









Output 5.1 Pilot Clusters



























INNOMED-UP

Promoting UPcycling in Circular Economy through INNovation and education for creative industries in MEDiterranean cities

Work Package (WP5): Pilot Integration Actions
Output 5.1: Pilot Cluster

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Activities:	A 5.1.1	Re-Production of clustering smar testing	t tools in each case study and			
	A 5.1.2	Methodology guidelines for the pilo	ot clustering intervention			
	A 5.1.3	Engagement and involvement of clusters	local communities in the pilot			
	A 5.1.4	Memorandum of Understanding local CCI SMEs	with Stakeholders and selected			
	A 5.1.5	Pilot clustering				
Output Participating Partners:	National To (NTUA), Gi	echnical University of Athens reece	Lead Beneficiary (BEN) WP1 Coordinator			
		ntal Planning Engineering and ent (EPEM SA), Greece	Project Partner 1 (PP01)			
	Municipali	ty of Prato (MoP), Italy	Project Partner 2 (PP02)			
		Economic and Social Research for of Italy (CRESM), Italy	Project Partner 3 (PP03)			
	Municipali	ty of Tunis, Tunisia	Project Partner 4 (PP04)			
Birzeit University (BZU), Pales		versity (BZU), Palestinian Authority	Project Partner 5 (PP05)			
	Future Pioneers for Empowering Communities' Members in the environmental and educational fields (FPEC), Jordan		Project Partner 6 (PP06)			











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1 ACTIVITY 5.1.2: METHODOLOGY GUIDELINES FOR THE PILOT CLUSTERING INTERVENTION

1.1 INTRODUCTION TO WP5 GUIDELINES

As per project document WORK PACKAGE 5: PILOT INTEGRATION ACTIONS (WP5), each project partner city is to implement WP5, following guidelines outlines in this report. WP5 comes almost half way through INNOMED-Up project lifetime, to capitalize onto all previous project's findings. At this stage, each partner has drafted a city circular economy cluster strategy, and this guideline, presents the implementation methodology, as well as case study documentation, knowledge sharing and involvement of the community, to ensure sustainability of results, success of awareness activities and involvement of all stakeholders, for more resilient cities.

1.1.1 WP5 Outcomes, Activities & Delivery

	Output Title	Target Outcomes	Implementation Semester 4 & 5						
Output 5.1	Pilot Clusters	6 Clusters							
Activity 5.1.1	Re-production of clustering smart tools in each case study and testing								
Activity 5.1.2	Methodology guidelines for the pilot clustering intervention								
Activity 5.1.3	Engagement and involvement of loc	cal communities in the pilot cluste	ers						
Activity 5.1.4	Memorandum of Understanding with	th Stakeholders and selected loca	l CCI SME's						
Activity 5.1.5	Pilot Clustering								
Output 5.2	Pilot innovative products	18 products	Semester 5						
Activity 5.2.1	Evaluation of proposals from CCI SM clusters	1E's that participate in the							
Activity 5.2.2	Selection of proposals to be funded	and supervision							
Activity 5.2.3	Evaluation report o produces produ	cts							
Output 5.3	Pilot Reuse Open Market	2 Pilot reuse Open markets	Semester 6						
Activity 5.3.1	Pilot Open Market in Tunis								
Activity 5.3.2	Pilot Open Market in Prato								
Output 5.4	Socio-Urban Circular Workshops	4 workshops	Semester 4						
Activity 5.4.1	Open workshop for role of CCI in revitalization of Med Urban Centers and promotion of CE								
Activity 5.4.2	Open workshop for civil society engagement in the INNOMED-Up model in Amman								
Activity 5.4.3	Open workshop for role of CCI's in revitalization of Med Urban Centers & promotion of CE								
Activity 5.4.4	Open workshop for civil society eng	agement in the INNOMED-Up mo	odel in Palermo						
Activity 5.4.5	Report on social and urban integrat	ion issues							

1.2 INTRODUCTION TO WP5 INNOMED-UP PILOT INTEGRATION ACTIONS

WP5 is a turning point in INNOMED-Up project implementation, as it is the project work-package, that tests previous outcomes, by translating all project gathered city circular economy data, into a pilot project to be implemented through a pre-identified, outlines, cluster road map strategy.











The pilot integration actions, will be executed in all project partner cities, and will be based on city specific identified circular economy opportunities, thanks to INNOMED-Up survey, SWOT analysis and participatory designed cluster road map. WP5 pilot integration actions, will be implemented by selected, motivated and trained CCI SME's, using locally designed smart tools, based on project methodology.

The pilot integrated actions, will be a case study which will require the important participation, of civil society, local authorities, academia, private sector and of course implementing CCI SME's. The case study will be led by city partner in each city, under the supervision of the Municipality of Tunis (PP4) WP5 coordinator. Material used in the pilot cluster, will be city specific, depending on mappings and surveys already defined through previous INNOMED-Up work-packages.

Participating CCI SME's will be encouraged to innovate in designing new marketable, sellable products, using identified city specific raw material, through upcycling. An INNOMED-Up label, will be defined to help identity and promote products that respect, city's circular economy objectives, to help reach zerowaste cities that are more environmentally friendly and resilient.

Circular Economy cluster will involve local community, local businesses, circular economy experts, civil society and of course executed by selected CCI SME, monitored and led by city's project partner.

To sustain and grow the upcycling trend, important events are planned in each partner city, to educate consumers, promote participating CCI SME's and make upcycling everyone's mission to reach the goal of a zero waste city. Those events include a 'pilot reuse open market' in both the cities of Tunis and Prato; where community can present, sell and exchange with each other and provide raw material to pilot SME's. The two partner universities, NTUA and Birzeit University will organize workshops, to make students aware of the importance of circular economy onto socio-urban resilience. And finally, the two partner NGO's CRESM and Future Pioneers, will organize workshops involving civil society, marginalized groups, women and youth, to create awareness around economic opportunities of circular economy, and potential new clusters.

1.2.1 Outcome 5.1: Pilot Cluster

Each city's pilot clusters will be designed based on INNOMED-Up field survey results and INNOMED-Up clustering roadmaps, and will include the identified CCI SME's that were part of the project survey, workshops and benefited from project circular economy and design trainings. Each city pilot cluster, will use local circular economy opportunities, including raw material, entrepreneurial ambitions, and contribute to each city's zero waste ambitions. Outcome 5.1 will test both the city specific designed circular economy cluster, including the smart tools. Pilot cluster implementation, will also be open to potential resulting new SMEs in the implementation phase, and will be inclusive of the community, private and public sector as well as civil society













	Output Title	Target Outcomes	Implementation
Output 5.1	Pilot Clusters	6 Clusters	Semester 4 & 5

Activity 5.1.1 Re-production of clustering smart tools in each case study and testing

The first WP activity, will require the development of the clustering smart tools, designed in WP4; which will include 2 smart bicycles/city cluster, hence a project total of 12 smart bicycles. As well as 10 smart garbage bins/city cluster, hence a total of 60 smart bins. Smart bicycles and smart bins, will transmit information to a central information system, which will monitor their activities, especially waste collection, weight and location. The production of the smart tools, will be by the participating SME's, using NTUA specific guidelines and provision of open-source electronic designs, and using 3D printing.

TIMEFRAME: March - August 2021

Activity 5.1.2 Methodology guidelines for the pilot clustering intervention

SMEs part of city's circular economy cluster, will be selected based on motivation during project workshops and training activities, their sensitivity to the zero-waste movement and contribution to city specific CCI pilot cluster. This activity will be implemented in consultation with PP4, WP5 leader.

TIMEFRAME: March - August 2021

Engagement and involvement of local communities in the pilot clusters Activity 5.1.3

Smart bins will be placed at households of local communities or local businesses, depending on city specific chosen raw material(s) to be upcycled, and that accept to be part of the cluster, and various communication tools and digital content will be developed, to further disseminate information about INNOMED-Up cluster, and get all the city involved.

TIMEFRAME: March - August 2021

Activity 5.1.4 Memorandum of Understanding with Stakeholders and selected local CCI SME's Each partner city, will sign 3 stakeholder MOU's and 5 MOUs with SME's which will be part

of pilot cluster implementation, communication and case study design.

TIMEFRAME: September - October 2021

Activity 5.1.5 **Pilot Clustering**

Once all the above activities have established, the pilot cluster could now start operations, using smart bins to gather raw material, smart bicycles to transport it, and CCI SMEs to use secondary raw materials and implement innovative design to produce upcycled products.

TIMEFRAME: September – February 2022

1.2.2 **Output 5.2: Pilot Innovative Products**

Now that the clusters are well defined in each city, and have developed the cluster needed smart bins, bicycles and information gathering system; participating CCI SME's will produce at least 2 prototype products/city, which means a total of 18 products for the whole project. To produce cluster prototypes, a grant between 2000 to 5000 Euro will be awarded, to help selected CCE SMEs to innovate in upcycled product design, and propose new products and services, to further enhance the cluster.

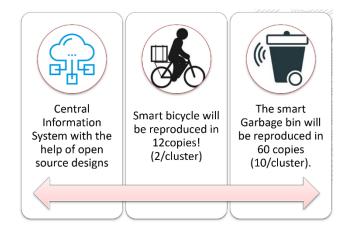












	Output Title	Target Outcomes	Implementation
Output 5.2	Pilot innovative products	18 products	Semester 5

Activity 5.2.1 Evaluation of proposals from CCI SME's that participate in the clusters

Each city will launch an open call to invite CCI SMEs to submit their cluster upcycling products proposal, for funding support to be able to produce their prototypes. The call, selection and funding process, should not last more than 3 months.

The call will have to pose specific criteria for the evaluation of the proposals based on each city's Strategy and Roadmaps. It is strongly advised that the secondary raw materials will be gathered for the pilot cluster with the use of the Smart tools (Smart bins, smart bicycle and digital platform)

Check document section CCI SME Selection Criteria, for more information.

TIMEFRAME: June - September 2021

Activity 5.2.2 Selection of proposals to be funded and supervision

Once awarded, CCI SMEs could start production of innovative prototypes within the pilot cluster, collected via smart tools, under the supervision of local project partner. Cross-border products or services development, could be integrated in city clusters at this stage. Finally, each city will have 2 sellable products, produce through upcycling. Final product or services selection, will be based on innovative approach, relevance to city circular economy needs and potential sustainability of designer cluster.

TIMEFRAME: September 2021 - January 2022











Following the important follow-up and evaluation of each participating city, each project partner will produce a report, evaluating their own Clustering Roadmap implementation, lessons learnt, and best practices; to be integrated in project's overall evaluation report.

TIMEFRAME: January - February 2022

1.2.3 Output 5.3: Pilot Reuse Open Market

One of the main project outcomes, is to advocate for circular economy and make it mainstream. For this reason, the 2 partner municipalities, Prato and Tunis, will organize an Open Market for 5 days, at a municipal building or public space, and invite the community to bring material and objects, which could be exchanged or used by CCI SMEs as raw material or inspirations for upcycled innovative product. The Open Market, will also be a great opportunity to promote project cluster, SME's and make circular economy trendy.

	Output Title	Target Outcomes	Implementation			
Output 5.3	Pilot Reuse Open Market	2 Pilot reuse Open markets	Semester 6			
Activity 5.3.1	Pilot Open Market in Tunis The municipality of Tunis will organize its first Pilot Reuse Open Market, at municipal building or public space; to promote upcycling, encourage reuse and improve resilience of circular economy clusters. Municipality might decide to make this event periodic after it's first time.					
	It is advised that the produced Innovative products – not only from Tunis but also from other INNOMED-UP cities, will be showcased in the framework of these market. It is also possible that other Innovative products that embrace the concept of circularity, will be presented in the market.					
		TIMEFRAI	ME: March – April – May 2022			
Activity 5.3.2	Pilot Open Market in Prato The municipality of Prato will organize its first Pilot Reuse Open Market, at municipal building or public space; to promote upcycling, encourage reuse and improve resilience of circular economy clusters. Municipality might decide to make this event periodic after its first time. It is advised that the produced Innovative products – not only from Tunis but also					
	from other INNOMED-UP cities, will be showcased in the framework of these market. It is also possible that other Innovative products that embrace the concept of circularity, will be presented in the market.					
		TIMEFRAI	ME: March – April – May 2022			











1.2.4 Output 5.4: Socio-Urban Circular Workshops

Steps of implementation:

Since the promotion of circular economy's socio-urban impacts is an integral part of INNOMED-Up model, outcome 5.4, will focus on important 4 participatory workshops. Two of the workshops, will be organized by the 2 partner universities, NTUA which will organize a workshop with students in Athens, and Birzeit University, which will organize workshops with students in Hebron and Nablus. The other 2 workshops, will be organized by the 2 partner NGO's; the first in Amman led by Future Pioneers, and will invite youth, women and marginalized communities, and the second in Palermo led by CRESM and will invite immigrants and marginalized groups.

	Output Title	Target Outcomes	Implementation					
Output 5.4	Socio-Urban Circular Workshops	4 workshops	Semester 4					
Activity 5.4.1	Open workshop for role of CCI in re Birzeit University will organize 2day students, to discuss the impacts of a revitalization historical urban center Nablus.	workshop, during last project ircular economy, innovation a	semester, inviting nd upcycling on					
	 Invitation of key speakers t Invitation of students to po 	 Presentation of scopes and findings of the project by PP5 Invitation of key speakers to present their views Invitation of students to participate (at least 10 participants) Closing discussion with participants 						
		TIMEFRA	AME: March - August 202					
Activity 5.4.2	Open workshop for civil society engagement in the INNOMED-Up model in Amman Future Pioneers will organize 2-day workshop, in Amman, inviting youth, women and marginalized communities, to discuss the socio-urban parameters impacting city's circular economy strategy.							
	Steps of implementation: - Presentation of scopes and findings of the project by PP6 - Invitation of key speakers to present their views - Invitation of women, young and marginalized people to participate (at least 10 participants) - Closing discussion with participants - Memo on conclusions							
	TIMEFRAME: March - August 2021							
Activity 5.4.3	Open workshop for role of CCI's in r NTUA will organize 2day workshop, circular economy, innovation and up	in Athens, inviting students, to	discuss the impacts of					

Presentation of scopes and findings of the project by PP5

Invitation of students to participate (at least 10 participants)

Invitation of key speakers to present their views











- Closing discussion with participants
- Memo on conclusions

TIMEFRAME: March - August 2021

Activity 5.4.4 Open workshop for civil society engagement in the INNOMED-Up model in Palermo

CRESM will organize 2-day open workshop, in Palermo, inviting immigrants and marginalized communities, to discuss the socio-urban parameters impacting city's circular economy strategy.

Steps of implementation:

- Presentation of scopes and findings of the project by PP6
- Invitation of key speakers to present their views
- Invitation of women, young and marginalized people to participate (at least 10 participants)
- Closing discussion with participants
- Memo on conclusions

TIMEFRAME: March - August 2021

Activity 5.4.5 Report on social and urban integration issues

Information gathered from all workshops, will be assembled in a final report, produced by the 2 universities, project partners, NTUA and Birzeit University. The report, will include the social and urban integration issues in relationship to CCIs roles in revitalization Mediterranean urban centres, for each partner city.

Steps of implementation:

- Partners from Athens, Palermo, Birzeit and Amman will draft a memo on the implementation of the workshops (dates, agenda, participants) and will include their conclusions on Social and Urban Integration issues
- NTUA and Birzeit Universities will compile the final report

TIMEFRAME: August 2021











1.3 PILOT INTEGRATION ACTIONS CASE STUCY TEMPLATE

The next 2 pages, present a template of each INNOMED-Up partner city to document outcomes of the pilot cluster integration activities in their cities. The objective is to outline city specific implementation methodologies, share lessons learnt that result in calls to actions, to improve city specific circular economy in creative industry sector development. This case study would need to be finalized and shared with all partners, by February 2022.

1.3.1 Introduction

Overall cluster description, how it relates to City Motto, and general reference to cluster members. (Approximately 150-200-words).

1.3.2 Pilot Cluster selection & description

An outline of cluster actor's selection criteria, and how it relates to partner city INNOMED-Up circular economy strategy, which was based on INNOMED-Up survey results. Following a description of selection process, describe the pilot integration actions' cluster actors, material used, smart tools use and bicycle path, as well as type of data gathered. (Approximately 400-500 words, photos and drawings recommended to demonstrate smart tools and SME workshops).

1.3.3 Success Metric

Explain the impact of pilot integration actions; start by outlining the success metric, which are city specific, and related to opportunity creation in circular economy, taking into account used material environmental benefits, cluster's shared economy opportunities, community involvement and participation, economic benefits and social inclusion for better sustainability of outcomes (Approximately 300-400 words, if possible, include quotes from cluster actors).

1.3.4 Lessons Learnt

Explain the pilot integration action implementation challenges, city specific strategy adaptation or changes during implementation, unexpected or unplanned activities that had to be planned, implementation time issues, also lessons from community and SME involvement. You may also include new circular economy opportunities, or untapped potentials that was unleashed due to pilot activities. (Approximately 300-400 words).

1.3.5 Overall Results

Outline the general results, which could be in terms of creating a new city trend, attempts in making entrepreneurship ventures in circular economy mainstream, but also describe the learning journey of participating SME's community, businesses and your own organization auto-evaluation of own methodology, strategy and implementation follow-up. This section can be supported by additional statements, quotes, visuals, graphs, and metrics. (Approximately 200-300 words).











1.3.6 Recommendations

Based on lessons learnt, state recommendations for way forward to make entrepreneurship ventures in circular economy more sustainable to make your own city more resilient. (Approximately 200-300 words).

1.4 CCI SME SELECTION

The selection criteria of each city's specific cluster SME CCI, will greatly depend on local pre-developed strategy and roadmap; nevertheless, there are general guiding principles, that could provide help each partner, design their selection criteria and launch their pilot integration activities.

INNOMED-Up WP5 is an important testing ground, for a sustainable shared economy innovative business model in circular economy, which interacts with local government, local businesses, local communities and civil society, to repurpose existing local resources, to create systemic change in environmental, social and economic perceptions. This innovative business model, will create shared inclusive economy, which creates new markets, new sources of income, especially for disadvantaged communities.

City's selection criteria, should take into account, city's designed INNOMED-Up strategy and roadmap, but also take into account entrepreneurial measures, which were part of INNOMED-Up previous workshops and trainings, such as:

CLUSTER CRITERIA:

- Material used related to identified geographic focus resources
- Cluster operating and supply chain plans
- Cluster use of smart tools, and data collection type and use

BUSINESS MODEL:

- Product outcome, market needs, marketability and business potential
- A proposal for the potential financial results, including costs and expenses and estimated market size of first 3year operations
- Communications and market access plans

ENTREPRENEUR CRITERIA:

- Motivation and past experience of cluster leader or cluster team
- Sensitivity to the environmental and social cause
- Strong will to make the cluster a success











- Willingness to work in cluster, share, learn and document pilot experience

The business model of circular economy, is regenerative by intention and aims to improve resources repurposing, through upcycling. Which is a sustainable model, for better climate justice, with SME's that create innovative income generating activities, with important environmental return on investments, but also minimize the instability that climate change might cause to businesses, especially SME's. The INNOMED-Up WP5 is an important opportunity, that allows participating partner cities, to benefit from testing a new operational circular economy model, bringing important value creation within the local economic and environment reality. But those benefits will only be maintained post project period, by a careful and well-planned selection of pilot cluster members, who should be motivated for the cause, social entrepreneurs in their way of thinking, and conscious that there is a need to transform their city's environment reality.











2 ACTIVITY 5.1.4: MEMORANDUM OF UNDERSTANDING WITH STAKEHOLDERS AND SELECTED LOCAL CCI SMEs

2.1 INTRODUCTION

According to the INNOMED-UP Full Application Form, PP4 Municipality of Tunis, lead WP5 Pilot Integration Action, where each partner, as part of activity 5.1.4 should sign a Memorandum of Understanding with Stakeholders and selected local CCI SME's that will participate in the pilot cluster of their city. At least 5 SMEs per city and 3 stakeholders are expected to sign the MoU's per city.

Within this Activity, a report should be drafted explaining MoU signed per city, and their impact or relevance to the pilot cluster.

This report was drafted by the PP4_Tunis with input from all the INNOMED-UP PPs participating in the Activity, and was reviewed and validated by LB-NTUA.

2.2 MOU REPORT PER PROJECT PARTNER

2.2.1 Athens, Greece

To make the pilot cluster a success in Athens, the National technical University of Athens, signed 5 memorandums of understanding; the first was with the Athens Chambre of Small and Medium Industries, through which it could provide Support towards the establishment of the pilot cluster; especially access to databases, as well as project dissemination and voucher award. The second MoU was with the Hellenic Confederation of Professionals, Craftsmen & Merchants, Small Enterprises' Institute. This partnership could provide support towards the establishment of the pilot cluster, through network access and important project information dissemination. The 3rd MoU was with Athens Trade Association, and the fourth was with Silver and Goldsmith's Association of Athens, and both are important partners in making the cluster open to their members and promote the overall project and CCI concepts to their members.

Finally, an MoU was signed with Athens Destination Development agency, which could have important input in territorial development as a result of INNOMED-Up pilot cluster, and its sustainability after the project.

2.2.2 Prato, Italy

The Municipality of Prato, signed 6 MoU's with institutions that could support pilot cluster dissemination, success and post project sustainability in Prato. Those MoU's were signed with Recuperiamoci onlus, Accaventiquattro Arte APS, Moebeus srl, Lottozero textile Laboratory, Mariplast SPA, and Lorenzo Vacirca Architect-Ipercollettivo.

The variety of MoU partners is very important, as it units an upcycling platfor, industrial sector, a service provider, a recycling wool laboratory and a plastic crafting institution.











The contributions of pilot cluster partners will be mainly through communication and dissemination (objects made with waste material), as well as training in art products creation with waste material. Partners will also support in voucher award use training on new equipment to work with recycled material, also corporate consulting for good practices of CE 2, and consulting on business plan and marketing plan; shared machinery use within partner laboratory, upcycling and recycling best practices.

2.2.3 Palermo, Italy

In Palermo CRESM signed 5 MoU agreements with partners who will be engaged in the establishment in the pilot cluse as well as its dissemination, such as Design Zingaro Fuori Catalogo di Aurelio Ciaperoni Cusenza Vincenzo Sandro (Real digital things) QMEDIA SRLS and Aranceamare cooperativa sociale

2.2.4 Tunis, Tunisia

To grow the impact and sustainability of INOMED-Up pilot cluster, the Municipality of Tunis, signed 4 MoU's, 2 of which with educational institutions, the first private and the second public. The first with Esprit University, to collaborate on academic and technical assistance in cluster development as well as dissemination of smart tools and sub- grants Similarly with public University 9 April, to improve graduates job creation through awareness of opportunities in alternative economies especially circular the municipality improves research publication visibility and integration into field work, improve accessibility of students to market opportunities and job creation.

An MoU was also signed with AIMF (association International des Maires Francophone) to assist municipality in setting up process for better public space management mapping, legal & real estate investigation of municipal properties as well as improving internal municipality property management; which will improve CE ecosystem development and sustainability in Tunis.

Finally, an MOU was signed with the city of Namur (Belgium) to improve circular economy opportunity initiation through adapted space for SME's lead by youth assistance to launch a Co-Creative Hub for Medina's youth, to meet, investigate, exchange and initiate their innovative microbusiness in circular economy.

2.2.5 Hebron, Palestinian Authority

The University of Birzeit, signed four MoU's, within the framework of pilot cluster; the first with the Hebron Chamber of Commerce and Industry, through which it could provide support to members cluster by being the coordinator and umbrella for sub-grants and through technical support, networking, and marketing. The chamber also provides links to other public institutions, providing free spaces for meetings and joint work, also involve participating SMEs with marketing support (via website, social media pages and exhibitions) provides licencing support and exceptions for home-based SMEs regarding registration requirements.

The second MoU was signed with Hebron Reconstruction Committee, which provides support to cluster through raising awareness, networking, and marketing, conducting public awareness campaigns about recycling, also by setting up recycling exhibition, and support the cluster with experience in recycling mechanisms and techniques











The third MoU was signed with Hebron Municipality to support cluster through technical support, networking, and assist in linking small and medium businesses with other institutions and associations marketing.

The fourth MoU was signed with the Hebron Governorate which supports the cluster through technical support, networking, and marketing (through the governorate's website, social media pages, and exhibitions) and connecting & networking SMEs with other institutions and associations.

Finally, a fifth MoU was signed with the Ministry of National Economy Support cluster through technical support, networking, and marketing (through the governorate's website, social media pages, and exhibitions) and through assisting in networking SMEs with other institutions and associations.

2.2.6 Irbid, Jordan

Future Pioneers signed three MoU's, within the framework of Pilot Cluster activity, the first is an important MoU, which groups 3 public institutions, which includes the Municipality of Irbid, Chamber commerce, and Trade commerce of Irbid. The objective of this MoU is to motivate SMEs, commercials and shops to sort their waste at source and encourage the circular economy practices. For example, Municipality of Irbid is planning to reduce the license fees for the shops that sort their waste. This is crucial, as it will motivate local authorities to take an active part in the solid waste management and circular economy industry development.

The other 2 MoU's were signed with local community, to motivate the community member to take the responsibility of the Smart Bin, motivate the neighbours to bring their recyclables and Cooperate with the smart bicycles to take and distribute the recyclables to interested SMEs.











INNOMED-UP MEMORANDUMS OF UNDERSTANDING LISTED

	Stakeholder	Type of organization	Stakeholder's extent of responsibilities	Stakeholder's location	Date MoU signed	Main MoUs provisions
			Α	thens		
MoU 1:	Athens Chamber of Small & Medium Industries (Enterprise Europe Network Hellas)	Chamber	Support and Networking of Small & Medium Industries	Athens	16/05/2022	Support towards the establishment of the pilot cluster - Access to databases - Dissemination - Voucher award
MoU 2:	Hellenic Confederation of Professionals, Craftsmen & Merchants - Small Enterprises' Institute (IME GSEVEE)	Chamber	Reseach supportive to Professionals, Craftsmen & Merchants	Panhellenic	16/05/2022	Support towards the establishment of the pilot cluster - Access to databases - Dissemination - Voucher award
MoU 3:	Athens Trade Association	Association	Support and Networking of Trade Enterprises	Athens	19/05/2022	Support towards the establishment of the pilot cluster - Dissemination - Voucher award
MoU 4:	Silver and Goldsmiths' Association of Athens	Association	Support and Networking of Silver and Goldsmiths	Athens	19/05/2022	Support towards the establishment of the pilot cluster - Dissemination - Voucher award
MoU 5:	Athens Development and Destination Agency	Local Authority	Design and Implementation of programs relevant to Athens Urban Development and Destination Management	Athens	26/09/2022	Support towards the establishment of the pilot cluster - Dissemination - Voucher award
			l	Prato		











	Stakeholder	Type of organization	Stakeholder's extent of responsibilities	Stakeholder's location	Date MoU signed	Main MoUs provisions
MoU 1:	Recuperiamoci onlus	Association	Vetrina upcycling & Poltrone Rifà (see more at the link)	Municipality of Prato	10/10/22	Communication and dissemination (objects made with waste material) 2. Formation courses on new equipment to work with recycled material - Voucher award
MoU 2:	Accaventiquattro Arte APS	Association	Industrial Art (see more at the link)	Municipality of Prato	10/10/22	Creation of art products with waste material - Voucher award
MoU 3:	Moebeus srl	Company	Cradle to Cradle & Services (see more at the link)	Municipality of Prato	10/10/22	Corporate consulting for good practices of CE 2. Consulting on business plan and marketing plan - Voucher award
MoU 4:	Lottozero textile Laboratory	Company	Circular Wool Laboratory (see more at the link)	Municipality of Prato	10/10/22	Laboratory with the use of shared machinery - Voucher award
MoU 5:	Mariplast SPA	Company	Rethinking Spods (see more at the link)	Municipality of Prato	10/10/22	Consulting for CCI- upcycling - Voucher award
MoU 6:	Lorenzo Vacirca Architect-Ipercollettivo	Professional	Plasticraft (see more at the link)	Municipality of Prato	10/10/22	Innovation design with recicled industrial waste - Voucher award
			Pa	alermo		
MoU 1:	Design Zingaro	SME (Association)	Implementation of the Pilot Innovative Action	Palermo	07/10/2022	Engagement in the establishment of the pilot cluster - Dissemination
MoU 2:	Fuori Catalogo di Aurelio Ciaperoni	SME	Implementation of the Pilot Innovative Action	Palermo	07/10/2022	Engagement in the establishment of the pilot cluster - Dissemination
MoU 3:	Cusenza Vincenzo Sandro (Real digital things)	SME	Implementation of the Pilot Innovative Action	Palermo	07/10/2022	Engagement in the establishment of the pilot cluster - Dissemination











	Stakeholder	Type of organization	Stakeholder's extent of responsibilities	Stakeholder's location	Date MoU signed	Main MoUs provisions
MoU 4:	QMEDIA SRLS	SME	Implementation of the Pilot Innovative Action	Palermo	07/10/2022	Engagement in the establishment of the pilot cluster - Dissemination
MoU 5:	Aranceamare cooperativa sociale	SME (Social cooperative)	Implementation of the Pilot Innovative Action	Palermo	07/10/2022	Engagement in the establishment of the pilot cluster - Dissemination
				Tunis		
MoU 1:	Universite Esprit	Private University	academic and technical assistance in cluster development and smart tools	Tunis	01/04/2022	municipality grants University students access to public buildings and benefit from INNOMED-Up activities, trainings and collaborations with student research
MoU 2:	Universite 9 Avril	Public University	improve graduates job creation through awarness of opportunities in alternative economies especially circular	Tunis	01/04/2022	the municipality improves research publication visibility and integration into field work, improve accessibility of students to market opportunities and job creation.
MoU 3:	AIMF	Federation of francophone cities	systems assist municipality of setting up process for better public space management	francophonie	09/05/2022	mapping, legal & real estate investigation of municipal properties as well as improving internal municipality property management
MoU 4:	Namur	city	Improve circular economy opportunity initiation through adapted space for SME's lead by youth	local gov. in Belgium	17/07/2020	assistance to launch a Co-Creative Hub for Medina's youth, to meet, investigate, exchange and initiate their innovative microbusiness in circular economy
			н	lebron		











	Stakeholder	Type of organization	Stakeholder's extent of responsibilities	Stakeholder's location	Date MoU signed	Main MoUs provisions
MoU 1:	Hebron Chamber of Commerce and Industry	Chamber	Support cluster by being the coordicnator and umbrella for it, through technical support, networking, and mareting	Hebron city	26.September.2022	 To be the official umbrella for SM'ES in the cluster and to link them with other institutions Providing free spaces for meetings and joint work Involve them in the exercises Marketing support (via website, social media pages and exhibitions) Support best projects with grants from the chamber. support SM'ES by issuing Craft and industrial licenses. Exceptions for home-based SMEs regarding registration requirements
MoU2	Hebron Reconstruction Committee	Association	Support cluster through raising awareness, networking, and mareting	Hebron city	26.September.2022	 conducting public awareness campaigns about recycling. Working on setting up recycling exhibitions Connecting SME's with other institutions and associations. Marketing support (through the Ministry's website and social media pages). Support the cluster with experience in recycling mechanisms and techniques
MoU3	Hebron Municipality	Muncipality	Support cluster through technical support, networking, and marketing	Hebron city	26.September.2022	 Consulting and technical support (engineers and technical) Assist in linking small and medium businesses with other institutions and associations











	Stakeholder	Type of organization	Stakeholder's extent of responsibilities	Stakeholder's location	Date MoU signed	Main MoUs provisions		
MoU4	Hebron Governorate	Local Authority	Support cluster through technical support, networking, and marketing	Hebron city	26.September.2022	 Providing marketing support (through the governorate's website, social media pages, and exhibitions) Local promotion of SME's products Connecting & networking SME's with other institutions and associations 		
MoU5	Ministry of National Economy	Local Authority	Support cluster through technical support, networking, and marketing	Hebron city	26.September.2022	 Providing marketing support (through the governorate's website, social media pages, and exhibitions) Local promotion of SME's products Connecting & networking SME's with other institutions and associations 		
	Irbid							
MoU 1:	Municipality of Irbid , Chamber commerce, and Trade commerce of Irbid	Local Authority	To motivate SMEs, commercials and shops to sort their waste at source and encourage the circular economy practices. For example, Municipality of Irbid is planning to reduce the license fees for the shops that sort their waste	Irbid	29/05/2021	To motivate local authorities to take an active part in the solid waste management and circular economy industry		











	Stakeholder	Type of organization	Stakeholder's extent of responsibilities	Stakeholder's location	Date MoU signed	Main MoUs provisions
MoU 2:	Community member	Community member	Within his/her neighbourhood	Irbid	01/08/2022	Motivate the community member to take the responsibility of the Smart Bin, motivate the neighbours to bring their recycables and Cooperate with the smart bicycles to take and distribute the recyclables to interested SMEs
MoU 3:	Community member	Community member	Within his/her neighbourhood	Irbid	01/08/2022	Motivate the community member to take the responsibility of the Smart Bicycle and Cooperate with the smart bins to take and distribute the recyclables to interested SMEs











3 ACTIVITY 5.1.5: PILOT CLUSTERING

In the following pages the main results per each Pilot Cluster developed in the framework of INNOMED-UP Project are presented.



Main Characteristics of the city. Specific features about creativity and the circular economy

Athens was and remains the gathering place of SMEs with a tradition in the creative arts professions (silver and goldsmithing, tannery, fashion design, clothing and footwear manufacturing, ceramics). The presence of creative professions remains obvious and dynamic despite the adversity created by the crisis. Especially in the historic center, the activities of jewelry, clothing and (more recently) design show remarkable dynamism.







Strategy design at local level

ATHENS CIRCLES of CREATIVITY

ENVIRONMENTAL
use/reuse of materials,
reduce waste, raise
awareness

SOCIAL positive social impact, Integration of marginalized groups ECONOMIC cooperation, sustainable value chains, urban revitalization CULTURAL
critical, dynamic and
original CCI sectors,
eco-design/eco-production

OTSH BUTTOUTH A The maintenance, strengthening, 1 COLLABORATION & CLUSTERING support and networking OF SMEs (20 SMEs in ONE cluster) of CCIs in the historic center of Athens. 2 SMART TOOLS (1 platform, 1 bicycle, 4 smart bins, 1 repository) B The integration and / or upgrade of circular practices in CCIs that can creatively produce suggestions and practices that will 3 TRAINING bring about positive immediate CULTURA (3 training courses-10 SMEs in each) and indirect results. 4 FINANCIAL SUPPORT & OUNGER CREATIVE **FUNDING OPPORTUNITIES** C Drawing new and external (4 Innovation vouchers & knowledge from the research/ 4 Cross-border mentorship vouchers) educational sector and experts on Circular Economy. ECONOMIC 5 CROSS-BORDER COLLABORATION (4 Innovative products) D Training on the use of new technologies and smart tools 6 AWARENESS to accelerate innovation (3 awareness campaigns / and boost their competitiveness. development of common branding)

TARGETS

Involvement of local communities in the Cluster:

Stakeholders

Involvement of Stakeholders:

MoUs with:

- Athens Chamber of Small & Medium Industries
 (Enterprise Europe Network Hellas)
- Hellenic Confederation of Professionals,
- Craftsmen & Merchants Small Enterprises'
- Institute (IME GSEVEE)
- Athens Trade Association
- Silver and Goldsmiths' Association of Athens
- Athens Development and Destination Agency





Involvement of local communities in the Cluster: CCI SMEs - Communities

Involvement of CCI SMEs:

- Interviews and photo shooting sessions
- Presentation of available waste / materials
- Discussions about their needs and proposals
- Participation for as many CCI SMEs as possible in Cluster's activities

Involvement of Local Communities:

- Special well-designed labels & QR codes
- Informational material
- Awareness campaigns
- Publicity events



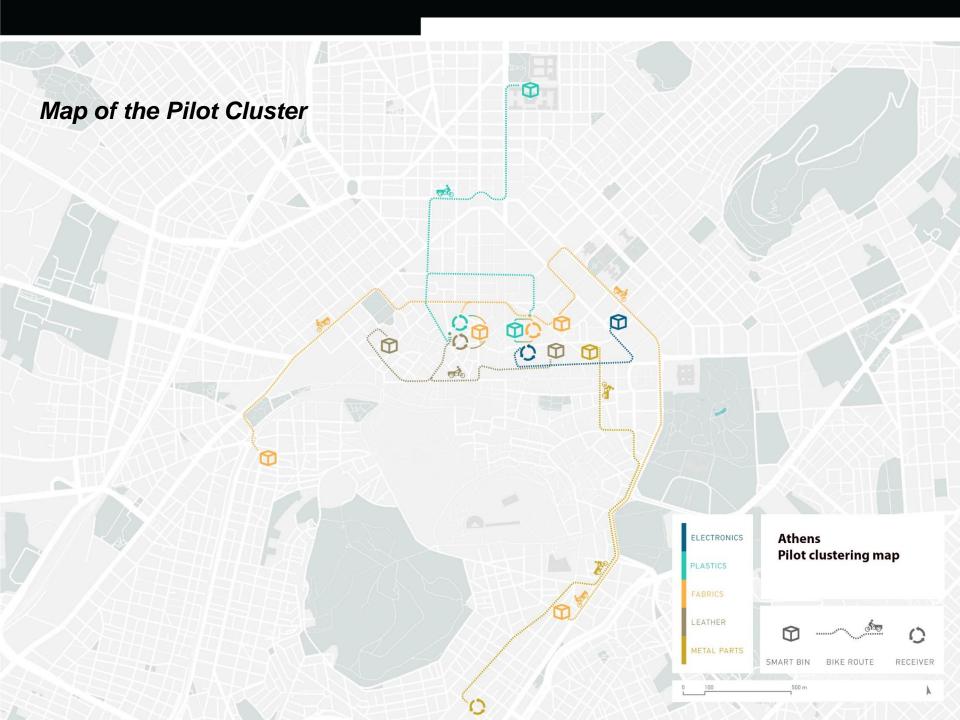




On site visits, during workshop "Athens Circles of Creativity"

Involvement of local communities in the Cluster: Subgrantees

tion	ers	Eating the Goober - Upgrading equipment	Akrivi Moudilou	Technical equipment for the production of upcyled products inhouse.
Innovation	Vouchers	Creation of a Center for Fabrics Upcycling	Garyfalia Pitsaki	Technical equipment (schreder) for the schredding of disposed fabrics from relevant CCI SMEs
oorder	Mentorship	Incorporating upcycling practices in the jewellry making process	Erato Boukogianni	Mentorship program in order to incorporate upcycling practices in the jewellry making process
Cross-border		Developing Educational Curriculums on Circularity	Diti Kotecha	Mentorship program in order to develop an innovative educational program on Circularity
ative		re-Futon: Objects of body and ecologic wellbeing through upcycling	Ioanna & Polyxeni Thanou	Innovative product based on the shredding and upcycling of fabric remnants
Innovativ		LOCUL: Pottery with metal finishes	LOCUL (Kizis Deligianni EE)	Object design using the remnants of silver and goldsmiths workshops



Results and Key challenges









Developing educational programs for upcycling By Thela





Experimentation with jewelry remnants By LOCUL

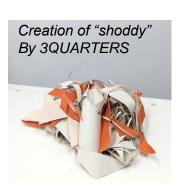
Results and Key challenges

Results:

- Creation of Innovative products
- Cooperation between SMEs
- Upgrade of equipment in relevant SMEs
- Creation of new business models

Challenges:

- To continue the cooperation and interaction
- To involve local authorities
- To engage local communities











PRATO - Creative & Circular City

PRATO is one of the largest Italian industrial districts and one of the most important textile and clothing production centers in the world - (35.000 employees / 7.200 companies 17% of italian textile exports)

- ★ EU Partnership on Circular Economy (2018-2021) reuse of wastewater, re-use of buildings and urban spaces, economic incentives
- ★ Prato Circular City a project aiming to accelerate the transition towards a circular economy
- ★ EU projects (INNOMED Up, URGE Urbact 2014-2020)
- ★ One of the 100 European cities included by the European Commission in the programme "Climate-neutral and smart cities by 2030".











The VISION "Prato, a sustainable, innovative and circular city"

The strategy envisions the creation of a city where residents enjoy a high quality of life, the economy is strong and diversified, the environment is healthy and culture and creativity are thriving

- ★ A sustainable urban development
- ★ Economic diversification
- ★ Urban regeneration
- ★ Circular city planning
- ★ Zero waste





Community Engagement

CCI SMEs

Business Support Academic institutions

NGOs

Startups

Citizens

SWOT/PEST workshop Consolidation workshop **Engagement workshops** Open market and exhibitions Dissemination events 40 hours online course **Training course** 27 participants Final upcycling projects / prototypes Mapping / Surveys / CCI SMEs clustering roadmap Interviews with 30 SMEs MoUs 6 MoUs 6 pilot projects with Micro and SMEs Pilot implementation and 2 pilot projects with NGOs monitoring SMART Bins collection points run by an NGO





PRATO PILOTS

New market positioning for Moebeus innovative services

Mentorship voucher for developing a business and a marketing plan on sustainability and circularity, focusing on specific features of the supply chain and on ethical branding.



Rethinking Spools - Mariplast Mentorship voucher for benchmarking research and practices on circular, creative and collaborative economy practices related to the plastic industry, and the application of design thinking for potential upcycling scenarios of the company.



PLASTICRAFT

Ipercollettivo & Codesign Toscana

Innovative equipment for a pilot that created sample objects with shredded plastic using an innovative machinery. The pilot worked through the creation of a collection point and a workspace





PRATO PILOTS

Circular Wool Lab by Lottozero

Lottozero Textile Laboratories produced samples of yarn made from waste material by using new innovative machinery. The pilot created a permanent Lab for artists and designers, who were invited to use the innovative machinery for upcycling a specific kind of wool





Be Circular! by Moebeus

"Innovative service with C2C approach for the adoption of circular business models" - a web app for SMEs and companies to assess their Cradle-to-Cradle (circular) status and approach.



Arte Indusstriale -Industrial Art by Accaventiquattro Arte A collaborative project betweenan artist and a few local companies to create an exhibition on waste fabric -specifically a wool waste called "Rossino" that is typically produced in the Prato textile district.





PRATO PILOTS

PoltroneRifà by Recuperiamoci!

Sample objects like chairs were made by the Recuperiamoci! NGO by using a special machinery that can work on plastic, leather and inner tubes and all kinds of waste material which is usually difficult to work on. A lab for the recovery and upcycling of specific scrap materials was created for the pilot

Vetrina Upcycling & Ecodesign by Recuperiamoci!

Through this pilot Recuperiamoci! NGO developed communication activities through the exhibition of upcycled lamps in some areas of the city. All lamps were created by using waste material.





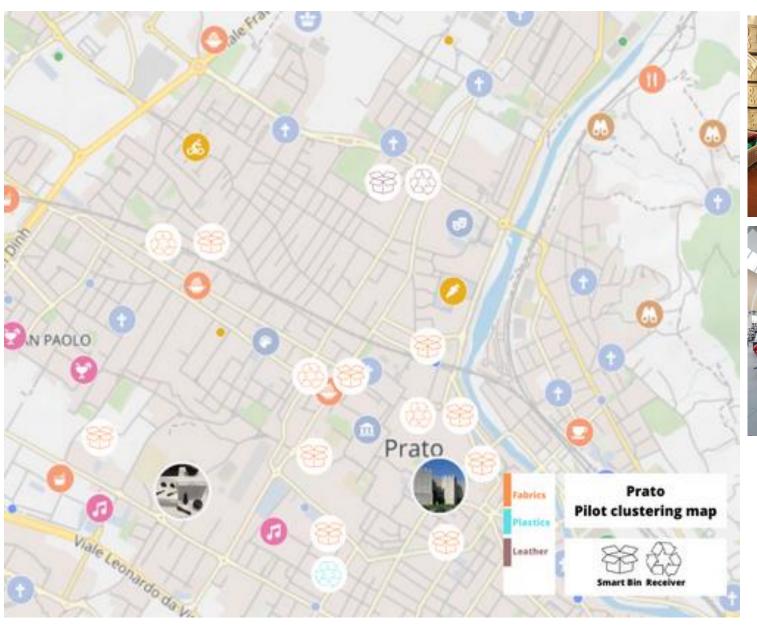








Map of the Pilot Cluster









CHALLENGES

- lack of awareness and understanding of circular economy concepts
- lack of adequate legislation for the re-use of special waste (textiles included)
- lack of financial support to micro and SMEs / NGOs / creatives

LESSONS LEARNED

- importance of communication and cooperation between stakeholders - community building
- meeting the needs for tailored training and capacity building
- the positive impact of the networking at local level (between public authorities, economic-social actors, research institutions...)











Main Characteristics of the city. Specific features about creativity and the circular economy

Palermo City Centre



Main Characteristics of the city. Specific features about creativity and the circular economy

Main characteristics of the city

The creative craft sector represents a crucial segment in the CCI sector in Palermo and in Sicily.

CE constitutes an important opportunity for facing the challenging problem of waste management, promoting, at the same time, the local CCI SMEs networks.

Public policies currently do not include any small-scale local-based solutions or clear paths for a circular transition.

Some creative craft SMEs clusters are experimenting with the renovation of traditional techniques based on the use of traditional sustainable materials.

Main Characteristics of the city. Specific features about creativity and the circular economy

Main characteristics of the city

Creative craft SMEs are often organised as non-profit entities in the startup phase, have strong cooperation networks with other non profit NGOs.

INNOMED-UP in Palermo promoted the involvement of local creative craft CCI SMEs in a CE pilot cluster using smart tools for the development of innovative products and production chains implementing upcycling processes based on a mix of traditional and innovative techniques using mainly wood, fabric and high density cardboard.

The pilot cluster contributes to involve the community and stakeholders to launch a debate about innovative solutions for a sustainable waste management and circular reuse of secondary raw materials.

Motto: The INNOMED-UP strategy promotes cooperation among profit and non-profit creative craft SMEs for the renovation of traditional techniques based on natural materials, mainly through the introduction of digital fabrication, in the framework of creative craftship and of the development of CE networks.

Vision statement of Palermo:

In a context where public policies do not actively support the circular transition, networks of CCI SMEs will promote Circular Economy focusing on cooperation and renovation of traditional techniques within their businesses.

General goal

Supporting the development of CE business models among local CCI SMEs.

Specific goals

- ✓ Supporting the renovation of traditional techniques in a CE perspective in the field of creative craft.
- ✓ Supporting the design of innovative products in a CE perspective.

Targets

Number of products developed in a CE perspective.

Number of SMEs trained in circular, sustainable and green practices.

The analysis conducted in the framework of INNOMED-UP identified the **peculiarities** of the pilot case area in terms of business models, models of cooperation and urban fabric:

- ✓ A focus on the creative craft sector, within the CCI.
- ✓ A tight link between the creative craft sector and the non-profit one.
- ✓ A high interest for low cost practices.
- ✓ A high interest for the reintroduction of some traditional renovation techniques, based on natural materials.
- ✓ A high interest in the introduction of digital fabrication techniques both in order to renovate the traditional ones and to reach economic sustainability.

The creative sector represents a crucial segment in Palermo and in Sicily. It includes several mSMEs, mostly located in the historic city-centre of Palermo. The establishment of small craft shops and of other CCI activities significantly contributed to the revitalisation of the area in the last decade.

The creative sector nowadays includes 2 main categories of SMEs:

- ✓ Family-run ones usually having solid manufacturing skills based on strong family tradition and experience. They often face troubles in surviving the contemporary market dynamics.
- ✓ New enterprises are often founded by highly-educated young people with strong technical skills and attitude to innovation.

- Creative craft SMEs focus a lot on renovation of traditional techniques and reintroduction of eco-sustainable materials.
- ✓ The development of a network of creative artists/crafters trying to innovate local traditions is quite transversal to these categories.

The most peculiar element of the CCI SMEs business model in Palermo and in Sicily is probably the tight connection with the non-profit sector.

Many of them, in fact:

- ✓ In the first phase are organised as non profit organisations.
- ✓ This circumstance fosters cooperation between NGOs and CCI
 SMEs.

- ✓ This peculiar creative context both facilitates the involvement of SMEs and makes it necessary for their real engagement. For this reason CRESM has always adopted a widely participatory approach.
- ✓ The renovation of traditional techniques, in particular through digital fabrication tools, represents an interesting path in terms of market positioning, cultural heritage protection and reintroduction of traditional eco-sustainable materials.
- Creative craft SMEs often have a quite high environmental awareness resulting in the choice of natural materials. Nevertheless there is a very low awareness about the concepts of CE and about the life-cycle management of production systems. Upcycling examples are just isolated experimentations.

- ✓ Green and circular transition needs to be promoted also as a cheaper and easier alternative to standard waste disposal (actually very expensive and complicated, according to local regulations).
- Creative craft SMEs often have no entrepreneurial education or experience and struggle in reaching economic sustainability, heavily relying on tourism flows. Networking skills are often lacking.
- ✓ The INNOMED-UP cluster, in particular through the InfoPoint, is
 experimenting with innovative models of cooperation, focusing on
 sharing equipment, knowledge and skills, in order to develop
 sustainable business models and the use of secondary raw materials.

Involvement of local communities in the Cluster: Stakeholders

INNOMED-UP developed a network for the promotion of the pilot cluster, the project activities and the cross-border cooperation including:

- Local CCI SMEs.
- Local NGOs active in the field of circular and green economy.
- High education institutions, contributing to the innovation of the cluster.
- Local Chamber of Commerce.
- Local cooperatives networks (Confcooperative).
- The municipality.





Involvement of local communities in the Cluster: Stakeholders

A widely participatory approach has been adopted in order to involve CCI SMEs in a network fostering the development of the cluster, as well as its long term sustainability and scalability.

For this purpose, the Info-Point for consultation of SMEs played an important role. Challenges and opportunities for SMEs have been identified and analysed, in order to respond to their needs in the configuration of the cluster, in terms of business models, product design and production chains.





Involvement of local communities in the Cluster: Stakeholders

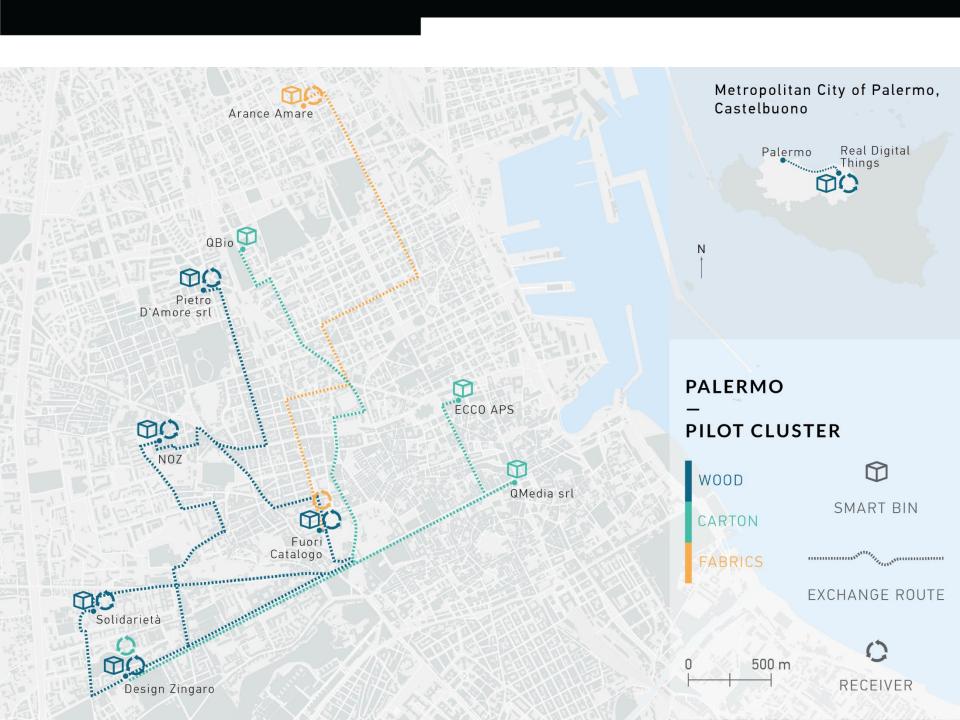
The needs analysis arisen from the exchanges with SMEs, experts and LAs contributed to the identification of innovative services to be proposed to CCI SMEs: support for the administrative procedures for the business establishment, strategic marketing, business development, support for the access to funding, support for the circular transition in order to collect leftovers as secondary raw materials.

The collaboration with the local cooperatives networks and Chamber of Commerce has been essential for the dissemination of the results and for the involvement of CCI SMEs.

The tight link between the profit and non-profit sectors in CCI facilitated the dissemination and the involvement of local communities and fostered synergies in developing innovative business models.

Involvement of local communities in the Cluster: Subgrantees

Name of the Beneficiary	Type of voucher	Amount awarded	Name of the project	Results
Design Zingaro	Pilot innovative products.	5.000€	Giochi circolari.	It is mainly designing toys, toy kits and jewellery made out of pressed carton and wood waste.
Pietro D'Amore srl		5.000€	Ruggine.	It is producing furniture accessories out of wood and building industry waste.
Fuori Catalogo di Ciaperoni Aurelio	Innovation vouchers.	5.000€	La piccola industria dell'economia circolare.	Project aimed at completing its production cycle in order to focus the businesses on self-designed production.
Real Digital Things		5.000€	Real digital things (printed).	Project aimed at completing its production cycle in order to focus the businesses on self-designed production.
Arance Amare social cooperative	Access to cross-border mentorship schemes & new financial tools.	5.000€	Scarti d'autore.	It is developing an updated marketing and business plan for optimising the promotion of its green brand.
QMedia srl		5.000€	CUNTO – Storytelling per l'economia circolare e la valorizzazione del patrimonio immateriale.	It received training for developing an innovative form of storytelling in the framework of sustainable economy.

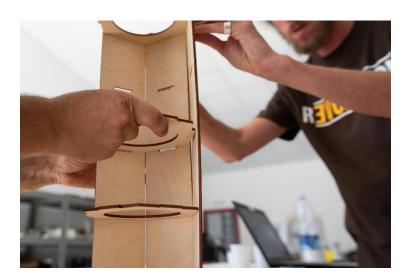


Pilot Cluster

The Palermo pilot cluster is located in the city-centre. It also has a "satellite" division in Castelbuono (a small town within the Metropolitan City).

The Palermo cluster, in particular through the INNOMED-UP InfoPoint, is experimenting with models of cooperation in order to develop sustainable business models and the use of secondary raw materials.





Pilot Cluster

The Palermo pilot cluster focuses on sharing equipment, knowledge and skills, in order to support innovative product design and production chains.

SMEs exchange mainly wood, carton and fabric. The choice of materials was made focusing on the availability and the potential for upcycling processes, thanks to the creativity of SMEs.



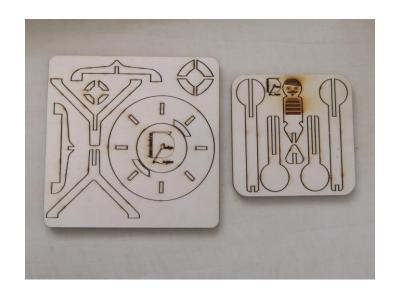


The pilot cluster includes the 6 sub-grantees, as well as other CCI SMEs. All contributed to the achievement of the following results engaging them in the reuse of materials and using their creativity in developing innovative business models and products.

NOZ is a place to share knowledge and equipment and also became the heart of the cluster.

9 of the smart bins are hosted by SMEs participating in the cluster (including the 6 sub-grantees). The 10th is located in NOZ, where wood and carton waste are produced by the cluster members in the experimental product design phase.











Challenges, solutions and lessons learnt

The most important challenges are connected to the lack of national or local regulations concerning CE and upcycling.

National waste management legislation forbids not-certified transport of waste: exchanging leftovers could be equivalent to illegal waste trafficking.

A solution dealt with LAs and environmental lawyers: SMEs produce a delivery note receipt highlighting that the collected materials are not waste but Secondary Raw Materials (as defined in the EU strategy for Secondary Raw Materials and the Italian regulations).

For the future this mechanism doesn't facilitate, especially for Micro business the development of CE practices.

It is necessary to engage experts and policy-makers in a debate in order to propose new answers to create a legal framework for the exchange of materials for SMEs.

Impact at urban level

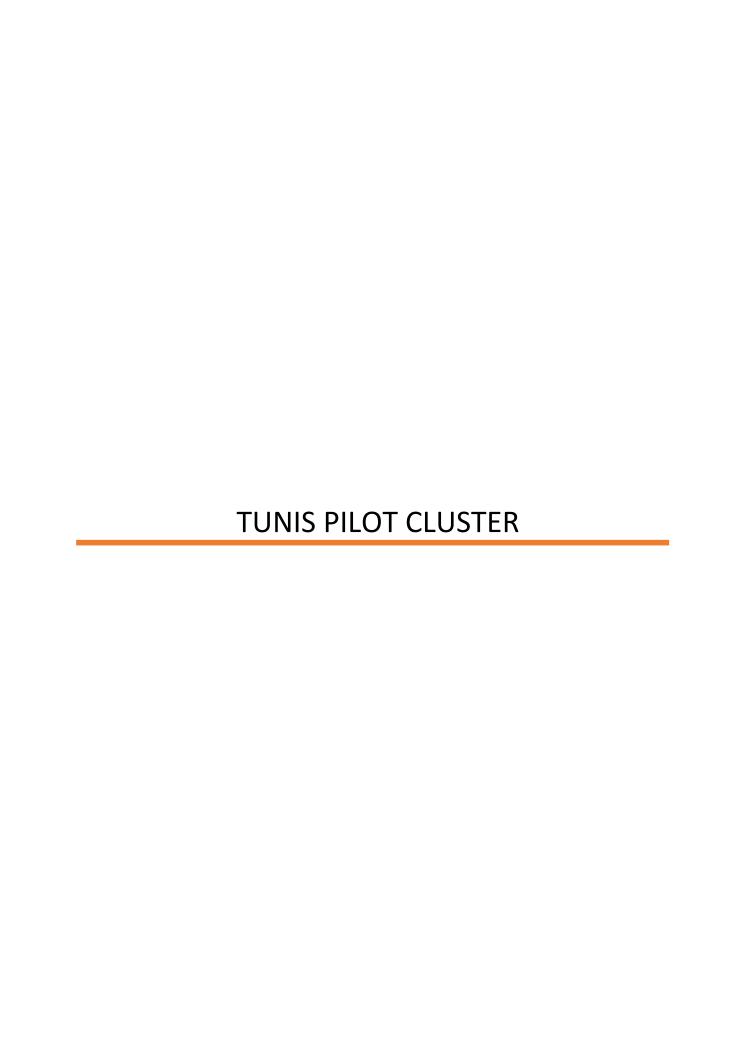
The innovative product design addressed also the cultural heritage protection.

Digital fabrication is a means to reproduce traditional objects and decorations with very high quality but low production costs. At the same time, traditional techniques using traditional sustainable materials can be easily renovated.

The debate on CE put pressure on the involvement of policy-makers and LAs in the development of new regulations more adapted to the circular transition.

For the end of September 2023, CRESM is organizing a Conference based on 3 main items:

- Innovative Enterprises both from the CE Sector and the Digital Sector
- Public Administration
- Mediterranean Networks



INNOMED-UP MUNICIPALITY OF TUNIS TEAM

- The project faced implementation challenges due to complex national proceedings and local situation
- After slow implementation in YR1, financial management was outsourced to a municipal implementing agency

Mr. Majdi Hentati Mr. Lakhdar DKHILI Senior Technical Experts

Mme. Samia Saad
M. Jalel Teffahi
Junior Technical Experts

Mr. Souheil Sassi
Mr. Kamel Hedfi
Financial and administrative
coordinators

Mme Hanen Tarhouni
Mr Amor Ennaifer
Communications coordinators

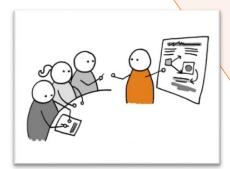
Mr. Adnen Saidan Mr. Adel Bettaieb IT/Smart Tools

Mme Souad Sassi Int Coop.

WP5 methodology design



INNOMED-Up Clustering Roadmaps INNOMED-Up Field Survey



Identified / trained CCI SMEs



Pilot integration actions

- Produced the guidelines for subgrants
- Report on all partnership MOU's

Stakeholder Workshops



Open discussions with SME's. artisans & civil society about:

- Movability solutions most suited for the Medina
- What clusters are economically viable
- Abandoned historical buildings, what are the challenges and opportunities





Socio-urban Workshops





Partnership with civil society to initiate community youth up-cycling workshops.

Smart tools challenges

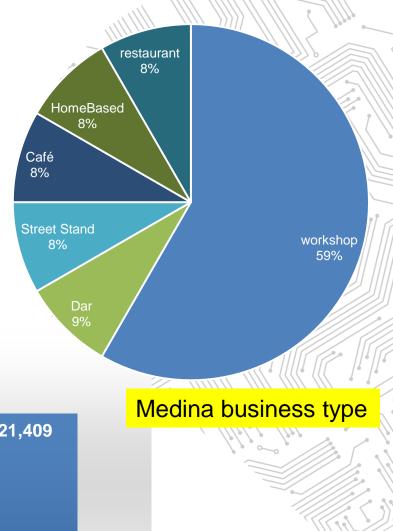
- Invested important time to identify the most adequate smart tools, adapted to Medina's circumstances, for a more sustainable and usable solution, taking into account urban challenges and user needs.
- Most sub-grant beneficiaries, are early stage SME's with little market experience
- Market negative perception of upcycled products, which could impact financial viability of products
- Ensuring waste pickers involvement,
 to maximize social impact of solutions

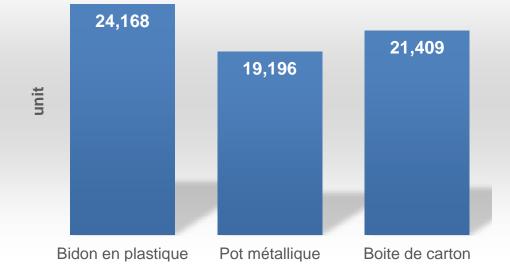




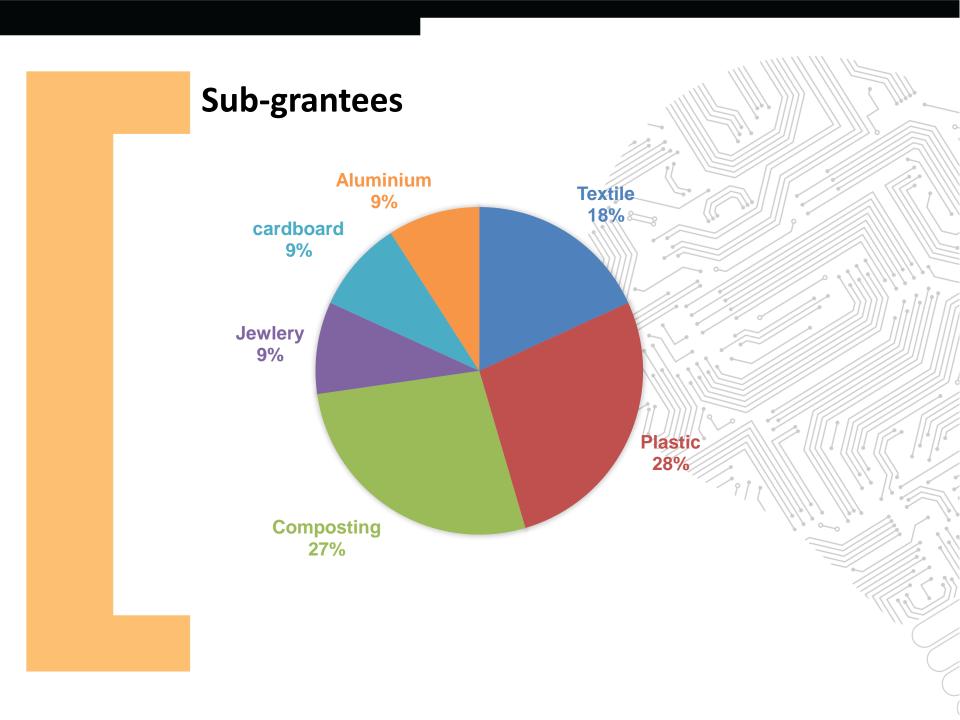
Medina CE findings

- Important presence of artisan workshops
- No sorting
- Important informal sector operations in recycling
- Waste pickers need to be part of the solution





Medina most important waste type



Open Market

- Circular economy
 awareness event and
 exhibition of SME
 beneficiary products
- Open market for 10 days
- Attended by community, civil society and inhabitants as well as visitors of the Medina







Smart tools delay & challenges

- Most medina SME's and not smart tools users
- Limited daily access to internet
- Supplier identification
- Purchasing process length and local currency devaluation
- Technical limitations of Medina supply chain







Nablus City

Nablus is a Palestinian city in the northern region of the West Bank, approximately 60 kilometres north of Jerusalem.

Located in a strategic position between Mount Ebal and Mount Gerizim, Nablus is considered the largest commercial and cultural center in Palestine.

Nablus' rich history lies in its Old City with its distinct stone facades, beautiful architecture, narrow streets and old urban spaces.



Nablus City

Old Market

In the heart of Nablus lies the old city, composed of six major quarters.

The area of the Old City is densely populated. There are two Turkish Baths (hamaams), markets with pottery and tile industry in addition to textile workshops. There are also numerous historic monuments such as the Khan al-Tujjar and the

Manara Clock Tower.

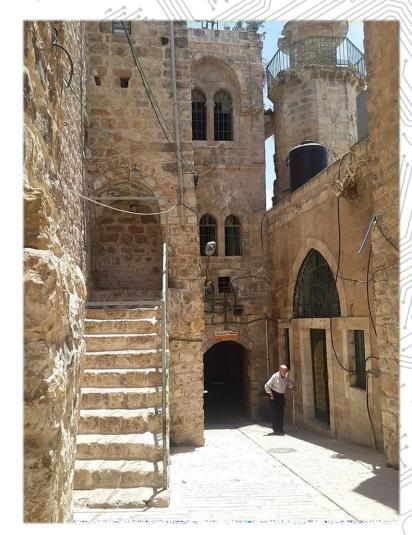




Hebron City

Hebron is a beautiful, ancient city twisted and torn by decades of unrest and conflict. It is the largest city in the West Bank with about 215,000 Palestinians. Its Old City of stone roofs, archways and never-ending alleyways is the perfect playground for the sensory delight of the markets and bazaars. Hebron is a hub of trade, primarily with the sale of marble from nearby quarries. The area is also renowned for grapes, figs, limestone, pottery workshops and glassblowing factories.

The city of Hebron is one of the oldest inhabited cities in the world, and its history dates back more than 4,000 years. The ancient architecture of the old city, which dates back to the Mamluk and Ottoman periods, has witnessed the development and sophistication of the city of Hebron.



Hebron City

The old City

The Old City of Hebron is the historic city centre of Hebron in the West Bank, Palestine. The Hebron of antiquity is thought by archaeologists to have originally started elsewhere, at Tel Rumeida, which is approximately 200 meters west of today's Old City, and thought to have originally been a Canaanite city.



















Nablus and Hebron City

The spatial distribution has had a clear impact on creating a gap between SMEs and the surrounding suppliers, clients, supportive organizations and cooperation at the artisans. This led to the conclusion that value chains need to be strengthened and supported in order to create connection networks and promote visibility and accessibility.

Most participating SMEs apply principles of circular economy and recycling at different stages of production, in different levels depending on the nature of work, availability of waste raw materials and technical skills. However, there is a clear gap between value of recycling practices perceived by customers and manufacturers.

Strategy design at local level PP5 / Birzeit University (NABLUS & HEBRON)

MOTO

VISION

GENERAL GOALS

SPECIFIC GOALS

RGETS

NABLUS

Sustaining History For Sustainable Future

HEBRON

Creative & cultural industries are reusing existing recourses and bringing cultural industries to our daily life's needs.

Revitalizing creative and cultural industries through innovation and circular economy models, and cross border cooperations.

Developing supply chains of wasted materials from existing recourses

Clustering capacity enhancement of SME'S Key stakeholders to setup the baseline of sustainable eco system Promoting the sector by setting up awareness campaigns

cooperation schemes and clustering with EUMC cities

Cross Border

At Least Two supply chains of waste types has been set and operated in each city At least 15 CCI SME'S in each city, are trained, and proposed for new products

Al least one MOU signed with one key stakeholder in each city

Two awareness campaigns for each city are conducted, with key stakeholders involved

one MoU's is conducted for each city. Regarding cross border cooperation clustering Involvement of local communities in the Cluster: Stakeholders proposed support

Key stakeholders that had been identified, and two MoU's were signed in partner cities (Hebron & Nablus)

Involvement of local communities in the Cluster: Nablus City

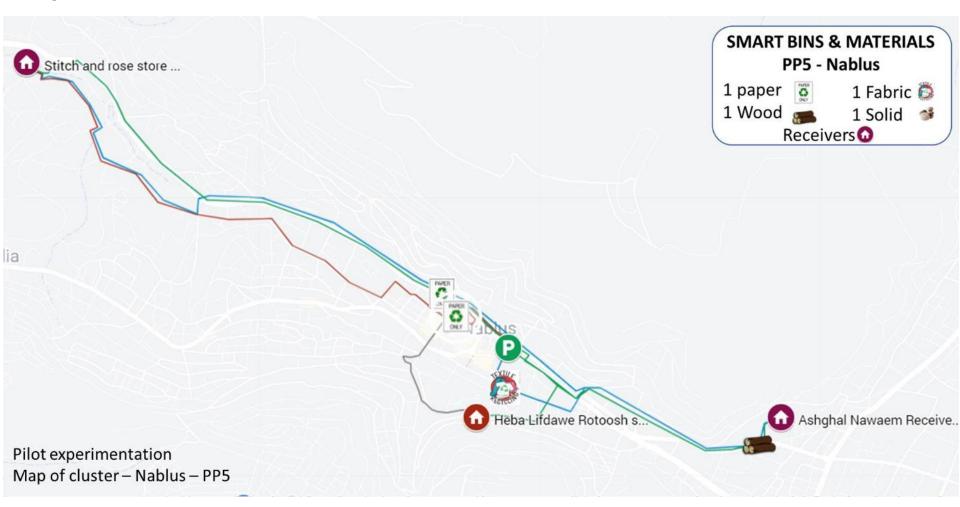
Organization	Responsibilities for the cluster			
Nablus Municipality	 Consulting and technical support (engineers and technical) Assist in networking and linking SME'S with other institutions and associations 			
Nablus Chamber of Commerce and Industry	 Providing free spaces for meetings and joint work Involve them in the trainings available in the chamber, which are compatible with their projects and develop their skills in the field of marketing Keeping them in touch with the Chamber to participate in any future exhibitions or festivals that are compatible with their projects 			
Engineers Syndicate	Provide 3D printing. Consultations and technical support when needed. Networking owners of small and medium enterprises with supporting institutions. Supporting owners of small and medium enterprises in providing paid training courses for women, girls and housewives engineers.			
Ministry of Culture	 Marketing support (through the Ministry's website, social media pages, and exhibitions). Local and global promotion of the products related to small and medium enterprises. Linking and networking the owners of small and medium enterprises with supporting institutions on local basis. 			
Ministry of Tourism and Antiquities	 Marketing support (through the Ministry's website, social media pages, and exhibitions). Local and global promotion of the products related to small and medium enterprises. Linking and networking the owners of small and medium enterprises with supporting institutions on local basis. 			
The Civil Committee of Nablus Governorate	 Providing a free space for meetings organized by the pilot cluster. Organizing awareness-raising events for the pilot cluster. 			

Involvement of local communities in the Cluster:

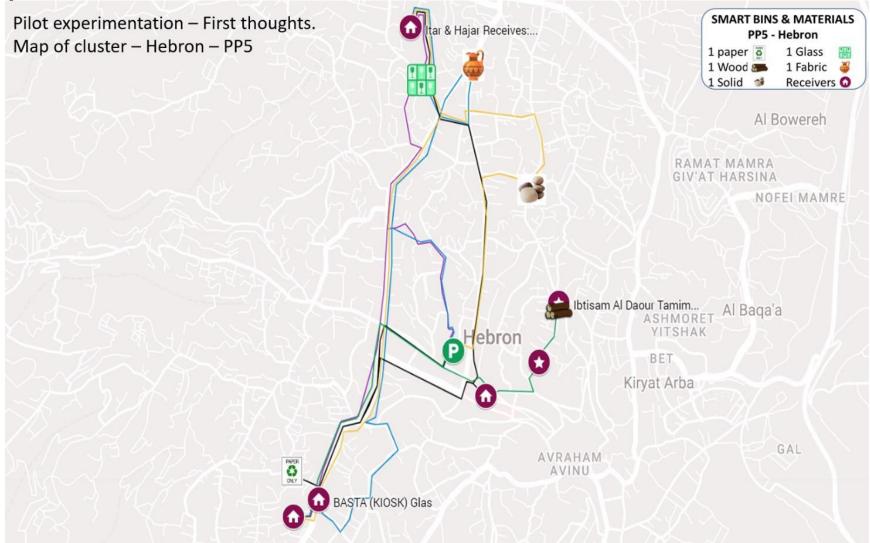
Hebron City

1 low on the	
Organization	Responsibilities for the cluster
Hebron Chamber of Commerce and Industry	 To be the official umbrella for SM'ES in the cluster and to link them with other institutions Providing free spaces for meetings and joint work Involve them in the exercises Marketing support (via website, social media pages and exhibitions) Support best projects with grants from the chamber. support SM'ES by issuing Craft and industrial licenses. Exceptions for home-based SMEs regarding registration requirements
Hebron Reconstruction Committee	 conducting public awareness campaigns about recycling. Working on setting up recycling exhibitions Connecting SME's with other institutions and associations. Marketing support (through the Ministry's website and social media pages). Support the cluster with experience in recycling mechanisms and techniques
Hebron Municipality	 Consulting and technical support (engineers and technicals) Assist in linking small and medium businesses with other institutions and associations
Hebron Governorate	 Providing marketing support (through the governorate's website, social media pages, and exhibitions) Local promotion of SME's products Connecting & networking SME's with other institutions and associations
Ministry of National Economy	 Providing marketing support (through the governorate's website, social media pages, and exhibitions) Local promotion of SME's products Connecting & networking SME's with other institutions and associations

Map of the Pilot Cluster / Nablus



Map of the Pilot Cluster / Hebron



Map of the Pilot Cluster & receivers of secondary materials

Bin#	Country	City	Description	Material	Route Colour	SME Receiver	SME Receiver 2	SME Receiver 3	SME Receiver 4
21	Palestine	Nablus	Karawan Printing	Paper	Black	Heba Lifdawe			
20	Palestine	Nablus	Al Ithad Printing	Paper	Red	Iman Zaid			
19	Palestine	Nablus	Salma carpentry	Wood	Green	Iman Zaid	Rania Saymeh	Heba Lifdawe	
18	Palestine	Nablus	Kahf Gallery of Curtains	Fabric	Blue	Iman Zaid	Rania Saymeh		

Bin#	Country	City	Description	Material	Route Colour	SME Receiver	SME Receiver 2	SME Receiver 3	SME Receiver 4
							Nagah	Khetam	Jehan Al
17	Palestine	Hebron	Jou'beh store	Paper	Black	Fedaa Ghaith	Zahdeh	Shaheen	Qawasmeh
						Khetam	Suaad	Fedaa	
16	Palestine	Hebron	Daour wood	Wood	Green	Shaheen	Shaheen	Ghaith	
						Khetam	Suaad	Fedaa	
15	Palestine	Hebron	Itar & Hajar	Solid	Orange	Shaheen	Shaheen	Ghaith	
						Khetam	Suaad	Fedaa	
14	Palestine	Hebron	Bounga Glass	Glass	Purpel	Shaheen	Shaheen	Ghaith	
							Suaad		
13	Palestine	Hebron	Tamimi Fabric	Fabric	Blue	Fedaa Ghaith	Shaheen		

Final established Clusters/ Subgrantees:

	Hebron	Nablus
# of clusters as subgrantees	3	1
# of members	6/5/5	6
Total grant	5000 EUR	5000 EUR



















Results and Key challenges / Nablus City

- Initially, SMEs faced difficulties in collaborating and cooperating, particularly due to intellectual property (IP) concerns. However, they eventually gained valuable experience in working within the cluster framework.
- Initially, SMEs believed that they had an adequate amount of waste and did not see the need for smart bins.
- Cluster members showed a strong interest in the concept of bicycles and requested one bicycle for each member to facilitate waste collection.
- Some waste suppliers were located far away from the receivers.

Nablus City Outputs:



Heba Ghassan Mohammed Zawawi Coordinator – Pilot Cluster



Heba Ghassan Mohammed Zawawi Coordinator – Pilot Cluster



Heba Ghassan Mohammed Zawaw Coordinator – Pilot Cluster



Heba Ghassan Mohammed Zawawi Coordinator – Pilot Cluster

Results and Key challenges / Hebron City

- Waste utilization was not extensively incorporated into their work.
- •Initially, they were not enthusiastic about the concept of co-working.
- Local organizations lacked awareness about CCI SMEs, but after establishing clusters, they formed a semi-official entity.
- Clusters provided a platform for SMEs to convene, engage in discussions, and exchange ideas.
- Women expressed a desire to handle waste without resorting to dumpsites or industrial parks, and smart tools played a significant role in addressing this issue.
- SMEs had limited familiarity with one another.

Hebron City Outputs:



Islam Ali Issa Abu Qweder Coordinator – Pilot Cluster



Islam Ali Issa Abu Qweder



Fida' Mohammad Ghazi Abd Ja'ba Coordinator – Pilot Cluster



Fida' Mohammad Ghazi Abd Ja'bari Coordinator – Pilot Cluster





Main Characteristics of the city.

- Irbid Governorate is located in the northern part of Jordan and it enjoys a number of natural resources, such as valleys, springs, fertile plains and a diverse climate which make it one of the most important agricultural areas in Jordan constituting 11% of the total cultivated land in the country
- Irbid is characterized by being the second largest governorate in Jordan in terms of population and the number of economic enterprises in operation, it is the second governorate after Amman, with a contribution rate of up to 71% of the total economic enterprises in operation in the north, and a rate of about 16.7% Kingdom-wide. It has the second largest industrial city in the Kingdom in terms of the volume of investment
- Irbid enterprises are mainly commercial and industrial.
- Commercial activities: retail and sale processes in food, drink and tobacco, followed by shops selling clothing, shoes and leather products, then computer and furniture shops. Wholesale and retail commerce; vehicle and motorcycle repairs also constituted a good percentage.
- Irbid industrial activities include: food industries, metal industries, nonmetal industries besides furniture, clothing and wood industries.







Strategy design at local level

Motto of Jordan: "Repair-Reuse for as long as possible"

Vision statement of *Jordan:* To reach to Zero waste through supporting CCI SMEs to adopt CE in Jordan.

General and specific goals of Jordan:

General Goal: Enhance livelihood among SMEs in Jordan while protecting the environment.

Specific Goal

- 1. Strengthen the production and performance of the CCI SMEs in Jordan to adopt the CE principles.
- 2. Advocacy and lobbying among relevant authorities to amend the legalizations to provide legal and financial support to the CCI SMEs.
- 3. Provide opportunities for exchanging experience and market linkages at national and international levels.

Strategy design at local level

Measurable targets of Jordan

- 1. (100) SMEs have been supported through technical training.
- 2. (40) SMEs have been supported in terms of finance.
- 3. Create jobs for 100 unemployed youth and women.
- 4. Contribute to reducing waste by 25% among targeted SMEs, private and industrial sectors.
- 5. 30% of targeted SMEs tuned from linear to circular economy.

Involvement of local communities in the Cluster: Stakeholders

- The involvement of the community and stakeholders was a fundamental factor in the success of the pilot in Irbid city. The main relevant stakeholders who were fundamental part of the pilot and the selection of CCI.
- These are Ministry of Local Administration (MOLA), Ministry of Environment (MoEnv.), Greater Irbid Municipality, Chamber of Commerce of Irbid, Chamber of Trade of Irbid, Local communities representative and Handicrafts and Cultural & Heritage CSOs/NGO.





Involvement of local communities in the Cluster: Stakeholders

- The local community was mobilized through the awareness workshops, where the project objectives, activities and the importance of Circular economy were clarified.
- This has facilitated the involvement of the community in establishing and operating the two clusters in Irbid.
- Ten people hosted ten smart bins and ensured collecting the recyclables from their neighbors and cooperating with the bicycle's driver who were collecting these recyclables and send them to the SMEs that are interested in these materials for their production.
- After testing this pilot, we have designed new clusters that better serve the SMEs and re-distributed the bins
- Also, we have reprogramed them to suit and connect to the digital platform, and connect the bicycle driver too using the mobile application









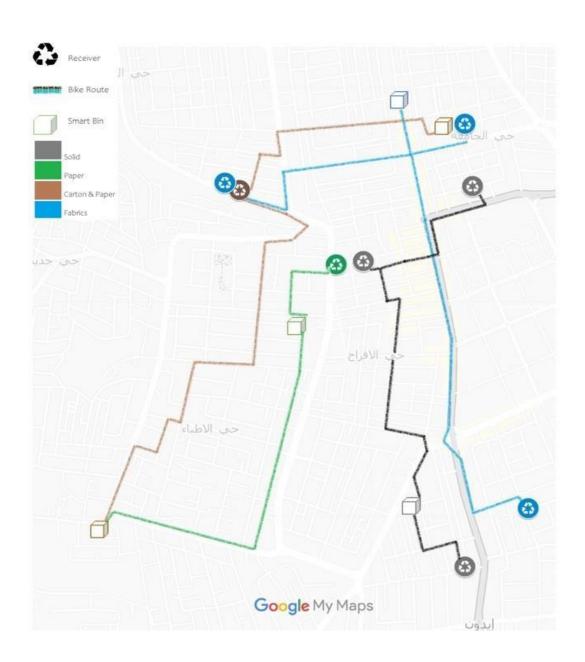


Involvement of local communities in the Cluster: Subgrantees

The grants that have been awarded to CCI SMEs in Irbid and implemented are 38 sub-grants in total. 15 of these SMEs are active parts of the clusters and they are distributed as follow:

- (20) sub-grants for pilot innovative products, (18) of them have been completed successfully and (2) are in progress and will be completed in July 2023
- (10) sub-grants for equipment; (8) of them have been completed successfully and (2) are in progress and will be completed by July
- (8) sub-grants for cross border mentorship in cooperation with various universities. (5) of them have been completed successfully and (3) of them are in progress and will be completed by July

Map of the Pilot Cluster



Results and Key challenges

The project's results are in general positive, and the provided technical and financial support to the SMEs have improved the quality and quantity of their production in the field of circular economy. The experience was good, but there were some challenges that can be used as lessons learned for future activities. These are mainly:

- Majority of the SMEs are not registered officially and are operating from home especially for women to reduce the registration fees and taxes. INNOMED-UP project provided a valuable opportunity for these producers as it did not require the official registration.
- 2. The provided technical support and trainings proved that the SMEs are in real need for such support and it will be very beneficial to have several Info-Points in different locations to provide such support.
- 3. The received applications from SMEs for the sub-grants showed clear weakness in terms of preparing a detailed market plan and estimated market size of upcoming years operations. This should be one of the capacity building topics to be addressee for SMEs.











Results and Key challenges

- The sub-grant's application in general was considered a little bit challenging for the applicants and this made some of them hesitant to apply.
- There is lack of interest in the Cross-border mentorship grant, as the value of 5,000 euro is considered modest for research academies. Although we reached out to several universities and organizations, we received only two applications.
- The SMEs need more support in terms of marketing, branding, packaging and improve the quality of designs. INNOMED-UP granted Future Pioneers the opportunity to provide such support to the SMEs through opening an exhibition for their products and improve their packaging quality.





