

Benchmarking Circular Hubs

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Introduction

This report was developed as a result of the Benchmarking service provided in the context of the [Definite-CCRI project](#). This service was provided to 2 of the project beneficiaries, [Tissel](#) in Roubaix and [Tehdassaari](#) in Nokia. Both are circular hubs that have transformed industrial and historical sites into spaces where businesses develop innovative, circular business models that contribute to the circular economy, and where local communities come together. These hubs wanted to learn from more advanced circular hubs, exploring both their successes and challenges to inform their future development.

To meet this objective, interviews were conducted with the following circular hubs:

- Circularium in Anderlecht, Belgium
- Center ROG in Ljubljana, Slovenia
- Blue City in Rotterdam, Netherlands
- ReTuna in Eskilstuna, Sweden
- Social Circular Hub Ghent, Belgium
- Impact Factory in Mechelen, Belgium
- MAAK site in Haarlem, Netherlands

The interviews, each lasting for approximately one hour, covered a wide range of topics, including the vision and future plans for each hub, ownership and governance structures, tenant selection processes, and the involvement of the public sector. Additionally, the discussions explored the activities of the hubs, their revenue streams, stakeholder engagement strategies, and partnerships. Other areas of focus included the impact and sustainability of the hubs, site refurbishment, and key success factors and lessons learned from their experiences.

While this report aims to inspire and inform decision-making for Tissel and Tehdassaari, it will also be shared with the hubs that generously participated in the interviews. We hope that the analysis presented here

will expand the understanding of how different hubs operate, on the diverse opportunities they offer, and the value they create for both early-stage businesses and the local communities they serve.

The report is structured as follows: it begins with a presentation of the interview results, organised into the following five key areas: hub renovation, business models, stakeholder engagement, tenants selection, impact measurement and governance models. The next chapter highlights the success factors and lessons learned from each hub, followed by a conclusions section. Finally, the annex includes a detailed fact sheet with more comprehensive information about each hub.



Results

The following section presents a comparative analysis of the results obtained from the interviews, focusing on the five key topics areas:

- Hub renovation
- Stakeholder engagement
- Tenants selection
- Impact measurement
- Governance models

Each section begins with the key takeaway, followed by a comparative summary of the results, and concludes with the specific information related to the Tissel and Tehdassaari hubs.

Hub renovation

Key takeaways

A major commonality among these hubs is that they are established on pre-existing sites, primarily former industrial locations. While renovation work is generally kept to a minimum to manage costs, circular construction principles are prioritised. These hubs aim to lead by example, promoting sustainability not only in structural construction (e.g., flooring, insulation, etc) but also in interior elements, such as the sourcing of furniture. However, it's essential to critically assess each case to ensure that circular material sourcing genuinely enhances sustainability, as secondary sourcing does not automatically equate to a more sustainable choice (e.g., recycled concrete vs new). Other sustainability upgrades included installing solar panels on the roof in the cases of Circularium, Blue City and Center ROG.



Rog Bicycle Factory, Ljubljana, February 1986.
Image: Janez Bogataj, kept at: National Museum of Contemporary History of Slovenia.

In the case of Center Rog, the site was a former factory building. It originally served as an industrial space, specifically for the production and manufacturing of leather products. Later, the premises were repurposed for the production of bicycles and typewriters by the Rog company, marking a shift to heavy machinery and consumer goods manufacturing. From 1991 onwards, the abandoned factory became a space for informal cultural, artistic, and social activities.

The site was then acquired by the municipality, and renovation of the buildings started in 2021. The renovation of the building was unconventional given that the site is a heritage protected site, which posed some challenges and ultimately meant that the renovation could not make the building as energy efficient as they had wished.

In the case of ReTuna, it was a DHL storage centre. During the renovation period, the building underwent extensive refurbishment, including the installation of

new flooring, the addition of a second storey, new ventilation systems, and improved insulation to meet energy efficiency standards. Second-hand materials were used wherever possible, such as for the staff's room kitchen. However, frequent breakages and the limited availability of suitable items were the main challenges when using second hand materials, thus the actual use was rather limited. It's important to note that in 2015, the use of second-hand materials was not as widespread or easily accessible as it is today.

Circularium is located on a site owned by D'leteren Immo since 1940, which was formerly the D'leteren Centre. Until 2020, this 25,000 m² space housed a multi-brand car dealership, mechanical workshop, and inventory storage. When these automotive operations were relocated, the site was transformed into what is now Circularium, repurposed for new industries and businesses better suited to the evolving [needs of the city](#). The renovation process was minimal, primarily focused on clearing unusable materials and thorough cleaning. One significant change was the replacement of the old steel gates with modern sliding doors. The

owners have also made key investments, including installing solar panels on the roof, converting the heating system from petroleum to gas, and conducting general maintenance to enhance sustainability.

In the case of Mechelen Impact Factory, two vacant buildings are being renovated to realise the Impact Factory together with a new section on a site owned by the city of Mechelen. On the one hand, this concerns the Pottery in the Potterijstraat, a former industrial laundry, and a former office building. Impact Factory is designed by WIT architects with subcontractors: Paridaens, Atelier T, De Fonseca, Bob Geldermans. For the renovation of the buildings, a maximum use is made of the existing structures. Where new material is needed, recycled materials or renewable materials based on biological raw materials will be considered. Limiting the impact of the construction process is deemed to be a [priority for the hub](#).

In the case of the MAAK site, historically, the site was a former industrial area, where later a waste incineration and waste grinding plant were built. The municipality



Image: Circularium

had planned to dismantle, but instead in 2013 the site was repurposed, transforming it into the MAAK site, the city's cleaning and waste removal services, moved to a [new location](#). Planned activities for the site include renovating some existing buildings and constructing new ones. The renovations will follow circular design principles, while the new buildings will incorporate biobased materials and modular design approaches. No tendering is required for the renovations, as MAAK will handle both design and specifications in-house.

In the case of the Blue City, the site was originally the Tropicana swimming pool, a popular leisure and entertainment spot for locals in Rotterdam from 1988 to 2010. However, due to the high maintenance costs, the pool was eventually closed. In 2015, the abandoned building was purchased at a public auction and

renovations began. Circular principles have been central to the building and renovation processes. BlueCity prioritized using second-hand (local) building materials over new ones. For example, the wooden windows in their office spaces were reclaimed from an old hospital in Maastricht, and the balustrades of Het Dek were sourced from an abandoned oil platform. Over 90% of the office spaces are made of [reused materials](#).

Beyond construction, BlueCity extends its circular and sustainable principles by reusing the majority of their furniture. Additionally, the site features solar panels on the roof and a rainwater collection system.

In the case of the Social Circular Hub Ghent, this hub is a virtual hub and not a physical hub, and as such, did not undergo any refurbishment.

Tissel

At the Tissel site, recent efforts have focused on critical updates to improve safety and prepare for more extensive future renovations. The primary action so far has been upgrading the outdated electrical grid, which posed safety risks. Insulation and general refurbishment work, however, have not yet started. Currently, the city has set aside €2.5 million for Tissel's development, available until 2029, but this funding is insufficient for a comprehensive building overhaul. To bridge the funding gap, efforts are underway to secure additional resources, specifically aimed at supporting insulation upgrades.

The energy efficiency study provided under the Definite-CCRI project, will help identify efficient, low-tech solutions for temperature regulation and energy savings, guiding insulation efforts in a cost-effective manner.

Tehdassaari

Tehdassaari is a large and complex site where renovations are being carried out progressively, based on immediate needs and priorities. Most of the renovation work is performed by Tehdassaari's own workforce, although subcontractors are occasionally brought in for specialized tasks.

The main improvements at Tehdassaari have included upgrading the air ventilation systems, repairing leaks in roofing, and replacing old, inefficient pipes. For the moment, the team focuses on essential maintenance needs as they arise, ensuring the site remains functional and safe, rather than performing extensive structural changes.

Business models

Key takeaways

A common revenue stream for all hubs is the rental of workspaces and event spaces. Additional income sources include site tours, restaurants or cafes, retail, events, and business programs. To support early-stage businesses and promote sustainable consumption, these hubs keep products/services affordable, which can limit profitability and create a reliance on public funding.

Circular hubs have a series of activities and offers through which they generate revenue for running the sites. These can be a combination of the following:

- Workspaces and/or event spaces rental
- Restaurant or cafés
- Selling of products manufactured at the site
- Makerspace membership
- Tenants fee
- Training courses
- Business programmes



Image: Center ROG

All the hubs generate revenue through space rentals, including both medium to long-term workspace leases and rentals for one-time events. Additionally, some hubs supplement this income with membership or community fees, giving individuals or tenants access to a range of services. For example, Center ROG offers membership for using the lab facilities. Individuals pay

€400 annually or €60 monthly to use all the labs that the site has, which amount to [9 different labs](#): the Green Lab, Wood Lab, Metal Lab, Food Lab, Glass Lab, Ceramic Lab, FabLab, Jewelry Lab, and Textile Lab. In the MAAK site, in the C-district, the tenants have to pay a "concept cost" fee, which supports community organization and activities, ranging from community building events to training opportunities for the tenants e.g., on fundraising.

Additionally, intrinsically to most hubs' business model and activities, is the offering of sustainable shopping/consumption and repair services. (e.g., tailor, repairs cafe, etc).

This is the case for Circularium, ReTuna, Mechelen Impact Factory and MAAK, but not for the Blue City and the Social Circular Hub Ghent. For some of the hubs, however, such activities are more predominant than for others. For instance, in the case of ReTuna, as a sustainable and circular shopping mall, their core activity is the selling of sustainable shopping of reused and [repaired products](#). Also, Center ROG hosts six shops selling locally designed products. One shop is dedicated to products made by lab users, while another is a pop-up store that changes its offerings regularly, allowing visitors to [discover new items](#).

Similarly, Mechelen Impact Factory, once operational, aims to offer sustainable shopping, repair services and sharing economy-like offerings, such as a tool library for people to borrow items they need, instead of buying new. In the case of MAAK, while the site is about the development of innovative circular products, retail activities are not permitted at the MAAK premises due to legal restrictions. However, customers might collect their online orders directly from the site.

Site visits are an additional income stream that some hubs implement, this is the case for example of [MAAK](#) and [ReTuna](#). Another common source of income comes from on-site food and beverage establishments, including restaurants or cafes, which cater to both hub's users and external visitors. This is the case for [ReTuna](#), [Blue City](#), [MAAK site](#) and Circularium, which has a small coffee corner for getting people to [chat and exchange](#).

Programs for businesses are, however, less common as a revenue stream. This is the case for BlueCity, which offers business programs to individuals that are financed both publicly and privately by [companies and the participants](#). Similarly, Mechelen Impact Factory, once operational, aims to offer an incubator program for businesses. The Impact Factory aims to become a

one-stop-shop for circular entrepreneurship, providing access to information and expertise. This support will include intensive guidance in areas such as product development, market validation, business strategy, financing, and [marketing](#). How this support will be financed and whether entrepreneurs will need to pay a fee is still to be decided.

The financial feasibility of these hubs is challenging, as their primary target audience, early-stage businesses, which typically operate with very limited budgets. Consequently, all hubs prioritise offering affordable rents and services that these businesses can afford. Additionally, the hubs aim to connect with local communities and promote circularity, the

repair economy, and community engagement. This is primarily achieved through free workshops and events, as well as affordable second-hand retail and repair services, such as those offered at ReTuna.

As a result, hubs are often challenging to sustain financially and frequently rely on public subsidies and funding. For instance, the Social Circular Hub Ghent depends entirely on government support, while Center ROG is funded primarily by the city of Ljubljana (70%) along with EU contributions. Although Center ROG seeks to diversify its funding through both public and private channels (e.g., sponsorships and donations), it will still rely on at least 50% government support. Mechelen's Impact Factory is also expected to depend on public funds; while revenue from space rentals should cover basic building costs, it will likely fall short of funding community activities.



Circular Challenge Blue City. Image: Jacqueline Fuijkschot



Image: Social Circular Ghent

Tissel

Tissel generates revenue from workspace and event spaces rentals, and tenant fees, which corresponds to the common expenditures, like utilities and the shared logistics. Future income streams are expected to diversify, with potential sources including training courses, revenue from restaurants, and the introduction of a makerspace membership program.

The site, owned by the city of Roubaix, benefits from substantial city subsidies, which cover maintenance and major construction costs. While some tenants undertake minor non-structural improvements, larger maintenance and structural work are funded by the city. Additionally, Tissel collaborates with Manufacture de Tissel, a manufacturing association, to support its activities.

On the other hand, some hubs have achieved financial sustainability, such as ReTuna, Blue City, and Circularium. ReTuna, for example, generates enough income from rents to cover its costs. Similarly, Circularium considers its model financially feasible, largely due to having owned the buildings for 70 years, with all major investments already recouped, and maintaining a small full-time team.

Tehdassaari

Tehdassaari's revenue comes from event and workspace rentals, the tenants, as well as restaurant operations and art sales. Moving forward, the hub aims to expand its support for businesses through incubator programs and expects future revenue from a material bank and related product sales.

Stakeholder engagement

Key takeaways

Stakeholder collaboration is at the core of circular hub success, with partnerships spanning schools and research institutions, society, government entities, and industrial partners. Hubs play a crucial role in building bridges between diverse actors, fostering collaboration, and driving change. For example, they can offer spaces and services that complement those of universities, as seen with Center ROG, or bring practical examples and raise awareness in schools, as ReTuna does. Additionally, hubs like Blue City facilitate direct engagement between the city and entrepreneurs, providing valuable guidance on using residual streams.

Engagement with school and research institutions:

Many circular hubs collaborate with educational institutions by hosting complementary workshops

and educational programs, and enabling research and innovation.

- Circularium partners engage with schools by renting spaces for courses and hosting educational visits. The hub has also been the subject of various academic studies conducted by universities.
- Center ROG has a partnership with the University of Ljubljana since the beginning, ensuring that Center ROG facilities [offer complementary spaces and services](#) for students to the ones of the university.
- ReTuna runs the CirkuLäran program in school, which offers workshops using donated materials, encouraging children to [adopt environmentally conscious behaviors](#). The hub also organizes site visits for schools, but also businesses, and municipality delegations.
- Mechelen Impact Factory, though not yet operational, has already attracted interest from universities and schools for running educational workshops on the site.
- MAAK partners with universities such as Delft and Eindhoven, as well as TNO and high schools, offering students opportunities for research and thesis support. Moreover, it also organizes events for children to bring them into contact with [technology through workshops](#).



Image: Centre ROG textile lab

Engagement with the local community:

- Center ROG offers public access to its labs via subscriptions and has community-oriented spaces like an edible garden run by volunteers. It hosts a large number of [events and courses for children and adults](#), and has a participatory budget of €15,000 for community-directed projects.
- ReTuna hosts 15-16 [free events annually](#), including a youth business market, Christmas market, swap events, repair workshops, and environmental cleanups. The hub also offers a paid, [year-long course on reusing and recycling](#), using donated items.
- BlueCity offers a variety of business programs targeting young professionals and entrepreneurs that aim to work on accelerating the transition from a linear to a circular economy. These are for example, the Circular Challenge, the Hackatons and the [Circular Chain projects](#). Moreover, BlueCity organizes public events to foster collaboration and raise awareness, such as the monthly BlueCityTownhall, which encourages networking



Image: MAAK

and collaboration, and Fuck Up Nights, where entrepreneurs share stories of business failures. While other circular entrepreneurs are the main target of these events, the invitation is open to everyone. Besides events, BlueCity also hosts [thematic workshops](#) (e.g., dyeing textiles with natural materials). Additionally, BlueCity operates a café/restaurant open to the public.

- MAAK site also hosts events for the local community, such as open door days, cleanup days, workshops and talks, for free for the MAAKers and subject to a small fee for external participants.
- Circularium hosts the ["Magasin Gratuit"](#) where people can go and take a max of 1 item for free per day. Moreover, Circularium hosts events for kids and adults (e.g. [Le Micro Carnaval Gratuit](#)), repair cafés, and thematic events (e.g sustainable food) and [workshops](#).

Engagement with the government:

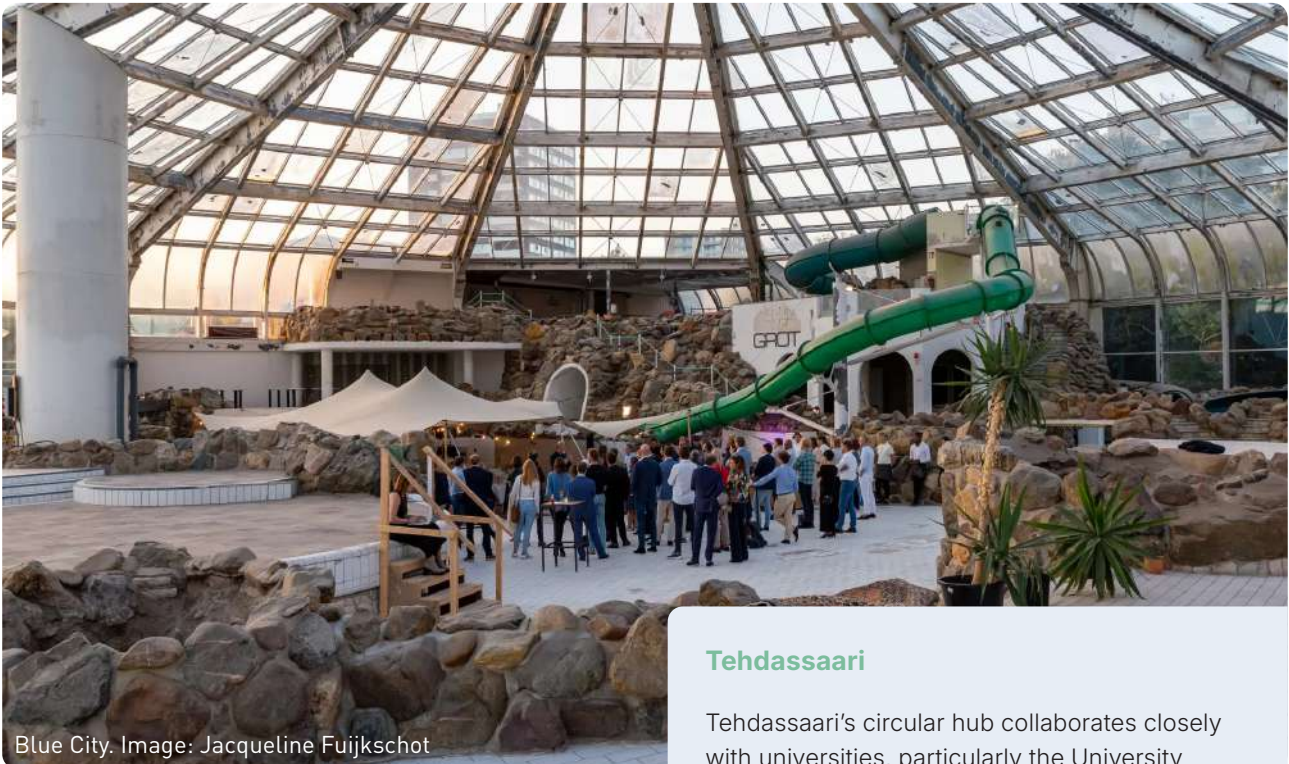
A more active involvement of the local and regional government is found in BlueCity, which partners with local and regional authorities through the Circular Locket, a free service that assists sustainable entrepreneurs in dealing with [regulatory challenges](#). Moreover, some of its business programs receive funding from public entities, such as municipal and provincial funding.

For the other hubs, direct involvement in operations was not identified. However, they receive a combination of public support, including funding, recognition and visibility, and provide a series of measures to provide greater certainty and security about the future, and for the permanence of the hub, such as the case for the MAAK site.

Engagement with businesses and other private actors:

Besides the rental of workspaces to entrepreneurs and early stage startups, which is characteristic for almost all hubs, there are further ways in which the hubs collaborate with businesses and other private actors.

- BlueCity collaborates with businesses and further private organisations through different programs that they offer. For example, the Hotel Neutral, which supports hotels towards [reducing their CO2 impact](#).
- Additionally, although not yet operational, Mechelen Impact Factory has attracted interest from industry partners specialising in space and service design, with plans to establish an open lab at the site.



Blue City. Image: Jacqueline Fuijkschot

Tissel

Tissel plans to open a restaurant in the future to provide affordable meals and create a welcoming space for the community. They also aim to increase the number of public events hosted, increasing visibility, engaging with the local community, and raising awareness on diversity of topics.

The hub has already partnered with ENSAIT (École Nationale Supérieure des Arts et Industries Textiles) to redesign a space at Tissel with sustainable, low-tech solutions, highlighting its commitment to eco-friendly design. Additionally, Tissel envisions establishing an incubation center with academic partners from Roubaix and Lille to offer training and mentorship programs, supporting entrepreneurs in sustainable and innovative fields.

Tehdassaari

Tehdassaari's circular hub collaborates closely with universities, particularly the University of Tampere. For example, the lab from the university visited the site to explore collaboration opportunities. Interns, primarily from environmental engineering programs, conduct research on and for the Tehdassaari case.

Additionally, Tehdassaari participated in the Nudge Global Impact Challenge in the Netherlands, where young professionals work on addressing real-world challenges. One example of success from this participation is Tehdassaari's floating sauna, which emerged from the first challenge they joined. This floating sauna has since become a product they are able to market and sell.

Tehdassaari also maintains a list of potential subcontractors and innovative projects with whom they could collaborate in the future. Furthermore, they are planning to work with a sustainable architecture studio based in Amsterdam on the development of a new building on the Tehdassaari site. This collaboration will involve a 50% investment from the architecture studio.

The hub also organises a variety of events for the local community, including concerts and events targeting kids and families, aimed at fostering community engagement and exchange.

Tenants selection

Key takeaways

The careful selection of businesses is a crucial step in establishing a circular hub, as it significantly influences community building, the hub's image, and the types of future entrepreneurs and stakeholders it will attract. A common criterion across all hubs is that businesses must demonstrate a certain level of environmental and social impact. Beyond this, the selection criteria may vary depending on the hub's specific priorities, for example, addressing local challenges at the Social Circular Hub in Ghent, fostering collaboration and community engagement at the MAAK site, emphasizing the innovativeness of proposed solutions at Centre ROG, or focusing on the financial sustainability of businesses at ReTuna.

Circularium focuses on the complementarity of businesses within the hub. Beyond having a social or environmental impact, companies must be willing to

collaborate with other tenants and adapt to the existing space, which may have limitations unsuitable for certain types of businesses.

CentreROG, on the other hand, emphasises the level of innovation of the products offered by the businesses. While environmental and social utility are also important, the novelty and pioneering nature of the product are key factors in the selection process.

In contrast, **BlueCity** values an alignment in mindset and a strong commitment to operating within the circular economy. The businesses here are chosen based on their dedication to circular principles and their desire to drive change in this area.

ReTuna places a greater emphasis on the business model and financial viability of the companies, which is critical for ensuring that they can sustain operations independently. Applicants must balance profit motives with a commitment to sustainability or social impact. Additionally, to ensure operational continuity, each business must be capable of being managed daily by at least two people.

For the **Social Circular Hub Ghent**, the evaluation revolves around the potential value that businesses can create for the city of Ghent. As this is a virtual



Image: MAAK site

hub, the complementarity and collaborative mindset of businesses are less relevant since there is no physical interaction expected among participants. The intake form [can be found here](#).

At the **MAAK site**, the primary criterion is the willingness of businesses to collaborate and engage with the MAAKers community. This focus on community

engagement is crucial for fostering a collaborative environment among diverse circular manufacturing companies. The questions used for their intake form can be found in MAAK's factsheet, in the Annex section.

Lastly, the **Mechelen Impact Factory** has not yet established specific selection criteria, as the physical hub is not operational at this stage.

Tissel

For tenant selection, Tissel's procedure is currently managed by the city, with criteria emphasising alignment with circular economy principles. Businesses must adhere to at least one of the seven pillars of circularity, such as eco-design, reuse, repurposing, recycling, and sustainable procurement. Financial viability is also a key requirement, as tenants should be able to sustain their operations long-term, even if some initially rely on public subsidies with plans to transition toward a more self-sufficient business model.

Tehdassaari

Tehdassaari is actively developing its tenant selection process, with an emphasis on future engagement and community participation. At present, Tehdassaari hosts around 40 businesses, many of whom initially joined due to the hub's affordable workspace offerings. Moving forward, Tehdassaari aims to increase tenant engagement in its community activities and will incorporate this as a selection criterion, with plans to expand to 100 tenants by 2025. Initially, the hub was less selective to ensure quick occupancy and revenue but is now focusing on curating a more engaged and active tenant community.



Centre ROG Wood Lab. Image: Centre ROG

Impact measurement

Key takeaways

All circular hubs have the desire to communicate their positive impact on the environment and their communities. The success and influence of these hubs are closely tied to the businesses they support, as these hubs are instrumental in supporting their growth. However, measuring the impact of early-stage startups presents a challenge, as their potential benefits are often uncertain and expected to materialise in the future. This uncertainty explains why all the hubs find impact measurement challenging, though they all express a strong interest in this area, with some already taking steps - particularly in assessing social impact.

Center ROG measures various aspects of its operations to report to the city council, focusing primarily on social outcomes. They evaluate the impact of their workshops and programs on school groups, such as whether activities at Center ROG influence classroom learning and whether skills acquired through their

programs have a lasting effect on students and teachers. They also assess the accessibility of their premises and inclusivity for disadvantaged groups, including individuals with mobility impairments and refugees, using methods such as focus groups and interviews. While their current emphasis is on social metrics, they plan to develop environmental key performance indicators (KPIs) soon and have already begun discussions on this front.

Also, **Mechelen Impact Factory**, previously operating as CE Hub Mechelen, has some experience in measuring social impact. During their time as a virtual hub, they assessed factors such as the number of interactions, business model development, and community-building efforts. For instance, by evaluating whether events fostered a sense of community.

Other hubs are also beginning to explore their approach to impact measurement. For example, **ReTuna** envisions a more comprehensive system for tracking impact once the shopping mall undergoes digitalization. This would enable them to systematise metrics such as carbon emission savings per product. While all these hubs are in the early stages of impact measurement, they recognize its importance and are seeking ways to capture and communicate their contributions more effectively to their users, investors and further stakeholders.

Tissel

Currently, Tissel measures its social impact primarily by tracking job creation and job retention (i.e., the number of jobs maintained by businesses within the hub). An external consultant is working on a deliverable focused on regenerative economy outputs, which will help further assess the social impact of the hub. Environmental impact is not yet formally measured, but energy consumption data will be available soon. Additionally, Tissel will soon benefit from more affordable and sustainable heating through a connection to the district heating network.

Tehdassaari

At present, Tehdassaari does not have a formal system in place to measure its environmental or social impact. However, it does collect data on energy and water consumption, as well as site visitors and website traffic. The hub does not yet use any specific framework or standards to assess impact. In the near future, Tehdassaari plans to adopt the ESG (Environmental, Social, and Governance) reporting method, which will provide a more structured approach to measuring and reporting impact.

Governance models

Key takeaways

The hubs feature diverse governance models, combining public and private sector involvement. Circularium and BlueCity are privately owned, with Circularium having a small team, while BlueCity has a larger, more diverse workforce. In contrast, Center ROG and ReTuna are publicly owned, with Center ROG largely funded by the city. Public-private partnerships are present in hubs like Mechelen's Impact Factory, MAAK, and the Social Circular Hub Ghent, each blending public ownership with private management, with some hubs like MAAK moving towards more private governance. These variations are dependent on the priorities and long-term goals of each hub.

Circularium, Center ROG, BlueCity, ReTuna, the Social Circular Hub Ghent, Mechelen's Impact Factory, and MAAK represent a diverse array of management and ownership structures, reflecting both public and private sector involvement in their operations. When comparing the different hubs, we distinguish differences in governance, team size, and operational models.

Circularium is a privately owned hub, managed by Makett, a company specializing in transitional real estate projects. Since its launch in March 2020, Makett has overseen both the transformation of the site and its day-to-day operations. The site is owned by D'leteren Immo, a Belgian real estate company. Circularium's team is relatively small, consisting of just three people: a general manager and community manager, a facility manager, and a site guard who also handles repairs.

In contrast, **Center ROG** in Ljubljana is a public institution founded and largely financed (60-70%) by the city of Ljubljana. Its operational structure is more complex, with a team of 12 professionals that includes a general director, various directors, program coordinators, and marketing specialists. Additionally, there is a supervisory board of seven members and nine lab managers, making it a much larger operation compared to Circularium, given the additional offering of activities.

The supervisory board is a standard requirement for all public institutions in Slovenia. Four members are appointed by the mayor/city council, one member is an employee representative voted by the staff, and two members selected through an open call, often from relevant civil society sectors—such as an NGO representative and a University of Ljubljana representative in this case.

BlueCity, another privately owned hub, operates with a team of 25 individuals. Their focus spans across



Image: ReTuna

various areas such as marketing, event coordination, business development, finance, and program management, indicating a broader operational scope compared to Circularium.

ReTuna, on the other hand, is publicly owned by Eskilstuna Energi och Miljö (EMM). EMM is a municipal company tasked with running competitive organizations in the energy and environmental sector. EEM works within six business areas: Electrical Grid, Electricity Market, Water & Sanitation, Recycling, Energy, and Marketing & Sales. ReTuna is part of the business area Recycling.

The **Social Circular Hub Ghent** is structured as a public-private partnership, established through public funding from Flanders, which mandated collaboration across public and private entities. This "quadruple helix" request brought together the City of Ghent, HOGENT, Artevelde University College, and De Punt. Each partner has played an equally critical role, creating

a horizontal governance structure where decisions are made collaboratively. This inclusive approach involves substantial relationship-building, and to maintain alignment, partners continue to meet bi-weekly to discuss progress, encourage open dialogue, and ensure their shared objectives are met.

Similarly, **Mechelen's Impact Factory** operates under a public-private partnership. The ownership of the building is divided between public entities and Stadsmakersfonds, a cooperative investment fund. The governance structure still needs to be defined, with a tender being prepared to select an organization to manage the site, indicating a developing model with undefined management roles.

MAAK is another public-private partnership, where the municipality owns the land, and MAAK manages the site operations. However, a significant shift is expected as a leasehold agreement will transfer ownership of the buildings to MAAK, while businesses on the site will gain more influence in shaping its future strategy. This model anticipates a stronger private-sector role in the hub's governance, despite its initial public ownership.

In conclusion, these hubs represent a spectrum of governance models, ranging from fully private (Circularium and BlueCity) to fully public (Center ROG and ReTuna), with various forms of public-private partnerships (Mechelen's Impact Factory, MAAK, and the Social Circular Hub Ghent) that blend public ownership with private management. Team sizes also vary significantly, from small teams like Circularium's three members to larger, more complex organizations like Center ROG and BlueCity, reflecting the difference in scale and scope of each hub's operations.

Tissel

The future organisational structure for Tissel is under consideration, with multiple options on the table. An option is to establish a public private partnership under the legal status of "Société d'Intérêt Collectif" (SCIC), or a cooperative society of collective interest. The SIC structure would replace the existing Manufacture de Tissel association and assume responsibilities for the site management and land property. An SIC could attract investors focused on social economy and sustainability, though it would involve more time and legal setup than other options.

An alternative approach that has been assessed with one of the services provided in the context by Definite-CCRI project is to convert Tissel into a limited company (société anonyme). A limited company structure offers the fastest and most straightforward approach, allowing for event hosting and building management to continue without interruption. Tissel may adopt this model temporarily and later transition to a more complex structure by 2025. This phased approach is expected to enhance Tissel's appeal to external partners and better align with its long-term objectives

Tehdassaari

Tehdassaari is privately owned by three key partners: Perttu Ketola, Fuad Ashrad of the private company Cireco, and an investor involved in the project. Alongside the core partners, the Tehdassaari team includes six additional staff members who handle essential functions like communications, marketing, site maintenance, event planning, project coordination, among other tasks.

Success factors & lessons learnt from Hubs

Circularium

Success factors:

Strategic tenant selection: Prioritizing strategic tenant selection over speed, they focused on aligning tenant choices with the project's long-term goals. This approach ensured a community of occupants who were committed to the hub's mission, fostering a sustainable and engaged environment from the start.

High initial demand: The hub attracted significant interest from the outset, with over 400 applications at launch. This high demand enabled them to choose the most suitable applicants and helped build a robust foundation with a high occupancy rate.

Financial backing: Their partnership with a multinational company provided crucial financial stability, enabling them to avoid the pressure of prematurely filling positions.

Agile decision-making: With a small team, decisions are made quickly and efficiently, as they don't need any approval of a decision making committee.

Lessons learned:

Rebuilding community engagement post COVID: During the pandemic, community building was difficult with events often canceled. After the pandemic, there was a noticeable decline in community engagement, requiring additional effort to rebuild connections. However, there has been a significant improvement over the last year.



Center ROG

Success factors:

High demand: At its opening and for the first six months, Center ROG attracted over 1k members, demonstrating strong initial interest.

Finding the niche: The concept of shared workshop areas and labs was novel in the city, filling a unique niche for urban handicrafts and practical skills.

Mindset shift: The pandemic led to a change in people's mindsets, with an increased interest in home crafting and repairs, creating a favorable momentum for Center ROG's services.

Co-creational process: The development phase was highly participatory, involving over 6,000 people over ten years. Focus groups contributed to various aspects of the hub, such as green spaces, workshop design, and gender balance. For example, the idea for the edible garden emerged from these discussions.

Trust: The city authorities fully trusted the co-creational process. Despite the substantial investment, they did not impose any ideas or intervened in the process.

Lessons learned:

Long process: The extensive co-creation and piloting phase was time-consuming but worthwhile.

Dealing with criticism: Not everyone will be pleased, and criticism is inevitable. It's important not to let negative feedback derail the project or create frustration.

Participatory approach: Developing something acceptable by society is crucial, therefore the people that will make use of that space should primarily decide what the use of it should be, based on their needs. No-one external can make such a decision by himself/herself without consultation.

Steady income: A reliable income stream reduces uncertainty and helps keep the project affordable. Without this stability, maintaining low prices for users would be challenging.



Image: Center ROG

Blue City

Success factors:

Proactive engagement: Taking a proactive approach attending networking events, and approaching large companies, offering suggestions for improvement. Making an effort to position themselves on the agendas of major companies has been a successful factor.

Iconic building: The BlueCity leveraged from the visibility and recognition their iconic, centrally-located building. Although it isn't highly sustainable and poses maintenance challenges, its prominence and name recognition have significantly boosted their profile.

Community events: Events such as the "Fuck Up Nights," open to everyone, fostered community engagement and contribute to building a strong network.

Foster a strong hub culture: Develop a culture within your hub that promotes collaboration, trust, and shared values among all members and stakeholders.

The right network is key: Focus on partnering and connecting with the right people and forming a strong, supportive network that aligns with your goals.



Image: Blue City

ReTuna

Success factors:

Build strong partnerships: Strong partnerships with the city, state officials, companies, individuals, and schools have been fundamental to success.

Media exposure: Extensive media coverage helped to quickly spread awareness and generate interest in the project.

Easy logistics: The proximity of the mall to the recycling center makes the logistics of collecting and sorting reusable items highly efficient. This setup addresses a common challenge faced by other similar initiatives.

Scale and diversity: Thinking big is essential. A larger scale and a diverse assortment of goods create a more appealing destination, and thus attract more visitors. Smaller shops in other municipalities often fail to drive traffic and engagement.

Lessons learned:

Mimic traditional shopping malls: Include a second corridor or backstage area for moving products without disrupting customer spaces. Aim to mirror the operational aspects of traditional commercial malls to meet consumer expectations and enhance the shopping experience. This is something that ReTuna has not been so successful at.



Image: ReTuna

Social Circular Hub Ghent

Lessons learned:

Focus on your strengths: Reaching out to civilians proved more complex than expected. A notable example was an event that required significant resources but saw lower-than-anticipated attendance. This led the hub to realize that event organization with civilians as a target group is best handled by the City of Ghent, which has the necessary outreach experience, network, and channels.

Collaboration is essential: Collaboration is crucial for helping startups to achieve high impact, and overcome their challenges. For this purpose, the hub focuses on connecting local and regional stakeholders across sectors, including with stakeholders in the Netherlands, given the geographical proximity.

A physical hub is not always a necessity: For the Social Circular Hub Ghent, this would not be possible financially due to the insufficient traction and demand for a physical hub.



Image: Social Circular Hub Ghent

Mechelen Impact Factory

Success factors:

Public-private partnerships elevate the project to the next level in terms of size of the space, and also the number of partners involved. While engaging and coordinating with these partners can be challenging, it is ultimately worthwhile.

Strong financial plan: Developing a strong financial plan and ensuring access to expertise in impact investment is crucial. Public bodies often lack knowledge in this area, so engaging with impact investors to understand their needs and expectations is essential. Building these connections can help align public projects with investor requirements, increasing the chances of securing funding and driving the project's success.

Ambitious tender criteria: Regarding the tender criteria for the renovation of the buildings, the city of Mechelen set a high requirement for the percentage of secondary materials to be used. Initially, there were concerns that companies would struggle to meet these ambitious circular construction standards, but several firms applied successfully. Thus, don't hesitate to implement ambitious criteria in your tendering process.

Test before going big: The establishment of the CE Hub Region Mechelen, prior to the Impact Factory, helped to test the waters and identify areas of need.



Image: Mechelen Impact Factory

MAAK site

Success factors:

Good collaboration with the municipality provides stability and long-term security, unlike many other hubs in the Netherlands that face uncertainties like building ownership and contract terminations. This collaboration is also beneficial for the municipality, who has sustainability targets, thus the work at MAAK fits into that vision, which makes them valuable for the municipality.

Investment approach: MAAK has a vast pool of private investors, between 30-40 small investors, avoiding dominant investors that may influence the direction of the hub. This approach allows MAAK to make decisions based on their values and mission, rather than being influenced by financial incentives.

Lessons learned:

Taking shared risks: Providing certainty and security is essential, but a transition also requires taking shared risks. This initiative is an example of that, where both the municipality and MAAK take shared risks in view of scaling up the benefits and the impact.

Government's involvement is essential: Governments play a pivotal role in supporting hubs, not just by providing stability but by playing a more active role. For example, they could collaborate with local banks to create innovation funds, similar to existing green loans, aimed at attracting impact investors.



Image: MAAK site

Conclusion

This case study exercise conducted as part of the Definite-CCRI project provided valuable insights into the operations, challenges, and success factors of various circular hubs across Europe. By examining different models, governance structures, and strategies, the report highlights how these hubs foster innovation in the circular economy, engage local communities, and provide supportive environments for early-stage businesses.

For the hubs of Tissel and Tehdassaari, the experiences of these hubs can guide and inspire their future development, particularly in areas such as hub renovation and circular construction practices, business models and the diversification

of income streams, the selection of tenants in accordance to the values and hub mission, impact measurement and communication, and governance models and collaboration pathways with the cities. By incorporating lessons from more experienced hubs, Tissel and Tehdassaari's hub can accelerate their growth and impact.

This report intends to not only support Tissel and Tehdassaari in their strategic planning but also serves as a resource for other emerging circular hubs seeking inspiration and guidance. As circular economy initiatives continue to gain traction, collaborative learning and knowledge sharing across hubs will remain crucial to their success.



Image: iStock / Galdric

Annex

Circular hubs factsheet: Circularium

History of the site

Circularium, established in 2020 for an initial period of 5 years with potential extensions based on project development, is a former garage facility reimagined as a hub for innovation and circular production. Spanning over 2 hectares, it includes 12033 m² of covered built space and 8400 m² of outdoor areas, creating a large-scale environment for sustainable and creative ventures.

The renovation focused primarily on clearing unusable materials and basic cleaning, with minimal structural changes. Steel gates were replaced by new sliding doors, and additional upgrades included the installation of solar panels, a transition from petroleum to gas heating, and general maintenance by the owners to improve sustainability.

The center supports initiatives focused on circular economy principles, fostering collaboration among businesses, artists, and makers in a versatile, eco-conscious space.

Ownership and governance structure

The project is managed and operated by **Makett**, which has been responsible for its transformation and daily operations since its launch in March 2020. Within a year, Makett transformed the former industrial facility into a major center for local innovation and circular production. However, the site of Circularium in Anderlecht, Belgium, is owned by **D'leteren Immo**, a real estate company, who have decided the purpose of the site, but don't run it. Moreover, the site does not receive any subsidies from the government and is financially self-sustainable.

In terms of the decision making process, **Makett** has decision making power on the site, while the decisions on the infrastructure are shared with **D'leteren Immo**, as the owners. Tenants don't have a mandate in the decision making processes, however, their feedback is requested to ensure their expectations and needs are met.

The team comprises 3 people total, the general manager & community manager, the facility manager and a person that guards the site and does the repairs.

The general manager & community manager role is occupied by Makett. The tasks of the person comprise:

- Selection of users and tenants
- Monitoring of contracts and rents from users
- External communication (press releases, etc.)
- Processing of applications for specific works
- Adaptation of the spaces (safety, accessibility)
- Monthly meetings with the Steering Committee and the management team.

The facility manager role is occupied by D'leteren Immo, their responsibilities comprise:

- Any major changes to the building
- Administration part with the contract for tenants, and sending out invoices

Lastly, there is a 3rd person that does:

- Oversees the maintenance and security of the property.

Communications activities are outsourced.

Public sector involvement

The city of Brussels is not involved in Circularium. However, the city is aware of the project, which is mentioned as best practices in the city's circular strategy.

Activities in the hub and tenants selection

The hub at Circularium hosts approximately 30 small businesses, accommodating around 200 people in total. Moreover, Circularium not only provides workspace for these tenants but also serves as an event venue, fostering a dynamic community dedicated to sustainable and circular economy practices.

These businesses operate in diverse sectors such as textile production, carbon capture, bridging the digital divide, wood processing, second-hand retail, and zero waste products, among others.

Selection criteria of tenants

Selection criteria for tenants are the following:

- Having a social or environmental impact
- A willingness to collaborate with other tenants
- Suitability to the existing space with minimal modifications. Due to this reason, manufacturing or logistics companies are preferable.

Moreover, tenants are chosen to complement each other, ensuring a diverse mix of businesses across different supply chains. Contracts are typically set for a maximum of 5 years, with the possibility of extension depending on the project's evolution and tenant performance.

Financials

Revenue is made solely of rents from workshop and event spaces. The hub is funded entirely by private sources, without any reliance on subsidies or public funding.

Impact measurement

The impact that Circularium has indirectly, through their tenants, as they primarily support high impact businesses, including those that have high social impact. They do this by offering them a cheap rent at the site. Moreover, Circularium also has a "Free shop", a give away store where people can take one item for free per day. The store also has a coffee corner for people to talk and exchange. The objects are

donated by individuals, and Circularium does a quality check to ensure that the products are in good conditions.

Regarding impact calculation, at the moment, their positive impact is not being measured, but they would be interested in starting. Therefore, the intern that they will onboard soon will look into how to measure impact in alignment with official frameworks.

Partnerships and community engagement

Circularium collaborates with schools that rent the space for courses and also engages with social workers from

the neighborhood. The hub organizes site tours, including educational visits for students. Additionally, Circularium has been the subject of academic studies conducted by universities.

Vision

Circularium plans to expand to other cities beyond Brussels while also exploring additional sites within Brussels due to the city's concentration of companies. Future expansions could focus on specific value chains to foster collaboration and transformation within those industries.

Circular hubs factsheet: Center ROG

History of the site

Center ROG was a former factory building since the late 19th century, first for the production of leather goods, after WWII it was a bicycle factory. The factory operated until mid 90-ies and after that the building was squatted by temporary users.

The site has a surface area of apr. 9000m². It has 4 floors, where distinct activities take place. Additionally, they have a 8000m² edible park and community garden of 25 high beds.

Before they opened in November 2023, the project was under development for over 10 years. In 2010 started the development plan, 2012 fab lab container pilot was created, called RogLAB, as an european project called Second Chance. The container was in use until 2021, and then the renovation of the factory building started. The pilot container project helped to test the interest in a makerspace, the future space use, the management structure and helped to understand people's needs and expectations.

Given that the Center ROG was a factory before, the idea was to keep it as a production space.

The renovation of Center ROG was a city-led project funded by the City of Ljubljana, with the Department for Infrastructural Investments managing and supervising the work. An international open call determined the architectural design, and subsequent public calls selected the construction and equipment suppliers. Renovation began in April 2021 and was completed in September 2024.

The renovation followed sustainable construction principles, emphasizing energy efficiency, sustainable material use, and minimal environmental impact. Conservation guidelines from the Monument Conservation Institute shaped much of the process, ensuring the historical integrity of the building while incorporating modern efficiencies. Key sustainability measures included recycled materials (like aluminum joinery and wooden flooring) and energy-saving systems such as central ventilation and low-energy lighting. Plans are in place to install a rooftop solar plant to enhance the building's energy self-sufficiency.

Ownership and governance structure

Center ROG is a public institution, specifically established by the City of Ljubljana to manage the site. The hub receives significant public funding, with 60-70% of its budget coming from the City of Ljubljana.

Center ROG has a team of 17 employees that run the site, including a General Director, Director of Strategic Development and Programs, Assistant Director for Human Resources and Management, Office Manager, Head of Marketing and Public Relations, Marketing and Public Relations Specialist, Project Managers (x3), Program coordinators, Head Technician, Sales Representative. Moreover, there is a supervisory board of 7 members.

Lastly, there are 9 lab managers, one for each of the labs. To complement the work in the labs, there are apr. 20 mentors as freelancers involved.

Public sector involvement

The City of Ljubljana invested €25 million in the renovation of the Center ROG site. In addition to this initial investment, the city provides ongoing financial support covering infrastructure, salaries, and public program expenses. To guide the hub's development, Center ROG is required to submit a five-year strategic plan to the City Council.

Despite this financial involvement, the City of Ljubljana does not actively participate in Center ROG's daily operations. Center ROG operates independently, managing its own programs and activities. The city's role is primarily fiscal, with Center ROG submitting an annual financial and program plan each November.

Activities in the hub and tenants selection

The ground floor currently hosts nine different production labs: the Green Lab, Wood Lab, Metal Lab, Food Lab, Glass Lab, Ceramic Lab, FabLab, Jewelry Lab, and Textile Lab.

On the 2nd and 3rd floors, there are nineteen project studios available (50 sqm each) for professional creatives developing new products: individuals and collectives working in fields such as urban crafts, product, industrial and fashion design, architecture, engineering, and applied arts. These studios are rented out for limited periods (1-3 years) via a public call free of charge. The products they develop have to be environmentally and socially sustainable and innovations of some kind.

In addition to workspace, these selected tenants receive mentorship (e.g., design and product development), access to all the labs, and a grant of up to €2,000 to develop their prototypes/products. The Center ROG also seeks to find complementary mentorship programs upon request, such as financial, business skills, and marketing support. Currently, all studios are occupied with appr. 50 creatives; tenants were chosen before the site opened, so when the building was ready, the tenants had already been selected.

The top floor features five residential studios for foreign makers and designers as well as Slovene creatives living outside Ljubljana. Residencies are offered for a maximum of four months to foster international exchange and enable residents to learn from and interact with each other. Additionally, the first floor is used for exhibitions, events (2 halls), and houses a public library and a coffee shop.

Center ROG also has an edible park and garden on 8.000 m² run by volunteers, and includes two restaurants and a café that source their products from the garden.

The Center hosts six shops selling locally designed products. One shop is dedicated to products made by lab users, while another is a pop-up store that changes its offerings regularly (monthly), allowing visitors to discover new items.

Lastly, Center ROG has an open co-working space where people can work for free on the premises (drop-in corners in the glass appendix throughout all floors).

Selection criteria of tenants

The main selection criterion for obtaining a workplace in Center Rog is the social and environmental utility of the product developed, as well as the level of innovation of the product.

Financials

Center ROG generates revenue through several streams: membership fees and user packages for lab usage (€400 annually or €60 monthly), rental fees for spaces (shops, two restaurants, and a café), and short-term rentals of larger halls (conference rooms and smaller event spaces). Residency and project studio spaces are provided at no cost but are subject to a selection process.

In addition to its own generated income, Center ROG has secured funding from a variety of European Union programs, including Creative Europe, Erasmus+, Horizon Europe, and Interreg, among others.

Impact measurement

As a public institution, Center ROG measures various aspects of its operations to report to the city council, with a primary focus on social outcomes and impact. They plan to develop environmental KPIs in the near future and have already been approached regarding this.

In terms of social impact, Center ROG evaluates the effects of their workshops and programs on school groups, including

how activities in Center ROG have an impact or not in how students learn in the classroom. Assessing whether the skills developed through their programs have a lasting impact on students and teachers.

Additionally, they measure the accessibility of their premises and inclusivity for disadvantaged groups, such as individuals with mobility impairments and refugees, typically through smaller focus groups or interviews.

Partnerships and community engagement

Center ROG has been partnering with the University of Ljubljana since the beginning. This collaboration included reviewing the university's facilities to ensure that the Centre would offer complementary and in-demand services for students. Currently there are 10 faculties using the lab spaces for practical seminars, the UNI also has a dedicated classroom.

In terms of community engagement, all premises are open to the public, including the edible garden, which can be accessed from a side street, as well as the library, restaurant, and café. Additionally, Center ROG hosts two major annual events aimed at increasing citizen awareness and engagement: Neighbor's Day, which features a full day of diverse activities both in the park and within the buildings, including workshops and other events.

Moreover, they have a participatory budget of €15,000 for the community to decide what it should be used for at the Centre.

Vision

Center ROG is focused on scaling up its operations, recognizing substantial growth potential. One key initiative is the €15k participatory budget, launching in 2024, which allows members to suggest and vote on new equipment and other improvements. Currently, Center ROG has 1,200 active members, each with voting rights via an online platform.

In addition to strengthening community involvement, Center ROG aims to reduce its reliance on city funding, targeting a 50% dependence by diversifying revenue sources. The strategy includes expanding user packages, increasing membership, and seeking additional public funding from EU and cross-border projects. While workshops and courses remain consistently full, the Centre is focused on boosting independent use of its installations. Some labs, such as ceramics, fablab, and textiles, are performing better in this regard, compared to others like jewelry, wood, and food labs.

Circular hubs factsheet: Blue City

History of the site

The site was originally the Tropicana swimming pool, a popular leisure and entertainment spot for locals in Rotterdam from 1988 to 2010. However, due to the high maintenance costs, the pool was eventually closed. In 2015, the abandoned building was purchased at a public auction for €1.8 million, and renovations began. The total surface area of the site is 12,000 square meters.

The building was in poor condition, requiring extensive renovation before operations could commence. Circular principles have been central to the building and renovation processes. BlueCity prioritized using second-hand (local) building materials over new ones. For example, the wooden windows in their office spaces were reclaimed from an old hospital in Maastricht, and the balustrades of Het Dek were sourced from an abandoned oil platform. Over 90% of the office spaces are made of reused materials.

Beyond construction, BlueCity extends its circular and sustainable principles by reusing the majority of their furniture. Additionally, the site features solar panels on the roof and a rainwater collection system.

Renovating and building with second-hand materials presented challenges, such as sourcing specific materials and evaluating whether reused materials are always the most environmentally friendly option. For instance, the decision to reuse concrete required careful consideration, as the transformation process involved significant water usage, potentially making it less sustainable than new concrete.

Ownership and governance structure

BlueCity is privately owned by BlueCity. 25 people work for BlueCity, working in general management, marketing and communication, event coordination, business development, finance, sales and program leads.

Public sector involvement

The public sector is not systematically involved in the site's operations. While the city maintains an interest in staying informed about what is happening, it does not have ownership or decision-making authority regarding how the site is managed. However, the public sector does provide funding for specific programs.

Activities in the hub and tenants selection

The BlueCity Lab is a place where entrepreneurs can start the validation of a product or process for the regenerative economy. The lab consists of four spaces: Fabrication Lab, Fungi Lab, Biochemistry Lab and Microbiology Lab. These work and lab-spaces are rented to bioneers (pioneers in biodesign) on a membership model.

BlueCity also offers other types of workspaces, such as individual desks and office space, as well as the rental of events spaces. BlueCity also offers support to circular start ups through different business programs.

- Circular Loket: Service to get free, custom advice, on how to deal with often complicated legislative and regularly framework residual streams and renewable resources to do business.

- Circular Challenge: Six-week program where the teams are challenged to convert a concrete residual flow into a circular product that is economically profitable and scalable.
- Circular Ideation Lab: An intensive 3 month prototyping program for biobased products.
- Circular Factory: a six-month program to support circular start ups to scale up from prototype to demo plant

BlueCity also hosts a variety of events open to the public, including its monthly networking drinks, "Townhall," which fosters community engagement. Public events take place in their bar "Stroom," which also functions as a restaurant and is open to the public on weekends during summer season. Additionally, BlueCity organizes public programs like 'CHANGEZ,' a sustainable clothing swap and fair created as an alternative to Black Friday, as well as public tours of BlueCity to showcase its innovative spaces and sustainable practices.

Selection criteria of tenants

They do not have a formal selection procedure or specific set of criteria. Instead, businesses are required to operate within the circular economy, and through conversations, BlueCity assesses whether the business aligns with their mindset.

Financials

BlueCity generates revenue through multiple streams. The primary sources include the rental of office and event spaces, where businesses host events such as inspiration days, product launches, and corporate gatherings, often with catering services. Another revenue stream comes from business programs, which are partly subsidized but also involve fees paid by participants. Additionally, BlueCity operates a bar/cafe that is open to the public, providing another consistent source of income.

Impact measurement

The social or environmental impact that the site generates/ enables are not measured on a structural basis. However, they do measure the number of companies that they have reached out to. And also for funding programs, they report on certain figures such as reach.

Partnerships and community engagement

Events are hosted with the purpose of connecting and raising awareness among the public. One of these events is the BlueCity Townhall event, which takes place on the first Thursday of every month. As they state on their website, doors are opened to anyone with an interest in creating new collaborations and helping others succeed. Here, the newest projects from BlueCitizens are presented and time is given for exchange and informal networking.

Another event is the Fuck Up nights which are meant to connect people and learn from each other from stories on fuckup that businesses went through.

In relation to partnerships, BlueCity has built a partnership with local and regional authorities for responding to the queries that they receive under the Circular Loket service.

Vision

The focus remains on addressing the ongoing mission to stimulate the circular economy through entrepreneurship and the developments at BlueCity, not only in Rotterdam, but throughout the Netherlands.

Circular hubs factsheet: ReTuna

History of the site

ReTuna is a circular shopping mall, which offers second hand products but also repair product repair services. It works in the following way: When individuals arrive at the recycling center, they drop off all reusable items that they brought with them. Staff members assist with unloading their vehicles, and then sort the items for distribution to various shops based on each organization's specific wishlist. No money is exchanged for the goods, instead, staff members thank individuals to make sure they leave with a sense of pride and satisfaction from donating.

The refurbishment of the site started in 2014, and was inaugurated in August 2015. The site was a DHL before, and its refurbishment required an investment of about 50M euros. The majority of the investment (80%) was covered by the waste management and energy company, and the rest was funded by the municipality.

ReTuna shopping mall is located next to the ReTuna Recycling Center. This is particularly convenient given that the items that don't match the shops' needs or cannot be repurposed are recycled, with approximately 70% of items being reused and the remaining 30% recycled.

During the renovation period, the building underwent extensive refurbishment, including the installation of new flooring, the addition of a second storey, new ventilation systems, and improved insulation to meet energy efficiency standards. Second-hand materials were used wherever possible, such as for the staff's room kitchen. However, frequent breakages and the limited availability of suitable items were the main challenges when using second hand materials, thus the actual use was rather limited. It's important to note that in 2015, the use of second-hand materials was not as widespread or easily accessible as it is today.

Ownership and governance structure

The ReTuna building is owned by the municipality's waste management company, Eskilstuna Energi och Miljö (EEM), which rents out the space to private businesses.

The tenants are primarily small business owners, but larger companies like IKEA are also present. This mix of large and small businesses is intentional, as it fosters an environment where they can inspire and learn from each other.

Public sector involvement

The public sector's involvement has to do primarily with the political support and mandate of building ReTuna.

Eskilstuna municipality strives to be a green role model, and under that idea, the politicians in the municipality decided to support the idea of constructing this mall that offers sustainable shopping.

Activities in the hub and tenants selection

ReTuna is a recycling mall and primarily focuses on selling second-hand products and offering repair services through its 16 businesses. In addition to retail and repair, ReTuna provides occasional coaching sessions for tenants facing financial challenges. The mall also rents out conference room spaces and hosts various events, including study visits and an annual upcycling course.

Selection criteria of tenants

The selection criteria include:

1. Solid business plan: Applicants must present a strong and viable business plan.
2. Team size: The business must be operated with a minimum of two individuals involved.
3. Fitting mindset: Applicants should demonstrate a balance between profit motives and a commitment to sustainability and/or social impact.

Financials

The shopping center generates revenue primarily through the rent collected from businesses occupying the retail spaces and from the rental of conference rooms. It is important to note that sales have increased by 10-15% every year.

Impact measurement

Currently, the environmental impact is not measured due to the significant investment that this requires. However, the team envisions that once the shopping mall is digitalized, tracking these metrics will become easier. For instance, by measuring carbon emission savings per product category. While there is no strict timeline for this digitalization, it remains a key aspect of ReTuna's vision.

In terms of social impact, systematic measurement is not in place, but they are aware of the creation of over 80 jobs and their role in educating people about sustainability. On the financial front, ReTuna keeps track of their financial performance. One of the main objectives is to demonstrate that the mall covers its costs and that businesses within it are profitable.

Partnerships and community engagement

ReTuna collaborates with schools through the CirkulÄran program, which includes hosting workshops using materials donated by ReTuna. These workshops aim to stimulate creativity, foster a desire to experiment, and encourage children to adopt environmentally conscious behaviors.

Additionally, ReTuna hosts about 15-16 events annually, including a youth business market, Christmas market, toy and clothing swap events, craft workshops, repair events, and environmental cleanup activities. These events are free and cater to various segments of society, from children to adults.

The site also offers a one-year course where participants learn about reusing and recycling different products and materials, utilizing donated items from ReTuna. This course is paid and provides practical knowledge for those interested in sustainability and circular economy practices.

ReTuna's Center Manager, Simon Glimtoft, mentions that he doesn't think there are stakeholders that they have not collaborated with, including hotels, senior houses, among others.

Vision

ReTuna currently occupies only part of a larger building, offering significant potential for expansion on the same site. While this expansion is feasible, given the existing space, it is essential to first ensure there is sufficient demand to justify the growth.

If ReTuna were to expand, they would ensure to cover existing gaps through the businesses that they choose for the site, such as incorporating construction and building materials, adding more services, and integrating food waste solutions, which are currently missing from their offerings. For example, services like hairdressing and tailoring are underrepresented and could be expanded.

Additionally, ReTuna aims to expand on the demographics they attract, such as middle-aged men, by including options for the resale and repurposing of construction materials. This strategic expansion would not only diversify their offerings but also draw in new customer groups. Nevertheless, ReTuna hopes that their example will be inspirational for other Swedish municipalities, and that the ReTuna model is replicated in further locations.

Circular hubs factsheet: Social Circular Hub Ghent

History of the site

Ghent has been a pioneer in social enterprise, particularly focusing on employment for disadvantaged groups. The city has a strong ecosystem of startups with a social focus, often intersecting with the circular economy.

In 2019, a significant event in the intersection of circular economy and social impact economy took place, attracting interest from a significant number of stakeholders. Then, in 2021, budget became available to support 12 hubs in Belgium, one of them being the Social Circular Hub Ghent.

The Social Circular Hub Ghent doesn't have a dedicated physical space, instead it utilizes various locations within the city for events, workshops, and working groups, emphasizing on their strategic matchmaking role. The hub connects startups, schools, universities, and consultants through intake conversations to foster collaboration among circular economy actors who otherwise might not connect with each other.

Partners are the City of Ghent, HOGENT, Artevelde University College and De Punt. Three companies from the social economy are advisory partners (Compaan, Ateljee VZW and Labeur).

Ownership and governance structure

The hub is structured as a public-private partnership, established through public funding from Flanders, which mandated collaboration across public and private entities. This "quadruple helix" request brought together the City of Ghent, HOGENT, Artevelde University College, and De Punt.

The city of Ghent is the promoter of the initiative, while HOGENT, Artevelde University College and De Punt provide the matchmaking services for enterprises as the core activity, but it is not limited to that.

The organizational structure is highly horizontal regarding roles and responsibilities. Although the City of Ghent acts as a promoter, it does not hold the final decision-making power. Instead, all four core partner organizations work together to find solutions. The aim is to find consensus, but a majority may suffice if necessary. Even if one partner opposes a decision, the three other partners can still pursue it if they agree.

The hub serves as a space for experimentation, allowing the city to act more quickly than usual.

Public sector involvement

The involvement of the city of Ghent is as one of the founding partners of the hub. The city also facilitates any

relevant contact that could be beneficial for the enterprises, and promote the initiative and events they might have.

Activities in the hub and tenants selection

The Social Circular Hub Ghent works in the following way.

1. They initiate and participate in discussions with key players in various fields, including startups, schools, universities, and consultants, to understand their needs and challenges.
2. After these conversations, they form working groups to tackle specific topics or challenges, whether they are business-related or city-specific.
3. They host events to create networking opportunities for stakeholders and foster connections among different participants.
4. Promising ideas may be developed into pilot projects. They assist with finding financial resources, partners, and suitable locations for these projects, spanning diverse domains such as construction, packaging, textiles, and food.

The hub communicates to its stakeholders through website, LinkedIn, Facebook and direct mailing, creating awareness around the social-circular economy and inviting enterprises to participate in its network and activities. However, they recognize that the communication strategy should be improved to better reach startups.

Selection criteria of tenants

Since there is no physical space, there are no tenants to be selected for the hub. Moreover, a selection process is in place to determine the entrepreneurs that will receive support from the Social Circular Hub Ghent. The only requirement, however, being that the idea/concept/initiative/project sufficiently matches the objectives of the hub.

In order to ensure it, the intake form comprises a series of questions where the entrepreneurs are asked about the ecological and social impact that they create, as well as the impact that that idea could create for the city of Ghent.

Financials

The Social-Circular Hub Ghent was and is financially supported by:

- 2021-2022: European Social Fund (ESF) & Flanders Circular
- 2023: Flemish Department of Work and Social Economy (WSE) & Flanders Circular
- 2024: Flemish Department of Work and Social Economy (WSE) & Province of East Flanders

The hub currently generates no revenue and is entirely dependent on government subsidies because the target group has very limited resources and might not use the service if it wasn't free. While the hub considered generating revenue by renting out workspaces and event spaces, the small target group wouldn't generate enough volume to cover costs, according to the hub's estimations. Additionally, any fees would need to be kept low due to the financial constraints of the target audience. Therefore, the business model will need further refinement to achieve Financials.

Impact measurement

Impact is not measured for the hub. The hub reports to the Flemish government, but focusing on outputs rather than direct impacts. For example, the number of companies supported, activities conducted, event attendance, participation rates, and social media outreach.

Measuring the indirect impact of supporting early-stage startups is challenging due to the uncertainty and future-oriented nature of these businesses. Their impact is not immediately visible and often takes time to materialize.

Partnerships and community engagement

The Social-Circular Hub Ghent helps entrepreneurs, citizens and governments to connect with each other to develop new circular activities with the potential to create employment in the Ghent Social Economy. The partners of the hub are the City of Ghent, HOGENT, Artevelde University College, De Punt, Compaan, Ateljee VZW and Labeur.

The hub does not engage directly with the wider community due to limited funding and a clear division of responsibilities. While the City of Ghent is actively involved in organizing events and engaging with the broader public, the hub focuses primarily on supporting businesses.

Vision

The plan for the future is to secure long-term funding beyond the current 1-2 year cycles. Additionally, they aim to strengthen their communication efforts. This includes the creation of a website that is appealing and informative. Enhancing online presence is a key priority to better appeal to entrepreneurs and other stakeholders.

Circular hubs factsheet: Mechelen Impact Factory

History of the site

Mechelen's Impact Factory is currently under construction. A total of 4,200 m² located in the historical city center of Mechelen - close to the railway station and the main shopping streets-, will be dedicated to provide space for impact entrepreneurs, building the future economy which is circular and social (inclusive). Stadsmakersfonds and the city of Mechelen therefore collaborate. Together, they repurpose an old industrial laundry (the Potterij) and a since years vacant office space.

This physical hub, known as the Impact Factory, is currently undergoing renovations and is expected to be fully operational by early 2026. Previously, the Potterij was occupied by civil society organizations that utilized it for running sharing economy initiatives. To give room to the renovations, these initiatives have been relocated in various locations.

Impact Factory needs to be the "inner city social-circular hub": a hub with space for office & cowork space, ateliers, event and demonstration rooms, and a restaurant, where new social and circular initiatives are born and bred and people meet and learn in view of the future economy. As it is in the historical city center, it does not provide space for logistics or storage, hence once social-circular initiatives grow they will need to be relocated.

Substantial effort is put into the circular and sustainable renovation of the site as the buildings need to be a showcase for what is going on inside the walls. The sanitation of the Potterij as a blackfield started in 2016. The actual renovations of the building in 2023. Focus has been put on the restoration of the concrete inner construction within the Potterij, as to maximise the use of the existing structure and materials. The second building is a former office building (called "The Studio"), dating from the 19th century. The third building, ("The coach house"), is a small building between the Pottery and the Studio, which enables the physical connection between both buildings.

For the renovation of the buildings, both the techniques and energy provision need to be green and innovative and the materials used need to have a low impact (embodied carbon). This means that we choose either for reclaimed materials (eg floor tiles) or for renewable materials based on biological raw materials (wooden structures, biological isolation, ...). A good example of the reclamation of materials are windows of the old library in Moensstraat, which will be incorporated into the new facade.

Ownership and governance structure

The ownership structure is a public-private partnership. The city holds a 28% stake through public ownership, while the remaining 72% is privately owned by Stadsmakersfonds, a cooperative investment fund. In terms of the governance of the site, a tender is being prepared to select an organization to manage the site, with a key requirement to uphold the project's values and focus on promoting the circular economy in the city. Emphasis is also placed on generating social value, such as employing disadvantaged communities, and showcasing the potential of the social-circular economy (making it tangible to the broader public).

Public sector involvement

The city's primary role is to partially finance the project, provide political support for its implementation, and allocate necessary human resources. This involvement underscores the city's commitment to the project's success by backing it both financially and strategically.

Activities in the hub and tenants selection

Currently, the hub is not operational. However, plans for the future include spaces for makers, workshops, co-working areas, offices, and event rooms, as well as facilities for some social initiatives, but it will also offer a demonstration or shopping facility. A key innovation is the aim to connect diverse groups of actors, bringing together entrepreneurs, companies,

and citizen organizations that don't typically collaborate. This cross-sector approach is designed to foster new partnerships and enhance community engagement within the hub.

Selection criteria of tenants

The specific selection criteria have not yet been established, as defining these will be one of the responsibilities of the organization that takes on the leadership and administration of the hub.

Financials

The investment costs for all buildings amounts a total of 10.5M Euros. For the privately developed area (office building + coach house), these costs will be covered with a combination of resources, including:

- Bank credit (+-60%)
- Own resources (+-40%), corresponding to Stadsmakersfonds, City Makers fund, Impact investor's loan, and rental income
- React-EU subsidies

The publicly owned area (the pottery), will be financed in the following way:

- React-EU subsidies
- Flemish government
- City of Mechelen

The hub will generate income by renting out spaces (co-working or event spaces) and through incubator programs. The rent is expected to cover the building's costs but it won't be enough to cover the cost of community activities. Thus, for any further activities, separate funding / business models will be needed.

Impact measurement

Since the hub is not yet operational, it currently does not measure any impact. However, plans are likely in place

to track performance and outcomes once the hub begins full operation.

Partnerships and community engagement

The future "operator" of the site will also be responsible for contacting and formalizing partnerships. However, to support this process, the city of Mechelen and Stadsmakersfonds are already proactively connecting with diverse organizations.

For example:

VLAIO: The Flemish Agency for Entrepreneurship, which provides company advisors. They have committed to holding advisory sessions once a month at Impact Factory.

Circular Flanders: They plan to use the hub's space for hosting events.

Private company: Specialized in space and service design, they would like to have an open Lab in Impact Factory.

Additionally, more than 50 actors have expressed their interest (through a request for information) in activities on site, from companies to NGOs, to knowledge institutions to public institutions. For instance, program makers, and also universities and schools, who would like to have educational workshops at Impact Factory with their students.

Vision

The vision of the Impact Factory is fully detailed in the project bundle, which can be downloaded from here: <https://www.impactfactory.be/home/>. This document presents the different blueprints of how the site will look once all the construction and renovation work is completed, as well as how the space will be allocated for various activities. At the end of the document, there is also a financial plan that estimates the required investment and outlines the development phases and budget.

Circular hubs factsheet: MAAK site

History of the site

The MAAK site has been developed into a hub for innovative and circular business since 2014. Currently, it hosts about 40 entrepreneurs on a 20,000 m² area, with approximately 4,000 m² of indoor space.

Historically, the site was a former waste disposal area that the municipality planned to dismantle. However, MAAK proposed transforming it into a space for innovation. Initially focused on 3D printing, the site later embraced the circularity aspect, which has since become a key component of the hub.

The businesses, or MAAKers, recycle or upcycle materials, helping to reduce waste and save energy. They also design products that are sustainable, modular, and adaptable.

Regarding the buildings, they are currently quite energy inefficient. Planned activities for the site include renovating some existing buildings and constructing new ones, with additional 1,000 m² over the next 7 years and increasing the green spaces on the site.

The renovations will follow circular design principles, while the new buildings will incorporate biobased materials and modular design approaches. No tendering is required for the renovations, as MAAK will handle both design and specifications in-house.

Ownership and governance structure

The current governance structure of MAAK includes a system of committees, allowing MAAKers to actively participate in key areas such as programming and events, the development of MAAKpark, and representation within the community.

Currently, the site is owned by the municipality, but this is set to change soon. While the land will remain municipally owned, MAAK will lease it from the city for an extended period and will own the buildings constructed on the land. This arrangement, known as a leasehold, is common in the Netherlands for construction projects.

Looking to the future, MAAK is negotiating a new 10-year leasehold agreement. This will involve not only MAAK and the municipality, but also businesses in the area, who will contribute to shaping the development strategy. Additionally, other businesses and organizations from the region will be invited to join the C-District ecosystem, which MAAK is already part of.

Public sector involvement

The municipality is involved in the selection process of businesses, ensuring that suitable enterprises are chosen for the hub and more broadly, the C-district. The C-district is a joint effort and provides support in attracting further investment and businesses to the site.

Activities in the hub and tenants selection

The site's activities primarily involve the use of premises by businesses spread across different buildings. There are also two Innovation Labs: the Construction Lab, which hosts companies pioneering new construction technologies, and the 3D Makers Zone, focusing on industrial 3D printing

combined with technologies like sensors, blockchain, and IoT. Additionally, the site organizes events for the MAAKers community but also for the wider community, such as networking sessions, open door events, workshops, and lectures. The site also has gardens and a restaurant, which are publicly accessible.

Retail activities are not permitted at the MAAK premises due to legal restrictions. However, customers might collect their online orders directly from the site.

Selection criteria of tenants

The decision on which businesses join MAAK is made collaboratively with the municipality and involves like-minded individuals, designers, and those with specialized machinery, such as 3D printers and laser cutters. Each entrepreneur brings their own equipment, given that MAAK does not currently own any machinery, although they are interested in exploring this possibility in the future.

Another aspect of the business selection process is their willingness to collaborate and engage with the MAAKers community. This community shares best practices, innovations, and mutual support. MAAK fosters this collaboration through an active program that includes networking events, lectures, tours, and media campaigns. Thus, besides the rental of the workspaces, tenants have access to a wide range of activities and events to foster community, advance their business and overcome challenges they might have.

The questions used in the intake form were translated with AI, they are the following:

Company Information

- What is the full company name as stated in the Chamber of Commerce registration form?
- What is the legal entity (BV, general partnership, sole proprietorship)?
- What is the KvK (Chamber of Commerce) number?
- What is the date of establishment?
- Who are the owners?
- Which business activities are registered with the Chamber of Commerce?

Products and Services

- Which circular and/or innovative manufacturing products and/or services does the company supply?
- Which circular and/or innovative manufacturing products and/or services does the company still want to develop?

Production Methods and Machines

- Which circular and/or innovative production methods/machines does the company use?
- Which circular and/or innovative production methods/machines does the company still want to develop/purchase?

Cooperation

- Does the company already have collaborations with other MAAKers? If so, with whom and in what area?
- Is the company looking for collaborations with other MAAKers? If so, with whom and/or in what area?

The MAAK Concept

- Which general MAAK themes apply to the company's products and/or services? (Choose at least 1 and up to 3 from a list of themes such as craft, smart technology, circular, biobased, etc.)

- What specific circular and/or innovation knowledge or activity can the company add to the MAAK concept? To what extent can this be valuable for other MAAKers?
- Which specific circular and/or innovation knowledge or activity present on the MAAK site does the company want to use?

General Information

- How did the company learn about MAAK Haarlem for housing?
- What support from the MAAK team could the company use?
- Are there any other questions or comments?

Financials

Income is generated from rental fees for workspaces and event spaces. In addition, tenants contribute to a concept cost fee, which supports community organization and activities. This fee funds social events, infrastructure improvements in shared spaces, and educational lectures on relevant topics (e.g., finance). It also provides access to a platform for tenants to promote their businesses.

Moreover, revenue is also generated from organizing various events, tours around the site, and from the restaurant, also open to the public.

Additionally, to implement the plan for constructing new buildings and renovating existing ones, MAAK primarily aims to attract private investors. Bank loans will be sought as a secondary measure. MAAK is in discussions with the municipality to serve as a guarantor for the loans, which would help secure lower interest rates. However, aside from this, MAAK is responsible for investing in the site and is not reliant on public funding.

Impact measurement

Not measuring impact at the moment.

Partnerships and community engagement

Partnerships include universities such as Delft and Eindhoven, TNO, high schools, and the House of Amsterdam, among other stakeholders, for piloting solutions and research purposes. For example by offering high school students support with research and thesis projects.

Research institutions, industry partners, and government bodies are all involved in various ways with activities at MAAK, contributing to a collaborative environment that fosters innovation and development.

Vision

MAAK plans to construct additional buildings and refurbish existing ones on the site. A business case and plan have been submitted to the municipality, with an agreement outlining the collaborative framework for the next 10 years. Key changes MAAK will implement include:

1. Sustainable buildings: Refurbishing the 1930s municipal yard to enhance comfort, extend its lifespan, and reduce energy consumption.
2. Energy grid: Investing in electricity generation and storage to increase grid independence and support the electrification of the site.
3. Expanded business premises: Adding 7,000 m² of stacked workspace to grow from 40 to 130 companies, while maintaining site greenery. This space will be created throughout the coming 10 years.



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