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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, Brașov, 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





































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2. CONTEXT AND INPUTS

2.1. ABOUT THIS DOCUMENT

This document proposes the methodology for understanding and improving the benefits of Nicosia'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, for example for:

HUB-IN Framework the vision, values, concepts and synchronised actions

cities take towards being 'HUB-IN Places'

Current Landscape the common HUB-IN narrative for the point the cities are

starting from

Entrepreneurial the key elements and dynamics of heritage-based

Ecosystem entrepreneurial ecosystems within Historic Urban Areas

Roadmap the overarching vision, values and missions of each Hub,

offering numerous project options to address those

Action Plans the selected interventions being implemented, with

specific goals, outcomes, steps and timelines

and more 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

o 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.

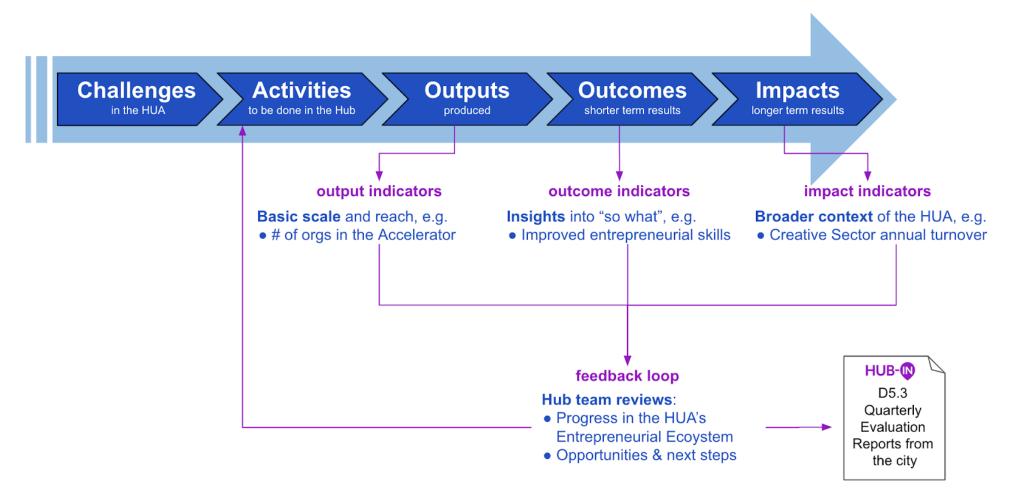


Figure 1: high level depiction of using a Theory Of Change logic model to identify where cities may most effectively blend their monitoring and evaluation effort for relevant and insightful monitoring. Details on Theory of Change and logic models are not duplicated here - for further reading see "D5.1"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

Ecosystem Element	Expected Outcomes
Heritage	 more accessible history and cultural heritage of the city improved knowledge of the HUA's history for residents, visitors, tourists improved attractiveness of the HUA
Physical & digital infrastructures	• [none yet / covered by other outcomes]
Marketplace / demand	increased footfall and improved visibility for local CCIimproved tourism offer
Support organisations	• [none yet / covered by other outcomes]
Human resources	• [none yet / covered by other outcomes]
Knowledge	• [none yet / covered by other outcomes]
Finance	• [none yet / covered by other outcomes]
Leadership	• [none yet / covered by other outcomes]

Urban culture	 improved sense of public realm and neighbourhood pride increased potential for spontaneous neighbourly interactions
Entrepreneurial culture	 increased awareness of residents & businesses of local CCI connections improved qualifications, skills and collaborations of CCI firms improved skills and training in old and new methods new products, services and collaborations in CCI increased number of start-ups in CCI
Networks	• [none yet / covered by other outcomes]
Formal institutions	• [none yet / covered by other outcomes]

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 Nicosia'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.

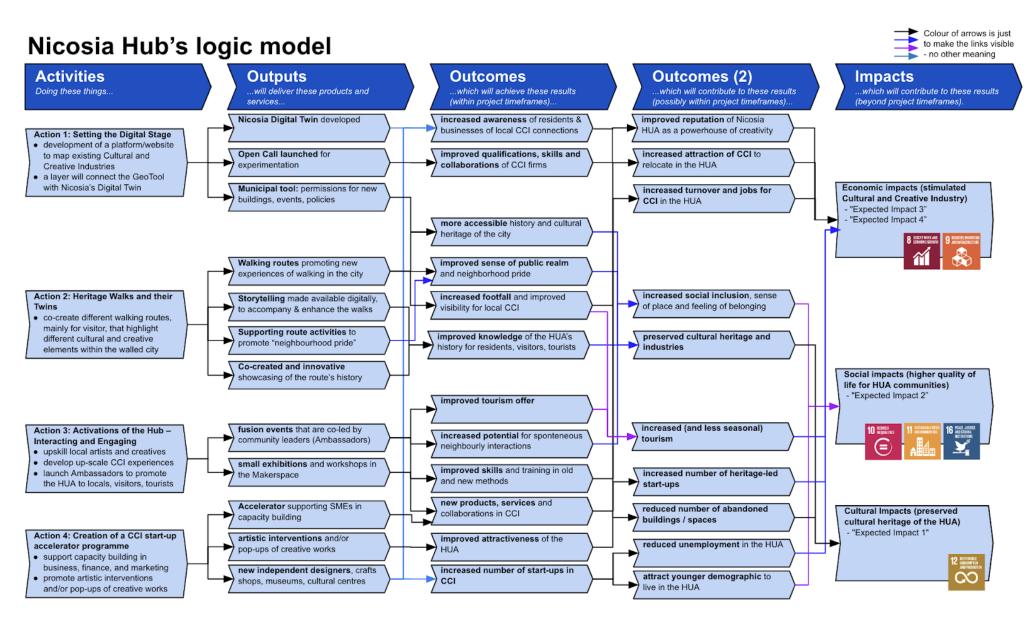


Figure 2: Nicosia's logic model, illustrating the change pathways for the specific Action Plans' intended outcomes. This guides subsequent identification of monitoring indicators for priority outcomes.

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 Nicosia, the prioritised outcomes selected were:

- Increased awareness on presence of CCI & their interconnections
- Improved knowledge of the HUA's history for residents, visitors, tourists
- Improved skills and training in old and new methods
- New products, services and collaborations in CCI

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: SETTING THE DIGITAL STAGE

Outcome indicator: Increased awareness on presence of CCI & their interconnections		
Municipal statistics (historic from 2013)		
Purpose	To obtain insights into the longer term broader change within the HUA regarding CCI sector development.	
Indicators	From municipal statistics:	
Tools	The City monitoring folder contains a dashboard for calculating the expected trendline of historic data and comparing it against actuals in the coming years - depending on the existence of other confounding variables, this can give an indication of change since the HUB-IN intervention.	
Analysis	The Hub team can review the comparison of Expected Value (forecasted using historic data) against Actual in the coming years, to determine the net difference. Conversations with key stakeholders may reveal the extent to which any change is due to HUB-IN rather than other factors.	
Limitations	Changes in these datasets can not be attributed to HUB-IN, as they are subject to numerous other factors. The data is also spread across multiple fragmented sources or requires door-to-door surveys, which requires a small team of interns to complete the analysis (TBC).	
Digital Twin Focus Groups (pre- May 2023, post- January 2024)		
Purpose	To obtain insights into the effect of the HUB-IN data on the digital twin, in terms of new decisions / insights / connections made.	
Study design	Pre- and post- focus groups with the Digital Twin team and researchers, held pre- and post- to compare aspirations with findings.	

Indicators	 The focus groups with the Digital Twin team and researchers explore: how is HUB-IN data expected to help what decisions would it enable how does it improve over existing content what does the mapping of CCI network open in terms of applications and other possibilities for the digital twin what other mappings, new ideas and directions does it unlock how does the geographic mapping of CCI help to interpret and promote this sector how has the data helped the CCI sector to understand who is around and what connections can be made
Analysis	Focus group analysis on key insights and differing viewpoints.

Output indicator (from May 2023)	s
Purpose	To support the outcome above with evidence of the scale and nature of the CCI network
Indicators	From Hub team / GeoTool: Number of CCIs involved/mapped in GeoTool Number of visits of the digital platform/website of the inventory
Analysis	Simple tracking of the figures each quarter.

ACTION 2: HERITAGE WALKS AND THEIR TWINS

Outcome indicator: Improved knowledge of the HUA's history for residents, visitors, tourists		
Municipal statistics (historic from 2013)		
Purpose	To obtain insights into the longer term broader change within the HUA regarding tourism.	
Indicators	From Nicosia Tourist Board Tourist visitors to the HUA per quarter - domestic tourist as well as foreigners Average tourist visit spend	
Tools	The City monitoring folder contains a dashboard for calculating the expected trendline of historic data and comparing it against actuals in the coming years - depending on the existence of other confounding variables, this can give an indication of change since the HUB-IN intervention.	
Analysis	The Hub team can review the comparison of Expected Value (forecasted using historic data) against Actual in the coming years, to determine the net difference. Conversations	

	with key stakeholders may reveal the extent to which any change is due to HUB-IN rather than other factors.	
Limitations	Changes in these datasets can not be attributed to HUB-IN, as they are subject to numerous other factors. However, they can still provide context.	
Trail Designer Int (from July 2023)	terviews	
Purpose	To obtain insights into the effect of the trail on cultural awareness and connections amongst the co-designers.	
Study design	Interviews with 5-10 co-creators (archaeologists, heritage professionals, creatives, researchers).	
Indicators	The co-creators (archaeologists, heritage professionals, creatives, researchers) asked on: • learnings, insights and connections gained by co- designing the trail • how the trail connects creativity, entrepreneurship, heritage	
Analysis	Analysis on interview findings.	
Trail Walker Questionnaire (from September 2023)		
Purpose	To obtain insights into the effect of the trail on cultural awareness and visitorship of local heritage sites.	
Study design	Hub staff / volunteers / students may be required to walk the trail and engage with walkers to conduct a short survey - or this may be conducted at the trail's public launch event (September 2023).	
Indicators	The survey may ask on: change in awareness of local heritage and CCI of the trailwalkers daily expenditure change in awareness of / intentions to visit of local heritage sites change in sense of public realm and neighbourhood pride origin motivations for visiting the trail suggestions for improvements, events that help them involve more in culture (is the trail filling a gap) demographics (age, gender, etc) attribution (if trail did not exist would they have still visited) displacement (is the trail "competing" with other areas / sites for their spend	
	Local heritage sites and CCI are also to be consulted on whether they have seen more footfall and business since the trails opened.	
Analysis	Survey results can be analysed for averages, insights into demographics and motivations. If there is data on total annual trail walkers (e.g. by sensor) then findings can be aggregated up to give annual expenditure etc.	
Limitations	In ideal scenarios, interns and volunteer researchers could contribute time to conduct several hundred interviews, to assist with statistically significant results. In reality, the HUb team is likely to see what is possible within given resource.	

Output indicator (from Sept 2023)	S
Purpose	To support the outcome above with evidence of the scale and nature of the trails.
Indicators	From the digital twin team / municipality: Number of walks created Number of landmarks connected through the walks Number of events/dissemination activities (online & physical)
Analysis	Simple tracking of the figures each quarter.

ACTION 3: ACTIVATIONS OF THE HUB - INTERACTING AND ENGAGING

Outcome indica	tor: improved skills and training in old and new methods
Event Attendee Interview (from June 2023)	
Purpose	To obtain insights into the experiences and behaviours of attendees to the events.
Study design	Hub team can conduct follow up interviews with a selection of event participants on how the events change their experience, rates of civic participation, if they plan to visit the HUA again
Indicators	The interviews ask on: development of skills due to the workshops plans to use the skills in business / entrepreneurship / other how the events changed their experience of local culture how the events changed their rates of civic participation if they plan to visit the HUA again as a result demographics / place of origin
Privacy	Respondents opt-in to answering, are provided a privacy statement on how their data is used (e.g. all reporting is anonymised and aggregated).
Analysis	Interview analysis to extract key insights. Additionally, interviewees can be followed up with in X months (if they agree) to capture any results of their new skill. Worth noting that this will likely be after the end of the project but could still be of interest to the Nicosia team.
Event Attendee QR Code Questionnaires (from June 2023)	
Purpose	To obtain insights into the experiences and behaviours of attendees to the events.
Study design	A flyer / poster / tablet with QR codes can be posted in the events, linking to a survey with 3 or 4 questions:
Indicators	 demographics (age, gender) if professional, industry they are in

	 scoring on the extent to which they learned new skill (1-5) responses on how will they do things differently as a result (free text)
Analysis	Analysis of aggregate questionnaire results.

Output indicators (from June 2023)					
Purpose	To support the outcome above with evidence of the scale and nature of the workshops.				
Indicators	From Hub team: • Number of events/workshops, and attendees • Number of members of Ambassadors network, split by age, gender, location of Nicosia				
Analysis	Simple tracking of the figures each quarter.				

ACTION 4: ACTION 4: CREATION OF A CCI START-UP ACCELERATOR PROGRAMME

Outcome indica	Outcome indicator: New products, services and collaborations in CCI						
Accelerator Que	estionnaire Pre- and Post-						
Purpose	To obtain insights into development inskills, business maturity and entrepreneurship of the supported organisations.						
Study design	re- and post- questionnaire to all supported organisations.						
Indicators	The questionnaire asks the organisations for responses that show the change between pre- and post-, for example on: • extent heritage is embedded in products • progression of innovations from idea to prototype to launch stage • growth in skills in product development, co-creation with local communities etc • improvement in plans to headquarter / operate in the HUA • plans to expand services due to the support • lessons learned - what went well, not so well, suggestions • perceptions on attribution (i.e. what proportion of change is due to the support) • demographics (age, gender, etc) • additionality (to what extent any reported change is due to the Accelerator)						
Privacy	Respondents opt-in to answering, are provided a privacy statement on how their data is used (e.g. all reporting is anonymised and aggregated), and are not required to give name or identification details.						
Analysis	The Hub team (or colleagues proficient in data analysis) can review the questionnaire results for difference in pre- and post- responses.						

Output indicator (from Nov 2023)	S
Purpose	To support the outcome above with evidence of the scale and nature of the Accelerator
Indicators	From Hub team: case studies of the products / services Number, age, gender, city of origin of participants of Accelerator programme
Analysis	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.

	Description		Data collection	
Type (short-term or long-term)	Pescription	Unit	Data source (City Team owns collection)	Target
EXPECTED IMPA	CT 1: Reversing trends of abandonment and neglect of historic heritage in urban areas and landscapes			
Short-term	Number of Local Associations and Local Community Groups committed with HUB-IN at the local level from each HUB-IN pilot	#	Action Plan	10-15
Short-term	Number of initiatives designed and developed in each HUB-IN pilot for the regeneration of places & people	#	Action Plan	3-6
Short-term	Number of local stakeholders participating in each co-creation workshop to co-design the tailored roadmaps	# per workshop	City team	25-35
Short-term	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	#	(WP4- modular package I – Invention)	24-42
	CT 2: New and tested blueprints for the socially and economically viable regeneration of European HUAs and cultural landscapes, with enha			25 - 35
Short-term	Number of local stakeholders participating in the development of HUB-IN pilot Action Plans	# per workshop	City team	
Short-term		0/ !!+!+!	,	
Short-term	* % of women and elderly residents engaged in the initiatives for the regeneration of places & people * Number of external local projects or programmes linked to the eight HIB-IN pilots for possible cross fertilization	% per initiative #	Community survey / Trail-walk questionnaire	30 - 40
Short-term	Number of external local projects or programmes linked to the eight HUB-IN pilots for possible cross fertilization	#	,	
EXPECTED IMPA	* Number of external local projects or programmes linked to the eight HUB-IN pilots for possible cross fertilization CT 3: Boosting heritage and culture-relevant innovation, creativity, entrepreneurship and light 'reindustrialization' of HUAs and cultural land	#	Community survey / Trail-walk questionnaire Action Plan	30 - 40 15
EXPECTED IMPA Short-term	 Number of external local projects or programmes linked to the eight HUB-IN pilots for possible cross fertilization CT 3: Boosting heritage and culture-relevant innovation, creativity, entrepreneurship and light 'reindustrialization' of HUAs and cultural land Number of ideas or solutions explored or prototyped during the invention process in the eight HUB-In pilot 	#	Community survey / Trail-walk questionnaire Action Plan (WP4- modular package I – Invention)	30 - 40 15
EXPECTED IMPA	 Number of external local projects or programmes linked to the eight HUB-IN pilots for possible cross fertilization CT 3: Boosting heritage and culture-relevant innovation, creativity, entrepreneurship and light 'reindustrialization' of HUAs and cultural land Number of ideas or solutions explored or prototyped during the invention process in the eight HUB-In pilot Number of ideas or solutions explored during the Accelerator programs in the eight HUB-IN pilots 	#	Community survey / Trail-walk questionnaire Action Plan (WP4- modular package I – Invention) Accelerator questionnaire	30 - 40 15
EXPECTED IMPA Short-term	 Number of external local projects or programmes linked to the eight HUB-IN pilots for possible cross fertilization CT 3: Boosting heritage and culture-relevant innovation, creativity, entrepreneurship and light 'reindustrialization' of HUAs and cultural land Number of ideas or solutions explored or prototyped during the invention process in the eight HUB-In pilot 	#	Community survey / Trail-walk questionnaire Action Plan (WP4- modular package I – Invention)	30 - 40 15
EXPECTED IMPA Short-term Short-term Long-term	 Number of external local projects or programmes linked to the eight HUB-IN pilots for possible cross fertilization CT 3: Boosting heritage and culture-relevant innovation, creativity, entrepreneurship and light 'reindustrialization' of HUAs and cultural land Number of ideas or solutions explored or prototyped during the invention process in the eight HUB-In pilot Number of ideas or solutions explored during the Accelerator programs in the eight HUB-IN pilots 	# scapes # #	Community survey / Trail-walk questionnaire Action Plan (WP4- modular package I – Invention) Accelerator questionnaire	30 - 40 15
EXPECTED IMPA Short-term Short-term Long-term	 Number of external local projects or programmes linked to the eight HUB-IN pilots for possible cross fertilization CT 3: Boosting heritage and culture-relevant innovation, creativity, entrepreneurship and light 'reindustrialization' of HUAs and cultural land Number of ideas or solutions explored or prototyped during the invention process in the eight HUB-In pilot Number of ideas or solutions explored during the Accelerator programs in the eight HUB-IN pilots # of start-ups offering solutions or services related with the three strategic clusters of activities 	# scapes # #	Community survey / Trail-walk questionnaire Action Plan (WP4- modular package I – Invention) Accelerator questionnaire	30 - 40 15
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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".

Risk / limitation	Mitigation
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:

- Marina Kyriaku, Charis Theocharous (Nicosia) 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:

Planned launch date (dependent on implementation times)	Item
May-23	Digital Twin focus groups - pre
Jul-23	Trail Designer Interviews
Jun-23	Event Attendee Interviews
Jun-23	Event Attendee QR codes
Sept-23	Trail Walker Questionnaire
Nov-23	Accelerator - pre
Jan-24	Accelerator - post
Jan-24	Digital Twin focus groups - post

- 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:

	Description		Data collection plan					
Indicator type	Indicator	Stakeholder groups benefitting	Unit	Data source	Frequency of measurement	Target	Data collection start date	
ACTION 1: SETTING	THE DIGITAL STAGE							
	ed awareness on presence of CCI & their interconnections							
	annual turnover (10 year historic)	ССІ	€	Municipal statistics	annual	NA	2013	
	annual jobs (10 year historic)	II .	#	Municipal statistics	annual	NA	2013	
	annual number of CCI organisations (growth since 2018)	u .	#	CYENS	annual	NA	2018	
	annual rates of opening and closing CCI firms (since 2008)	u .	%	CYENS	annual	NA	2013	
Outcome indicator.	The focus groups with the Digital Twin team and researchers explore: - how is HUB-IN data expected to help - what decisions would it enable - how does it improve over existing content - what does the mapping of CCI network open in terms of applications and other possibilities for the digital twin - what other mappings, new ideas and directions does it unlock? - how does the geographic mapping of CCI help to interpret and promote this sector - how has the data helped the CCI sector to understand who is around and what connections can be made		qualitative	Focus group	post-	NA	Pre: May 2023, Post: Jan 2024	
Output indicators	Number of CCIs involved/mapped in GeoTool	н	number	mapping	once a year	100	01 May 23	
	Number of visits of the digital platform/website of the inventory	п	number	platform/website	every 3 months	800	01 Sep 23	

	Description			Dat	a collection p	lan	
Indicator type	Indicator	Stakeholder groups benefitting	Unit	Data source	Frequency of measurement	Target	Data collection start date
	WALKS AND THEIR TWINS d knowledge of the HUA's history for residents, visitors, tourists						
Impact indicators	Tourist visitors to the HUA per quarter - domestic tourist as well as foreigners	CCI, businesses, visitors	#	Nicosia Tourism Board	annual	NA	2013
	Average tourist visit spend	п	#	Nicosia Tourism Board	annual	NA	latest available
Outcome indicator. *	Change in number of visitors to local museums (5 year historic trend - estimates only)	11	#	Sensors+question naire	annual	NA	01 Jun 23
	Change in awareness of local heritage and CCI of the trailwalkers: - expenditure - origin - demographics - attribution, displacement	CCI, Businesses,visitors	Likert (1-5)	post-walk questionnaire	ongoing	NA NA	01 Jan 24
	Number, City of Origin, Gender, Age of participants (who do the walks) and also whether they would do the walks again	Tourists / visitors	#	digital twin and DeepNic	every three months	500	01 Sep 23
Output indicators 🔻	Number of walks created	Residents, Visitors, CCI, Municipality, Tourism agents	#	digital twin	once	3	01 Sep 23
	Number of landmarks connected through the walks	п	#	digital twin	every three months	NA	01 Sep 23
	Number of events/dissemination activities (online & physical)	CCI, Businesses, visitors	#	municipality/ CEA	every three months	dissmination	01 Jun 23

	Description			Dat	a collection pl	an	
		Stakeholder groups			Frequency of		Data collection
Indicator type	Indicator	benefitting	Unit	Data source	measurement	Target	start date
	ONS OF THE HUB - INTERACTING AND ENGAGING						
	ed skills and training in old and new methods		(4.5)				
Outcome indicator:	Follow up interviews with participants on how the events change their experience, rates of civic participation, if visit the HUA again	"	Likert (1-5)	interviews	post-event	NA	June 2023
Output indicators	Number of events/workshops	Residents, Visitors, CCI,	number	municipality /CEA	every three	4	June 2023
	Number of members of Ambassadors network, split by age, gender,	Residents	number	municipality/CEA	every three	5	01 Sep 23
	location of Nicosia	/municipality/city			months		
ACTION 4: CREATIO	N OF A CCI START-UP ACCELERATOR PROGRAMME						
OUTCOME: New pro	oducts, services and collaborations in CCI						
Outcome indicator.	Number of new products/services in CCI	startups, individuals, city	number	municipality /	every three	NA	Nov 2023
				CYENS	months		
	Change in business skills and innovation ("before" and	II .	(see below)	Accelerator	pre- and post-	NA	Nov 2023
	"after"questionnaires of the entrepreneurs)			questionnaire			
	 extent heritage is embedded in the new products 	II .	Likert (1-5)	п	II .	NA	Nov 2023
	- progression of innovations from idea to prototype to launch stage	"	Likert (1-5)	п	н	NA	Nov 2023
	 growth in skills in product development, co-creation with local 	"	Likert (1-5)	п	п	NA	Nov 2023
	 improvement in plans to headquarter / operate in the HUA 	"	Likert (1-5)	"	"	NA	Nov 2023
	 plans to expand services due to the support 	"	Likert (1-5)	п	н	NA	Nov 2023
	 lessons learned - what went well, not so well, suggestions 	"	qualitative	п	11	NA	Nov 2023
	- perceptions on attribution (i.e. what proportion of change is due to the	"	checklist	ıı ı	п	NA	Nov 2023
	support)						
Output indicators	case studies of the products / services	п	qualitative	11	11	NA	Nov 2023
	Number, age, gender, city of origin of participants of Accelerator	start-ups, CCI,	number	municipality	every three	NA	Nov 2023
	programme	indivuiduals, city			months		

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:

	Description			Dime	nsion	
Indicator type	Indicator	Stakeholder groups benefitting	Economic	Environ- mental	Social	Cultural
ACTION 1: SETTING						
	d awareness on presence of CCI & their interconnections	CCI	l v			v
Impact indicators *	annual turnover (10 year historic)	CCI	Υ			Υ
	annual jobs (10 year historic)	"	Υ			Υ
	annual number of CCI organisations (growth since 2018)	II .	Υ			Υ
	annual rates of opening and closing CCI firms (since 2008)	п	Υ			Υ
Outcome indicator.	The focus groups with the Digital Twin team and researchers explore: how is HUB-IN data expected to help what decisions would it enable how does it improve over existing content what does the mapping of CCI network open in terms of applications and other possibilities for the digital twin what other mappings, new ideas and directions does it unlock? how does the geographic mapping of CCI help to interpret and promote this sector how has the data helped the CCI sector to understand who is around and what connections can be made		Y			Y
Output indicators *	Number of CCIs involved/mapped in GeoTool	п				
,	Number of visits of the digital platform/website of the inventory	II .				

		Description			Dime	nsion	
			Stakeholder groups		Environ-		
Indicator type	Indicator		benefitting	Economic	mental	Social	Cultural

ACTION 2: HERITAGE	WALKS AND THEIR TWINS					
OUTCOME: Improve	d knowledge of the HUA's history for residents, visitors, tourists					
Impact indicators	Tourist visitors to the HUA per quarter - domestic tourist as well as foreigners	CCI, businesses, visitors	Υ			
	Average tourist visit spend	п	Υ			
Outcome indicator.	Change in number of visitors to local museums (5 year historic trend - estimates only)	II				
	Change in awareness of local heritage and CCI of the trailwalkers: - expenditure - origin - demographics - attribution, displacement	CCI, Businesses, visitors		Y	Y	Y
	Number, City of Origin, Gender, Age of participants (who do the walks) and also whether they would do the walks again	Tourists / visitors				
Output indicators	Number of walks created	Residents, Visitors, CCI, Municipality, Tourism agents				
	Number of landmarks connected through the walks	Ш				
	Number of events/dissemination activities (online & physical)	CCI, Businesses, visitors				

	Description		Dimension				
			Stakeholder groups		Environ-		
Indicator type	Indicator		benefitting	Economic	mental	Social	Cultural

ACTION 3: ACTIVATIO	DNS OF THE HUB - INTERACTING AND ENGAGING						
OUTCOME: Improved skills and training in old and new methods							
	Follow up interviews with participants on how the events change their experience, rates of civic participation, if visit the HUA again	II			Υ	Υ	
Output indicators *	Number of events/workshops Number of members of Ambassadors network, split by age, gender, location of Nicosia	Residents, Visitors, CCI, Residents /municipality/city					

ACTION 4: CREATION	OF A CCI START-UP ACCELERATOR PROGRAMME				
OUTCOME: New pro	ducts, services and collaborations in CCI				
Outcome indicator. *	Number of new products/services in CCI	startups, individuals, city	Υ		Υ
	Change in business skills and innovation ("before" and	II .	Υ		
	"after"questionnaires of the entrepreneurs)				
	 extent heritage is embedded in the new products 	II .			Υ
	- progression of innovations from idea to prototype to launch stage	II .	Υ		
	- growth in skills in product development, co-creation with local	II .	Υ		
	– improvement in plans to headquarter / operate in the HUA	II .	Υ		
	 plans to expand services due to the support 	п	Υ		
	 lessons learned - what went well, not so well, suggestions 	п			
	- perceptions on attribution (i.e. what proportion of change is due to the	II .			
	support)				
Output indicators *	case studies of the products / services	п			
	Number, age, gender, city of origin of participants of Accelerator	start-ups, CCI,			
	programme	indivuiduals, city			





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