

## D5.2 Adapted Monitoring Methodology for Each Pilot City (Lisboa)

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**STATEMENT OF ORIGINALITY**

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# 1. ABOUT HUB-IN

## 1.1. MISSION

Hubs of Innovation and Entrepreneurship for the Transformation of Historic Urban Areas (HUB-IN) aims to foster innovation and entrepreneurship in Historic Urban Areas (HUA), while preserving their unique social and cultural identity and the environment.

The project adopts innovation and entrepreneurship as the main drivers of urban regeneration in HUAs and is fully aligned with the international agendas for Cultural Sustainable Development (UNESCO) and Cultural Heritage Strategy (Council of Europe).

In the first stage of HUB-IN, a network of Hubs of innovation and entrepreneurship will be developed in the HUAs of eight city partners (Belfast, Braşov, Genova, Grand Angoulême, Lisbon, Nicosia, Slovenska Bistrica, Utrecht) and in the second stage, the resulting methods and tools will be scaled up to a global network of HUAs in follower cities. The Hubs of Innovation and Entrepreneurship will test, demonstrate and pilot activities of co-creation and co-design in three main areas that hold potential for the Hubs' sustainable transformations: 1) Cultural and creative industries, 2) New lifestyles and 3) Endogenous Natural & Social Resources.

## 1.2. VISION

HUB-IN expects to contribute to reverse trends of abandonment and neglect of historic heritage in a systemic way through the creation of networks of Hubs where innovation will be the main driver. The project will also have a direct impact on the creation of new sustainable opportunities for local traditional businesses and for the development of new creative skills and jobs.

## 1.3. CONSORTIUM



Δήμος Λευκωσίας  
Nicosia Municipality



Belfast  
City Council



Cyprus  
Energy  
Agency



Agency of Braşov for the  
Management of Energy and Environment



Infrastrutture Recupero Energia  
Agenzia Regionale Ligure



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NOVA SCHOOL OF  
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Connected Places



LISBOA  
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# Table of Contents

<b>1. ABOUT HUB-IN</b>	<b>3</b>
1.1. Mission	3
1.2. Vision	3
1.3. Consortium	4
<b>2. CONTEXT AND INPUTS</b>	<b>6</b>
2.1. About This Document	6
2.2. References to Other Project Documents	6
<b>3. OVERALL MONITORING APPROACH</b>	<b>7</b>
3.1. Key HUB-IN Elements	7
3.2. Theory of Change	8
3.3. Monitoring Materials	10
<b>4. TAILORED MONITORING PLAN</b>	<b>11</b>
4.1. The Expected Outcomes and Logic Model	11
4.2. Prioritised Outcomes	14
4.3. Methodology	15
4.4. “Common” Indicators	20
4.5. Feedback Loops (Quarterly Hub Review and Report)	21
4.6. Risk and Limitations	22
<b>5. RESPONSIBILITIES &amp; NEXT STEPS</b>	<b>23</b>
<b>6. APPENDIX</b>	<b>25</b>
6.1. Indicators and Data Collection Details	25
6.2. Indicators by Economic, Environmental, Social, Cultural Dimension	29

## 2. CONTEXT AND INPUTS

### 2.1. ABOUT THIS DOCUMENT

This document proposes the methodology for understanding and improving the benefits of Lisboa's Hub over time. It sets out an overview of the theory underpinning the monitoring approach (including quantitative and qualitative techniques operating at different levels) and a detailing of specific indicators and their data collection processes.

Each city is responsible for its own data collection, analysis and reporting, with a nominated point of contact to carry this out. This guide is therefore intended to support the city's nominated person in this regard, as a granular handbook for monitoring their Hub and developed in parallel to their developing their action plans with key stakeholders.

The document draws on previous HUB-IN discussions, deliverables, stakeholder engagement, Work Package and city meetings and monitoring workshops to date, formed in conjunction with the city teams and stakeholders.

### 2.2. REFERENCES TO OTHER PROJECT DOCUMENTS

In order to put monitoring plans in context, it is beneficial to present the challenges to be addressed in the HUA, the proposed solutions for addressing them and the outcomes that are expected as a result. Each of these topics has been deeply explored in previous HUB-IN deliverables and by other Work Packages. To avoid duplication and keep master versions of the details in a single source, that content is not replicated here. Instead, readers seeking further information may wish to refer to [www.hubin-project.eu/library](http://www.hubin-project.eu/library), for example for:

<b><u>HUB-IN Framework</u></b>	the vision, values, concepts and synchronised actions cities take towards being 'HUB-IN Places'
<b><u>Current Landscape</u></b>	the common HUB-IN narrative for the point the cities are starting from
<b><u>Entrepreneurial Ecosystem</u></b>	the key elements and dynamics of heritage-based entrepreneurial ecosystems within Historic Urban Areas
<b><u>Roadmap</u></b>	the overarching vision, values and missions of each Hub, offering numerous project options to address those
<b><u>Action Plans</u></b>	the selected interventions being implemented, with specific goals, outcomes, steps and timelines
<b>and more</b>	on HUB-IN's empowering frameworks, theory, tools, networks, training and more...

# 3. OVERALL MONITORING APPROACH

## 3.1. KEY HUB-IN ELEMENTS

The HUB-IN project intends to address the long term decline and degeneration of Historic Urban Areas by using their cultural heritage as an engine of innovation and entrepreneurship, while still preserving their unique social and cultural identity and the environment.

For the purpose of focussing the monitoring and evaluation, this can be thought of as linking together several layers to be assessed:

- **the project's Expected Impacts**

the Grant Agreement sets out "Expected Impacts" common to all its cities:

- Expected Impact 1:  
Reversing trends of abandonment and neglect of historic heritage in urban areas and landscapes
- Expected Impact 2:  
New and tested blueprints for the socially and economically viable regeneration of European HUAs and cultural landscapes, with enhanced well-being, quality of life, social cohesion and integration
- Expected Impact 3:  
Boosting heritage and culture-relevant innovation, creativity, entrepreneurship and light 'reindustrialization' of HUAs and cultural landscapes
- Expected Impact 4:  
Cross-sector collaboration, creation of job opportunities and skills in cultural and creative sectors and innovative manufacturing linked to historic heritage

- **Entrepreneurial Ecosystem**

WP2's "[D2.7 Entrepreneurial Ecosystems in Historic Urban Areas](#)" (van Twuijver, M., Toxopeus, H., Bosma, N. and Munch, G., 2022) sets forth the key ingredients and elements of an Entrepreneurial Ecosystem for "what makes a HUB-IN place". HUB-IN Cities aim to develop these within their Historic Urban Area in order to foster heritage-driven innovation and entrepreneurship - for example Leadership, Knowledge, Finance, etc.

- **Action Plans**

Based on their progress through the programme's phases and co-creation with their stakeholders, each HUB-IN city develops targeted interventions (Action Plans) that seek to drive change for key beneficiaries and stakeholders, across dimensions such as placemaking, data collection, co-creation and community engagement, policy and regulation, art and creativity, sustainability.

## 3.2. THEORY OF CHANGE

As can be noted from the Expected Impacts, part of the change HUB-IN intends to drive is long-term in nature (e.g. reversing trends of abandonment) and also indirect (in the sense that HUB-IN may influence and contribute towards these but can not be said to have direct control over them).

Projects that intend to drive such long-term and indirect impacts face common challenges in determining with accuracy and credibility what level of change occurred due to the project rather than, for example, due to the numerous other causes at play from existing policies, projects, investments, and technological progress to wider trends within the HUAs, cities and regions.

As set out in D5.1 “Common Impact Assessment Framework”, such projects often use a Theory of Change approach. This approach maps and tests the intended change pathways for how longer term impacts will be contributed to. By collaboratively mapping the co-created vision in a logic model, this enables the identification of which change pathways are most suitable for monitoring in the short, medium and long-term, and a discussion on where to focus limited capacity. This provides identification of the most appropriate indicators to monitor, offering balanced insights in the following categories:

1. **output indicators:** data indicating the scale of the action plans. For example, the number of organisations participating in a network-building action, to understand if the action is generating traction and who with.
2. **outcome indicators:** deeper insight via quantitative or qualitative analysis, such as pre- and post- comparisons of business growth or community perceptions via interviews, questionnaires, focus groups, surveys etc. As a simple example, the level of change in business skills / conditions that organisations experienced as a result of the Accelerator.
3. **impact indicators:** longer term tracking of broader HUA indicators, for example comparing growth in industry turnover and jobs in the Creative and Cultural Sector against the trend expected from the previous 10 years. This data is often hardest to obtain as there is often no historic (e.g. 10 years of data) HUA baseline, and when data does exist the HUA boundaries do not match normal municipal datasets. Further, change in these indicators can not be said to be directly driven by HUB-IN due to numerous other initiatives, projects, policies, investments at play. Thus, the cities do not focus most of their monitoring effort here - however a few indicators can provide useful context for the wider environment.
4. **feedback loops:** reflexive assessments on lessons and adaptations. As a simple example, a quarterly assessment by the Hub team on how well a network-building action is progressing the HUA's broader entrepreneurial ecosystem, and what adaptations can be taken to further improve.

The role that these play within a Theory of Change are illustrated in Figure 1 below.



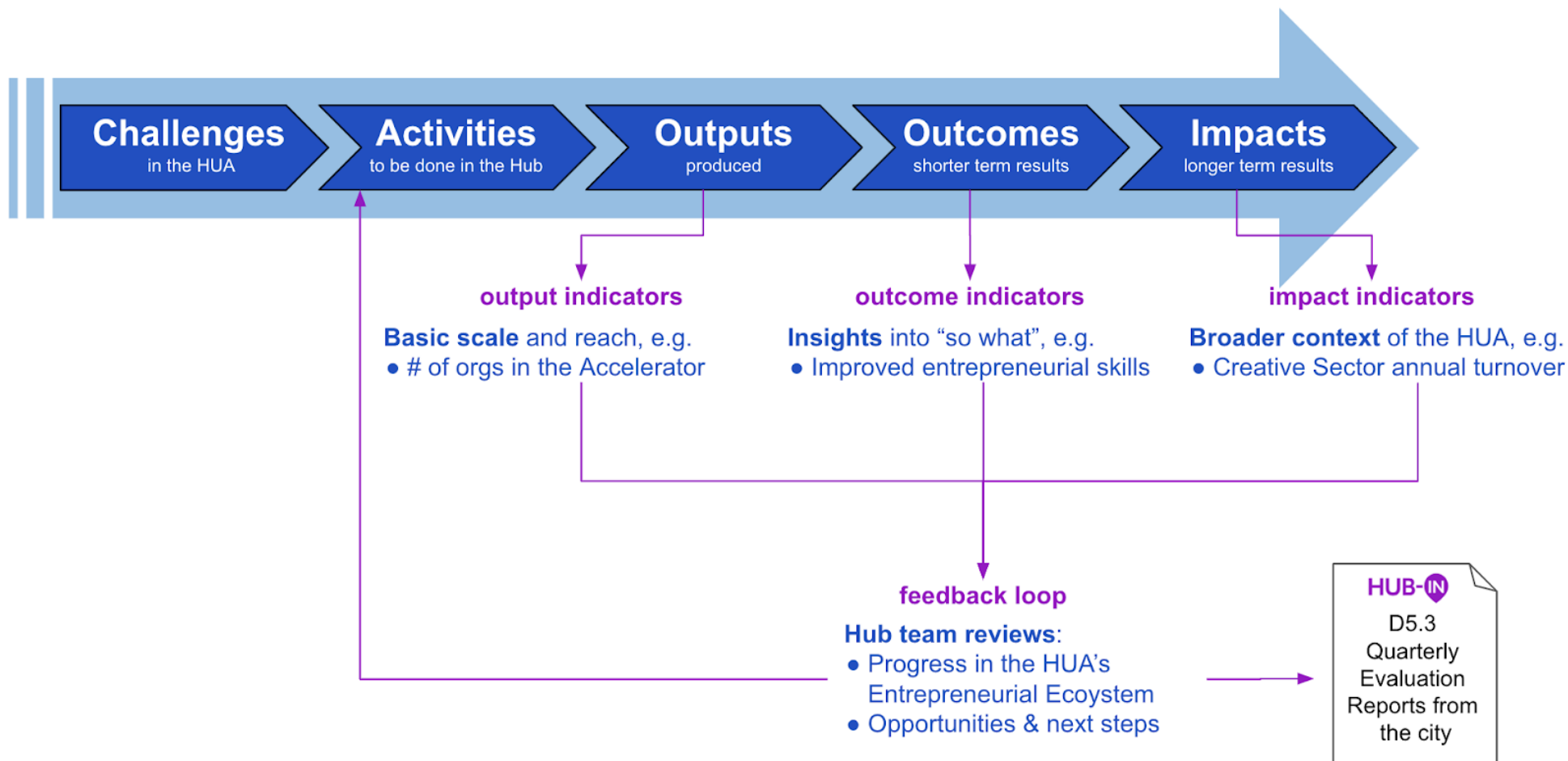


Figure 1: high level depiction of using a Theory Of Change logic model to identify where cities may most effectively blend their monitoring and evaluation effort for relevant and insightful monitoring. Details on Theory of Change and logic models are not duplicated here - for further reading see “D5.1 “Common Impact Assessment Framework”.

### 3.3. MONITORING MATERIALS

The practical application of the above is a set of monitoring materials in each city:

1. A tailored logic model for their Action Plans
2. A data collection plan for prioritised indicators
3. Supporting materials such as draft questionnaires, surveys etc
4. A focus group guide for assessments of overall progress (feedback loops)
5. A quarterly report template

The report template will be provided to cities to support them in their monitoring. Each quarter, the core Hub teams will capture the current data for their indicators in the report, as an input to their “feedback loop” focus group on overall progress, opportunities, next steps and other insights. Wider stakeholders can be invited as needed and depending on the topics and possible stakeholder fatigue. Those focus group findings can also be logged in the report template - thus the materials work in sequence to assist cities with a low effort way of producing the D5.3 Quarterly Evaluation Reports.

## 4. TAILORED MONITORING PLAN

### 4.1. THE EXPECTED OUTCOMES AND LOGIC MODEL

As the city has progressed from its Roadmap to its intervention details, Lisboa has confirmed its expectations on a number of targeted outcomes for its Action Plans. These are mapped to Entrepreneurial Ecosystem elements in Table 1 below.

N.B. in practice, outcomes can relate to more than one ecosystem element, and only for simplicity are shown here mapped on a one-to-one basis. In addition, HUB-IN does not expect cities' current Action Plans to target all Entrepreneurial Ecosystem elements at once.

<b>Ecosystem Element</b>	<b>Expected Outcomes</b>
<b>Heritage</b>	<ul style="list-style-type: none"><li>● Increased preservation and exploitation of cultural assets</li></ul>
<b>Physical &amp; digital infrastructures</b>	<ul style="list-style-type: none"><li>● Reduction of vacant or underused spaces due to use by new business</li></ul>
<b>Marketplace / demand</b>	<ul style="list-style-type: none"><li>● Increased exposure for local creative &amp; cultural orgs of their work</li></ul>
<b>Support organisations</b>	<ul style="list-style-type: none"><li>● [none yet / covered by other outcomes]</li></ul>
<b>Human resources</b>	<ul style="list-style-type: none"><li>● Improved skills in the community due to knowledge sharing events</li><li>● Improved talent attraction due to strengthened entrepreneurial scene</li></ul>
<b>Knowledge</b>	<ul style="list-style-type: none"><li>● Improved knowledge and experimentation on climate neutral solutions in HUAs</li></ul>
<b>Finance</b>	<ul style="list-style-type: none"><li>● [none yet / covered by other outcomes]</li></ul>
<b>Leadership</b>	<ul style="list-style-type: none"><li>● [none yet / covered by other outcomes]</li></ul>

<b>Urban culture</b>	<ul style="list-style-type: none"> <li>● Improved quality of commerce for local communities</li> <li>● Increased community engagement in addressing HUA issues</li> <li>● Awareness of efficient resource use (water, energy) from communities</li> <li>● Social integration of migrants due to knowledge sharing events</li> <li>● Reduced energy poverty within the community</li> </ul>
<b>Entrepreneurial culture</b>	<ul style="list-style-type: none"> <li>● Accelerated growth for incubated entrepreneurs (revenues, jobs, etc)</li> </ul>
<b>Networks</b>	<ul style="list-style-type: none"> <li>● Strengthened networks of entrepreneurs, business, community</li> </ul>
<b>Formal institutions</b>	<ul style="list-style-type: none"> <li>● [none yet / covered by other outcomes]</li> </ul>

Table 1: the expected outcomes mapped against HUB-IN's Entrepreneurial Ecosystem elements (N.B. in practice, outcomes can map to more than one element).

These expected outcomes are mapped in a logic model, testing the link between Lisboa's Action Plans, the outputs they produce, the outcomes they intend to drive for different stakeholders, and how these link to broader and longer-term economic, environmental, social and cultural visions and Expected Impacts of the project. See Figure 2 below.

To avoid duplication, details of the Action Plans are not replicated here - for further reading, please refer to the specific Action Plan documentation.

# Lisboa Hub's logic model

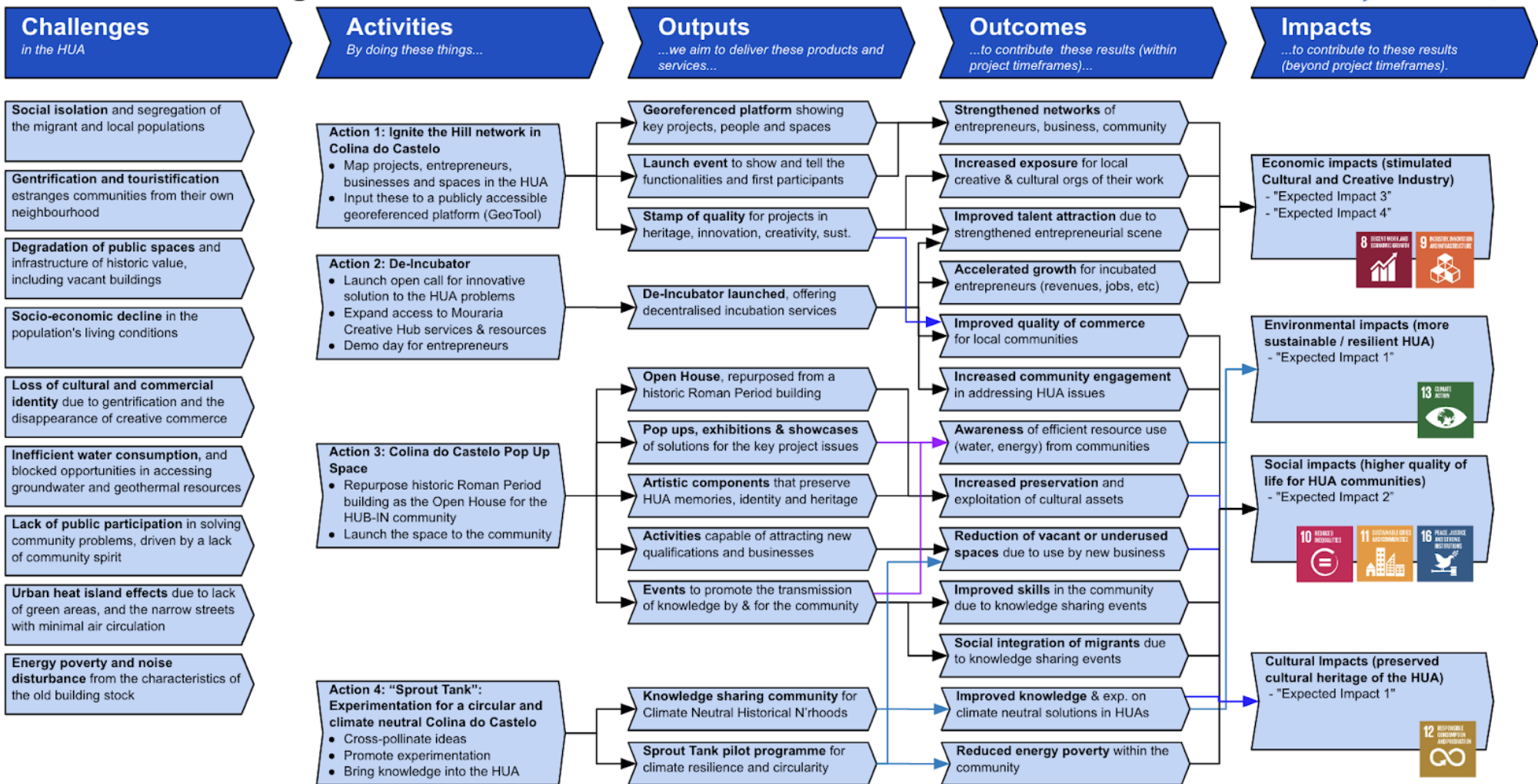


Figure 2: Lisboa's logic model, illustrating the change pathways for the specific Action Plans' intended outcomes. This guides subsequent identification of monitoring indicators for priority outcomes.



## 4.2. PRIORITISED OUTCOMES

The Hub logic models contain a large suite of possible indicator options. Measuring every indicator for every outcome and impact in the logic model is not realistic or effort-effective. For this reason, Cities go through a process of shortlisting their priority indicators, with the criteria for that selection being:

1. **the outcome being monitored has strong a strategic fit with objectives**  
i.e. monitoring the outcome will provide insights on the intervention's progress towards its objectives
2. **the Action Plans directly contribute to the outcome**  
i.e. the outputs can be shown to directly drive or contribute to the outcome
3. **the outcome is expected to show a change during the project**  
i.e. there is expected to be enough "signal" to detect a change with project timescales, and thus to justify measuring it.
4. **the outcome has a high expected ease of measurement**  
i.e. the data is available and accessible in appropriate formats, timescales, accuracy and trustworthiness etc, and the city team has the required experience and resourcing to analyse it.

For Lisboa, the prioritised outcomes selected were:

- Strengthened networks of entrepreneurs, businesses and communities
- Accelerated growth for incubated entrepreneurs (revenues, jobs, etc)
- Increased preservation and exploitation of cultural assets
- Awareness of efficient resource use (water, energy) from communities
- Improved knowledge of integrating renewable energy solutions in HUAs

The data collection plans are summarised below, and full details can be found in the Appendix.

## 4.3. METHODOLOGY

For those outcomes, the monitoring methodologies and data collection plans agreed with the Hub team are summarised below (full details can be found in the Appendix). They are grouped by Action Plan as that aligns with the delivery owners in each city.

At time of writing, city Action Plans are undergoing some refinement (e.g. still defining the challenge areas of Open Calls or Accelerators etc), as a result the programme has acknowledged that precise monitoring indicators may adapt and remain open for now. The current view is presented here.

### **ACTION 1: Ignite the Hill network in Colina do Castelo**

<b>Outcome indicator: Strengthened networks of entrepreneurs, businesses and communities</b>	
<b>HUA effects study</b> <i>(from July 2023)</i>	
<b>Purpose</b>	To obtain insights into changes within the broader HUA network of CCI organisations.
<b>Indicators</b>	<p>From the GeoTool</p> <ul style="list-style-type: none"> <li>• Growth in number of CCI organisations active in the HUA</li> <li>• Growth in number of CCI innovative projects in the HUA</li> </ul> <p>From the HUB-IN team:</p> <ul style="list-style-type: none"> <li>• Number of new projects/partnerships that come from the Match &amp; Ignite event</li> <li>• Case studies on businesses with stamps awarded: what impact has the stamp had on them (sales, partnerships, networks, customers, financial sustainability etc)</li> </ul>
<b>Analysis</b>	Growth in the number of CCI organisations (and innovative projects) active in the HUA can be tracked over time. Supporting interview with key stakeholders can help the team to understand to what extent the growth is contributed to by HUB-IN.
<b>Castle Hill Network Focus Group</b> <i>(from July 2023)</i>	
<b>Purpose</b>	To obtain insights into the business benefits and development of CCI organisations engaged in the Castle Hill Network.
<b>Study design</b>	Focus Groups held with approximately 6-10 participants each, in a semi-structured format.
<b>Indicators</b>	<p>Participants explore key themes including changes in:</p> <ul style="list-style-type: none"> <li>• perceptions of "cultural heritage is a public liability / cost"</li> <li>• perceptions of network strength: density, diversity, spontaneity, value</li> <li>• perceptions of quality of knowledge exchange</li> <li>• perceptions of levels of co-operation</li> <li>• perceptions of strength of entrepreneurial spirit</li> </ul>

	<ul style="list-style-type: none"> <li>• perceptions of ease of accessing local talent</li> <li>• examples of results, including joint collaborations</li> <li>• effects from HUB-IN: attribution, displacement, leakage</li> </ul> <p>Case studies on businesses with stamps awarded: what impact has the stamp had on them (sales, partnerships, networks, customers, financial sustainability etc)</p>
<b>Analysis</b>	Focus Group analysis of key themes emerging, including diverging views and examples.

The Outcome indicators above are supported by the Output indicators below:

<b>Output indicators</b> <i>(from July 2023)</i>	
<b>Purpose</b>	To support the outcome above with evidence of the scale and nature of the Castle Hill Creative Network.
<b>Indicators</b>	<p>From GeoToo:</p> <ul style="list-style-type: none"> <li>• Number of projects, entrepreneurs, businesses &amp; spaces mapped in the tool</li> <li>• Number of businesses signed up to the tool</li> <li>• Number of unique users</li> </ul> <p>Form Mouraria Creative Hub:</p> <ul style="list-style-type: none"> <li>• Number and types of target groups that participate in the Match &amp; Ignite events</li> <li>• Number of stamps awarded (split by business size and sector)</li> <li>• Number of collaboration meetings created as a result of the Match &amp; Ignite events</li> </ul>
<b>Analysis</b>	Simple tracking of the figures each quarter.

## **ACTION 2: “De-Incubator” - “decentralised” & “dematerialized” incubator for innovative projects**

<b>Outcome indicator: Accelerated growth for incubated entrepreneurs (revenues, jobs, etc)</b>	
<b>Entrepreneur Questionnaire</b> <i>(pre- from May 2023, post- from December)</i>	
<b>Purpose</b>	To obtain insights into the changes in business maturity of Accelerated organisations / entrepreneurs.
<b>Study design</b>	Pre- and post- questionnaires issued to each organisation in the De-Incubator. A first round in May 2023 (approximately 40 organisations) will be followed by a second smaller round of organisations in October (approximately 15)
<b>Indicators</b>	<p>The survey asks entrepreneurs on:</p> <ul style="list-style-type: none"> <li>• progression of innovations from idea to prototype to launch stage</li> </ul>

	<ul style="list-style-type: none"> <li>• growth in skills in product development, co-creation with local communities, Customer Discovery, Prototyping and Testing, Business and Investment Pitch, Entrepreneurship and innovation that is environmentally sustainable, Entrepreneurship and innovation that preserves or exploits cultural heritage</li> <li>• improvement in plans to headquarter / operate in the HUA</li> <li>• plans to expand services due to the support</li> <li>• description of products / services produced and the role of heritage in them</li> <li>• lessons learned - what went well, not so well, suggestions</li> <li>• demographics (age, gender, etc)</li> <li>• attribution (to what extent changes are due to the De-Incubator)</li> <li>• displacement (in absence of De-Incubator, would they have received similar support)</li> </ul>
<b>Tools</b>	The City monitoring folder contains a draft survey for the city team to edit further according to the Action Plan needs and ambitions.
<b>Analysis</b>	The Hub team (or colleagues proficient in data analysis) can review the questionnaire results and compare pre- and post- results in skills development etc.

The Outcome indicators above are supported by the Output indicators below:

<b>Output indicators</b> <i>(from June 2023)</i>	
<b>Purpose</b>	To support the outcome above with evidence of the scale and nature of the De-Incubator.
<b>Indicators</b>	From Mouraria Creative Hub: <ul style="list-style-type: none"> <li>• Number of services / products developed through the De-Incubator</li> <li>• Number of entrepreneurs receiving support - mentoring events, workshops, master classes and networking</li> </ul>
<b>Analysis</b>	Simple tracking of the figures each quarter.

### **ACTION 3: Colina do Castelo Pop Up Space: a multifunctional space for Lisbon's creative & sustainable urban regeneration solutions**

<b>Outcome indicator: Increased preservation and exploitation of cultural assets</b>	
<b>Pop-up User and Visitor Questionnaires, and Focus Groups</b> <i>(from May 2023)</i>	
<b>Purpose</b>	To obtain insights into the role of the heritage pop-up in driving awareness of local culture amongst the organisations that use it and visitors that visit.
<b>Study design</b>	Pre- and post- questionnaires issued to the organisations that use the pop-up (for events, displays etc) and short one-time questionnaires to visitors that visit.
<b>Indicators</b>	The pre- and post- user questionnaire asks on: <ul style="list-style-type: none"> <li>• development of knowledge on local culture: fado</li> <li>• development of knowledge on local culture: local culinary experience</li> </ul>

	<ul style="list-style-type: none"> <li>• perceptions of the area as welcoming for local communities</li> <li>• perceptions of the area as socially inclusive of diverse migrant populations</li> <li>• growth in visibility of products</li> <li>• business type, sector, demographics of owner</li> <li>• lessons learned - what went well, not so well, suggestions</li> <li>• plans to replicate pop-up in other buildings</li> <li>• benefits and challenges of cultural pop-ups</li> <li>• business benefits from participation (sales, brand, networks etc)</li> <li>• skills improved from participation</li> </ul> <p>A follow-up focus group will be held with the users on what worked well, what worked not so well, lessons learned, how to upscale the pop-ups, replicate, how did the pop-up meet their expectations (or not) etc.</p> <p>The ne-time questionnaire to pop-up visitors will ask on:</p> <ul style="list-style-type: none"> <li>- proportion of visitors new to the HUA</li> <li>- improvement of the pop-up on awareness of local culture: fado</li> <li>- improvement of the pop-up on awareness of local culture: local culinary experiences</li> <li>- perceptions of the area as welcoming for local communities</li> <li>- perceptions of the area as socially inclusive of diverse migrant populations</li> <li>- improvement in quality of local commerce</li> <li>- improvement in skills or awareness of [energy/water/material efficiency - depending on the nature of the pop-up]</li> <li>- demographics</li> </ul>
<b>Analysis</b>	The Hub team (or colleagues proficient in data analysis) can review the questionnaire results and compare pre- and post- responses for changes.
<b>Limitations</b>	The users can be required to return questionnaires and attend the focus group, thus securing data - however, visitor questionnaires may have low response rates unless the questionnaires are prominently placed and encouraged.

The Outcome indicators above are supported by the Output indicators below:

<b>Output indicators</b> <i>(from May 2023)</i>	
<b>Purpose</b>	To support the outcome above with evidence of the scale and nature of the pop-up.
<b>Indicators</b>	From Hub team: <ul style="list-style-type: none"> <li>• Number of partnerships/users</li> <li>• Number of initiatives</li> <li>• Number of visitors</li> <li>• Number of products/services displayed</li> </ul>
<b>Analysis</b>	Simple tracking of the figures each quarter.



## **ACTION 4: Sprout Tank”: Experimentation for a circular and climate neutral Colina do Castelo**

**Outcome indicator: Improved knowledge and experimentation on climate neutral solutions in HUAs**

### **Sprout Tank Network Questionnaires**

*(pre- from November 2023)*

<b>Purpose</b>	To obtain insights into the changes in business maturity of Accelerated organisations / entrepreneurs
<b>Study design</b>	Pre- and post- questionnaires issued to the Sprout Tank network. The number possible depends on the number of organisations joining the network, and driving response rates. The questionnaires will be followed with post-interviews.
<b>Indicators</b>	<p>The survey asks the Network for responses on:</p> <ul style="list-style-type: none"> <li>• perceptions on network strength: density, diversity, spontaneity, value</li> <li>• perceptions on quality of knowledge exchange</li> <li>• perceptions on levels of co-operation</li> <li>• perceptions on strength of entrepreneurial spirit</li> <li>• impact of Sprout Tank on overcoming market / technical barriers</li> <li>• quality of learnings and evidence established</li> <li>• expected scalability of the solutions trialled</li> <li>• contribution of the Sprout Tank to local circularity</li> <li>• case studies of the outputs of the Sprout Tank</li> <li>• perceptions on effects from HUB-IN: attribution, displacement, leakage</li> <li>• funding generated for new actions related with Hub Ecosystem</li> <li>• additionality (to what extent any changes are due to Sprout Tank)</li> </ul>
<b>Analysis</b>	The Hub team (or colleagues proficient in data analysis) can review the pre- and post-questionnaire results for differences in responses.
<b>Limitations</b>	The exact details and focus topics of the Sprout Tank are still being defined, and depend to some extent on the network's goals, once formed (e.g. energy poverty Vs 15 minute cities etc). What can be appropriately monitored depends on the focus areas selected, and the Lisbon Hub team will revisit this once known.

The Outcome indicators above are supported by the Output indicators below:

### **Output indicators**

*(from Oct 2023)*

<b>Purpose</b>	To support the outcome above with evidence of the scale and nature of the Sprout Tank
<b>Indicators</b>	<p>From Hub team:</p> <ul style="list-style-type: none"> <li>• Number dissemination initiatives of the knowledge created (research publications, blogs or other specialist websites)</li> <li>• Number of organisations involved</li> <li>• Type of organisations involved, per type (quadruple helix)</li> <li>• Number of initiatives that create bridges between the Hub ecosystem and climate action</li> <li>• Number of identified synergies and opportunities that promote creative</li> </ul>

	solutions in the field of climate resilience and circularity <ul style="list-style-type: none"> <li>• Entities involved in the climate action Ecosystem initiatives</li> <li>• Number and type of experimental activities promoted through “Sprout Tank”</li> </ul>
<b>Analysis</b>	Simple tracking of the figures each quarter.

Table 2: data collection methods and indicators

See the Appendix for:

- the indicators’ specific data collection units, sources, frequencies of measurement, and collection start dates
- the indicators mapped to economic, environmental, social and cultural dimensions

## 4.4. “COMMON” INDICATORS

HUB-IN's Grant Agreement contained a number of indicators for the project, including some that cities are to measure as part of their monitoring and evaluation. Where possible and relevant, cities have agreed these indicators and identified data sources. The project has also recognised that HUB-IN has evolved since the Grant Agreement (for example there is no longer an “Invention module”), and that the precise indicators and expected data sources are therefore sometimes no longer appropriate. Thus the project has agreed that cities do not need to spend effort collecting data that is no longer relevant, but will only collect data for the indicators that are still suitable and appropriate for their Hubs and interventions. Where relevant, these are set out below.

Indicator	Data collection plan		
	Unit	Source	Target
<b>EXPECTED IMPACT 1: Reversing trends of abandonment and neglect of historic heritage in urban areas and landscapes</b>			
Number of Local Associations and Local Community Groups committed with HUB-IN at the local level from each HUB-IN pilot	#	WP4 Action Plans	10-15
Number of initiatives designed and developed in each HUB-IN pilot for the regeneration of places & people	#	WP4 Action Plans	3-6
Number of local stakeholders participating in each co-creation workshop to co-design the tailored roadmaps	# per workshop	WP3 ENC	25-35
Number of ideation sessions or prototyping designed and developed in each HUB-IN pilot to boost creativity and cultural heritage led regeneration in three clusters	#	NA - Invention package no longer relevant to HUB-IN	24-42
<b>EXPECTED IMPACT 2: New and tested blueprints for the socially and economically viable regeneration of European HUAs and cultural landscapes, with enhanced well-being and quality of life, social cohesion and integration</b>			
Number of local stakeholders participating in the development of HUB-IN pilot Action Plans	# per workshop	WP4 Action Plans	25 - 35
% of women and elderly residents engaged in the initiatives for the regeneration of places & people	% per initiative	questionnaires to visitors in the pop-up - Action 3	30 - 40
Number of external local projects or programmes linked to the eight HUB-IN pilots for possible cross fertilization	#	WP4 Action Plans	15
<b>EXPECTED IMPACT 3: Boosting heritage and culture-relevant innovation, creativity, entrepreneurship and light 'reindustrialization' of HUAs and cultural landscapes</b>			
Number of ideas or solutions explored or prototyped during the invention process in the eight HUB-IN pilot	#	NA - Invention package no longer relevant to HUB-IN	5 - 7
Number of ideas or solutions explored during the Accelerator programs in the eight HUB-IN pilots	#	Number of entrepreneurs receiving support through the De-incubator - Action 2	9 - 10
# of start-ups offering solutions or services related with the three strategic clusters of activities	#	Accelerator Lead	7
<b>EXPECTED IMPACT 4: Cross-sector collaboration, creation of job opportunities and skills in cultural and creative sectors and innovative manufacturing linked to historic heritage</b>			
Number of products or services developed during the Accelerator programs for the eight HUB-IN pilot	#	number of services/products developed through the De-incubator - Action 2	1 - 2
<b>Transversal KPI 's for HUB-IN Impacts</b>			
Expected financial leverage to ensure the HUB-IN pilots' activities beyond the project lifespan (euros)	€	City Team	€ 1,000,000

Table 3: the indicators and data collection plan for HUB-IN's Common Indicators for cities to collect

## 4.5. FEEDBACK LOOPS (QUARTERLY HUB REVIEW AND REPORT)

HUB-IN's deliverables include Quarterly Evaluation Reports from each city on progress and learnings. At quarterly intervals, the Hub team can capture the most recent data for their indicators and review them in order to draw out key insights, turning points, developments and next steps.

The reports aim to cover topics including:

- **Activities and Outputs**

Progress to date on key tasks and identification of turning points (important moments where something changes that helps or hinders the realisation of goals).

- **Outcome and Impacts**

Key insights gained from the monitoring of impacts and outcomes. Tactical adaptations and priorities for the short- and medium-term to reach the Hub's long-term goals.

- **Deepening the Ecosystem**

A view of new situations in the HUA (e.g. new initiatives, projects, policies, financing options, stakeholders), and likely influence on the Hub's actions and goals.

- **Learning and Next Steps**

Reflecting on all of the above, what are the key learnings, how will the Hub incorporate this into future project activities - specific actions and next steps to take.

These reviews can be facilitated with a member(s) of the core Hub team preparing the latest view of monitoring data, and then holding a focus group session to gather inputs on the above topics from the core Hub team. The outputs then form the content of the D5.3 Quarterly Evaluation Report, submitted to WP5 by the end of each quarter. WP5 will also hold quarterly check-in calls with the Hub team to see how the monitoring is progressing and discuss any challenges or opportunities.

The findings from these quarterly reports input to the programme's D5.4 "Final Economic, Social and Environmental Appraisal Lessons Learned" and D5.5 "HUB-IN Guidebook" for future HUB-IN cities.

## 4.6. RISK AND LIMITATIONS

As is to be expected with any project, there are some limitations to monitoring inherent in the reality of what data is available, accessible and relevant to the specifics of the interventions (Action Plans). Relevant risks and limitations are presented below, in addition to general ones in D5.1 “Common Impact Assessment Framework”.

<b>Risk / limitation</b>	<b>Mitigation</b>
Some details and precise focus areas of the Action Plans (e.g. Sprout Tank) are yet to be finalised, as this depends on the nature and ambitions of the network, once formed. The lack of certainty is a barrier to identifying relevant indicators.	The Hub team will revisit and confirm indicators as more certainty comes to light on the nature and focus areas of the Action Plans, including the Sprout Tank.
Effort burden on cities for collecting monitoring data across up to four Action Plans, the HUA and the Grant Agreement indicators - constraints around available capacity and experience	Intention to make effort most effective for city teams by providing support on their monitoring plans: materials, suggested indicators and data sources, workshops on where to focus effort, templates and quarterly check-in calls. As Action Plans evolve cities may prioritise which indicators to monitor, and length of questionnaires / interviews etc. Although monitoring requires effort, the benefits should not be overlooked.
Challenges in quantifying the contribution or attribution of HUB-IN's action plans, due to challenges such as lack of appropriate data options or small groups etc (e.g. <10 supported SMEs in an Open Call)	Appropriate options for analysis discussed with cities as their Action Plans evolve. If there are existing historic datasets for the HUA (e.g. 10 years of past data in order to assess changes in trends), then these are collected - however there is often a lack of datasets at the right geographical boundaries or granularity. In cases where quantitative findings are not possible or realistic (e.g. due to small sample size or a lack of credible data), qualitative alternatives are considered (e.g. focus groups, interviews and qualitative case studies etc). A balance is intended between quantitative and qualitative findings.
Willingness of Hub stakeholders to participate in recurring iterative monitoring sessions and assessments (stakeholder fatigue).	Stakeholder fatigue is recognised as a risk. Rather than require all stakeholders to attend quarterly report focus groups, the sessions are designed primarily for the Hub team - they can review stakeholder data already provided and bring in stakeholders ad hoc as is appropriate to the topics discussed. Where appropriate, indicators in the Action Plans may involve interviews with these stakeholders, thus capturing insights at an appropriate time for the appropriate topic and minimising “standing requirements” for their repeated participation in reviews.

Table 4: risks and potential limitations of the monitoring



## 5. RESPONSIBILITIES & NEXT STEPS

Implementing the above occurs in line with the fuller details of the interventions contained with the Action Plans. Regarding monitoring, the key roles and timings are set out here.

### Key roles:

- **Sara Freitas, Susana Paulo, Susy Silva, Andre Martins, Mariana Cunha, Vera Gregório (Lisboa)** - owning the monitoring for the Hub in terms of data collection, analysis, interpretation and reporting
- **local stakeholders as needed** - for insights, participatory learnings and adaptations, to be brought in as and when is suitable by the Hub team
- **Chris Taylor (WP5)** - quarterly check-ins with the Hub team on monitoring progress and their D5.3 Quarterly Evaluation Reports

### Key dates for Hub teams:

<b>Planned launch date</b> <i>(dependent on implementation)</i>	<b>item</b>
May-23	De-incubator Entrepreneur Questionnaire first round - pre
May-23	Pop-up visitors - one-shot
May-23	Pop-up users questionnaires - pre
Jul-23	Case studies on stamps awarded
Jul-23	Castle Hill Network Focus Group
Aug-23	De-incubator Entrepreneur Questionnaire first round - post
Nov-23	Sprout Tank Network Questionnaires
Dec-23	De-incubator Entrepreneur Questionnaire second round - post
Dec-23	De-incubator Entrepreneur Questionnaire interviews - post
Jan-24	Pop-up users questionnaires - post

Jan-24	Pop-up users interviews - post
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- **by end June 2023** - Quarterly Evaluation Report completed & sent to WP5
- **by end Sep 2023** - Quarterly Evaluation Report completed & sent to WP5
- **by end Dec 2023** - Quarterly Evaluation Report completed & sent to WP5
- **by end Mar 2024** - Final Evaluation Report completed & sent to WP5. Final date for Hub teams to send data and insights for inclusion in the project's final monitoring report D5.4 "Final Economic, Social and Environmental Appraisal and Lessons Learned" and D5.5 "HUB-IN Guidebook".

## 6. APPENDIX

### 6.1. INDICATORS AND DATA COLLECTION DETAILS

The chosen indicators are grouped by Action Plan because this best aligns with the data collection owner:

Indicator			Data collection plan				
Indicator type	Indicator	Stakeholder groups benefitting	Unit	Data source	Frequency of measurement	Target	Data collection start date
<b>ACTION 1: IGNITE THE HILL BUILDING AN ENTREPRENEURSHIP AND INNOVATION NETWORK IN COLINA DO CASTELO</b>							
<b>OUTCOME: Strengthened networks of entrepreneurs, businesses and communities</b>							
Outcome indicators	Growth in number of CCI organisations active in the HUA	CCI	#	GeoTool	end of Action Plan	NA - to be discovered	pre- 2022 post- Jan 2024
	Growth in number of CCI innovative projects in the HUA	"	#	GeoTool	end of Action Plan	"	"
	Number of new projects/partnerships that come from the Match & Ignite event	"	#	Lisboa HUB-IN team	quarterly	"	Sep 2023
	Case studies on businesses with stamps awarded: what impact has the stamp had on them (sales, partnerships, networks, customers, financial sustainability etc)	"	qualitative	Lisboa HUB-IN team	yearly	"	Jul 2023 (before) - Jan 2024 (After)
	Change in the Castle Hill Network maturity ("before" and "after" focus groups)	Castle Hill Network	see below	focus group run by Lisboa Hub team	before and after the Action	"	Jul 2023 (before) - Jan 2024 (After)
	– perception on "cultural heritage is a public liability / cost"	"	qualitative	"	"	"	"
	– perceptions on network strength: density, diversity, spontaneity, value	"	"	"	"	"	"
	– perceptions on quality of knowledge exchange	"	"	"	"	"	"
	– perceptions on levels of co-operation	"	"	"	"	"	"
	– perceptions on strength of entrepreneurial spirit	"	"	"	"	"	"
Output indicators	– perceptions on ease of accessing local talent	"	"	"	"	"	"
	– examples of results, including joint collaborations	"	"	"	"	"	"
	– examples of Intellectual Property Rights developed	"	"	"	"	"	"
	– perceptions on effects from HUB-IN: attribution, displacement, leakage	"	"	"	"	"	"
	Number of projects, entrepreneurs, businesses & spaces mapped in the tool	"	#	GeoTool	quarterly	"	Sep 2023
	Number of businesses signed up to the tool	"	#	GeoTool	quarterly	"	Sep 2023
	Number of unique users	"	#	GeoTool	quarterly	"	Sep 2023
	Number and types of target groups that participate in the Match & Ignite events	"	#	Mouraria Creative Hub	before and after	"	Jul 2023
	Number of stamps awarded (split by business size and sector)	"	#	Lisboa HUB-IN team	yearly	"	Sep 2023
	Number of collaboration meetings created as a result of the Match & Ignite events	"	#	Mouraria Creative Hub	quarterly	"	Jul 2023

Indicator			Data collection plan				
Indicator type	Indicator	Stakeholder groups benefitting	Unit	Data source	Frequency of measurement	Target	Data collection start date
<b>Action 2: "De-Incubator" - "decentralised" &amp; "dematerialized" incubator for innovative projects</b>							
<b>OUTCOME: Accelerated growth for incubated entrepreneurs (revenues, jobs, etc)</b>							
Outcome indicators	Change in business skills and innovation ("before" and "after" questionnaires of the entrepreneurs)	the supported entrepreneurs (not organisations)	(see below)	De-incubator survey	Before and at the end of the acceleration program	NA - to be discovered	May 23
	– progression of innovations from idea to prototype to launch stage	"	checklist	"	"	"	"
	– growth in skills in product development, co-creation with local communities, Customer Discovery, Prototyping and Testing, Business and Investment Pitch, Entrepreneurship and innovation that is environmentally sustainable, Entrepreneurship and innovation that preserves or exploits cultural heritage	"	1-5 scores	"	"	"	"
	– improvement in plans to headquarter / operate in the HUA	"	checklist	"	"	"	"
	– plans to expand services due to the support	"	qualitative	"	"	"	"
	– lessons learned - what went well, not so well, suggestions	"	%	"	"	"	"
	– perceptions on attribution (i.e. what proportion of change is due to the support)	"	1-5 scores	"	"	"	"
Output indicators	Number of services / products developed through the De-Incubator	"	#	Mouraria Creative Hub	At the end of the acceleration program	1-2	30 Jun 24
	Number of entrepreneurs receiving support - mentoring events, workshops, master classes and networking	"	#	"	half-yearly	9-10	01 Sep 23

Indicator			Data collection plan				
Indicator type	Indicator	Stakeholder groups benefitting	Unit	Data source	Frequency of measurement	Target	Data collection start date
<b>Action 3: Colina do Castelo Pop Up Space: a multifunctional space for Lisbon's creative &amp; sustainable urban regeneration solutions</b>							
<b>OUTCOME: Increased preservation and exploitation of cultural assets</b>							
<b>OUTCOME: Awareness of efficient resource use (water, energy) from communities</b>							
Outcome indicators ▾	Extent of exploitation of the pop-up model in other heritage buildings	local community and organisations	# of organisations planning to replicate	Pre- and post-questionnaire	At the end of usage	NA - to be discovered	May 23
	Change in pop-up user awareness, business benefits and skills (pre and post-questionnaire):	local organisations (pop-up space users)	(see below)	"	"	"	May 23
	– development of knowledge on local culture: fado	"	1-5 scores	"	"	"	"
	– development of knowledge on local culture: local culinary experience	"	1-5 scores	"	"	"	"
	– perceptions of the area as welcoming for local communities	"	1-5 scores	"	"	"	"
	– perceptions of the area as socially inclusive of diverse migrant populations	"	1-5 scores	"	"	"	"
	– growth in visibility of products	"	1-5 scores	"	"	"	"
	– business type, sector, demographics of owner	"	checklist	"	"	"	"
	– lessons learned - what went well, not so well, suggestions	"	qualitative	"	"	"	"
	– plans to replicate pop-up in other buildings	"	1-5 scores	"	"	"	"
	– benefits and challenges of cultural pop-ups	"	qualitative	"	"	"	"
	– business benefits from participation (sales, brand, networks etc)	"	checklist	"	"	"	"
	– skills improved from participation	"	checklist	"	"	"	"
	Learnings: focus group on what worked well, what worked not so well, lessons learned, how to upscale the pop-ups, replicate, how did the pop-up meet their expectations (or not) etc	pop-up space users	[per focus group discussion; peer review session]	Focus group	end of pop up	"	February 2024
	Change in pop-up visitor awareness, business and skills:	local community		Single snapshot survey	After the visit of the pop up space	"	May 23
	– proportion new to the HUA	"	1-5 scores	"	"	"	"
	– improvement of the pop-up on awareness of local culture: fado	"	"	"	"	"	"
	– improvement of the pop-up on awareness of local culture: local culinary experiences	"	"	"	"	"	"
	– perceptions of the area as welcoming for local communities	"	"	"	"	"	"
	– perceptions of the area as socially inclusive of diverse migrant populations	"	"	"	"	"	"
	– improvement in quality of local commerce	"	"	"	"	"	"
	– improvement in skills or awareness of [energy/water/material efficiency]	"	"	"	"	"	"
	– demographics	"	(demographics)	"	"	"	"
Output indicators ▾	Number of partnerships/users	HUB IN partners (associations, fellows, Creative HUB residents)	#	Lisboa HUB-IN team	Mid term and final	3	May 23
	Number of initiatives	visitors, partners, local community	#	Lisboa HUB-IN team	Mid term and final	5-10	"
	Number of visitors	"	#	"	"	80-120	"
	Number of products/services displayed	"	#	"	"	10-20	"



Indicator			Data collection plan				
Indicator type	Indicator	Stakeholder groups benefitting	Unit	Data source	Frequency of measurement	Target	Data collection start date
<b>Action 4: "Sprout Tank": Experimentation for a circular and climate neutral Colina do Castelo</b>							
<b>OUTCOME: Improved knowledge &amp; exp. on climate neutral solutions in HUAs</b>							
Outcome indicators	<b>Change in network and knowledge maturity of the knowledge sharing community</b>	Knowledge sharing community	(see below)	pre- and post-questionnaires	after 2/3 of the project	NA - to be discovered	Nov / Dec 2023 Feb 2024
	– perceptions on network strength: density, diversity, spontaneity, value	"	qualitative	"	"	"	"
	– perceptions on quality of knowledge exchange	"	qualitative	"	"	"	"
	– perceptions on levels of co-operation	"	qualitative	"	"	"	"
	– perceptions on strength of entrepreneurial spirit	"	qualitative	"	"	"	"
	– impact of Sprout Tank on overcoming barriers	"	qualitative	"	"	"	"
	– quality of learnings and evidence established	"	qualitative	"	"	"	"
	– expected scalability of the solutions trialled	"	qualitative	"	"	"	"
	– contribution to circularity	"	qualitative	"	"	"	"
	– perceptions on effects from HUB-IN: attribution, displacement, leakage	"	qualitative	"	"	"	"
	Funding generated for new actions related with Hub Ecosystem	General HUA	€	Lisboa HUB-IN team	quarterly	"	March 2023
	<b>Results of the Sprout Tank via interviews</b>		qualitative	post-interviews	post-	"	Jan 2024
Output indicators	Number dissemination initiatives of the knowledge created (research publications, blogs or other specialist websites)	General HUA	#	"	"	"	ongoing
	Number of organisations involved	Knowledge sharing community	#	"	Mid term and final	"	Mid-tem: Oct 2023, Final: March 2024
	Type of organisations involved, per type (quadruple helix)	"	#	"	"	"	"
	Number of initiatives that create bridges between the Hub ecosystem and climate action	"	#	"	"	"	"
	Number of identified synergies and opportunities that promote creative solutions in the field of climate resilience and circularity	"	#	"	"	"	"
	Entities involved in the climate action Ecosystem initiatives	"	#	"	"	"	"
	Number and type of experimental activities promoted through "Sprout Tank"	"	#	"	"	1-3	"

## 6.2. INDICATORS BY ECONOMIC, ENVIRONMENTAL, SOCIAL, CULTURAL DIMENSION

In this view, the chosen indicators are categorised according to economic, environmental, social or cultural dimensions:

Indicator			Dimension			
Indicator type	Indicator	Stakeholder groups benefitting	Economic	Environmental	Social	Cultural
<b>ACTION 1: IGNITE THE HILL BUILDING AN ENTREPRENEURSHIP AND INNOVATION NETWORK IN COLINA DO CASTELO</b>						
<b>OUTCOME: Strengthened networks of entrepreneurs, businesses and communities</b>						
Outcome indicators	Growth in number of CCI organisations active in the HUA	CCI	Y			
	Growth in number of CCI innovative projects in the HUA	"	Y	Y	Y	Y
	Number of new projects/partnerships that come from the Match & Ignite event	"	Y			
	Case studies on businesses with stamps awarded: what impact has the stamp had on them (sales, partnerships, networks, customers, financial sustainability etc)	"	Y			
	Change in the Castle Hill Network maturity ("before" and "after" focus groups)	Castle Hill Network				
	– perception on "cultural heritage is a public liability / cost"	"				Y
	– perceptions on network strength: density, diversity, spontaneity, value	"	Y			
	– perceptions on quality of knowledge exchange	"	Y			
	– perceptions on levels of co-operation	"	Y			
	– perceptions on strength of entrepreneurial spirit	"	Y			
	– perceptions on ease of accessing local talent	"	Y		Y	
	– examples of results, including joint collaborations	"	Y			
	– examples of Intellectual Property Rights developed	"	Y			
	– perceptions on effects from HUB-IN: attribution, displacement, leakage	"				
Output indicators	Number of projects, entrepreneurs, businesses & spaces mapped in the tool	"				
	Number of businesses signed up to the tool	"				
	Number of unique users	"				
	Number and types of target groups that participate in the Match & Ignite events	"				
	Number of stamps awarded (split by business size and sector)	"				
	Number of collaboration meetings created as a result of the Match & Ignite events	"				

Indicator			Dimension			
		Stakeholder groups benefitting	Economic	Environmental	Social	Cultural
Indicator type	Indicator					
<b>Action 2: "De-Incubator" - "decentralised" &amp; "dematerialized" incubator for innovative projects</b>						
<b>OUTCOME: Accelerated growth for incubated entrepreneurs (revenues, jobs, etc)</b>						
Outcome indicators ▾	Change in business skills and innovation ("before" and "after" questionnaires of the entrepreneurs)	the supported entrepreneurs (not organisations)	Y			
	– progression of innovations from idea to prototype to launch stage	"	Y			
	– growth in skills in product development, co-creation with local communities, Customer Discovery, Prototyping and Testing, Business and Investment Pitch, Entrepreneurship and innovation that is environmentally sustainable, Entrepreneurship and innovation that preserves or exploits cultural heritage	"	Y			
	– improvement in plans to headquarter / operate in the HUA	"	Y			
	– plans to expand services due to the support	"	Y			
	– lessons learned - what went well, not so well, suggestions	"				
	– perceptions on attribution (i.e. what proportion of change is due to the support)	"				
Output indicators ▾	Number of services / products developed through the De-Incubator	"				
	Number of entrepreneurs receiving support - mentoring events, workshops, master classes and networking	"				

Indicator			Dimension			
Indicator type	Indicator	Stakeholder groups benefitting	Economic	Environmental	Social	Cultural
<b>Action 3: Colina do Castelo Pop Up Space: a multifunctional space for Lisbon's creative &amp; sustainable urban regeneration solutions</b>						
<b>OUTCOME: Increased preservation and exploitation of cultural assets</b>						
<b>OUTCOME: Awareness of efficient resource use (water, energy) from communities</b>						
Outcome indicators ▾	Extent of exploitation of the pop-up model in other heritage buildings	local community and organisations				Y
	Change in pop-up user awareness, business benefits and skills (pre and post-questionnaire):	local organisations (pop-up space users)				
	– development of knowledge on local culture: fado	"				Y
	– development of knowledge on local culture: local culinary experience	"				Y
	– perceptions of the area as welcoming for local communities	"			Y	Y
	– perceptions of the area as socially inclusive of diverse migrant populations	"			Y	Y
	– growth in visibility of products	"	Y			
	– business type, sector, demographics of owner	"	Y			
	– lessons learned - what went well, not so well, suggestions	"				
	– plans to replicate pop-up in other buildings	"				Y
	– benefits and challenges of cultural pop-ups	"				
	– business benefits from participation (sales, brand, networks etc)	"	Y			
	– skills improved from participation	"			Y	
	Learnings: focus group on what worked well, what worked not so well, lessons learned, how to upscale the pop-ups, replicate, how did the pop-up meet their expectations (or not) etc	pop-up space users				
	Change in pop-up visitor awareness, business and skills:	local community				
	– proportion new to the HUA	"			Y	Y
	– improvement of the pop-up on awareness of local culture: fado	"				Y
	– improvement of the pop-up on awareness of local culture: local culinary experiences	"				Y
	– perceptions of the area as welcoming for local communities	"			Y	Y
	– perceptions of the area as socially inclusive of diverse migrant populations	"			Y	Y
	– improvement in quality of local commerce	"	Y			
	– improvement in skills or awareness of [energy/water/material efficiency]	"		Y		
	– demographics	"				

Indicator		Dimension				
Indicator type	Indicator	Stakeholder groups benefitting	Economic	Environ-mental	Social	Cultural
Action 4: “Sprout Tank”: Experimentation for a circular and climate neutral Colina do Castelo						
OUTCOME: Improved knowledge & exp. on climate neutral solutions in HUAs						
Outcome indicators ▾	Change in network and knowledge maturity of the knowledge sharing community	Knowledge sharing community				
	– perceptions on network strength: density, diversity, spontaneity, value	"	Y			
	– perceptions on quality of knowledge exchange	"	Y			
	– perceptions on levels of co-operation	"	Y			
	– perceptions on strength of entrepreneurial spirit	"	Y			
	– impact of Sprout Tank on overcoming barriers	"		Y	Y	Y
	– quality of learnings and evidence established	"	Y	Y	Y	Y
	– expected scalability of the solutions trialled	"	Y	Y	Y	Y
	– contribution to circularity	"		Y		
	– perceptions on effects from HUB-IN: attribution, displacement, leakage	"				
	Funding generated for new actions related with Hub Ecosystem	General HUA	Y			
	Results of the Sprout Tank via interviews		Y	Y	Y	Y
Output indicators ▾	Number dissemination initiatives of the knowledge created (research publications, blogs or other specialist websites)	General HUA				
	Number of organisations involved	Knowledge sharing community				
	Type of organisations involved, per type (quadruple helix)	"				
	Number of initiatives that create bridges between the Hub ecosystem and climate action	"				
	Number of identified synergies and opportunities that promote creative solutions in the field of climate resilience and circularity	"				
	Entities involved in the climate action Ecosystem initiatives	"				
	Number and type of experimental activities promoted through “Sprout Tank”	"				



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