



**BuildUPspeed**

***Austrian Ecosystem: Assembly Factory Factsheet  
Re-Use Box / Social Urban Mining***

03.06.2026

# Terminology

Term	Definition
<b>Pop-up factory (PuF)</b>	Pop-up factories are temporary manufacturing and/or assembling facilities that can be quickly set up and taken down to produce components for construction projects. A factory in the district itself for the time of the district retrofitting program. The factory will develop and assemble industrialized prefab building components that will be installed in the retrofitting projects.
<b>On-site</b>	Refers to the closeness of the pop-up factory to the construction project. Usually, it means that the factory itself is located in close proximity to the construction site (usually up to district or regional level).
<b>Off-site</b>	The opposite of on-site concept, where a factory is located in a different geographical area from the construction site.
<b>Service</b>	Here refers to any type of service that is provided locally, on-site specifically for construction/retrofitting projects. This could be a consultancy service offering advice on retrofitting activities. Could be a platform to bridge the local demand and supply for renovation projects. It could be a non-profit organization to connect local stakeholders and facilitate knowledge sharing about retrofitting, LCA tools or circularity frameworks.
<b>Manufacturing</b>	(Pre-)Fabrication of materials/products used for construction projects.
<b>Assembling</b>	Assembly of (pre-)fabricated materials/products used for construction projects.
<b>Temporary structure</b>	When a pop-up factory is set-up in a temporary way, e.g. housed in a container, industrial tent or modular building.
<b>Permanent structure</b>	When a pop-up factory is set-up in a permanent building, e.g. in an abandoned building, old industrial building.
<b>Just-in-Time (JIT) delivery</b>	JIT is a well-known Lean Management technique that involves small-scale production at the point of demand. The term "Just in Time" is often used in the construction industry to describe the delivery of goods to a job site. It means that materials will be brought to the site of final installation and installed right away, without being delayed by storage in a laydown or staging area.

# Overall PuF Concept Background

Table 1: Pop-up Factories Key Features Comparison

Feature	Mobile On-Site	Satellite	District	Assembly	Service
<b>Location</b>	On or very near site	Near site	Regional/district	Near site or district	In community areas
<b>Main Function</b>	Manufacturing & assembly	Adaptation & assembly	Full integration	Assembly only	Support & guidance structure
<b>Type</b>	Modular units	Warehouses/containers	Industrial facilities	Warehouses	Community spaces
<b>Permanence</b>	Temporary	Semi-permanent	(Semi-)permanent	Temporary/semi-perm.	Temporary/semi-perm
<b>Scalability</b>	High (modular setup)	Medium (region-based)	High (multi-project)	Medium	Context-dependent

## Categorization Framework

PuFs vary significantly in their setup and purpose, depending on the specific needs of construction projects. To support effective planning and deployment, a categorization framework has been developed based on four defining features and these provide a practical reference for identifying and selecting the most suitable factory model for a given context,

- **Purpose:** PuFs fulfil a range of functions within the construction value chain. While some are focused on the production of specific components or entire systems, others offer services such as consultancy, design, engineering, installation, maintenance, or end-of-life processing. This includes contributions to circular economy practices, such as repair, reuse, and recycling—aligned with the R-imperatives.
- **Design:** this refers to the physical configuration and technological setup of the factory. Factors such as mobility, equipment type, automation level, and sustainability measures define the flexibility and complexity of each PuF. Setups can range from compact, fully mobile units to semi-permanent installations with advanced capabilities.
- **Scale:** the scale dimension considers both production capacity and physical size. Some PuFs are small and portable, ideal for localized or temporary tasks, while others are designed for high-throughput operations and larger footprint requirements.
- **Location:** the factory's geographical positioning is a key operational consideration. PuFs may be deployed directly on construction sites, at nearby

district hubs, or in regional or off-site facilities. Location affects logistics, accessibility, and cost-efficiency.

To facilitate consistent evaluation and comparison of different PuF setups, Table 5 presents classification criteria under each of these four dimensions. It also introduces a fifth element, Factory Scenario, which summarizes the combination of features into the five PuF types: mobile, satellite, district, assembly, and service factories. This categorization tool (see Table 2) serves as a decision-making aid, enabling stakeholders to match factory models with project requirements. By encouraging flexible and context-specific configurations, the framework supports more efficient, scalable, and sustainable construction practices.

Table 2: Checklist criterion for Pop-up Factory scenarios

Criteria	Pop-up factory	Mobile on-site factory (m)	Satellite factory (s)	District factory (d)	Assembly factory (a)	Service factory (se)
<b>Purpose</b>						
P1	Provides localised manufacturing and assembly of construction components and systems in a specific region or district			<input checked="" type="checkbox"/>		
P2	Supports more extensive manufacturing facilities by producing components or products in a more decentralised manner on a local scale		<input checked="" type="checkbox"/>			
P3	Assembles (pre)fabricated components locally				<input checked="" type="checkbox"/>	
P4	Provides specific services related to construction and renovation projects					<input checked="" type="checkbox"/>
P5	Produces customised components on-site	<input checked="" type="checkbox"/>				
P6	It aims to create jobs and boost economic growth locally.			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
P7	Provides JIT delivery for specific projects	<input checked="" type="checkbox"/>				
<b>Design</b>						
D1	Mobile, easily transportable structure	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
D2	Semi-permanent structure			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D3	Temporary structure	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D4	Permanent structure			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D5	Uses innovative and flexible manufacturing processes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
D6	High level of automation and precision		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
D7	Uses sustainable and eco-friendly solutions			<input checked="" type="checkbox"/>		
<b>Scale</b>						
S1	Large-scale manufacturing		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
S2	Small-, medium-scale manufacturing	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
S3	Large-scale assembling		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
S4	Small-, medium-scale assembling	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
<b>Location</b>						
L1	Near the construction site (on-site)	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
L2	District level		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
L3	Within proximity (regional level)		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
L4	Off-site (away from the construction site)		<input checked="" type="checkbox"/>			

Using the framework and supporting literature, five main PuF types were identified. These categories are based on the four defining features: purpose, design, scale, and location. While each factory type has a general profile, the location is often influenced by local ecosystem conditions. Therefore, we defined proximity thresholds tailored specifically for the BUPS project rather than based on external sources. These thresholds help classify the factories according to their distance from the construction site:

- On-site factories: these include mobile on-site, service, and assembly factories. "On-site" may refer to the exact project location, but due to practical constraints, we consider any location within 15 km as on-site. At this distance, transportation costs and logistics are negligible compared to conventional supply chains.
- District-level factories: located within 30 km of the site, these typically include manufacturing, assembly, or service operations. They strike a balance between mobility and production capacity.
- Regional-level factories: these are usually satellite factories, placed between 30 and 100 km from the site. While still relatively accessible, they may require some logistics coordination.
- Beyond 100 km: at this distance, factories operate as part of a traditional supply chain, with significant reliance on transportation, storage, and logistics infrastructure.

Building on the framework used to characterise and distinguish between different PuF scenarios, the next step is to translate these insights into a practical management tool. This involves setting up a digital environment that supports the design, planning, and coordination of PuFs across their lifecycle. By integrating the checklist criteria into a digital platform, it becomes possible to streamline the configuration and monitoring of tailored factory setups, ensuring they respond effectively to project-specific goals and local conditions. The following section outlines the development of this digital PuF management environment.



# 1 Austrian Ecosystem PuF Development Storyline

The Austrian PuF scenario is centred on the innovative concept of social urban mining, with a focus on systematically identifying, documenting, deconstructing, and reusing building components prior to demolition. The approach is applied across multiple pilot activities, ranging from former shops and hotels to industrial parks and training facilities, and is designed to be replicated across several sites. **Within the BuildUPspeed PuF typology, the Austrian ecosystem primarily adopts an Assembly Factory concept, referred to as the “Re-Use Box,” to support the organization and execution of reuse-oriented deconstruction and redistribution activities.** Rather than relying on a single fixed installation, the Austrian ecosystem implements reuse through locally organized “Re-Use boxes” and operational dismantling activities that are adapted to each building context.

A core element of the PuF concept is the development and continuous refinement of a screenbook, which functions as a structured planning and checklist tool to guide reuse activities before, during, and after deconstruction. The screenbook supports early coordination with real estate developers, clarifies negotiation points, identifies technical and logistical constraints (such as lack of electricity or reliance on elevators), and enables post-activity documentation and evaluation. This planning framework is applied iteratively across all pilots and is considered a key outcome of the ecosystem’s work.

To address the high effort and cost associated with manual documentation of reusable elements, the Austrian ecosystem is also developing a digital recording and stock documentation tool. Reusable products were identified through on-site inspections, photographs, and manual notes that were later compiled into catalogues. In the meanwhile a digital tool accelerates this process, reduces back-office workload, and enables trained representatives of social economic partners to support documentation activities, rather than limiting this task to experts only.

Operationally, the Austrian PuF scenario is implemented through a portfolio of pilots, including completed and ongoing projects such as community shops, hotels, large industrial parks, and a former training centre in Vienna where a new reuse box is being established. These pilots demonstrate different levels of engagement, from conceptual urban mining studies to active dismantling and reuse operations, often in cooperation with social economic enterprises. While not all projects result in on-site reuse boxes, linkages to operational dismantling and reuse pathways are systematically explored. In parallel, the Austrian PuF scenario connects the BuildUPspeed activities with national R&D projects to address structural barriers to reuse, particularly in relation to testing, auditing, warranty, and insurance of reused building products. These efforts include developing testing procedures for reused steel and reinforced concrete elements and exploring insurance models that could cover risks associated with placing reused products on the market. Through this combination of practical pilots, planning tools, digital support, and regulatory experimentation, the Austrian PuF



scenario positions social urban mining as a scalable and knowledge-driven approach to embedding reuse within standard deconstruction and redevelopment practices.



## 2 Assembly Factory Factsheet

### 2.1 Scenario & Strategy

<b>PuF type</b>	Assembly Factory, closely linked to a mobile/on-site reuse operation. In the Austrian ecosystem this is implemented as the Re-Use Box / Social Urban Mining approach.
<b>PuF purpose</b>	Identification, documentation, dismantling, sorting, temporary storage, matchmaking, and sale/redistribution of reusable building components before demolition.
<b>Deep renovation / reuse scope</b>	Not a conventional whole building deep retrofit package. The Re-Use Box deals with all potentially reusable components in buildings scheduled for demolition or major redevelopment.
<b>Priority components</b>	Furniture, doors, flooring, wall coverings, sanitary and interior components, electrical products, installations, cooling units, windows, facade elements, steel beams, concrete elements, roof trusses, and other reusable construction products.
<b>Target building typology</b>	Buildings larger than roughly 2,000 m <sup>2</sup> are preferred, especially office buildings, factory buildings, healthcare facilities, educational buildings, hotels, shops, and large redevelopment assets.
<b>Design intent</b>	Turn the demolition site into a temporary reuse operation, supported by a Social Urban Mining concept, screenbook/checklist, documentation tool, and local social economic partners.
<b>Best-fit conditions</b>	A client willing to engage in reuse planning; a sufficiently large building; at least 3 months for exploration and planning; at least 2 weeks of operational time; truck access; construction power; sanitary facilities; and temporary storage space.

### 2.2 Factory Layout & Production Logic

<b>Factory typology</b>	The current concept is less dependent on one fixed container. The building itself becomes the operational disassembly zone, with a defined contact point/office and controlled access.
<b>Production workflow</b>	1) Social Urban Mining concept and pre-demolition audit; 2) inventory and quality categorisation; 3) buyer/matchmaking process; 4) controlled dismantling; 5) sorting, packaging, documentation and temporary storage; 6) collection by new owner/buyer; 7) evaluation.
<b>Component categories</b>	Easy reuse: doors, furniture, flooring, wall coverings, and interior items. Reuse with checks: electrical products, installations, cooling units, and sanitary components. High-effort reuse: windows, façade elements, beams, concrete elements, and roof trusses.
<b>Dimensions / space allocation</b>	The whole building is used for dismantling. Recommended minimum storage: around 100 m <sup>2</sup> ; site specific storage examples indicate around 200 m <sup>2</sup> . Staging/loading area: around 20 m <sup>2</sup> . Site office/contact point: around 20 m <sup>2</sup> . Social room: about 20–100 m <sup>2</sup> depending on team size.
<b>Operational scale</b>	Experience covers buildings from roughly 1,000 m <sup>2</sup> to 60,000 m <sup>2</sup> . Potential reuse value can range from 0 EUR in devastated vacant buildings to up to about 350,000 EUR in large building complexes still in use.

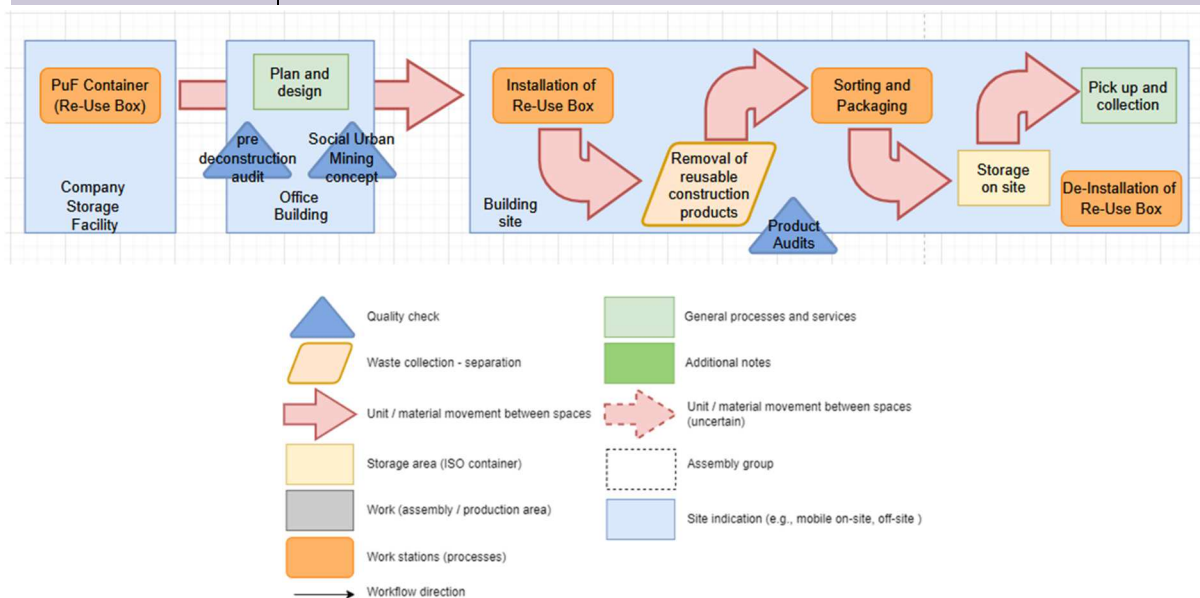


Figure 1: Assembly Factory - Tailored Design

## 2.3 Resources & Utilities

<b>Power &amp; electricity</b>	Construction site power is mandatory. Typical requirement: 240 V minimum; 400 V three-phase preferred; around 5 kW indicated for lighting and operational activities. Generator use may be considered where site power is unavailable.
<b>Water &amp; sanitation</b>	Water and greywater solutions are required for social/sanitary needs. Rule of thumb: 1 mobile toilet per 5 workers.
<b>Digital infrastructure</b>	Internet/WiFi is required for documentation, sales, payment, coordination, and inventory processes. Tablet based documentation and a digital tool based on Odoo/open source database logic are indicated.
<b>Equipment and materials</b>	Documentation devices/camera, PPE, emergency equipment, tools and working materials, packaging materials/pallets, barrier tape, construction diary, legal information package, waste bins and separated collection facilities.

## 2.4 Site & Logistics

<b>Site preconditions</b>	Controlled building access, one defined entry point, secured/no-go areas, construction road or truck access, parking/entrance area, sanitary facilities, storage area, office/contact point, and building/site fencing where needed.
<b>Access constraints</b>	Best case: truck/lorry access. Public space use may require permits and additional lead time. Time windows are agreed with the building owner and must fit the deconstruction schedule.
<b>Supply chain integration</b>	Reusable components are identified and matched with buyers during planning. The PuF operator avoids long term storage and generally stores only already sold components temporarily until delivery/collection.
<b>Waste handling</b>	Reuse activities improve waste separation quality. Residual waste, packaging waste, and specific dismantled materials are separated on site; responsibility is assigned to the PuF operator and/or building owner framework depending on contract.
<b>Last mile logistics</b>	Final transport and integration into new construction or refurbishment projects is normally the responsibility of the buyer/new owner, not the Re-Use Box operator.

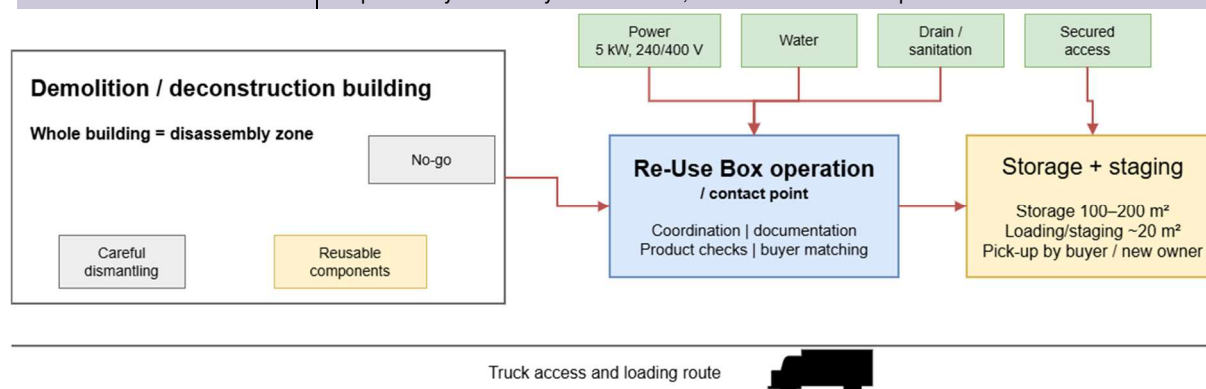


Figure 2: Indicative Re-Use Box site setup showing the whole-building disassembly zone, controlled entry, no-go areas, storage, office/contact space, loading/staging area, and required truck access.

## 2.5 Actors, Roles & Governance

<b>Factory owner / operator</b>	The Re-Use Box is operated by BauKarussell or the responsible Social Urban Mining organiser.
<b>Client / contracting authority</b>	Building owners, public or private, can decide on reuse oriented deconstruction and commission the Re-Use Box process.
<b>Contracting and payment</b>	Contracts are signed between the building owner and the Re-Use Box organiser. The building owner pays, with co-financing potential through revenues from reuse sales.
<b>Demand side partners</b>	Building owners, public and non-profit housing organisations, buyers of reused components, redevelopment actors, and clients interested in circular construction.
<b>Supply side partners</b>	BauKarussell, local social economic enterprises, general contractors, planning experts, dismantling companies, original producers, circular economy start-ups, certification bodies, authorised professionals, and insurance companies.
<b>Governance lead</b>	Building owner for project decisions; Re-Use Box organiser for operational planning, documentation, dismantling coordination, sales/matchmaking, and evaluation.

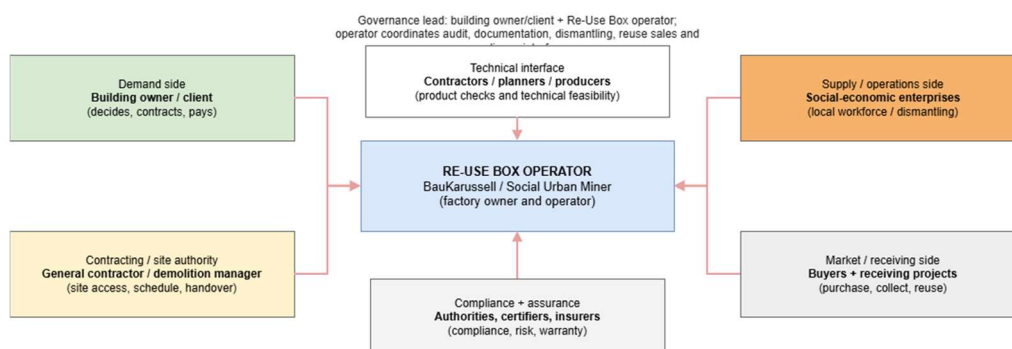


Figure 3: Stakeholder and governance structure of the Re-Use Box

## 2.6 Labour Force & Required Skills

<b>Typical team</b>	Typical operational team: one lead/head and around 4–5 workers. Additional teams from different social partner organisations can be organised for larger buildings.
<b>Core roles / indicative FTE</b>	Site/factory supervisor: 0.2 FTE; production/assembly operative: 0.1 FTE; logistics/warehouse handler: 0.3 FTE; electrician: 0.05 FTE; unskilled labourers through socioeconomic partners.
<b>Skills and certifications</b>	Reliability is important because workers may handle cash and customer interaction. Product specific certificates may be required for electrical, technical, HVAC, cooling, facade, or structural components.
<b>Training needs</b>	Training as Social Urban Miner is strongly recommended; approximate duration: 3 days. Retail/customer contact onboarding is also needed for public Re-Use Box operation.
<b>Labour sourcing</b>	Mixed models using local social economic enterprises, subcontracting, and partner workforce.
<b>Shift model</b>	One shift. Opening hours comparable to retail, adjusted to site and client conditions.

## 2.7 Legal & Regulatory Requirements

<b>Pre-demolition audit</b>	Required according to Austrian waste management and recycling material rules. It defines safe working conditions, waste law limitations, and documentation requirements. Lead time: at least 3 months for building evaluation and chemical analysis.
<b>Other legal acts</b>	Relevant rules may include waste management law, recycling building materials ordinance, Austrian standard ONORM B 3151, trade regulation, electrical engineering law, REACH/chemical regulation, F gas rules, product certification and CE-related requirements.
<b>Compliance issue</b>	The legal framework is not fully designed for reuse products. Testing, certification, warranty, insurance, and end of waste questions can limit the sale of certain reused components.
<b>Incentives / subsidies</b>	Possible regional public funding schemes for sustainable business and circular economy support, such as WIN, OKOPLUS, OekoBusiness Wien, and KPC circular economy related programs. Eligibility and value are region and call specific.

## 2.8 Cost Structure

<b>CAPEX / company baseline</b>	Approximately 1,800 EUR/month for the legal entity to run the company; Re-Use Box is one service of this company. Includes rent, insurance, accounting, phone/internet, IT devices, software, hand tools, fees, and taxes.
<b>OPEX</b>	Approximately 1,000 EUR/month of operation, including travel costs, certifications, and subcontracting costs.
<b>Project personnel cost range</b>	Approx. 15,000–30,000 EUR depending on building size and condition, mainly for personnel costs to organise and operate the Re-Use Box.
<b>Cost basis</b>	Analysis: around 1–2 EUR/m <sup>2</sup> depending on size and state of the building. Operation: around 1.5–2.5 EUR/m <sup>2</sup> .
<b>Social Urban Mining concept</b>	Detailed exploration/Social Urban Mining concept: approximately 5,000–10,000 EUR depending on building size and location.
<b>Revenue / value logic</b>	Reuse sales can create “negative cost” or co-financing potential. The building owner and buyers of reused components form the payment/revenue chain. Reuse value depends on product quality, demand, certification effort, and buyer matching.

## 2.9 Lifecycle & Time Schedule

<b>Setup &amp; commissioning</b>	Minimum 3 months, ideally 6 months. Includes Social Urban Mining concept, pre-demolition audit, contract, permits/compliance, buyer search and operational planning.
<b>Operational phase</b>	Typically 2 weeks to 2 months depending on building size, available schedule, storage allowance and buyer matching.
<b>Decommissioning / wrap up</b>	Approx. 2 days for removal of temporary setup, close-out documentation, remaining sold items and site handover.
<b>Main dependencies</b>	Owner mindset, demolition timeline, matchmaking duration, local social-economic partners, storage permission, power, water, sanitation and access.

## 2.10 Risks & Contingencies

<b>High negotiation effort without realisation</b>	Mitigation: standardise offer, screen opportunities early, and stop quickly where reuse potential or client commitment is too low.
<b>Legal restrictions and misunderstandings</b>	Mitigation: training, structured communication with authorities, clear documentation and compliance strategy.
<b>Long lead time from negotiation to operation</b>	Mitigation: focus on promising projects, define decision gates, and align early with deconstruction schedule.
<b>Product failure / quality uncertainty</b>	Mitigation: written quality checks, product specific testing/certification where needed, and clear communication of acceptance criteria.
<b>Continuity of operations</b>	Mitigation: portfolio management of multiple projects, operational planning, and workload monitoring.
<b>Reuse sales below estimates</b>	Mitigation: present sales values as estimates, agree liability boundaries, and evaluate against the Social Urban Mining concept.

## 2.11 Scalability & Impact

<b>Scalability approach</b>	Multi-site coordination, process standardisation, digital documentation/sales tools, second-hand material market platforms, and continuous clarification of legal compliance for new product groups.
<b>Distance threshold</b>	Local to regional level; roughly up to 50 km is indicated as a practical estimate aligned with building sector logistics.
<b>Storage threshold</b>	No fixed maximum, but long-term storage should be avoided. The operator generally stores only already sold components temporarily until collection/delivery.
<b>Volume threshold</b>	Limited mainly by building site conditions, available reusable products, workforce, storage, buyer matching, and available operational time.
<b>Environmental impact</b>	Reuse of building components increases resource efficiency, reduces waste, and improves separation quality for remaining waste streams.
<b>Social impact</b>	Cooperation with social economic enterprises supports reintegration of long-term unemployed people and creates local social value.
<b>Digital tools</b>	Tablet based documentation and placement/sales/stock control tool based on Odoo/open-source database logic; required features include documentation, sales, stock control, traceability, and payment support.

## 2.12 Contextual requirements for PUF application

Table 3: Contextual requirements as identified through the comparative analysis, retrieved from ecosystem's report Task 4.5.

Characteristic	Description
Multi-purpose Assembly PUF	The assembly PUF is applicable in various environments, such as stimulating re-use, stimulating efficiency and standardisation, and industrialising production whilst maintaining flexibility.



Energy performance	Improvements of energy performance of buildings is a consistent objective across PUF applications in various ecosystems.
Material re-use	Re-using materials during deep-renovation is difficult in traditional approaches due to logistical problems. The PUFs lend itself to stimulate re-use of materials and thereby avoiding additional embodied carbon emissions by the low proximity and extra logistical services it provides.
Institutional organisation of renovation	Important in the application of PUFs is the role of the government in facilitating large-scale renovations and projects, stimulating the need for adoption and application of the PUF.

## 2.13 General implementation of PUFs

Table 4: The general deduction of all ecosystem's business model canvasses, retrieved from the ecosystem's Task 4.5 report.

		Pop-up Factory
Value creation	<b>Value proposition</b>	<i>The core value delivered by the PuF, typically improving efficiency, reducing waste, enabling circular construction, and delivering renovation or construction services closer to the site.</i>
	<b>Customer relationships</b>	<i>The way the PuF interacts with clients (e.g. housing associations, contractors), often involving long-term collaboration, co-creation, and close coordination during projects.</i>
	<b>Channels</b>	<i>The means through which the PuF delivers its services and communicates its value, including direct project partnerships, procurement processes, and digital tools or platforms.</i>
	<b>Customer segments</b>	<i>The main users of PuF services, such as housing associations, construction companies, municipalities, and developers involved in renovation or new-build projects.</i>
Value delivery	<b>Key activities</b>	<i>The main operations of the PuF, including prefabrication, assembly, logistics coordination, material recovery, and on-site or near-site production.</i>
	<b>Key resources</b>	<i>The essential assets required, such as skilled labour, temporary manufacturing facilities, digital tools (e.g. BIM), machinery, and access to materials or components.</i>
	<b>Key partners</b>	<i>The organisations involved in delivering the PuF model, including contractors, suppliers, SMEs, logistics providers, housing associations, and public authorities.</i>
Value Capture	<b>Revenue streams</b>	<i>The ways the PuF generates income, typically through project-based contracts, service fees, or integrated renovation and construction services.</i>

	<b>Cost structures</b>	<i>The main cost drivers, including labour, equipment, logistics, temporary facility setup, and coordination across the supply chain.</i>
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## 3 Evaluation Questions for Assembly Factory Factsheet

Please review the attached PuF factsheet and answer the questions below. The aim is to assess whether the PuF concept is understandable, feasible, useful, and replicable in different local contexts.

For Questions 1–8, please use the scale:

**1 = Very low / strongly disagree**

**2 = Low / disagree**

**3 = Moderate / neutral**

**4 = High / agree**

**5 = Very high / strongly agree**

### 3.1 Concept clarity and relevance

1. **Clarity:** How clear and understandable is the PuF concept described in the factsheet?  
Score: [1–5]  
Optional comment:
2. **Relevance:** How relevant is this PuF concept for renovation, deep renovation, or circular construction activities in your context?  
Score: [1–5]  
Optional comment:
3. **User need:** Does the PuF concept respond to a real need or bottleneck in the renovation market?  
Score: [1–5]  
Optional comment:

### 3.2 Implementation feasibility

4. **Technical feasibility:** How feasible does the proposed PuF setup seem from a technical and operational perspective?  
Score: [1–5]  
Optional comment:
5. **Partner and governance feasibility:** Are the required actors, roles, and responsibilities realistic and complete enough for implementation?  
Score: [1–5]  
Optional comment:
6. **Legal and regulatory feasibility:** Are the legal, permitting, compliance, and policy aspects sufficiently clear for implementation?  
Score: [1–5]  
Optional comment:



7. **Economic feasibility:** Are the cost structure, financing logic, and value proposition convincing enough to support implementation?

Score: [1–5]

Optional comment:

### *3.3 Replication and scalability*

8. **Replicability:** How easy would it be to replicate or adapt this PuF concept in another region, project, or market context?

Score: [1–5]

Optional comment:

9. **Main conditions for replication:** Which conditions are most important for this PuF concept to work?

Please select up to three:

- Sufficient renovation demand / project pipeline
- Similar building typologies
- Available local partners / SMEs
- Skilled labour availability
- Suitable site space and logistics
- Permits and supportive regulations
- Access to financing or subsidies
- Digital tools / data availability
- Market demand for circular or industrialized solutions
- Other: [please specify]

10. **Main barriers:** What are the most important barriers or risks for implementing this PuF concept?

Please select up to three:

- High upfront costs
- Unclear business model
- Lack of skilled workers
- Lack of suitable partners
- Legal or permitting uncertainty
- Limited site space
- Logistics complexity
- Low market demand
- Lack of standardization
- Difficulties with resident/user acceptance
- Other: [please specify]

### *3.4 Impact and added value*

11. **Expected added value:** What do you see as the main added value of this PuF concept?

Please select up to three:

- Faster renovation process
- Lower renovation costs



- Better quality control
- Reduced disruption for residents/users
- Lower transport or logistics impact
- Higher circularity / reuse
- Lower CO<sub>2</sub> emissions
- Local employment or skills development
- Better coordination between stakeholders
- Other: [please specify]

12. **Most useful factsheet information:** Which parts of the factsheet were most useful for evaluating the PuF concept?

Please select up to three:

- Scenario & strategy
- Factory layout and production logic
- Resources and utilities
- Site and logistics
- Actors, roles and governance
- Labour force and skills
- Legal and regulatory requirements
- Cost structure
- Lifecycle and time schedule
- Risks and contingencies
- Scalability and impact

### *3.5 Improvements and platform relevance*

13. **Missing information:** What information is still missing or unclear in the factsheet to properly assess the PuF concept?

14. **Suggested improvements:** What should be improved in the PuF concept, factsheet, or blueprint to make it more useful for future users?

15. **Digital platform support:** Which functionalities should a digitized market activation platform provide to support this PuF concept?

Please select up to five:

- Match renovation demand with PuF solutions
- Identify suitable local partners / SMEs
- Compare PuF scenarios and suitability
- Estimate costs and financing options
- Support permit and regulatory checks
- Support logistics and site planning
- Provide standard templates / blueprints
- Track sustainability KPIs



- Support circular material or product matching
- Support stakeholder communication
- Other: [please specify]

16. **Final recommendation:** Would you recommend further development or testing of this PuF concept?

- Yes
- Yes, but only with major adaptations
- Not sure
- No

Please briefly explain your answer:

