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Multigination

Multiplicative imagination of citizens and stakeholders towards the 15 minutes City

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Haute Ecole Spécialisée de Suisse Occidentale
Route de Moutier 14, 2800 Delémont,
par la HES-SO Valais-Wallis
Rue de l'Industrie 23, 1950 Sion

Stadt Winterthur
DP, Amt für Stadtentwicklung
Pionierstrasse 7, 8403 Winterthur

Drees & Sommer Schweiz AG
Aemtlerstrasse 201, 8003 Zürich

ZHAW – Institute of Sustainable Development
Technoparkstrasse 2, 8401 Winterthur

Open Urbanism Foundation
Chemin de Champ-Claude 10, 1214 Vernier

Authors:
Prof. Dr Joëlle Mastelic, HES-SO Valais-Wallis, joelle.mastelic@hevs.ch
Anastasia Ponomareva, HES-SO Valais-Wallis, anastasia.ponomareva@hevs.ch
Sylvie Ramel, HES-SO Valais-Wallis, sylvie.ramel@hevs.ch
Alain Renk, Open Urbanism Foundation, alain.renk@urbanismeouvert.ch
Vicente Carabias, Stadt Winterthur, vicente.carabias@win.ch
Thierry Nolmans, Drees & Sommer, thierry.nolmans@dreso.com
Haris Piplas, Drees & Sommer, haris.piplas@dreso.com
Zoe Freudenbernger, Drees & Sommer, antonia-zoe.freudenberger@dreso.com
Andrea Del Duce, ZHAW, delc@zhaw.ch

SFOE project coordinators:
Luca Castiglioni, luca.castiglioni@bfe.admin.ch

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Summary

Multigination aims to integrate sustainable urban planning, climate change mitigation, and citizen participation to support the co-design of 15 minutes cities. In 2024, the project successfully addressed the challenge of reconciling these complex domains by developing an easily deployable, efficient process supported by a suite of open source softwares and complementary guidelines.

This integrated process facilitates stakeholder engagement through multiple, interdependent phases, including: (1) **Resident Ideation**: engaging citizens early in the planning process. (2) **Innovation Marketplace**: providing a platform for innovative urban solutions. (3) **Participatory Decision-Making**: implementing a voting system to capture citizen input. (4) **Innovative Financing**: leveraging civic crowdfunding to support project initiatives.

Additionally, a shared and clear project vision was established through collaborative workshops and online sessions with consortium members and key partners, ensuring that the project's core intentions are both widely understood and applicable across diverse urban contexts.

The key learning for WP1 in 2024 was the realization that Multigination's initial idea of a unified digital technical platform enabling ideation, market place, voting and crowdfunding under a single login would not correspond to the operational reality of future user cities. In the end, the result defined in a collegial manner with the consortium and cooperation partners was to rethink the software support of the Multigination method as an addition of interconnected software modules. The open-source nature of Multigination is perfectly suited to this software suite structure, since in the future other modules can be added organically to keep pace with city demands.

Therefore, case studies have been identified in the partner cities Winterthur and Başakşehir where first urban analyses have been carried out to set the ground.

Zusammenfassung

Multigination zielt darauf ab, nachhaltige Stadtplanung, Klimaschutz und Bürgerbeteiligung zu integrieren, um die Mitgestaltung von 15-Minuten-Städten zu unterstützen. Im Jahr 2024 stellte sich das Projekt erfolgreich der Herausforderung, diese komplexen Bereiche miteinander in Verbindung zu bringen, indem es einen leicht einsetzbaren, effizienten Prozess entwickelte, der von einer Reihe von Open Source Softwares und ergänzenden Leitlinien unterstützt wird.

Dieser integrierte Prozess erleichtert die Einbindung von Interessengruppen durch mehrere, voneinander abhängige Phasen, darunter: (1) **Ideenentwicklung von Einwohnenden**: frühzeitige Einbindung der Bürger in den Planungsprozess. (2) **Innovationsmarktplatz**: Bereitstellung einer Plattform für innovative städtische Lösungen. (3) **Partizipative Entscheidungsfindung**: Einführung eines Abstimmungssystems zur Erfassung von Bürgerbeiträgen. (4) **Innovative Finanzierung**: Nutzung von bürgerschaftlichem Crowdfunding zur Unterstützung von Projektinitiativen.

Darüber hinaus wurde in gemeinsamen Workshops und Online-Sitzungen mit den Mitgliedern des Konsortiums und den wichtigsten Partnern eine gemeinsame und klare Projektvision erarbeitet, die sicherstellt, dass die Kernabsichten des Projekts sowohl allgemein verstanden werden als auch in verschiedenen städtischen Kontexten anwendbar sind.

Der wichtigste Lernprozess in WP1 im Jahr 2024 war die Erkenntnis, dass die ursprüngliche Idee von Multigination, nämlich eine einheitliche digitale technische Plattform, die Ideation, Marketplace, Voting und Crowdfunding unter einem einzigen Login ermöglicht, nicht mit der operativen Realität der zukünftigen Anwenderstädte übereinstimmen würde. Das Ergebnis der kollegialen Zusammenarbeit mit dem Konsortium und den Kooperationspartnern bestand schließlich darin, die Software-Unterstützung der Multigination-Methode als eine Ergänzung von miteinander verbundenen Software-Modulen zu überdenken. Die Open-Source-Natur von Multigination ist perfekt an diese Struktur der Software-Suite angepasst, da in Zukunft weitere Module organisch hinzugefügt werden können, um den Anforderungen der Städte zu folgen.

Dafür wurden in den Partnerstädten Winterthur und Başakşehir Fallstudien identifiziert, in denen erste städtebauliche Analysen durchgeführt wurden, um die Ausgangslage einordnen und Szenarien entwickeln zu können.

Résumé

Multigination vise à intégrer la planification urbaine durable, l'atténuation du changement climatique et la participation des citoyens pour soutenir la co-conception de la « ville du quart d'heure ». En 2024, le projet a relevé avec succès le défi de réconcilier ces domaines complexes en développant un processus efficace et facile à déployer, soutenu par une suite de logiciels libres et de lignes directrices complémentaires.

Ce processus intégré facilite l'engagement des parties prenantes par le biais de phases multiples et interdépendantes, notamment : (1) **L'idéation avec les résidents** : impliquer les citoyens dès le début du processus de planification. (2) **Place de marché** : fournir une plateforme pour des solutions urbaines innovantes. (3) **Prise de décision participative** : mise en œuvre d'un système de vote pour recueillir l'avis des citoyens. (4) **Financement innovant** : tirer parti du «civic crowdfunding» pour soutenir les initiatives du projet.

En outre, une vision claire et partagée du projet a été établie par le biais d'ateliers collaboratifs et de sessions en ligne avec les membres du consortium et les partenaires clés, garantissant que les intentions fondamentales du projet soient à la fois largement comprises et applicables dans divers contextes urbains.

Le principal apprentissage au niveau du WP1 lors de l'année 2024 a été de comprendre que l'idée initiale de Multigination, à savoir une plateforme digitale technique unifiée permettant l'idéation, la market place, le vote et le crowdfunding sous un seul login ne correspondrait pas à la réalité opérationnelle des villes future utilisatrice. Finalement le résultat défini de façon collégiale avec le consortium et les partenaires de coopération a été de repenser le support logiciel de la méthode Multigination comme une addition de modules logiciels interconnectés. A noter, la nature Open Source de Multigination est parfaitement adaptée à cette structure de suite logiciel puisque, dans le futur, d'autre modules pourront s'ajouter de façon organique pour suivre les demandes des villes.

Des études de cas ont donc été identifiées dans les villes partenaires de Winterthur et Başakşehir, où des analyses urbaines ont été réalisées pour préparer le terrain.

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15mC	15 minutes city
KPIs	Key Performance Indicators
OUF	Open Urbanism Foundation
SECAP	Sustainable Energy and Climate Action Plan
SFOE	Swiss Federal Office of Energy
UC	Unlimited Cities
WPs	Work Packages
WinLab	City of Winterthur Living Lab

1 Introduction

1.1 Context and motivation

Today's urban transformation processes are mostly based on a **top-down approach**, with municipalities who often do not have the resources, methods, and tools for identifying and satisfying the local needs of communities and neighbourhoods with open innovation methods. Yet multi-level experimental governance, open innovation and collective intelligence are crucial for feedback on missing services in specific locations, on potential actions in misused spaces from the local citizens, with their key **tacit knowledge** (Fenton & Gustafsson, 2017, Kronsell & Mukhtar-Landgren, 2018).

To **reduce car-centric mobility** in favour of short trips by walk or bike, co-imagination, quasi-experiments, and bottom-up interventions represent promising tools (Bertolini, 2020). A strong portfolio of interventions should be co-designed with the stakeholders to ensure a smooth alignment and adoption. Methods and tools such as applications of **civic technologies** can play a critical role in accelerating urban transformation processes towards the 15 minutes cities (15mC) vision (Moreno et al, 2021). This should be embedded in Living Labs as innovation intermediaries, as concrete realisation of Open innovation hinging on a quadruple helix model uniting citizens, public research, and administration, as well as private companies and engaging key actors into a dialog to co-design desirable solutions in a long-term perspective (Compagnucci et al, 2021).

Open source digital tools can clearly facilitate the implementation of ideas in cities, as well as to foster inclusive urban development (Hasler et al., 2017), but they require better structuring of what is shared. Challenging wicked urban problems require multi-scale action, and both a clear organisational set up and governance of clusters for strategy definition and implementation (Gebhardt 2022), and a framing in terms of (new) formal rules, standards and processes that rely on stakeholder acceptance and on buyer behaviour (Dhar & Khirfan, 2017).

Thus, urban solutions must profit from solutions that are already provided in the neighbourhood and must close gaps in service provision to serve local stakeholders. Spreading necessary functions at neighbourhood level can lead to valorising proximity (Fredericks et al., 2019). Finally, coordinated multi-stakeholder collaboration is the key to successfully define adequate and sustainable solutions for complex problems at the nexus of human behaviour, human need, and technology through early participation, visualisation and joint evaluation of new tentative scenarios (Gray and Purdy, 2018, Buckley et al., 2019). In this context, Living Labs are widely used arenas for such beneficial inter- and transdisciplinary collaborations and co-design of solutions in real-life environment (McCrory et al., 2020).

The mission of the project *MULTIGINATION* is to establish a full, lean, and effective process of citizen-driven sustainable urban transformation and to apply it in use-cases relevant for the goals of the 15mC. The innovative aspect lies in the "operational mash up" of different strategies and tools.

MULTIGINATION combines opportunities and fills the gaps in existing knowledge

The 15mC concept emphasizes the importance of human-centered urbanism, creating diverse, livable, inclusive, and accessible neighborhoods with political support (Allam et al, 2022, Balletto et al. 2021). This concept also aims to propose a new model of urban connectivity and lifestyle emphasizing the need for urban environments to be user-centered (Moreno et al, 2021) and bottom-up driven (Papas, 2023).

Additionally, researchers introduce chrono-urbanism as a tool to a resilient, sustainable, and inclusive city "where proximity is vibrant and where social intensity is real" (Allam et al, 2022). Respecting the objectives of Urban Agenda 2030 and following the demonstration of 15mC advantages by C40 Cities, including Milan, Paris, Barcelona, Melbourne (Pinto & Akhavan 2022), it is important to bring diverse activities within the urban neighborhoods, create a decentralized system of urban services, develop a social and functional mix, as well as engage people in the urban planning process (Abdelfattah et al, 2022). Polycentric and multifunctional city models can bring health benefits, time benefits, and higher social cohesion (Weng et al. 2019) drawing on longer urban planning tradition (Pozoukidou, 2021) which are particularly important factors for *MULTIGINATION* project.

However, there is a risk of approaching the 15mC as an original spatial planning concept, but without actual provision of opportunities (Khavarian-Garmsir et al, 2023). In literature and in practice there are two gaps that need further investigation:

(1) **How to involve diverse stakeholders in the urban transformations** and thus to provide realistic market perspective (effective demand) for the services and functions, especially for services that require minimum thresholds of number of users for their financial sustainability (Marchigiani & Bonfantini, 2022),

(2) **How the bottom-up initiatives can be channeled into decision making processes** where finance plays a key role, in which cities retain the decisive role, but the private sector can be engaged (Gutierrez & Gutierrez, 2019).

Building on 15 years of partners' experience in Living Labs setting up and managing, strategic urban development, open innovation technologies, as well as planning process and finance, *MULTIGINATION* project will fill in these two gaps and the risk. Our project will create synergies between the human-centered open innovation methodology used in the Living Labs (Von Wirth et al, 2019; Ballon, Van Hoed & Schuurman, 2018), and crowdfunding digital tools (Chiappini & de Vries, 2022) for the actual implementation of the 15mC.

1.2 Project objectives

Here are the detailed objectives of the project:

1. **Support the 15mC concept strengthening its advantages and making it real** by combining a participatory design, open innovation, an interactive urban platform and participatory financing models. Reduce the time to market and increase the market uptake.
2. **Create a theoretical (knowledge base) and practical (marketplace) data bases** through the multiple use-cases analysis and successful urban interventions in the pilot cities.
3. **Demonstrate the 15mC actual implementation in the 2 pilot-areas and evaluate the benefit of the new way of implementing a 15mC component:** in the city of Winterthur (Canton Zurich, CH) and municipality of Başakşehir (Istanbul, TR), **with a constellation of 6 follower cities** (Bergamo – IT, Pamplona – ES, Vernier – CH, Coventry – UK) **and regional research centres** (Tampere – FI and the Flanders – BE). The proposed application will be realised **using principles of co-design and bottom-up innovation, respecting different social, cultural, geographical and economic settings** of chosen countries to test the developed solutions in a variety of city contexts.
4. **Ensure inter- and trans-disciplinary collaboration, continuous knowledge exchange and dissemination of project results** through the Living Lab methodology and experience in multi-stakeholder engagement and coordination.
5. **By facilitating the rapid implementation and local adaptation of the 15mC concept** the project will contribute to the achievement of climate goals in terms of energy efficiency, and to urban air quality in liveable, healthy and inclusive cities.
6. **Citizen participation** will include entrepreneurial opportunities, citizen sciences and social innovation in terms of ownership.

2 Approach, method, results and discussion

This report provides a detailed account of the activities and progress of the Multigination project after one year. Each module described is structured into four sub-sections: (1) Presentation of the Methods Used; (2) Activities Carried Out; (3) Results Obtained and (4) Critical Analysis.

Visualisation Software Module (Open Urbanism Foundation)

1. Presentation of the Methods Used & Results Obtained

The primary objective of the visualization software module was to enhance the Unlimited Cities ideation platform in support of the Multigination process. **The methodological approach involved continuous and iterative engagement with urban stakeholders from Switzerland and Turkey, then checking the progress of the project ideas and their enhancement with the whole consortium and the cooperation partners.**

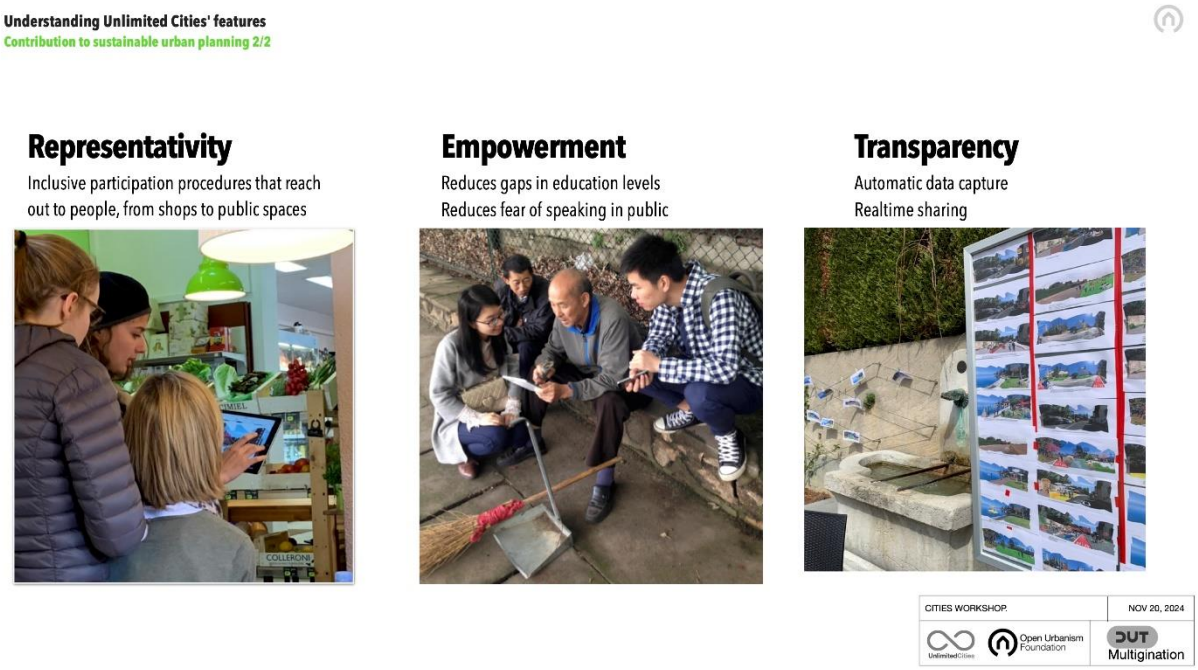
This approach was designed to elicit experts' input that would contribute to the formulation of robust hypotheses regarding the deployment of the platform. **To ensure the best possible understanding within the consortium, with partners from different disciplines, illustrations and diagrams have been developed.**

The Meta Dimensions of the co-ideation software

One of the first actions was to demonstrate the software to all participants and its interoperability. This demonstration was not limited to using the software. **It was the starting point for the sharing and subsequent appropriation by the consortium of the meta-dimensions of the Unlimited Cities ideation software.** These meta-dimensions include r**epresentativeness, empowerment, transparency, hybridation, the holistic approach and the ability to 'reach out to participants' in public spaces**. See illustration 1. The various meetings made it possible to measure how these meta-dimensions should not be limited to the co-ideation software but, on the contrary, should continue within other modules.

An important learning was that **these meta-dimensions are the DNA of Multigination's innovative proposition**, because they are at the heart of the hypothesis put forward by Multigination: to make civil society and the various stakeholders real players in sustainable urban transformation.

One of the first results was the strong interest shown by the cities of Winterthur and Basaksehir in extending the meta-dimensions present in the ideation software as far as possible to the Multigination method. The town of Winterthur, for example, regretted not having had these methods at its disposal, which could have prevented a negative vote on a cycle lane project in the past. According to Winterthur, **the Multgination method could have made it possible to identify bottlenecks at an early stage, to benefit from useful contributions from citizens and stakeholders** to overcome them, and thus to commit many people and companies to more sustainable lifestyles. Contrast this with the current situation, in which Winterthur is being asked to start the urban study from scratch, with the associated new costs and delays in implementing the urban transition. In addition, detailed process diagrams were developed.



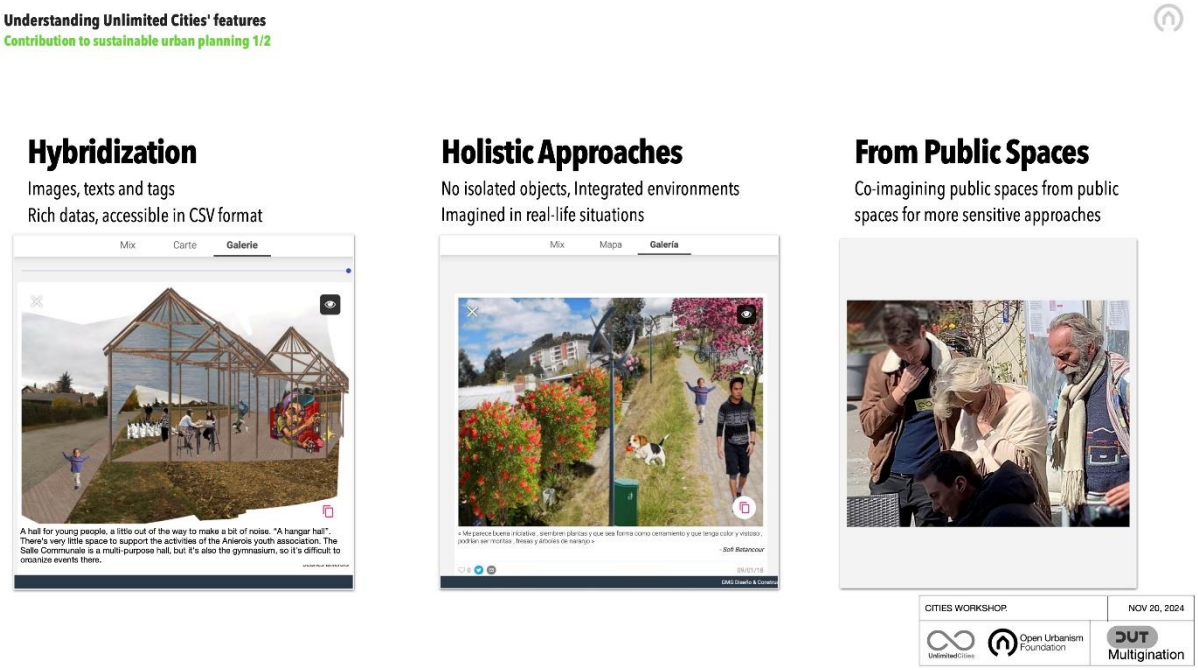


Figure 1: The 6 meta dimensions of the co-ideation software "Unlimited Cities"

In terms of learning**, this exchange phase showed that it was difficult, at the outset, for the other module developers to get to grips with the logic and appropriation of an innovative ideation tool without having tried it out in the field, with local populations.** For this reason, OUF then provided access to existing operational versions of Unlimited Cities, which the partners were able to test in real-life situations.

The result was to change the partners' preconceptions about participation and particularly about the possibility of creating interest and useful contributions from participants in apparently inappropriate situations. For example, the Finnish partner in charge of the market place development found that people jogging in a park in winter could take the time to use the app and give ideas on what would be needed to improve sporting activities in difficult weather conditions. **The results were a better understanding of the contributions of the ideation software, which made it possible to strengthen the dialogue around the market place with**

the various companies producing innovative urban products for the transition, who specified what could be a value proposition likely to interest them in placing their products in the market place, namely presenting unfinished objects and obtaining feedback from residents in order to finalise them.

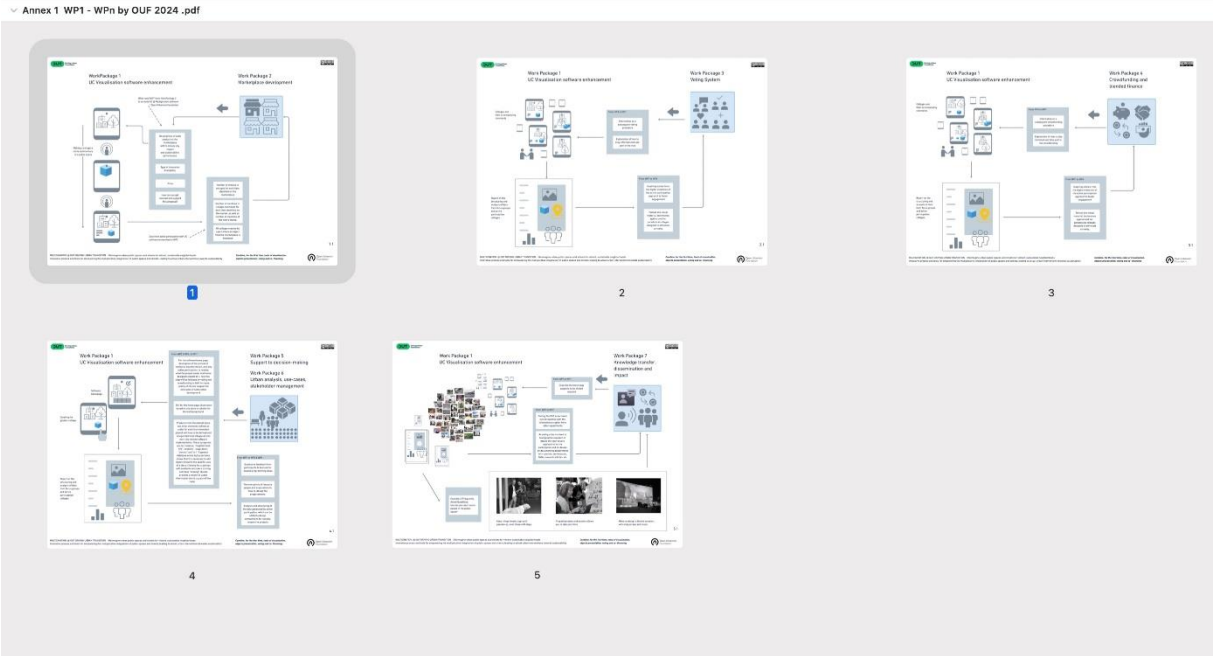


Figure 2: Operational phases between modules & Process Diagram hypothesis

These diagrams enable the partners to visualise the various connections and information flows between the modules to develop the prototypes in Switzerland and Turkey.

Learning. The first diagram, ‘Operational phases between modules’, was initially useful for taking the partners beyond the initial theoretical proposal. Initiated at the first meeting in Winterthur in March 2024, this diagram helped to explain the 8 development phases aimed at the physical materialisation of the prototypes. As the project progressed, the partners, most of whom are not urban planners, wanted to have a better understanding of the project's overall chronology, which was expressed through the second diagram, ‘Process Diagram hypothesis to connect the visualisation tool with all modules.

The result was a progressively shared vision of the process where each module has its place, feeding off information from the other modules and feeding off the other modules. These diagrams were crucial to document a start-to-finish flow for the ideation process and for clarifying the roles and responsibilities of each stakeholder, defining the sequential activation of software modules.

Figure 3: Operational phases between modules

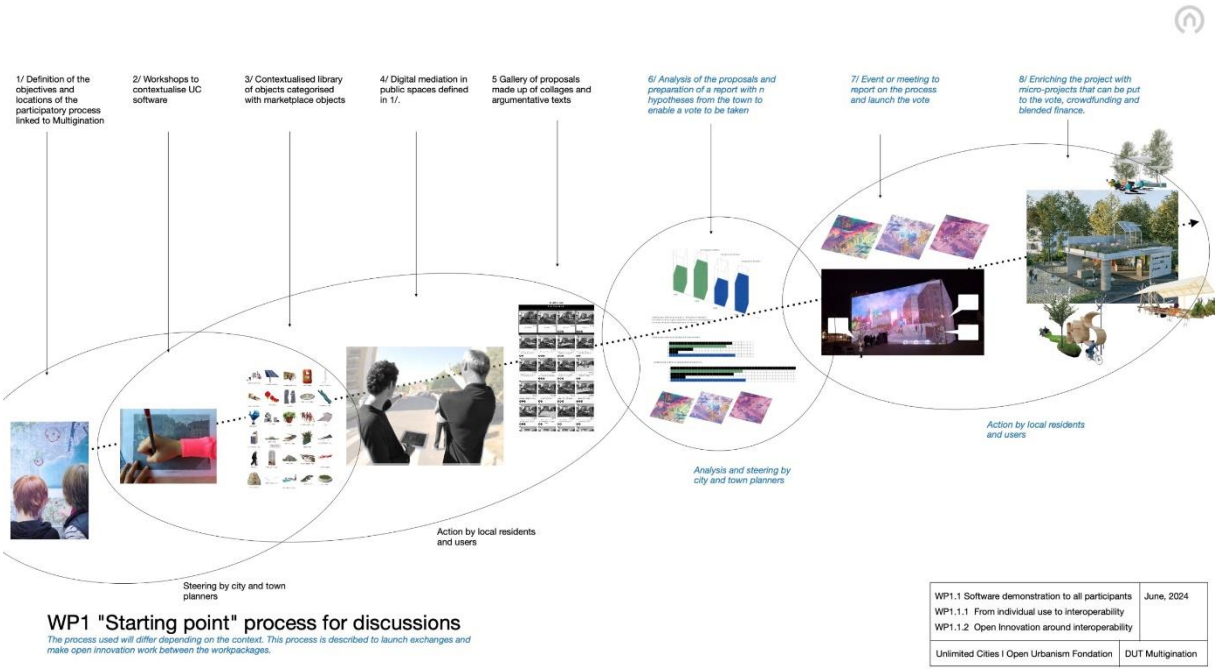


Figure 4: Multigination described by sequences for operational efficiency

Between the plenary meeting at the beginning of October 2024 in Geneva and the online meeting in November with the cooperation partners, various bilateral meetings between the planners and cities involved showed different widespread models concerning voting and crowdfunding software which **called into question the initial idea of a unified technical platform allowing ideation, marketplace, voting and crowdfunding under a single login.**

Indeed, cities that have secure voting systems will tend to want to use them rather than migrate to a system integrated with Multigination. For crowdfunding software, linked by nature to financial operations, there is work done by these platforms within each country to obtain authorisations, which would require to work on a case-by-case basis by the providers of a Multigination approach if this system were integrated into Multigination, which seems unrealistic. **The decision was taken to present an alternative proposal for the unitary software platform to the cooperation partner cities and to take their proposals into account to promote subsequent appropriation and the scalability of Multigination.** This alternative was to design the software support for the Multigination method as an addition of interconnected software modules.

The result was the validation of the model of an addition of interconnected software modules for the technical support part of Multigination (See illustration). The exchange with the various cities with the aim of maximising the adoption of Multigination also determined that **the Multigination method should be presented as a whole (ideation, marketplace, voting, crowdfunding) but should not require cities to carry out all 4 phases on a mandatory basis.** This free association of modules and the freedom given to cities to apply all or part of the method fits in well with the logic of open innovation and the use of interoperable open-source software.

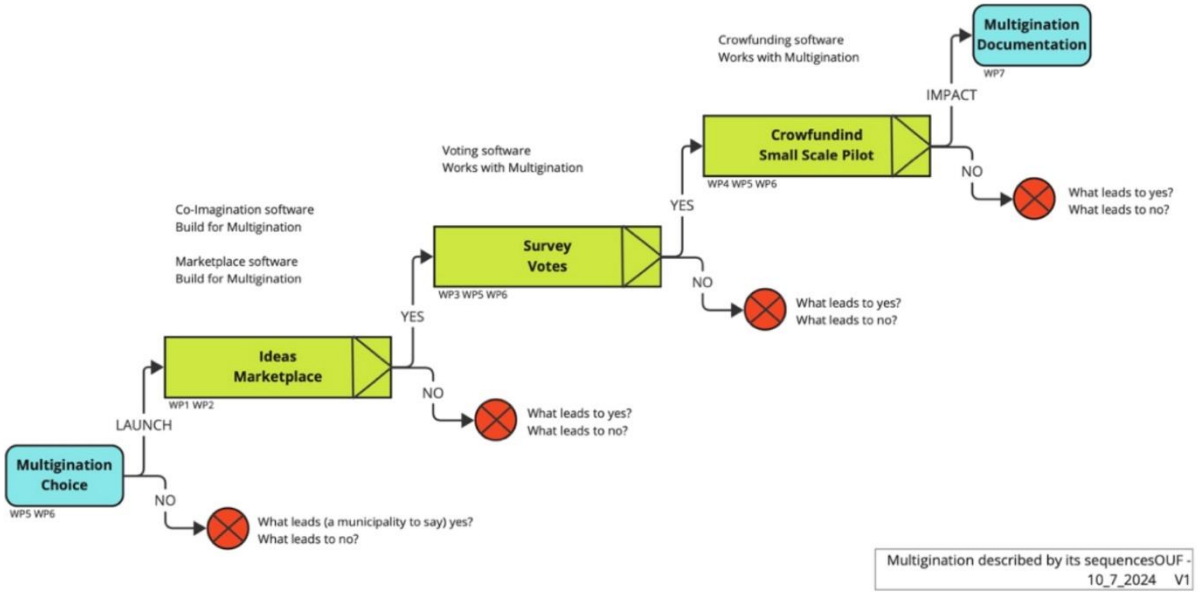


Figure 5: Multigination described by its sequences of modules

2 Critical Analysis

The methodologies implemented in the visualization module have significantly contributed to **aligning the ideation platform with real-world urban planning needs**. The iterative engagement model ensured that diverse perspectives were integrated into the development process, thereby increasing the platform's adaptability. However, challenges remain in **achieving full integration of the platform into pre-existing urban development frameworks**. Variability in stakeholder requirements across different cities has highlighted the need for further customization and flexible deployment strategies. The absence of a uniform SECAP framework in all cities necessitates the continued evolution of the process diagrams to accommodate local differences.

Summary of the Visualisation Module

UNLIMITED CITIES

Digital platform

DUT Driving Urban Transitions

Short description

- Civic tech open source specialized in co-ideation for urban planning
- Can be used in real-life situations, in public spaces
- Develops curiosity and interest among residents
- Very easy to use on smartphone, tablet or computer

Key fonctionalities

- Easily adapted by cities to their specific contexts
- Allows residents to create visual collages and comment on them
- Provides access to the collage gallery in real time
- Provides access to all data for analysis

Development plan : what has been done

- Prototype Winterthur V1 contextualized
- Choice of locations

Going forward: what needs to be done

- Fine content contextualization by partners Winterthur
- Operationalization of schedule, choice of mediators, etc.
- Back office technical development
- Support Basaksehir

UNLIMITED CITIES

Digital platform

DUT Driving Urban Transitions

Benefits for cities & Living Labs

- Compatible with general open-source participatory platforms such as Decidim
- Requires no IT or technical skills for cities and urban planners
- Reaches out to people who are often absent from participation processes
- International community of city users, planners and facilitators

Scheme / illustration

Relevant links & references

https://unlimitedcities.dev.j42l.ch/#description

https://vimeo.com/759158315

Questions & challenges

How to use ideation for voting? Should voting be used to small-scale elements / to teach large-scale strategies? Should voting be used to encourage more sustainable lifestyles?

Figure 6: Summary of the Visualisation Module

Development of the Marketplace Module (Tampere University of Applied Sciences)

1. Presentation of the Methods Used

The **development and piloting of an international marketplace** is designed to support the exchange and commercialisation of urban innovation solutions within the Multigination process. It does so through 4 main activities:

1. Definition of acceptance criteria for the marketplace.
2. Definition of the database necessary to support the marketplace, meaning the specific data entries that companies will have to share about their products for it to be correctly displayed and usable within the various software modules in Multigination.
3. Identification of products and companies suitable for the marketplace.
4. Outreach to companies.

All these activities are currently in development and are modified iteratively based on the consortium's and companies' feedback.

Point 1 was kick-started looking at the overall aims of the project and its vision to support 15mC projects and was then further developed in various internal workshops.

Point 2 is being developed through extensive discussion in internal workshops. The main aim is to define the key information about the marketplace objects which need to be visualised in the app during the co-design processes; along with information which does not need to be visualised but which might be required for internal processes. A first list of parameters was developed based on direct exchange with the consortium partners who are more actively involved in the app design. This list is now being refined based on the first feedback from companies on what data they can and want to provide.

For **point 3**, a literature analysis on 15mC projects aiming at reducing mobility was performed which was then expanded with a market analysis looking at companies selling products which could play an enabling role in local mobility reduction. Based on this analysis and on the existing network of the consortium, direct exchanges with companies started to test their availability to join Multigination's marketplace.

In practical terms, the core of the marketplace is an excel document containing all the information described above which serves as input to the various software modules (see the Figure 1 for an excerpt of the current state of the marketplace database).

Object	Object Name	Description	Why it is relevant for 15-min city?	Category	Company name	Contact person	Contact information	Market place description (yes/no)	Image (.png)	Source (Local, Regional Global)	Pricing available
	Smart locker	Smart lockers enable easy access to parcel deliveries and shared services, reducing the need for personal ownership and fostering a circular economy.	The services allow residents to pick up packages, groceries, or shared items within a short walk or bike ride, reducing reliance on cars.	Local Life	Switzerland (Boxly) Switzerland (AndMore) **Switzerland (Smart Locker Technologies AG)**	Sales Team Sales Team	**Boxly:** T: +41415253231 Email : info@boxly.ch **AndMore** T: +4156 5564471 Email: info@ andmore.swiss **Smart Locker Technologies AG** T: +4176 398 03 96 **Email: sales@smartlockertec .com**	yes	Yes	Regional	Yes No
	Smart street lights	LED-based lighting systems with sensors that automatically adjust brightness and incorporate environmental monitoring capabilities for pollution, humidity, temperature, and noise levels.	Built-in IoT sensors could collect data on pedestrian and vehicle movement, helping city planners optimize mobility infrastructure.	Local life	NovaLight Nevalux AG (Vevey) esave ag (Chur)	Sales Team Sales Team Sales Team	**NovaLight** T: +4179 7778900 Email: info@novaccess.ch **Nevalux AG** T: +4144 508 78 78 Email: info@nevalux.swiss **esave** T:+41815115550 Email: sale@esaveag.com	No	Yes Yes No Yes	Regional	No

Figure 7: Excerpt of the marketplace database

2. Results

The focus of the development was to define the acceptance criteria of the marketplace for companies. Based on the main aims of the project, it was decided that the marketplace should not be open to any company, or any product, but only to companies and products which can make a clear contribution to the 15mC concept. This means that products of the marketplace should either enhance the local diversity of services or amenities (e.g. packet exchange stations, book exchange stations, urban gardening facilities, playgrounds, etc.) thereby reducing mobility demand or contribute to the strengthening of public and active transport (e.g. innovative public transport stations, smart e-bike charging stations, cycling paths, etc.).

Subsequently, the development of a data structure for the marketplace started. A process which is still ongoing as the project develops and interaction with stakeholders and companies grows. The data structure defines all the data the companies must deliver to be integrated into the marketplace. Apart from obvious aspects like contact details and images of the products, companies will be asked to submit a short description of their products and how these products contribute to the 15mC concept. A critical element in the data structure is the price. To budget the proposed ideas, a price tag is required for each project. However, the first exchanges with companies revealed this to be a sensitive issue since prices for a product may vary significantly based on the number of pieces ordered, the specific country and other factors of variations, and, hence, defining a specific price for Multigination could be problematic. Currently, the best solution to this problem seems to be to define a range of prices (0 – 100CHF, 101 – 200CHF, etc.) and use the middle point of a specific range for budgeting.

In parallel to this, a literature review of 15mC projects and a market analysis is being conducted to identify objects suitable for the marketplace. Cities worldwide are embracing diverse 15-minute city initiatives aimed at reducing mobility-related emissions. These efforts focus on strengthening micromobility options, enhancing local community connectivity, and integrating smart sensor technologies (Bruno et al., 2024; Büttner, 2024). For example, Paris, Barcelona and Houston prioritize active mobility by expanding cycling infrastructure, regulating shared micromobility, and reclaiming public spaces for pedestrians. Paris has implemented secure bike parking facilities, while Barcelona's "superblocks"(Nieuwenhuijsen et al., 2024) reduce car traffic to create safer, more accessible streets. Paris and Barcelona also place emphasis on reconfiguring urban land use, by transforming underutilized areas—such as abandoned hospitals or parking lots—into dynamic mobility hubs that accommodate a mix of micromobility options. These urban transformations also reflect a growing recognition of the need to enhance conditions for micromobility through dedicated bike lanes, charging stations, and walkable environments.

Beyond mobility, **fostering local community connectivity** is another pillar of the 15-minute city model. In many cities, the installation of street furniture—including benches, outdoor playground, and communal gathering spaces—and of public art (Tan et al., 2024) encourages social interaction. Educational and environmental initiatives, like Paris's learning gardens, further contribute to community well-being by linking sustainability and schooling. Similarly, community-based vertical and hydroponic gardens (Garmsir et al., 2023) promote efficient land use while reducing the carbon footprint associated with long-distance food delivery.

Technology also plays a crucial role in supporting these initiatives. By deploying smart sensor solutions and solar-powered infrastructure, cities like Madrid, Miami, and Los Angeles are introducing smart streetlights, waste bins, and benches that can monitor usage patterns, optimize service routes, and ultimately reduce unnecessary travel and energy consumption.

Overall, these initiatives highlighted several objects which should be part of the marketplace and for which corresponding available products and companies will be searched. This will be, amongst other things, infrastructure related to making active mobility more attractive (e.g. cycling lanes, smart bike lockers and e-bike charging stations), objects which deliver specific services (e.g. package exchange stations, book exchange stations) or elements which enrich the local diversity of a recreation area (e.g. playgrounds, urban gardening or sport facilities like, for example, external gym infrastructure or table tennis sets).

So far, a limited number of companies closest to the consortium were contacted to obtain more direct feedback on the marketplace concept and its challenges. Engagement has been very promising, with qualitative feedback highlighting significant potential for collaborative development. Preliminary assessments further indicate that the project is ready to deploy the first cycle of products on the marketplace in the upcoming project year, with a pool of about 20 candidate products currently under review.

In this context, it was decided to expand the marketplace also with certain objects, for which direct contacts with companies is not available yet, but for which most of the relevant information was publicly available. This will allow us to offer a larger object library for the co-creation processes even if no direct arrangements were made with the corresponding companies. This decision was taken since, if companies have provided all the necessary information publicly, the use of their data within the marketplace would be in their interest. During the next weeks it will be analysed if this is feasible in terms of copyrights of the information.

4. Critical Analysis

This module has succeeded in laying the foundational framework for an **innovative international marketplace**. The structured engagement with both industrial and urban stakeholders has ensured that the marketplace is developing in alignment **with real-world requirements**. Nonetheless, the iterative nature of the circular process poses challenges in maintaining momentum and ensuring continuous updates. The transition from conceptual discussions to actual deployment of products requires further refinement. Future efforts must focus on consolidating the feedback loop to guarantee that marketplace outputs are not only innovative but also **practically viable and scalable**. The marketplace is expected to comprise about 40 companies at the beginning of the 3rd project year. So far, about 20 products suitable for the marketplace have been identified and will be available for the co-creation processes. Official discussions about having each product backed up by a specific company were only run with a small part of companies closest to the consortium. This will be a key task in the 2nd project year.

Summary of the Marketplace Module

MARKETPLACE

Marketplace of solutions

DUT Driving Urban Transitions

Short description

Marketplace development

- To co-create and pilot a marketplace with companies and real international product offering.
- These product and services will be piloted in different use cases.
- WP2 – Creates a wider objects library of real products, linked to sustainable urnab development and commercially available
- Objects are available as visual items for citizens to select, scale and place and include in their planning scenario

Key functionalities

- object and product description available for each categories with linkage to 15 min cities themes
- includes data for their prices to allow preliminary budgeting of citizens' proposals
- services and intangibles will be included
- support for marketplace users with tips and guidance for functionality provided and requirements for company user

Development plan : what has been done

- Market place features elaborated and systematic approach created
- Collection of the first set of offered products with true availability and price estimate

Going forward: what needs to be done

- Communication package & guidebook creation for the market-place- software users
- Finding and engaging new companies with potential offering
- Lessons learned collection, result documentation

MARKETPLACE

Marketplace of solutions

DUT Driving Urban Transitions

Benefits for cities & Living Labs

- Marketplace will be further populated and thus promoting the activities of Living labs in the cities.
- Allowing users (citizens and stakeholders) to have a very broad and pertinent enhanced library of items to choose from
- Allow preliminary budgeting of citizens' proposals
- Companies will have specific export/tendering opportunities and share knowledge& access to cities' urban plans

Questions & challenges

- Accuracy of Prices, lifecycle cost included? (installation, service etc)
- Platform benefit for companies need to be approved, scaling up and serving as true marketplace?

Scheme / illustration

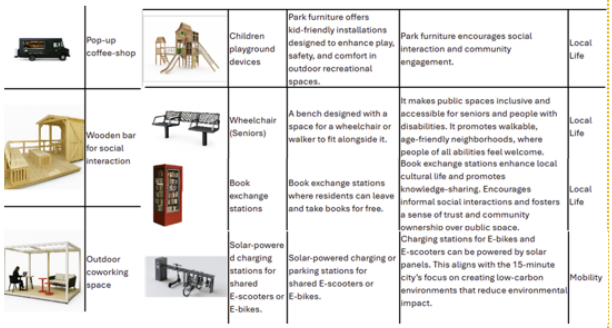


Figure 8: Summary of the Marketplace Module

Voting System (City of Bashakshir) and Crowdfunding and Blended Finance (HES-SO Valais)

1. Presentation of the Methods Used

The voting module and the crowdfunding module jointly address the need for robust, citizen-oriented platforms and sustainable financing models. The voting system was developed through a participatory design process, engaging multiple stakeholders including city planning departments, software developers, and citizen focus groups. The methodology was rooted in a user-centered design approach, aimed at creating an intuitive and accessible **platform for participatory decision-making**.

In parallel, HES-SO Valais focused on exploring **blended financing models** that integrate public funding, private investments, and **innovative civic crowdfunding mechanisms**. A comprehensive literature review was undertaken to coin and define the term “civic crowdfunding,” and mapping exercises were conducted to identify relevant financial actors and instruments.

2. Carried Out Activities

The following concrete activities were undertaken:

- **Stakeholder Workshops**: Multiple sessions were organized with the City Urban Planning Department and a software development company to discuss design requirements and user interface features for the e-voting platform.

- **Integration with Visualization Tools**: Collaborations with the Open Urbanism Foundation facilitated the integration of visualization software with the e-voting platform.

- **Literature Review and Guide Development**: HES-SO Valais conducted a comprehensive literature review on civic crowdfunding and developed a best-practice guide outlining blended finance models and financing strategies tailored to urban interventions.

- **Pilot Workshops**: Participatory workshops using the City Action Lab methodology were held to test the proposed financing models and gather feedback on the integrated approaches.

3. Results Obtained

The outcomes are as follows:

- A citizen-friendly **e-voting platform prototype** was developed, incorporating feedback from diverse focus groups.

- A **best-practice guide for crowdfunding** was successfully written, establishing a framework for future urban financing initiatives.

- The integrated approach has increased **stakeholder awareness** regarding the potential of civic crowdfunding as a tool for urban transformation.

4. Critical Analysis

The combined efforts of the e-voting platform and crowdfunding modules have laid a strong foundation for both **technological and financial innovation** within the project. The participatory design approach has ensured that the e-voting platform meets user expectations, while the exploration of crowdfunding models provides a promising alternative to conventional funding mechanisms. However, integration challenges remain, particularly in ensuring **seamless interoperability** between the visualization tools and the e-voting system. Furthermore, while the best-practice guide is comprehensive, its practical implementation will require continued refinement and stakeholder buy-in to ensure long-term sustainability.

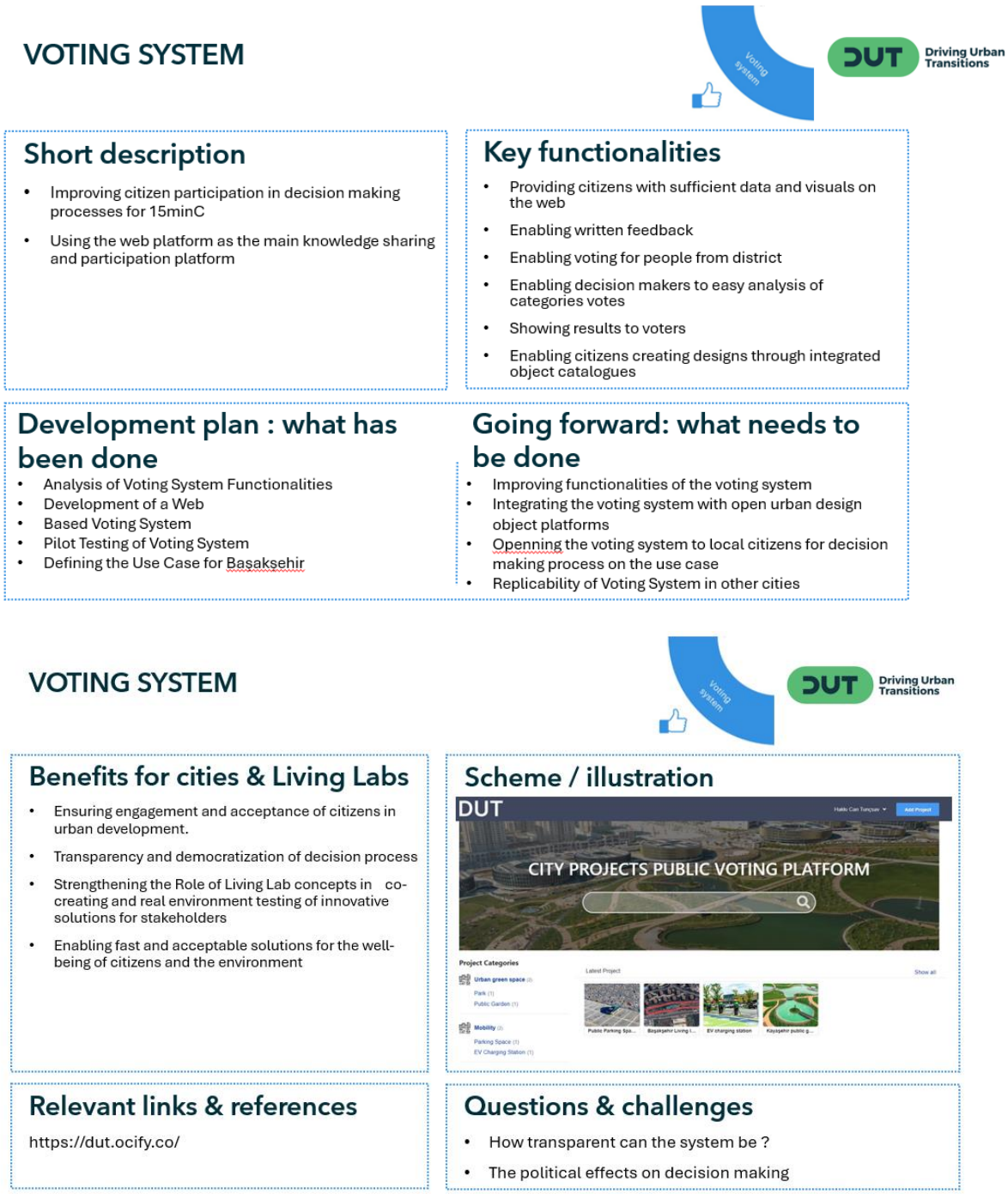


Figure 9: Summary of the e-voting system

Summary of the Crowfunding Module

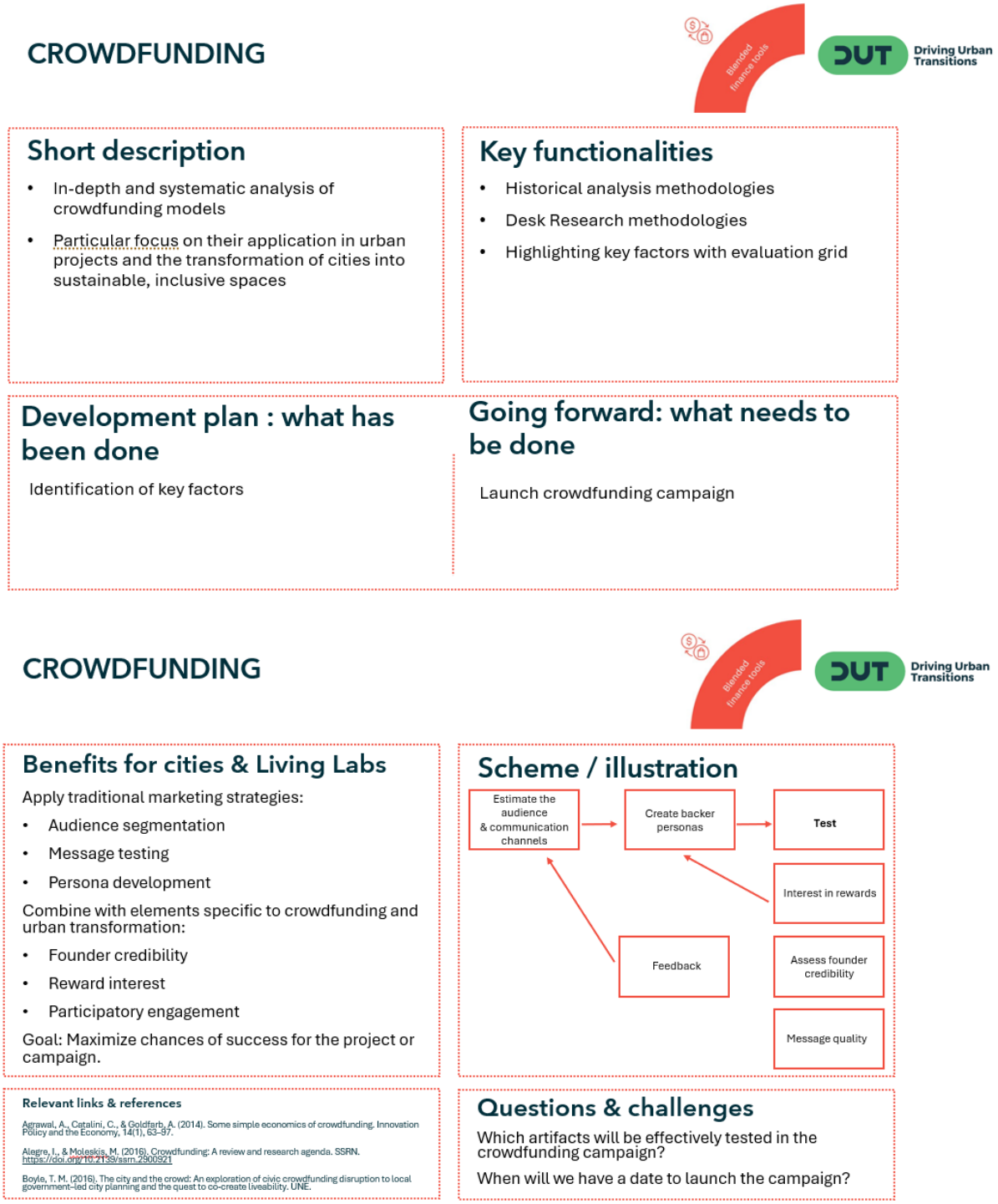


Figure 10: Summary of the Crowdfunding Module

Support to Decision-Making and Urban Analysis, Use-Cases and Stakeholder Management (City of Winterthur and Drees & Sommer)

These two parts are interconnected to each other. The Support to decision making is supported by Urban Analysis. This interrelation aims at strengthening the urban-cases and stakeholders management.

1. Presentation of the Methods Used

This part focus on leveraging urban analysis and decision-support mechanisms to support and inform the implementation of Multigination. The methodology involved a case study approach whereby **key urban areas were selected based on their potential for pilot implementation**. In Winterthur and Başakşehir, **detailed urban analyses** were performed to identify critical 15mC zones, using a combination of spatial analysis, stakeholder mapping, and participatory workshops. The approach was highly integrative, combining inputs from local urban planners, civil engineers, and community representatives. The use of co-creation workshops and on-site visits allowed for the tailoring of the Multigination process to the specific needs of each locality.

2. Carried Out Activities

The following activities were carried out:

Task 1: **Site Visits in Winterthur Grüze and Başakşehir**

Task 2: **Stakeholder Workshops in Geneva**

Task 3: **Development of an Integrated Urban Analysis in Winterthur**

Task 4: **Documentation and Reporting**

As for task 1, several organized visits to potential pilot sites in Winterthur and Başakşehir have been conducted (cf. Figures 11 and 12). In Winterthur, these site visits included guided tours of key urban areas, presentations on work progress, and discussions aimed at identifying a suitable implementation site. In task 2 face-to-face workshops were conducted in Geneva and locally in the pilot cities. These sessions convened urban planners, civil engineers, and other key stakeholders to discuss and validate the findings of the urban analysis. The workshops were held with representatives of the cities of Winterthur and Basaksehir to tailor the Multigination process to local contexts, including customizing interventions for specific neighborhoods and mapping out future urban experimentation strategies.

Figure 11: Impressions from Site Visit in Winterthur Grüze (City of Winterthur)

Figure 12: Workshop impressions in Başakşehir (Drees & Sommer / City of Winterthur)

The integrated urban analysis (task 3) of the overall urban context in Winterthur Grüze has been completed. This analysis aimed to identify promising locations for urban interventions and covered critical 15 minutes zones in terms of mobility, green spaces, leisure, social, and supply infrastructures. It provided an initial assessment of existing conditions and highlighted potential areas for improvement and implementation. Finally, detailed reports were compiled that documented the findings of the urban analyses and the outcomes of the stakeholder engagements, that build the base for the “Multigination” interventions. These reports will serve as a guide for subsequent phases of the project.

3. Results Obtained

This part of the research focused on identifying critical zones for testing the Multigination tool. An urban analysis based on the 15mC principles was conducted to establish a comprehensive and comparable framework (see Figure 13) for analyzing Winterthur Grüze. This methodologic framework can be applied to the follower cities. The methodology involved overlaying multiple categories (Figure 5) mobility, green spaces and leisure, social, and supply infrastructures—to develop a holistic understanding of the site. The results of the analysis indicated that Grüze, due to its strategic location, has

the potential to function as a sub-center within Winterthur. The site offers diverse intervention possibilities, including creating community activities (e.g. playgrounds, public bookshelves, etc.), enhancing green spaces and connections (e.g. urban gardening, etc.), improving soft mobility infrastructure (e.g., bicycle infrastructure, lighting, safer crossings, and resting places), and boosting gastronomic offerings around the train station. This knowledge will serve as a foundational basis for selecting the intervention later in the process.

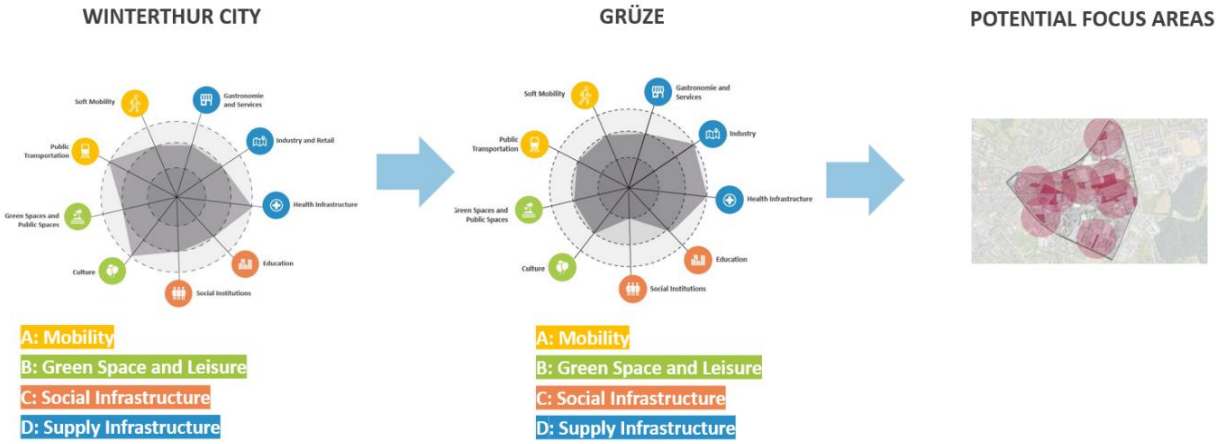


Figure 13: Integrated urban analysis method based on 15mC Principles (Drees & Sommer)

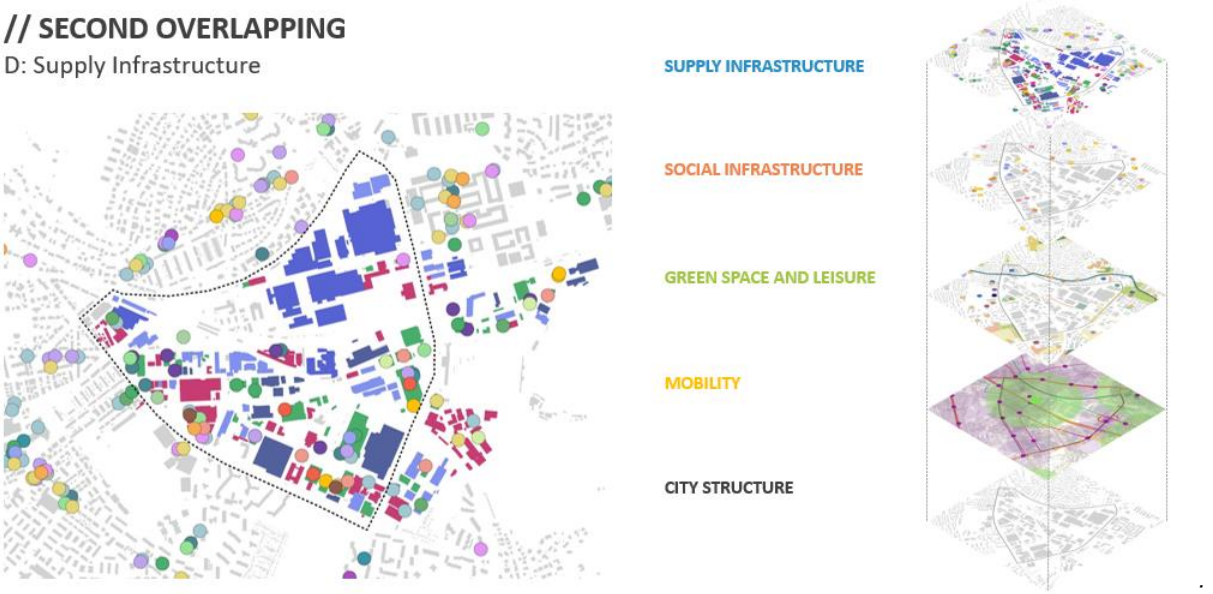


Figure 14: Illustration of supply infrastructure mapping and an overlay of multiple 15mC-based categories (Drees & Sommer based on Geoportal Kanton Zürich and Geoportal Winterthur)

Furthermore, the analysis facilitated the identification of critical areas within Winterthur Grüze that are well-suited for the application of the “Multigination” tools and serve as a location for the future implementation. Based on the urban integrated analysis and initial identification of critical zones (Figure 15), a site visit including a working session in Winterthur Grüze with the consortium and city representatives was conducted to define the intervention site. In Winterthur Grüze, the area around the railway station and the innovation lab has been designated as the intervention zones. Given that these centrally located areas are currently underused but scheduled for development in the coming decades (cf. Figure 16), they are well-suited for an initial interim intervention.

Subsequently, through various workshops (e.g. workshops in Geneva, site visits in Winterthur and Başakşehir), strong working relationships with key urban decision-makers were established, ensuring a robust support network for future project phases. Furthermore, stakeholders gained an enhanced understanding of the urban dynamics that will influence the co-planning process.

Overall, a detailed urban analysis reports has been developed for Winterthur Grüze, which include spatial data sets and key performance indicators (KPIs) for urban proximity and connectivity.

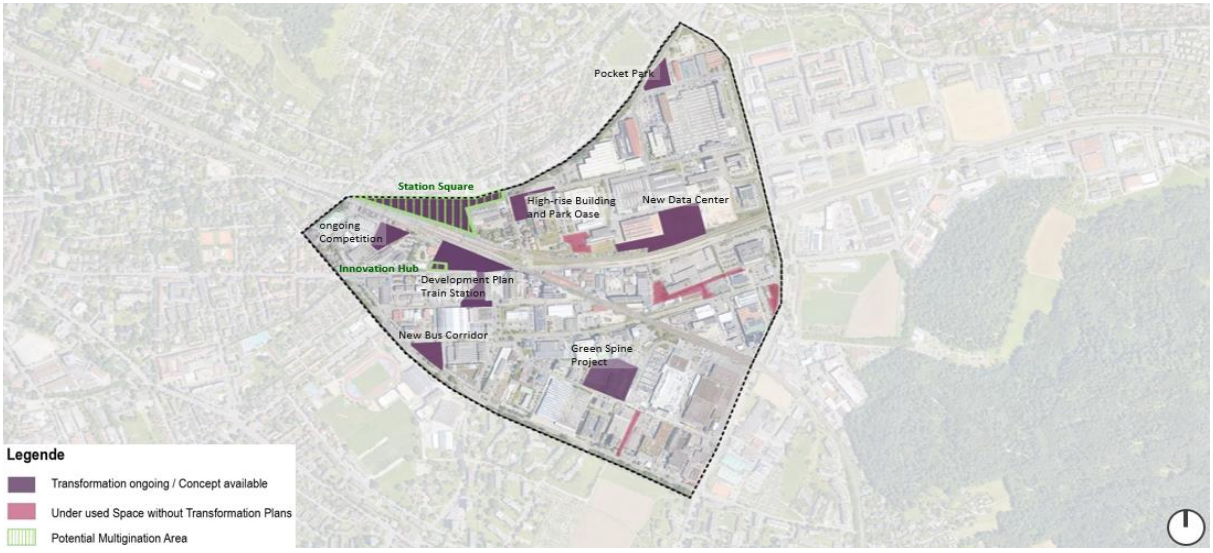


Figure 15: Critical zones for testing the Multigination tool in Winterthur-Grüze (Drees & Sommer based on Geoportal Kanton Zürich and Geoportal Winterthur)

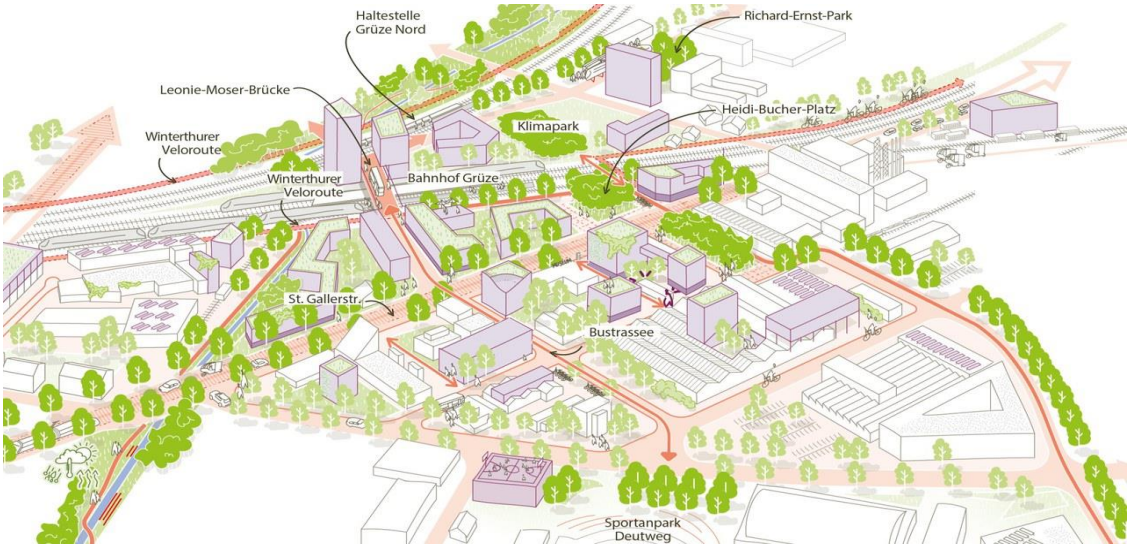


Figure 16: Development plans for Grüze+ (City of Winterthur)

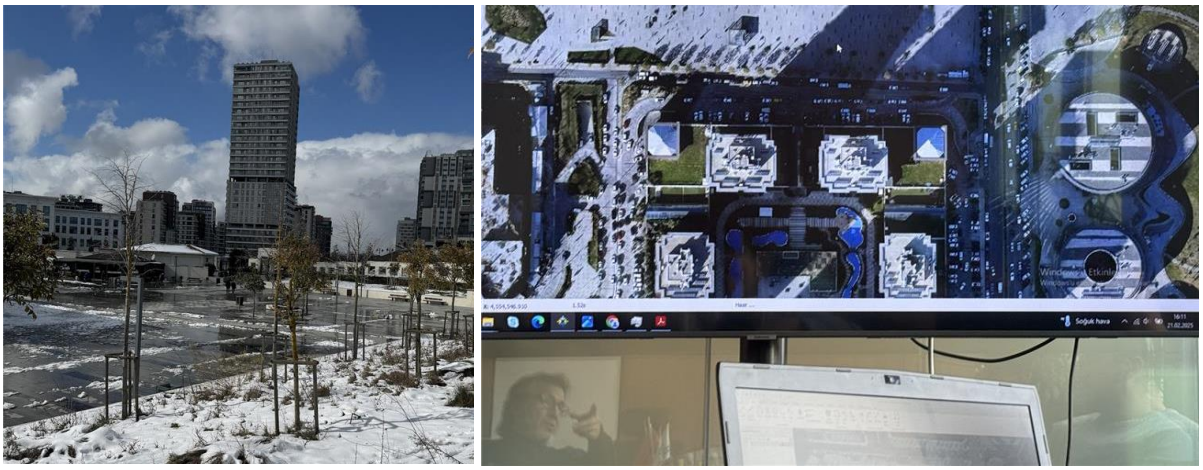


Figure 17: Project-site in Başakşehir (Drees & Sommer)

4. Critical Analysis

The **integration of urban analysis with stakeholder management** has significantly strengthened the foundation for decision-making in the project. The urban analysis served as the preliminary step to ensure that the local context and urban dynamics were considered. Subsequently, this will be comprehensively addressed through the co-creation approach. Nonetheless, the diversity of urban environments presents challenges in **standardizing processes across different cities**.

To **align the Multigination tasks with the ongoing planning activities** of the partner cities is an opportunity but also challenging, as timing is often not congruent. In Winterthur for instance there are plans to enhance citizen participation with the envisioned WinLab Citizen Lab, which shall allow in a first pilot project in the identified Mutligination case study area around the Innovation Lab Grüze to promote and support citizen ideation. The Multigination platform and toolbox will therefore be a useful source of inspiration to the citizens and further local stakeholders with regards to 15mC.

The reliance on extensive stakeholder engagement is both a strength and a potential limitation, as sustained engagement is needed to translate early successes into long-term transformation. However, based on urban planning experience, the early involvement of stakeholders in the planning process is often neglected, which frequently results in a lack of acceptance of even well-designed projects. By adopting an approach that integrates stakeholders at an initial stage, we aim to enhance the acceptance and commitment of the community. Future efforts should focus on **streamlining the decision-making framework** to enable faster and more effective scaling across varied urban settings.

Summary of the collaborative urban vision for 15 M-Cities

COLLABORATIVE URBAN VISIONS FOR 15M-CITIES

DUT Driving Urban Transitions

Short description

- **The 15-Minute City is about access, not just mobility**—it's about meeting daily needs locally without relying on a car.
- **Public space is a democratic space**—it must be co-designed with its diverse users.
- **Residents are local experts**—their input shapes context-sensitive planning strategies.
- **Digital tools like Multigination** capture stakeholder visions and guide planning decisions.
- **Participatory workshops** are **one of the key elements of holistic urban planning** – planners need to integrate stakeholder input with solutions for green space, housing, services, mobility, and energy to create tailored, and **creative planning solutions and strategies**.

Key functionalities / steps

- Integrated urban analysis
- 15-Minute City gap analysis
- Collaborative stakeholder workshops
- Holistic strategy development
- Participative design and placement of public space interventions

Integrated urban analysis method

Development plan: what has been done

- **Integrated urban and 15-Minute City gap analysis** conducted at both macro (City of Winterthur) and micro levels (Grüze district and selected intervention sites).
- **Literature review on key performance indicators (KPIs)** to assess the effectiveness and quality of 15-Minute City interventions.
- **Research of international best practices** to identify diverse and innovative intervention types for the identified intervention areas.
- **Site-specific analysis** of the intervention areas (*Innovation Lab & Querung Grüze*) to explore their potential for **interim uses and placemaking** aligned with 15-Minute City principles.

Going forward: what needs to be done

- **Participatory neighborhood and stakeholder workshops** using the digital Multigination platform to foster inclusive dialogue and idea generation.
- **Collaborative visioning** through the digital voting system to prioritize shared goals and aspirations.
- **Strategy development** based on both, the urban analysis and the collaborative workshop outcomes to ensure relevance and feasibility.
- **Laying the foundation for implementation** of ephemeral micro-interventions aimed at enhancing local proximity and reducing mobility demands in the case study areas.

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COLLABORATIVE URBAN VISIONS FOR 15M-CITIES

DUT Driving Urban Transitions

Benefits for cities & Living Labs

- **Strengthening local access:** Co-created neighborhoods support diverse, nearby amenities—reducing the need for long commutes and promoting short-distance living.
- **Sustainable mobility shift:** When living, working, and services are brought closer together, reliance on cars decreases—encouraging walking, cycling, and public transport.
- **Needs-based planning:** Local stakeholders contribute their perspectives, ensuring that services and infrastructure align with real community needs.
- **Resilient and adaptable urban development:** Holistic approaches integrate climate, energy, green spaces, and social factors—making cities more future-proof and livable.
- **Social cohesion and inclusion:** Participation fosters a sense of community, strengthens democratic engagement, and builds identification with the local environment.

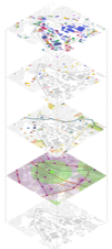
Relevant links & references

- Sim, D., 2019. *Soft City: Building Density for Everyday Life*. Foreword by Jan Gehl. Washington, DC: Island Press.
- Moreno, C., 2024. *The 15-Minute City: A Solution to Saving Our Time and Our Planet*. 1st ed. Hoboken, NJ: Wiley.
- Sennett, R., 2018. *Building and Dwelling: Ethics for the City*. New York: Farrar, Straus and Giroux.
- Pahl-Weber, E. and Henckel, L.S., eds., 2021. *Stadt gemeinsam gestalten: Neue Governanceformen für die kooperative Stadtentwicklung*. Bonn: Bundesinstitut für Bau-, Stadt- und Raumforschung (BBSR).
- Wüstenrot Stiftung, ed., 2016. *Ephemere Stadtentwicklung: Handbuch und Planungshilfe*. Berlin: DOM publishers.

Scheme / illustration

Assessment of key topics

Overlapping of urban analysis maps



Questions & challenges

- How can the micro-intervention be sustained over time?
- How can the holistic and collaborative strategies be implemented alongside the micro-intervention and integrated within local urban development frameworks and strategies?
- How can fair participation be ensured—clearly communicating the scope and limits of collaboration to enable genuine co-creation rather than tokenism?
- How can equitable voting processes be guaranteed within participatory frameworks?

Figure 18: Collaborative urban vision for the 15 M-Cities

Knowledge Transfer, Dissemination and Impact (HES-SO)

An interdisciplinary approach was adopted, integrating expertise from urban planning, sustainable mobility, Living Lab methodologies, and digital innovation.

1. Presentation of the Methods Used

The methods employed included online and offline exchanges, structured meetings and interviews with partner cities, capacity-building workshops, and literature analysis for further development of a comprehensive framework for impact assessment and knowledge transfer. Emphasis is placed on aligning the dissemination and evaluation strategies with the 15-minute city concept and integrating these ideas with the Living Lab approach.

2. Carried Out Activities

Multigination Process Development: the Living Lab Integrative process (Mastelic, 2019) together with approaches to working on urban participatory projects (Geekiyanage et al., 2021) were completed by Multigination modules, such as Digital platform, Marketplace of solutions, Voting system, Blended finance tools and resulted into the circular scheme of the Multigination process (Figure 9). This scheme aims to present an overall picture of the project methodology and facilitate communication with project partners and follower cities.

Online Engagement: the first online meeting with **follower cities** was convened to present the current version of the Multigination process (Figure 9) and the associated tools. This session was structured to facilitate immediate feedback and encourage early adopter participation.

Evaluation Framework Development: collaborative efforts were made to understand assessment methodologies and develop an **evaluation framework for measuring the impact** of the Multigination approach (Figure 10). As a result, the issue of impact also enriched the discussion on future dissemination actions.

Capacity Building Workshops: interactive workshops were planned twice a year to develop and refine the capacity-building framework. These sessions will involve consortium partners and external stakeholders, with the aim of creating replicable methodologies for urban transformation.

Interdisciplinary Collaboration: regular interactions with other WPs were maintained to ensure that the knowledge transfer activities were synchronized with ongoing project developments.

3. Results Obtained

A cohesive and comprehensive vision for capacity building and knowledge transfer was established, integrating key concepts such as the 15-minute city and Living Lab methodologies.

A circular scheme of the Multigination process was developed and proposed in the framework of WP7 (Figure 19). This holistic approach includes classical steps of working with urban projects and steps proposed by the Multigination project, such as using the digital modules combined with the participatory activities in the chosen areas. The framework will be tested and evaluated during the case study in Winterthur, then updated and extended to follower cities and beyond in the framework of the capacity building.

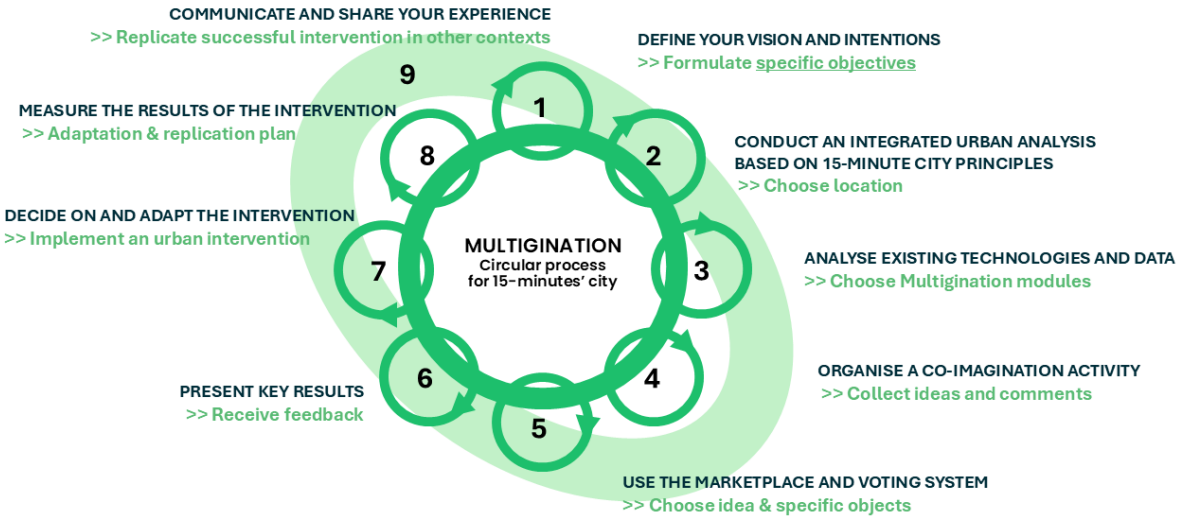


Figure 19: Circular scheme of Multigination process

Early engagement with follower cities (more than 4 follower cities have been engaged) has generated a positive response, with stakeholders expressing a strong interest in adopting the Multigination framework and approach.

With respect to the development of a robust evaluation methodology, the first task was to define what would be the object of evaluation. **The concept of the 15-Minute City, as articulated by Carlos Moreno, is built upon four fundamental pillars: proximity, density, diversity, and digitalisation (Moreno et al, 2021).** Hence, a project fostering the 15mC should have a positive impact at least on one of these 4 pillars. While within the possibilities of Multigination, the envisaged case studies cannot have a relevant influence on local density, the project aims at influencing local proximity and diversity by co-creating missing services in a chosen area. Moreover, due to the nature of the project, it is evident that the project also contributes to the digital development of urban design processes.

Currently, a number of metrics are being proposed to assess how close an area is to the 15mC concept (see, for example, (Papadopoulos et al. 2023) or (Sdoukopoulos et al. 2024)). In the context of Multigination, it was decided that these approaches would not be suitable for two reasons. First, it is the objective of the project to induce a transformation through the Multigination process. However, the metrics mentioned above address a wider area with, typically, a relevant number of pre-existing activities. With the types of interventions feasible within the Multigination case-studies, these metrics would fail to show relevant change in a before-after evaluation. Moreover, these metrics ultimately focus on the pillars highlighted by Moreno but fail to address impact in terms of elements such as, for example, stakeholder involvement, co-creation or long-term transformation of communities.

3 Hence, building on the experience obtained within the SWEET projects, it was decided to build the evaluation methodology on INTEP's five stage model for SWEET consortia. Currently, the main focus of the work in this context was on understanding how to adapt this

framework to the Multigination case (see

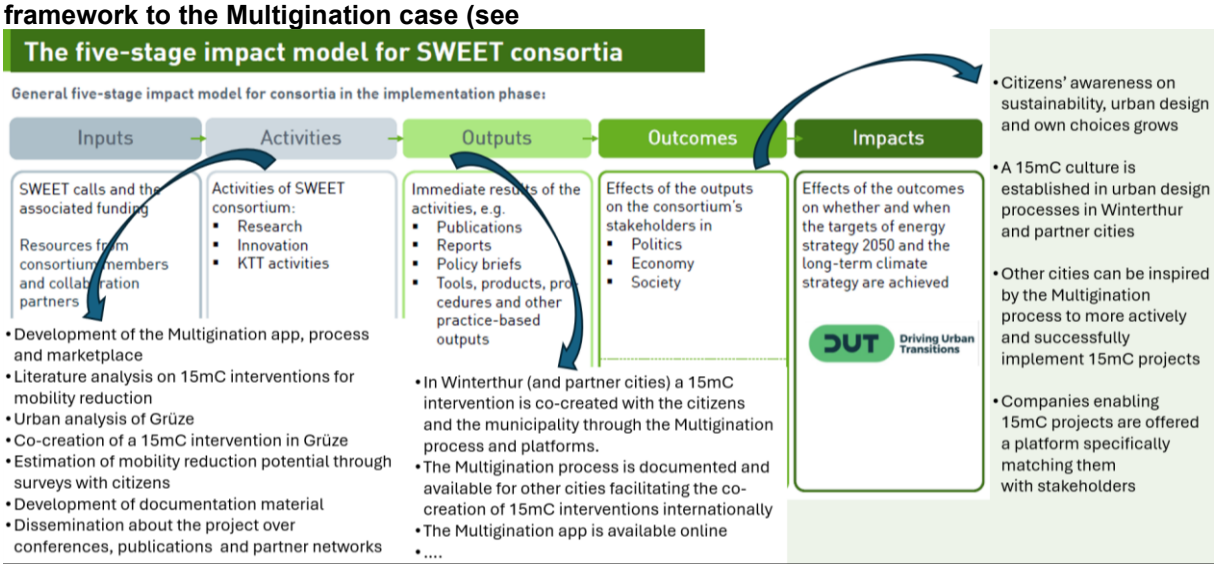


Figure 20: Adapting the INTEP framework to Multigination – Impact assessment methodology.

4. Critical Analysis

The establishment of a robust evaluation methodology is on track. Currently, the focus was set on understanding how to implement INTEP's framework to the Multigination process. To ensure the effectiveness of our methodology, it is essential to compare the evaluation methods with the current urban design process. This comparison will be a key task in our assessment and how to implement it will be addressed in the next months. This will help us adjust the overall evaluation framework and test it in pilot areas, such as the city of Winterthur. To gain deeper insights, we plan to engage diverse actors and conduct interviews with key stakeholders from the City of Winterthur, including city representatives and urban mobility specialists. By integrating insights from side research and interviews, and by enhancing the assessment methodology, we aim to propose a framework that not only meets Multigination's objectives but could also be adopted in similar 15mC co-creation projects.

Project Management

1. Presentation of the Methods Used

WP8 encompasses the overarching **project management framework**, which is pivotal for ensuring smooth inter-consortium communication and effective stakeholder engagement. The methods used include dynamic stakeholder management techniques, regular international consortium meetings, and on-site engagements with pilot areas. Emphasis was placed on proactive planning and monitoring, including the use of project dashboards and structured reporting formats. The project management approach was designed to support operational pilots in selected cities, ensuring alignment with both local development needs and the project's strategic objectives.

2. Carried Out Activities

During this reporting period, we conducted the following concrete activities:

- **Stakeholder Engagement**: Extensive interactions were held with the City of Winterthur's Living Lab (WinLab), including multiple visits and dedicated sessions with the city's chief engineer.

- **International Meetings**: The consortium held a plenary international meeting in Geneva, which served as a platform to review progress, discuss challenges, and plan for the next phases. The meeting included presentations from various WP leaders.

- **On-Site Piloting**: Guided tours were organized for consortium members to visit ongoing construction sites in Winterthur, particularly within the Grüze district. These visits provided firsthand insights into the practical conditions and infrastructural needs for implementing the Multigination tools.

- **Urban Analysis Support**: we collaborated with urban analysis experts to identify potential pilot sites. Detailed assessments were performed to determine the suitability of areas such as Grüze station square and the Innovation Lab Grüze.

- Project Coordination: Regular coordination meetings were held among consortium members to align operational plans, monitor progress, and adjust project strategies based on real-time feedback.

3. Results Obtained

- **Strengthened internal and external collaboration** among consortium partners and local stakeholders, evidenced by the active participation of key city officials. Over 10 high-level meetings were documented during the reporting period, with significant involvement from over 15 key local decision-makers.

- Establishment of a **clear operational framework:** development of the quality and management guidelines

4. Critical Analysis

The project management efforts have played a critical role in ensuring the overall coherence and timely progress of the Multigination project. The proactive engagement with local stakeholders, especially in Winterthur, has built a **solid foundation for operational piloting**. However, replicating this level of engagement in new contexts—such as in Turkey during the second project year—poses a significant challenge. The reliance on **extensive in-person interactions** may need to be balanced with scalable digital communication methods. Continuous refinement of the coordination mechanisms and adaptive management strategies will be essential to maintain momentum as the project expands its geographical scope.

4 Conclusions and outlook

This interim report provides a preliminary assessment of the results achieved to date and the work carried out, along with a discussion of the next steps, potential future implementations, and remaining open questions.

Overall, the Multigination project is progressing in a structured and methodologically robust manner. The project has made significant strides in developing innovative tools and processes that integrate stakeholder input from diverse urban contexts. Key achievements include the iterative refinement of process diagrams and software modules, which have been instrumental in clarifying the roles and requirements at every phase of the co-planning process. This work has identified four critical success factors for the political adoption and practical utility of the Multigination process:

1. **Stakeholder Engagement**: Early and sustained engagement with local decision-makers and urban planning experts is essential. The project conducted over 15 structured consultation sessions involving more than 25 experts.

2. **Iterative Co-Design and Feedback**: Approximately 30 documented revisions of the platform and processes were made based on feedback, highlighting the importance of iterative development and adaptability to local needs.

3. **Modular and Open-Source Architecture**: The shift to a modular system of interoperable software components (ideation, marketplace, voting, crowdfunding) allowed cities to adopt only the parts they found useful, facilitating appropriation without overburdening them with unnecessary features.

4. **Integration into Existing Urban Planning Contexts**: The tools were aligned with local urban planning activities (e.g., in Winterthur), reinforcing relevance and uptake. The method provided practical support to ongoing planning tasks, enhancing political legitimacy.

These factors together facilitated not just the technical deployment but also the political and institutional appropriation of the Multigination process.

In parallel, the establishment of an international marketplace framework has set a clear conceptual foundation, delineating the interplay between the ideation process and user selection. This framework, reinforced by feedback from over 20 industry and public sector representatives, has fostered a shared understanding of the need for iterative refinement and real-world testing. Early qualitative feedback indicates promising user engagement, and preliminary assessments suggest readiness to deploy the first cycle of products in the upcoming project year, with a candidate pool of 10–15 products under review.

The successful design and initial testing of a citizen-friendly e-voting system, coupled with the exploration of innovative financing models such as civic crowdfunding have underscored the potential for integrating participatory decision-making into urban planning. Similarly, the robust integration of urban analysis and stakeholder management has enabled the identification of strategic pilot sites in Winterthur and Başakşehir, providing valuable insights into local urban dynamics and critical 15 minutes city zones. Complementing these technical and methodological developments, the comprehensive knowledge transfer and dissemination strategy has begun engaging follower cities and establishing a framework for measurable long-term impact, while dynamic project management has ensured effective coordination and stakeholder engagement across all operational levels.

The findings drawn from these efforts indicate that the project's tools and processes are well-aligned with the emerging needs of sustainable urban development. By fostering multi-stakeholder collaboration and deepening citizen participation in urban planning processes, Multigination is poised to drive urban transitions that support the development of 15-minute cities. The practical, modular approach not only enables adaptation to diverse urban contexts but also catalyses sustainable and inclusive urban development.

Looking ahead, the project is set to deepen its focus on citizen engagement and innovative financial mechanisms. Key next steps include finalizing the deployment of the marketplace and e-voting systems, further refining the integrated urban analysis framework, and expanding pilot implementations in additional urban contexts. There is also a strong emphasis on scaling up civic crowdfunding initiatives as a tool for sustainable urban finance, which will require additional work on stakeholder capacity building and policy integration.

While the current results are promising, several open questions remain. These include the need to further validate the scalability of the modular tools across different urban settings, to refine the evaluation methodologies for long-term impact assessment, and to address integration challenges that have surfaced during the pilot phases. Continued research and collaborative testing will be essential to ensure that these innovative solutions can be effectively implemented and sustained over time.

In conclusion, the Multigination project has achieved substantial progress in its interim phase, setting a solid foundation for the next steps. The combination of technical innovation, stakeholder engagement, and adaptive project management provides a compelling model for urban transformation. As the project moves into its subsequent phase, the insights gained thus far will be pivotal in refining methodologies and expanding the impact on urban sustainability and civic participation.

5 National and international cooperation

Mid-February 2025, several Swiss members of the Muligination consortium visited the project site in Basaksehir, Turkey. During the site visit, experts from Başakşehir provided insights into the area and the project concept. Additionally, Drees & Sommer presented the integrated urban analyses of Winterthur Grüze, outlining their approach and offering a methodological framework for further work on the use case in Başakşehir.

An exchange visit to Vienna, Austria, featured the presentation of the TuneOurBlock project. This initiative aims to validate, internationalise and expand the concept of the superblock as a political and planning strategy for adapting cities to reduce the mobility burden and strengthen public space. The project exemplified effective participation through small, citizen-centred measures that successfully changed mobility patterns, offering valuable lessons for Multigination.

6 Publications and other communications

Project Kick-off Meeting: An initial gathering of key stakeholders and consortium members to introduce the project's objectives, align expectations, and set the foundation for ongoing collaboration and feedback.

Thematic Workshops: Online interactive sessions designed to engage city representatives and experts in discussions on sustainable urban planning, climate action, and citizen participation, aimed at refining tools and methodologies.

Webinar on Open Innovation Platforms: An online event co-organized with partner organizations that featured both theoretical sessions on Open Innovation concepts and practical sessions for hands-on testing of civic-tech platforms, providing valuable feedback on usability and functionality.

Transnational Living Lab Initiative: A collaborative event organized with the European Network of Living Labs that brought together cities to co-design sustainable energy and climate planning frameworks, ensuring broader dissemination of project results and fostering long-term engagement.

7 References

Abdelfattah, L., Deponte, D., & Fossa, G. (2022). The 15-minute city: interpreting the model to bring out urban resiliencies. Transportation Research Procedia, 330-337.

Allam, Z., Bibri, S. E., Chabaud, D., & Moreno, C. (2022). The '15-Minute City'concept can shape a net-zero urban future. Humanities and Social Sciences Communications, 9(1), 1-5.

Allam, Z., Bibri, S. E., Jones, D. S., Chabaud, D., & Moreno, C. (2022). Unpacking the '15-minute city'via 6G, IoT, and digital twins: Towards a new narrative for increasing urban efficiency, resilience, and sustainability. Sensors, 22(4), 1369.

Balletto, G., Ladu, M., Milesi, A., & Borruso, G. (2021). A methodological approach on disused public properties in the 15-minute city perspective. Sustainability, 13(2), 593.

Ballon, P., Van Hoed, M., & Schuurman, D. (2018). The effectiveness of involving users in digital innovation: Measuring the impact of living labs. Telematics Informatics, 35(5), 1201-1214.

Bertolini, L. (2020). From "streets for traffic" to "streets for people": can street experiments transform urban mobility?. Transport reviews, 40(6), 734-753.

Bruno, M., Melo, H. P. M., Campanelli, B., & Loreto, V. (2024). A universal framework for inclusive 15-minute cities. *Nature Cities*, *1*(10), 633–641. https://doi.org/10.1038/s44284-024-00119-4

Buckley, K. J., Newton, P., Gibbs, H. K., McConnel, I., & Ehrmann, J. (2019). Pursuing sustainability through multi-stakeholder collaboration: A description of the governance, actions, and perceived impacts of the roundtables for sustainable beef. World Development, 121, 203-217.

Büttner, B. (2024). *Mapping of 15-minute City Practices – Overview on strategies, policies and implementation in Europe and beyond*.

C40 Cities. Online access: https://www.c40.org. Accessed 07 April 2023. (https://www.c40.org/what-we-do/raising-climate-ambition/inclusive-thriving-cities/)

Chiappini, L., & de Vries, J. (2022). Civic Crowdfunding as Urban Digital Platform in Milan and Amsterdam: Don't take pictures on a rainy day!. Digital Geography and Society, 3, 100024.

City of Winterthur (2025): Schwerpunktraum Grüze+. (https://stadt.winterthur.ch/themen/leben-in-winterthur/planen-und-bauen/wir-planen-fuer-sie/schwerpunktraeume/grueze)

Compagnucci, L., Spigarelli, F., Coelho, J., & Duarte, C. (2021). Living Labs and user engagement for innovation and sustainability. Journal of Cleaner Production, 289, 125721.

Dhar, T. K., & Khirfan, L. (2017). A multi-scale and multi-dimensional framework for enhancing the resilience of urban form to climate change. Urban Climate, 19, 72-91.

Fenton, P., & Gustafsson, S. (2017). Moving from high-level words to local action—governance for urban sustainability in municipalities. Current opinion in environmental sustainability, 26, 129-133.

Fredericks, J., Caldwell, G. A., Foth, M., & Tomitsch, M. (2019). The city as perpetual beta: Fostering systemic urban acupuncture. The hackable city: Digital media and collaborative city-making in the network society, 67-92.

Geekiyanage, D., Fernando, T., & Keraminiyage, K. (2021). Mapping participatory methods in the urban development process: A systematic review and case-based evidence analysis. *Sustainability*, *13*(16), 8992.

Geels, F. W. (2004). From sectoral systems of innovation to socio-technical systems: Insights about dynamics and change from sociology and institutional theory. Research policy, 33(6-7), 897-920.

Gray, B., & Purdy, J. (2018). Collaborating for our future: Multistakeholder partnerships for solving complex problems. Oxford University Press. **16. Gutierrez**, M., & Gutierrez, G. (2019). Climate finance: Perspectives on climate finance from the bottom up. Development, 62, 136-146.

Hasler, S., Chenal, J., & Soutter, M. (2017). Digital tools as a means to foster inclusive, data-informed urban planning. Civil Engineering and Architecture, 5(6), 230-239.

Garmsir, A. R., Sharifi, A., Hajian Hossein Abadi, M., & Moradi, Z. (2023). From Garden City to 15-Minute City: A Historical Perspective and Critical Assessment. Land, 12(2), 512.**Kronsell**, A., & Mukhtar-Landgren, D. (2018). Experimental governance: The role of municipalities in urban living labs. European planning studies, 26(5), 988-1007.

Marchigiani, E., & Bonfantini, B. (2022). Urban Transition and the Return of Neighbourhood Planning. Questioning the Proximity Syndrome and the 15-Minute City. Sustainability, 14(9), 5468.

Mastelic, J. (2019). Stakeholders' engagement in the co-design of energy conservation interventions: The case of the Energy Living Lab.

McCrory, G., Schäpke, N., Holmén, J., & Holmberg, J. (2020). Sustainability-oriented labs in real-world contexts: An exploratory review. Journal of Cleaner Production, 277, 123202.

Moreno, C., Allam, Z., Chabaud, D., Gall, C., & Pratlong, F. (2021). Introducing the "15-Minute City": Sustainability, resilience and place identity in future post-pandemic cities. Smart Cities, 4(1), 93-111.

Nieuwenhuijsen, M., de Nazelle, A., Pradas, M. C., Daher, C., Dzhambov, A. M., Echave, C., Gössling, S., Iungman, T., Khreis, H., Kirby, N., Khomenko, S., Leth, U., Lorenz, F., Matkovic, V., Müller, J., Palència, L., Pereira Barboza, E., Pérez, K., Tatah, L., … Mueller, N. (2024). The Superblock model: A review of an innovative urban model for sustainability, liveability, health and well-being. *Environmental Research*, *251*, 118550. https://doi.org/10.1016/j.envres.2024.118550

Papas, T., Basbas, S., & Campisi, T. (2023). Urban mobility evolution and the 15-minute city model: from holistic to bottom-up approach. Transportation research procedia, 69, 544-551.

Pinto, F., & Akhavan, M. (2022). Scenarios for a Post-Pandemic City: urban planning strategies and challenges of making "Milan 15-minutes city". Transportation research procedia, 60, 370-377.

Papadopoulos, E., Sdoukopoulos, A., & Politis, I. (2023). Measuring compliance with the 15-minute city concept: State-of-the-art, major components and further requirements. *Sustainable Cities and Society*, *99*, 104875. https://doi.org/10.1016/j.scs.2023.104875

Pozoukidou, G., & Angelidou, M. (2022). Urban Planning in the 15-Minute City: Revisited under Sustainable and Smart City Developments until 2030. Smart Cities, 5(4), 1356-1375.

Sdoukopoulos, A., Papadopoulos, E., Verani, E., & Politis, I. (2024). Putting theory into practice: A novel methodological framework for assessing cities' compliance with the 15-min city concept. *Journal of Transport Geography*, *114*, 103771. https://doi.org/10.1016/j.jtrangeo.2023.103771

Tan, R., Wu, Y., & Zhang, S. (2024). Walking in Tandem with the City: Exploring the Influence of Public Art on Encouraging Urban Pedestrianism within the 15-Minute Community Living Circle in Shanghai. *Sustainability*, *16*(9), Article 9. https://doi.org/10.3390/su16093839

Tartell, R. (2016) 'Understand teams by using the GRPI model: organizational theorist Dick Beckhard developed the GRPI model--Goals, Roles, Processes, Interpersonal Relationships--to help diagnose the causes of team dysfunction', Training (New York, N.Y.), 53(1), pp. 22.

Von Wirth, T., Fuenfschilling, L., Frantzeskaki, N., & Coenen, L. (2019). Impacts of urban living labs on sustainability transitions: Mechanisms and strategies for systemic change through experimentation. European Planning Studies, 27(2), 229-257.

Weng, M., Ding, N., Li, J., Jin, X., Xiao, H., He, Z., & Su, S. (2019). The 15-minute walkable neighborhoods: Measurement, social inequalities and implications for building healthy communities in urban China. Journal of Transport & Health, 13, 259-273.