critical role when enabling smart route planning, shipment consolidation, and capacity sharing among different carriers. This improves delivery efficiency and reduces the number of empty trips. From an economic perspective, green logistics also creates new job opportunities. For example, bike couriers, e-mobility technicians, or micro-depot operators.

Eco-friendly delivery is a vital step toward healthier, more sustainable cities. It helps reduce emissions, improve urban quality of life, lower noise levels, foster innovation in transport and logistics, and support the goals of municipal climate policies.

3.2 Resource-sharing platforms

Resource-sharing platforms allow individuals or businesses to access and use goods or services without the need for direct ownership. These platforms are based on the principles of circular economy, maximizing resource utilization and minimizing waste.

With the rise of digitalization, these systems have become even more accessible and efficient. Digital technologies enable easy user connection, transparent tracking of the movement and condition of shared resources, and the development of trust among participants. Resource-

sharing platforms represent a key tool of the circular economy in the digital age, supporting sustainable consumption and innovative approaches to the use of materials and services.

SMEs and cities have the opportunity to contribute to the development of such a platform or to operate it entirely by themselves. At the same time, brick-and-mortar retailers might also serve as a contact point for these sharing services (e.g. as a pick-up point/storage facility for shared items or as a venue for swap events)

3.2.1 Resource sharing as a sustainable practice in urban commerce

In the realm of urban commerce, resource sharing brings a wide range of benefits that help both the economy and the environment. Key advantages include:

- **Efficient resource use:** Shared items like tools, vehicles, or office spaces are used more efficiently, reducing the need for new or own resources.
- **Cost savings**: Sharing spreads costs for acquisition, maintenance, and storage among users.
- **Reduced environmental footprint**: Efficient resource use leads to lower material consumption, which in turn reduces waste and emissions associated with production and disposal.
- **Strengthened community collaboration**: Sharing fosters collaboration and trust, benefiting local economies and social ties.

3.2.2 Forms of resource sharing

Nowadays, there are various resource sharing offers. The most common forms include:

- **Space sharing**: Underused spaces like offices or retail locations are shared, e.g., coworking spaces or shared shops.
- **Vehicle sharing**: Bikes, scooters, and cars are shared, promoting eco-friendly mobility and reducing private vehicle ownership. This model saves money and frees up space in congested city areas.
- **Tool and equipment sharing**: Tools or machinery used occasionally are shared, saving money and space. These services are increasingly popular in urban areas where space is limited.
- **Digital platforms for sharing**: Online tools simplify sharing, from lending books to exchanging professional skills.
- **Swap events**: People are meeting at a location and exchange items they no longer need, such as clothing, books, toys, or even furniture. Swap events can be organized

by diverse stakeholders in public spaces, community centers, pop-up stores or via online platforms that support peer-to-peer exchange. They may also be accompanied by educational or awareness-raising activities.

3.2.3 Integrating digital tools for easier access to shared resources

Digitalisation is transforming resource sharing in urban areas. Key functions include:

- **Visibility**: Apps and maps help users find shared resources like community fridges or tool libraries.
- **Event coordination**: Digital tools streamline planning and promotion for reuse events.
- **Reservations**: Online systems allow users to book tools, spaces, or workshops.
- **Impact tracking**: Platforms measure the environmental benefits of sharing, like waste reduction or CO_2 savings.

For success, digital tools must be user-friendly, inclusive, and compatible with other local and municipal digital services. Offline alternatives, such as printed materials or in-person support, remain essential for accessibility. Finally, digital tools require clear operational support, maintenance, and the ability to evolve according to community needs.

3.2.4 Encouraging local communities to participate in resource-sharing schemes.

Active community involvement is crucial for resource-sharing initiatives to thrive.

- People are motivated when they see clear **benefits**, such as saving money, space, or time. Sharing also builds social connections and supports sustainable lifestyles.
- **Clear communication** is key. Simple messages like "Borrow instead of buying" work well, and real-life stories inspire participation.
- **Low-barrier activities**, like public lockers or community libraries, help people try sharing without hesitation.
- **Education and outreach**, such as workshops or school projects, can spark interest and teach sharing habits.
- **Digital tools** like apps and maps make sharing easier, but offline options ensure inclusivity for all.
- **Local coordinators, volunteers, and partnerships** with schools or community groups play a vital role in spreading awareness and building trust.

- By making sharing **accessible** and welcoming, communities can unlock its full potential for a more sustainable and connected urban life.

3.3 Integrating digitalization into processes to foster circular lifestyles

Digitalisation plays a crucial role in accelerating the transition toward circular lifestyles by connecting people, processes, and products in smarter and more transparent ways. In the context of sustainable e-commerce and urban circularity, digital tools enable citizens and businesses to adopt reuse, repair, and sharing practices more easily, while helping cities to manage resources more efficiently.

At its core, digitalisation transforms how communities interact with materials and services. Online platforms, apps, and databases make it easier to map available resources, exchange goods, and coordinate logistics. For example, reuse centres can **digitalise their inventory**, allowing citizens to browse available items online before visiting in person. Booking and reservation systems can streamline the lending of tools, furniture, or equipment, while digital payment and reporting tools increase efficiency and transparency. A practical illustration of this approach can be found in Jihlava's Silo community and its reuse centre Útulek věcí, where digital tools were introduced to improve daily operations and community engagement (for more information see the case study in chapter 4.1).

Beyond reuse operations, **digitalisation can foster civic participation and collaboration**. Interactive maps and apps allow citizens to locate nearby reuse centres, repair cafés, or swap events. This gives them the opportunity to integrate circular practices into their everyday lives.

Integrating digitalisation into circular processes therefore means **creating connected ecosystems**, where data, technology, and human action reinforce each other. It requires interoperability between local systems, open data standards, and **digital inclusion** to ensure accessibility for all residents. Transparent communication and user-friendly design are key to building trust and encouraging behavioural change.

Ultimately, digital tools are not an end in themselves but an enabler of circular lifestyles. When aligned with social engagement and community values, they can turn reuse centres, shared workshops, and local businesses into living examples of a **digital circular economy**, bridging the physical and online worlds while revitalising city centres as spaces of collaboration, creativity, and sustainability.

4 SUPPORT & TOOLS FOR LINKING E-COMMERCE AND CITY CENTERS

4.1 Stadtimpulse – project database for best practices

Stadtimpulse (City Impulses) is Germany's first nationwide, certified project pool for vibrant cities, town centres, and regions. It offers proven and tested solutions to address the current and future challenges facing our inner cities and local centres. The platform presents successfully implemented projects that have achieved tangible local results. It serves as a genuine best-practice toolbox for urban revitalisation.

The project pool is aimed for cities and municipalities, as well as for businesses and organizations operating in urban centres. It features many best-practice examples on online retail and digitalisation, which you can easily find by searching for keywords such as "online," "e-commerce," or "digital."

The Stadtimpulse project pool has been active since 2021. It was launched by an alliance of leading professional associations and institutions representing cities and municipalities in Germany and is supported by these and other partners. Among them are the German Retail Association (HDE), the German Association of Towns and Municipalities (DStGB), the Federal Association of City Marketing Germany (bcsd), and the German Association of Cities (Deutscher Städtetag). The project pool is managed and coordinated by CIMA Consulting and Management.

The website is only available in German language. However, as it is provided in an online format, you can use your web browser's automatic translation feature to view each chapter in your preferred language.

Link to the project pool: https://unsere-stadtimpulse.de/projektpool/

4.2 UBA Guide for Sustainable E-Commerce

This digital guide shows online retailers how to make their offerings as environmentally friendly as possible. There is especially potential for ecological optimisation in areas such as shipping and packaging, delivery and returns, product selection and information, as well as in the technical implementation and web design of the online shop.

The guide is primarily intended for SMEs and individuals planning to establish an online shop, to support them in integrating ecological considerations into their business model. The other target group are dedicated and interested operators of online shops and marketplaces, who

are provided with options for implementing environmentally sustainable practices in their operations.

The guide was published by the German Environment Agency (UBA) in 2022 as part of a research project conducted in cooperation with the Institute for Environmental Strategies and Policy (Ökopol). The guide is only available in German language. However, as it is provided in an online format, you can use your web browser's automatic translation feature to view each chapter in your preferred language.

Link to the guide: https://www.umweltbundesamt.de/themen/wirtschaft-konsum/leitfaden-fuer-mehr-umweltfreundlichkeit-im

4.3 Quickstart Online

Quickstart Online is a free knowledge portal on e-commerce. It helps small and medium-sized retailers quickly find the right digital approach. Their free online courses answer key questions such as where to start and which type of e-commerce fits which retailer. In addition, the platform offers articles about success stories and networking events.

The platform is provided by the German Retail Association (HDE), Merchants Helping Merchants, and Amazon's "Entrepreneurs of the Future" initiative.

The website is only available in German language. However, as it is provided in an online format, you can use your web browser's automatic translation feature to view summaries of each video in your preferred language.

Link to the knowledge portal: https://quickstart-online.de/

4.4 Guide for going Omnichannel

The 'Going Omnichannel - A Guide to Expanding Your Ecommerce Business Beyond Your Website' guide explores what true multi-channel integration entails, the benefits and ROI of going omnichannel, and case studies and tips you can use to go all in on growing your omnichannel empire.

The ebook is for any online brand or retailer who is ready to go omnichannel and grow their e-commerce business beyond their e-commerce store. It is provided by Plytix, a Danish company specializing in Product Information Management (PIM) software tailored for small and medium-sized businesses (SMBs).

The ebook is in English language.

Link to the guide: https://www.plytix.com/resources/going-omnichannel

4.5 The Storefront

Storefront is an online platform that offers short-term rentals of retail spaces, such as shops, showrooms, pop-up stores, galleries, or event venues.

Users (including brands, e-commerce businesses, designers, and artists) can easily search for spaces by city, rental duration, or event type, and rent them for just a few days or weeks without committing to a long-term lease.

The platform enables companies to test new markets, showcase products or services in a new environment, or host temporary events. All without the need to invest in their own physical store.

Link: https://www.thestorefront.com/

4.6 WeWork

WeWork is a platform offering coworking spaces for companies, freelancers, and teams, including shared offices, individual workspaces, meeting rooms, and fully equipped private offices.

Through the website, users can easily find suitable spaces based on location, team size, or rental duration. WeWork enables flexible working arrangements: businesses and individuals don't need long-term leases, can start with a smaller team, and can adjust their workspace as needed. The service is especially helpful for start-ups, small companies, or project teams looking for a professional office environment without having to invest in their own physical space.

Link: https://www.wework.com/

5 CASE STUDIES

5.1 The Reuse Recognizer tool in Jihlava, Czech Republic

5.1.1 About Silo Jihlava and the Útulek věcí reuse centre

Jihlava is the regional capital of the Vysočina Region, located on the historical Bohemian–Moravian border in the Bohemian-Moravian Highlands. With around 50,000 inhabitants and over 10,000 daily commuters, the city has been designated an urban heritage conservation zone since 1982.

In 2023, the grassroots community Silo Jihlava was founded in a former grain warehouse near the city centre. The community promoted local culture, education, and social engagement through about 70 cultural and community events annually, supported by 80 active volunteers.

Figure 1 Interior of Silo Jihlava reuse centre. Source: Útulek věcí.

The Útulek věcí reuse centre, jointly run by the Municipality of Jihlava and Silo Jihlava, operates on the city's outskirts in a former military warehouse. With an area of 400 m², five employees, and two opening days per week, it handles the collection, sorting, and sale of donated items, attracting around 50 visitors per opening day.

Together, Silo Jihlava and Útulek věcí form a strong base for circular-economy activities such as equipment rental, support for low-income residents, and zero-waste or educational events (e.g. Swaps and workshops).

Operationally, the reuse centre faces staff shortages in sorting, pricing, and record-keeping. Around 250 kg of items arrive within hours of opening, each requiring documentation upon arrival and sale, estimated to take about 500 hours annually.

5.1.2 The pilot idea and objectives of the initiative

Within the digitalisation and e-commerce tandem of the NiCE project, the Jihlava pilot project focused on facilitating record-keeping in reuse (second-hand) operations using the **Reuse Recognizer tool.** Leveraging artificial intelligence, it enables the identification, classification, and documentation of items both at intake (1st level) and at distribution (3rd level). For reuse operations, it can serve for reporting needs toward the national umbrella organisation for reuse centres, the Federation of Reuse Centres and Furniture Banks, toward the city of Jihlava, for tracking the turnover of public collections, and for communication with the public. With the forthcoming obligation for EU Member States to report national reuse volumes to the European Commission, the pilot project's ambition is to create a tool that will make this reporting easier.

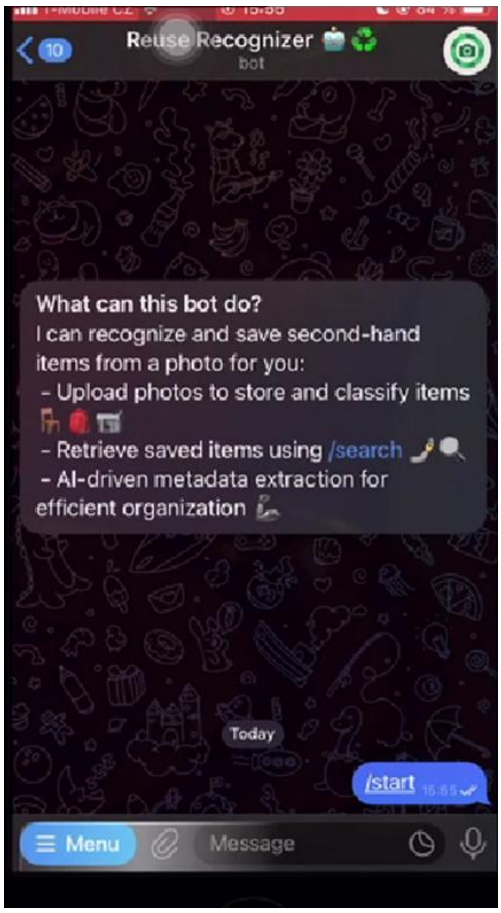

Figure 2 Reuse Recognizer. Source: Útulek věcí

The pilot involved a wide spectrum of stakeholders, including:

- SILO Jihlava z.s. – reuse center operators
- Federation of Reuse Centres and Furniture Banks (US: Centers)
- Municipal Authority of the City of Jihlava
- Czech Invest - Agency for Business and Investment Support

The Reuse Recognizer tool is an AI-based system for recognising, categorising, and valuing items from photos and was developed to accelerate record-keeping, enable data export, and prepare integration with online sales and a potential national reuse registry. It was also tested in connection with Extended Producer Responsibility (EPR) for furniture.

A new website, reusejihlava.cz, now provides information about services, opening hours, and practical details for the public.

The pilot project also linked community activities with digitalisation. The Reuse Days in 2024 and 2025 featured swaps, workshops, repair demonstrations, and a fashion show of upcycled

textiles, raising awareness of reuse and strengthening community ties. In 2024, four swap events were held, followed by seven in 2025.

Coordination among actors was ensured by the Local Advisory Board, which connects the city, Silo Jihlava, NGOs, and public institutions. The tandem with Würzburg facilitated knowledge exchange in digitalisation, e-commerce, and volunteer engagement.

5.1.3 Successes and outcomes

The Reuse Recognizer significantly streamlines record-keeping. Under “paper-based” records, each individual item had to be written down and weighed manually, alternatively object weight coefficients established by reuse federaton were used.

Currently, the Reuse Recognizer offers:

- Automatic object recognition using AI (Google Gemini) based on user-submitted images, in real time.
- Management and categorisation of items by type, material, and other properties in JSON format.
- Storage and management of data on items, photos, and users via Firebase (Firestore, Storage) and export to XLS.
- Assignment of users to locations (specific reuse operations).
- User interface via Telegram (desktop and mobile): uploading photos, displaying item properties, searching items, marking items for distribution, and exporting data.
- Administrator functions for system and user management.

Main success factors of the tool are:

- Increased accuracy of weight estimation compared to object-weight coefficients
- Automatic categorization and object description facilitating data entry to the online marketplace
- Second-hand item price estimation facilitating pricing for unique items
- Omitting need to transcribe paper evidence into digital form

5.1.4 Challenges

The tool currently allows data entry solely on the basis of a photograph. However, feedback from Útulek věcí’s operations indicates a need to simplify data entry for common/ frequent/ numerous items for example, jars, small items, or books. In such cases, the reuse operation

does not need to photograph each item individually. The solution will be to add a function for entering data for common items via text or buttons and to use coefficients to estimate weight.

At present, data can be edited only by the system administrator. Operational feedback shows a need for user-level data editing, for example for adjusting descriptions and classifications and, where applicable, flagging errors. The solution will be to add this function to the next version of the tool.

Another challenge is slow data processing. The solution will be to display item properties only on demand and to add intake/distribution modes.

5.1.5 Lessons learned

The Reuse Recognizer quickly became a natural part of reuse centre operations, reduced errors, saved time and costs, and improved data quality for local and future European reporting. Equally important was the social component: Reuse Days, swaps, and educational workshops promoted reuse activities in the city. A technology without community work would have only a limited impact. Engaging governance through the Local Advisory Board and the international tandem accelerated learning, helped align stakeholder expectations, and inspired further refinements to the tool and the reuse centre operation.

The main challenges lay in infrastructure (capacity and location of premises, unsolved ownership), maintaining long-term public interest, and establishing new routine processes for staff. An unexpected benefit is the tool's applicability for Extended Producer Responsibility (EPR) and the growing interest from other cities, which confirms its replicability when the local context is respected.

For other cities, three recommendations follow:

- combine digital and social innovation (technology + community programmes);
- secure institutional backing from the outset (e.g. the city and key partners);
- implement solutions gradually and flexible: from a smaller set of categories and functions to full integration (including links to an e-shop and registries); while simultaneously working on adequate physical facilities and accessibility

Link Silo Jihlava: https://www.silojihlava.cz/

5.2 Green delivery for rented items in Würzburg, Germany

5.2.1 About Würzburg and the Zukunftshaus

Würzburg, a historic city in northern Bavaria with around 130,000 inhabitants, is well known for its prestigious Julius Maximilian University and lively student scene. The city demonstrates a strong commitment to sustainability, having integrated circular economy principles into its Climate Protection Concept and supported initiatives such as the “Einmal ohne, bitte” campaign to reduce disposable packaging. Despite these progressive steps, Würzburg faces several urban challenges common to many European cities, including the decline of traditional retail in the city centre, the need for innovative mobility and logistics solutions, and the ongoing task of revitalising central urban areas. The city’s forward-looking attitude is further reflected in the election of a Green Party mayor and its ongoing support for sustainability initiatives, making Würzburg an ideal setting for piloting new approaches to sustainable consumption.

Figure 3 The Zukunftshaus from the outside. Source: Zukunftshaus.

The Zukunftshaus Würzburg (“House of the Future”) which opened in 2022 provides an innovative response to key challenges: making sustainable consumption accessible in everyday life and combining various forms of sustainable consumption under one roof.

The Zukunftshaus brings together four distinct services:

- **Purchase** of sustainably produced everyday and utility goods
- **Rental** of items for occasional use

- **Exchange** and donation of items that are no longer needed
- **Repair** of defective (electrical) devices

A lifestyle that actively incorporates all four areas offered by the Zukunftshaus is not only particularly sustainable, but also time-saving and no more expensive than a conventional lifestyle focused on frequent purchases and disposals. By renting, exchanging, and repairing products and devices, both the environment and personal finances benefit.

The Zukunftshaus is implemented by Zukunftshaus eG (a registered cooperative) and the non-profit Zukunftswerk e.V. (a registered association). Covering an area of around 200 m² in the heart of Würzburg's city centre, the four areas are open to all interested parties on weekdays from 10:00 to 18:00. The exchange section is managed by Zukunftswerk e.V. with the support of over 40 volunteers, while the purchase, rental, and repair sections are overseen by Zukunftshaus eG with five permanent staff and four regular volunteer repairers.

The concept of the Zukunftshaus focuses on sustainability. At the same time, its broad range of services contributes to revitalising and enhancing the attractiveness of city centres. In particular, the services of renting, repairing, and exchanging are difficult or impossible to offer online with the same simplicity as at the Zukunftshaus. The combination of all four areas in a single location is also unique and represents a genuine innovation.

5.2.2 The pilot idea and objectives of the initiative

The pilot initiative of Zukunftshaus Würzburg within the NiCE project set out to bridge the gap between sustainable e-commerce and the physical city centre. Its primary goal was to support and promote sustainable consumption models, such as renting and repairing goods, by demonstrating how e-commerce and city centre retail can complement and strengthen one another. By introducing a bicycle-based delivery service, the project aimed to reduce emissions and address the environmental impact of the "last mile" in urban logistics. In addition, the initiative sought to foster a circular economy mindset among residents and to make the city centre more attractive and liveable by integrating innovative business models into everyday urban life.

The pilot brought together a diverse group of stakeholders, including[1]:

- adelphi (think-and-do tank, consulting Zukunfthaus eG during the pilot)
- Citizens and customers of the Zukunftshaus

[1] In alphabetical order

- City of Würzburg (Economic Development Department and city representatives)
- Julius Maximilian University of Würzburg (WUE-Lab)
- Radius (local bicycle courier service)
- UBA (German Environment Agency, project lead and coordinator)
- Zukunftshaus eG (cooperative managing the sustainable department store)
- Zukunftswerk e.V. and memo Stiftung (local NGOs and foundations)

To achieve its objectives, the pilot introduced a bicycle delivery service for rental and repair items, making these sustainable consumption options more accessible to residents both within and beyond the city centre. Orders for rental items could be placed through the Zukunftshaus website, bringing convenience and flexibility to users. The project team fostered collaboration and engagement by organising ideation workshops, advisory board meetings, and regular coordination sessions among all partners. A variety of public launch events, participation in street festivals, and targeted promotional campaigns, such as voucher distributions and social media outreach, were used to raise the profile of the new service. Additionally, direct outreach to customers in-store and local surveys helped to gauge interest, understand user needs, and refine the service offering over time.

Figure 4 Launch of the cooperation between Radius and Zukunftshaus. Source: Zukunftshaus.

5.2.3 Successes and outcomes

The pilot succeeded in establishing an innovative service that effectively connected online ordering with local, circular economy practices in Würzburg. By facilitating strong cooperation among local actors, the project raised public awareness of sustainable consumption, repair, and rental options. Events like the bicycle-powered cinema and active participation in local festivals captured the public's imagination and drew significant community engagement.

Furthermore, the pilot served as a valuable testbed for new business models and helped to strengthen local networks, laying the groundwork for future sustainability initiatives in the city.

5.2.4 Challenges

Despite the positive feedback received from surveys, the actual uptake of the bicycle delivery service remained very low, with only a single recorded user during the pilot period. Several factors contributed to this limited adoption, including the absence of a convenient online payment system, higher-than-expected delivery fees, and the lack of same-day delivery options. The closure of the initial courier partner (Wü-Livery) necessitated the search for a new partner (Radius), which brought increased costs and logistical constraints. Many customers continued to prefer in-person visits for rentals and repairs, which diminished the appeal of the delivery option. Even financial incentives, such as vouchers and reduced fees, did not lead to a significant increase in service usage. These challenges underscored the importance of robust digital infrastructure and a seamless customer experience for similar initiatives in the future.

5.2.5 Lessons Learned

The pilot experience highlighted that convenience and affordability are essential for the successful adoption of sustainable delivery services. Starting with free or discounted delivery may help to build a user base and encourage trial. Integrating online payment and booking systems is crucial for scaling such services and meeting user expectations. The importance of personal interaction, particularly for rental and repair services, suggests that hybrid models, that combine digital and face-to-face elements, may be most effective. The collaboration among diverse stakeholders proved invaluable, fostering innovation and resilience even in the face of limited initial uptake. Ultimately, the project generated valuable insights and strengthened local networks, providing a strong foundation for future efforts to revitalise city centres through sustainable, circular economy models.

Link Zukunftshaus Würzburg: https://www.zukunftshaus-wuerzburg.de/

5.3 Further good practices

5.3.1 Platoyo – seamlessly merging online and offline retail

Platoyo is an omnichannel platform that supports retailers in bridging the gap between online and offline commerce. Today, more than 3,000 retailers use Platoyo to manage over 25 million products across 30 platforms in five countries (Platoyo 2025). This reach illustrates how local businesses can stay competitive and visible in an increasingly digital world.

At its heart, Platoyo offers a flexible, all-in-one Software as a Service (SaaS) solution for professional omnichannel platforms. Retailers can set up online marketplaces, manage real-time product availability, and connect their physical shops with digital sales channels. The system handles everything from product data import and payment processing to logistics. Thanks to its AI-powered technology, even complex projects can be implemented quickly and with minimal technical risk.

For customers, this means a seamless shopping experience. They can check what's in stock locally, reserve items for in-store collection, or opt for home delivery. The platform supports the increasingly common "Research Online, Purchase Offline" (ROPO) behaviour, which blends the best of both worlds, convenience and personal service.

Platoyo's omnichannel approach helps address the challenges faced by city centres, such as declining foot traffic and competition from global e-commerce giants. By making local inventory visible online and offering flexible fulfilment options, Platoyo enables retailers to reach new customer segments and build trust through their physical presence. Features like click-and-collect, local delivery, and bundled pick-up points not only make shopping easier but also reduce the environmental impact of last-mile logistics.

The platform itself is packed with over 250 features, including payment processing, order splitting, and product data management. Retailers don't need to invest in their own IT infrastructure, as Platoyo is ready to use and scalable. Frequent updates ensure that the platform remains user-friendly and secure.

By providing a reliable link between digital and physical retail, Platoyo helps revitalise city centres and supports local economies. The platform's flexibility also allows for new business models, such as shared marketplaces and collaborative logistics, which further strengthen urban retail. In summary, Platoyo demonstrates how thoughtfully applied digital tools can help local businesses thrive while keeping city centres vibrant and relevant. It's a practical example of how online and offline retail can complement each other, rather than compete.

Link Platoyo: https://platoyo.com/

5.3.2 RepairSYS by Opravárna – The digital platform for repair

RepairSYS is an innovative Czech digital platform developed by Opravárna s.r.o., designed to connect customers, manufacturers, and local repair technicians into one efficient system for managing product repairs.

Its main goal is to extend the lifespan of consumer goods and thereby reducing the volume of electronic waste. But also reduce waste by simplifying the entire process of reporting and handling service requests as well as minimizing emissions through optimized technician routes, and supporting local entrepreneurs, like smaller repair companies and individual service providers. The platform connects online repair services with local environments and thus strengthen circular practices in product use.

Through automation, data management, and network optimization, RepairSYS enables manufacturers and retailers to manage warranty and post-warranty repairs more efficiently,

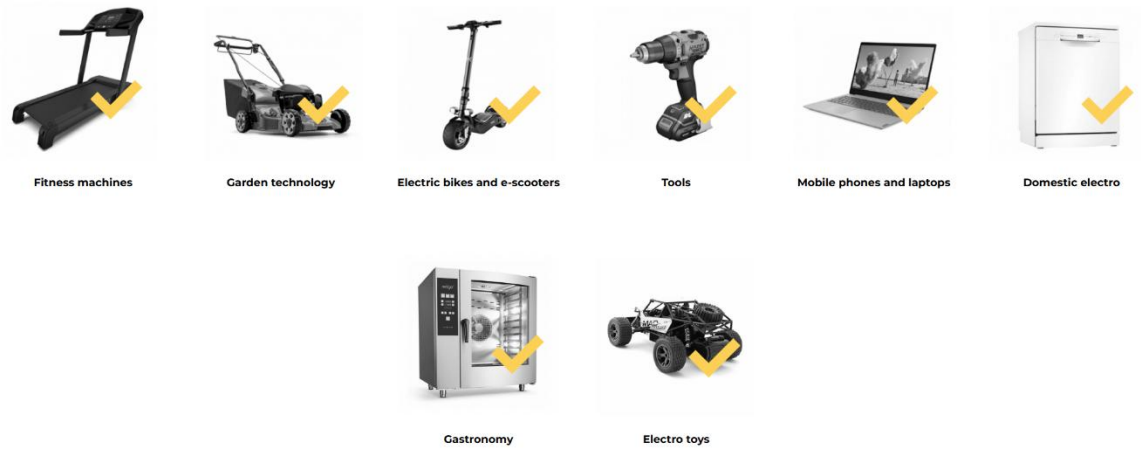

Figure 5 Product repair spectrum. Source: repairsys.eu.

while allowing local service providers to receive digital repair orders directly from nearby customers.

The platform operates across the Czech Republic, particularly in larger cities and regions with a high concentration of manufacturers and retailers of consumer goods. Urban areas are often faced with typical challenges such as high production of electronic waste, limited access to quality post-warranty repair services, and the need to reduce emissions associated with transporting products to service facilities. Within this context, RepairSYS delivers innovative solutions that align with the principles of the circular economy and promote sustainability. The digitalization of the entire process simplifies and speeds up order management, increases transparency, and reduces administrative burdens for all participants.

A wide range of actors is involved in the system's operation. The key player is Opravárna s.r.o., which manages the RepairSYS platform. It cooperates with major manufacturers and importers such as Alza, Decathlon, and Bauhaus, while also engaging a network of local repair

technicians and small businesses connected through the platform. The end customers who use its services are an equally important part of the system.

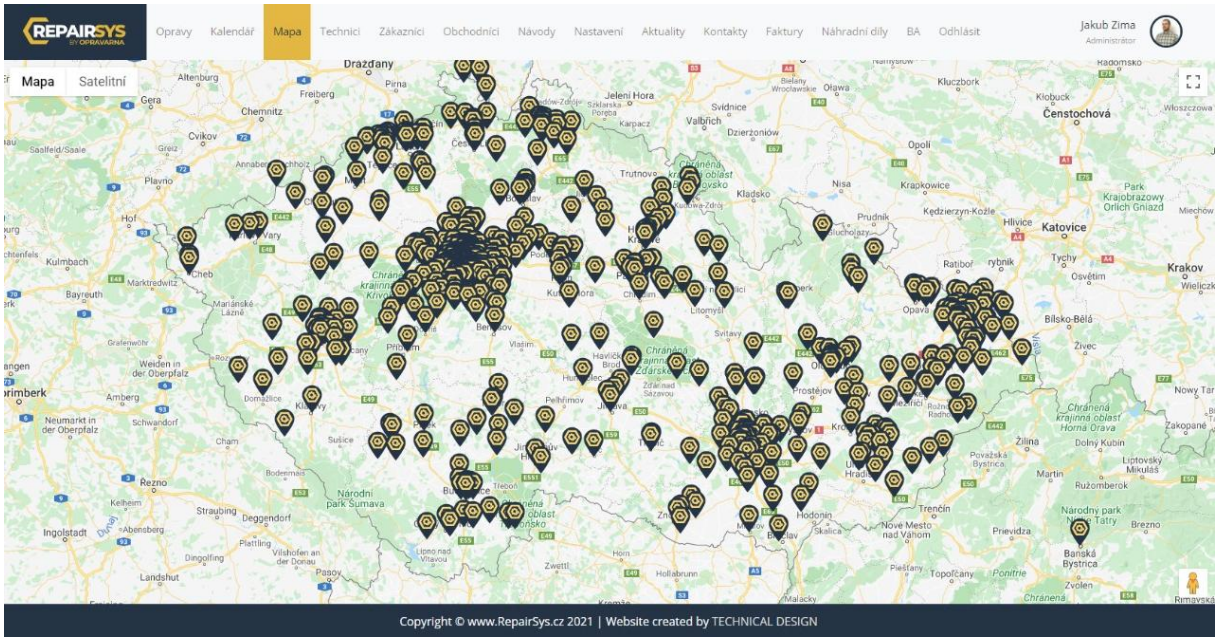

Figure 6 Map of partners. Source: repairsys.eu.

The operation of the platform is based on the RepairSYS software, which enables online dispatching and real-time order tracking. The system shares technicians' capacities across regions, optimizing routes and reducing transport-related emissions. It also supports cooperation with local repair businesses and offers the option of on-site repairs through so-called pop-up services. Integration into partners' websites and connections via application programming interfaces (APIs) ensure smooth linking with corporate systems.

The platform also enhances product repairability through technician training and video diagnostics and involves hundreds of repair specialists and small companies in the circular model.

Nevertheless, the introduction of the system has also presented several challenges. These include logistical difficulties during peak order times, a diverse product portfolio, occasional reluctance from some manufacturers to engage in open repair cooperation, the need for continuous technician training, and regional differences in the availability of quality repair capacities.

Experience so far shows that a digital platform can make repair services significantly more efficient and sustainable compared to traditional models. The success of the project depends primarily on close cooperation with local partners, shared capacities, and transparent communication with customers, which helps build trust. The RepairSYS model has strong

potential for replication in other cities and countries, provided there is a sufficient network of technicians and support from manufacturers.

Link to RepairSYS: https://www.repairsys.eu/en/

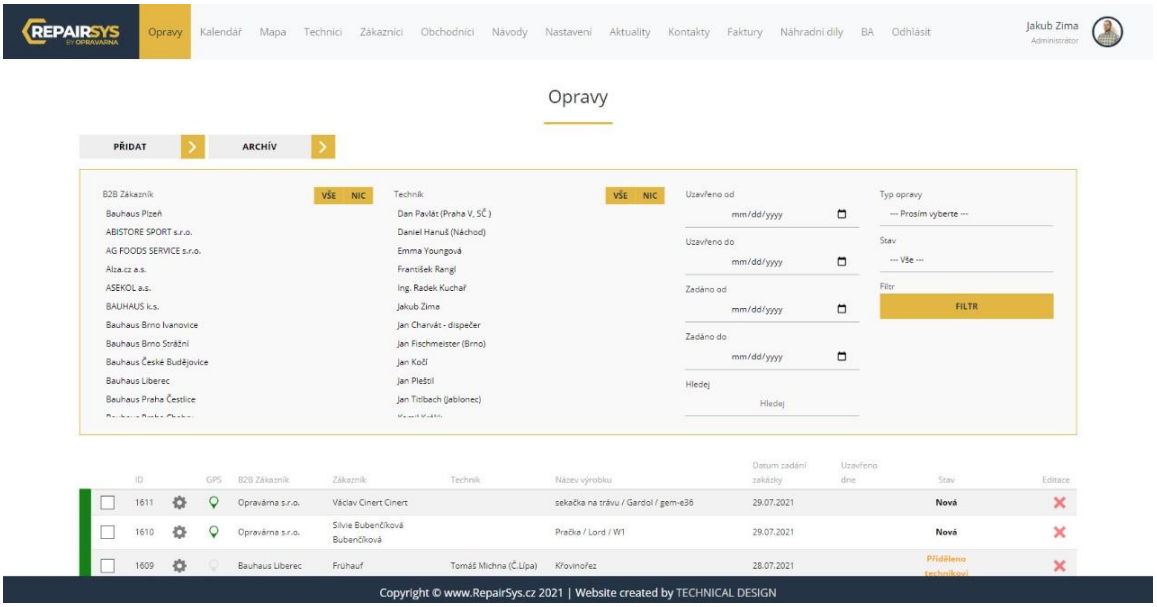

Figure 7 Repairsys custom system. Source: repairsys.eu.

5.3.3 Library of Things

A Library of Things, sharing library or a hire shop are services similar to a library, but not for books, but for objects, like tools, clothing or instruments. This can be offered and operated by a community, a company (like a hardware store), an NGO, or actually the municipal library.

From the operator's perspective, the core task is the efficient management of a shared inventory that is accessible to residents, groups and small and medium-sized enterprises (SMEs). Digitalization and a online platform can help in the following areas in particular: reservations, payments, and user communication. While local collection points manage the physical issuing and return of items, including inspection, cleaning, and maintenance.

At the heart of the operation is a well-maintained catalogue of items, which the operator must regularly update and adjust based on user demand. Each item should have an assigned life cycle, and the operator tracks its wear, frequency of use, and servicing costs. This allows the operator to determine when an item needs repair, replacement, or removal from the inventory. Staff at collection points also require training to ensure that items are checked correctly, that users receive basic safety instructions, and that general maintenance tasks are completed to keep the inventory in good condition.

Operational management also involves planning and logistics. To keep the service running smoothly, the operator needs a clear overview of item availability, return schedules, and the condition of each product. A digital platform can help to automatically monitor availability calendars, sends reminders for return dates, and allows users to see real-time availability. This minimises reservation conflicts and ensures a steady turnover of equipment.

Library of Things can also collaborate with local institutions and community organisations, building a user network that shares values of sustainability and responsible consumption. This approach give the operator the opportunity not only to manage inventory but also to help cultivate a sense of community around shared resources. For SMEs, the service offers a flexible way to access equipment for specific projects or short-term needs without major upfront investment.

From a business perspective, the model can be sustainable, for example due to a combination of membership fees, rental income, and partnerships with local organisations. This financial structure allows the operator to invest in inventory renewal, platform development, and the expansion of new collection and pick-up points. Library of Things thus represents a managed system for sharing equipment that reduces material consumption while providing a practical and cost-effective service for households and businesses alike. In addition, it offers SMEs, initiatives, or municipalities the opportunity to add another service to their business portfolio. This can strengthen local locations and may help to even open up additional locations (as pick-up points) in the city center.

Link to Library of things: https://www.libraryofthings.co.uk/

5.3.4 Food waste reduction platforms

Online platforms and apps can also help prevent food waste. There are various forms:

- connecting private individuals with each other: e.g. Olio, UXA, Nesnězeno
- connecting citizens with cafes and restaurants: e.g. TooGoodTooGo
- associations dedicated exclusively to the goal of food rescue: e.g. foodsharing
- online shops selling expired but still edible food: e.g. Motatos, Sirplus, Nesnězeno

Connecting citizens with cafés and restaurants via an online platform helps food businesses, grocery stores, and other retailers reduce food waste by selling surplus but still perfectly edible products at a discounted price.

At TooGoodTooGo, for example, the system combines a simple digital interface with an efficient, low-effort process at the physical location. Businesses create so-called “Magic Bags”

in the app: mixed packages filled with items or meals that remained unsold at the end of the day. Customers purchase the bag in advance through the application and pick it up at the store or restaurant during a specified time window. This allows businesses to plan inventory more accurately and significantly reduce the volume of food that would otherwise be discarded.

The platform is designed to be operationally straightforward. The operator only enters the number of available bags and the pick-up time. The app automatically manages everything else, including promotion, payments, and communication with customers. As a result, businesses do not need to invest additional effort in marketing or direct coordination with individual buyers. the platform centralises the entire process and provides a steady flow of new and returning users. Too Good To Go also offers analytics tools that help businesses track the amount of food saved and the financial benefits achieved.

Operationally, the service is advantageous because staff members do not need to prepare exact, standardised packages far in advance. The content of each bag simply reflects the surplus of that particular day, making the process easy to integrate into everyday operations. Businesses can adjust availability, temporarily pause offers, or scale up during busy seasons. This makes Too Good To Go suitable for small cafés as well as large retail chains seeking a structured approach to managing food surplus. It is therefore a good example of how digitalisation can support circular economy principles in the food sector and how cafes and restaurants can further strengthen their location in the city center with this offer.

There are also local initiatives such as the Czech platform Nesnězeno, which operates on a similar principle. In addition to connecting customers with restaurants' surplus meals, Nesnězeno has also introduced an online shop offering long-life foods that are approaching their minimum shelf-life date at reduced prices.

Links:

- https://www.toogoodtogo.com/
- https://shop.nesnezeno.eco/

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