

WT3: Work package description

Project Number ¹	609129	Project Acronym ²	CITyFiED
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One form per Work Package

Work package number ⁵³	WP1	Type of activity ⁵⁴	OTHER
Work package title	CITY CLUSTERING		
Start month	1		
End month	60		
Lead beneficiary number ⁵⁵	8		

Objectives

The City Clustering work package will create communities of interest with cities that are closely connected to the CITyFiED consortium. The aim is to increase the replication potential of the CITyFiED results for technologies and measures of near zero energy districts for other cities with both similar typologies as the cities of Valladolid, Soma and Lund and with different typologies. The objective is:

- To create a City Cluster with 10 cities where the potential for replication of near zero energy districts for retrofitting, district heating and cooling and smart grids will be evaluated.
- To create a larger community of interest addressed to cities through the collection of 40 Letters of Interest enabling the increase of the awareness in the project activities for future implementations.

WP1 will move from the core demonstration cities to the creation of a City Cluster into a larger Community of interest involving up to 40 cities. The core of the Community is represented by the 3 cities, Valladolid, Soma and Lund, where demonstrations will take place, and the City Cluster represented by 10 cities closely connected to the CITyFiED consortium, as they represent cities where a high replication potential exists. WP1 will assess the replication potential before including cities into the City Cluster.

The broader community of interest will include cities expressing their interest through the collection of 40 Letters of Interest (at the moment of the submission of the proposal, 18 cities have already signed a letter of interest) enabling the increase of the awareness in the project activities for future implementations and replications.

An intensive activity to contact additional cities will be carried out in WP1 by the partners of the consortium and particularly by the cities involved in the demonstration by exploiting their membership to other city networks and associations such as Energy Cities, or other clusters such as such as the Smart City VyP initiative for the city of Valladolid, they will address other members. Close interlinks with the Smart Cities and Communities Initiative of the SET-Plan and other initiatives such as CONCERTO, CIVITAS and the Covenant of Mayors, as well as other councils' networks and associations, such as the Council of European Municipalities and Regions (CEMR), EUROCITIES and the Energy Cities Association will be set up and targeted dissemination activities will be performed to establish a Community of Interest around the project and enhance the replication potential of the CITyFiED results for near zero energy districts.

Dissemination and communication activities addressing the City Cluster will be implemented by WP6 in cooperation with WP1 as shown in the exhibit below and will encompass specific information campaigns targeting cities to investigate their involvement both in the City Cluster and in the Community of Interest, the support to organization of local events, such as workshops and training, embedded in topic-related events, a periodical e-newsletter dedicated to the City Cluster, a reserved web section to exchange information with the project consortium, the supply of dissemination material upon request.

Description of work and role of partners

Task 1.1: The CITyFiED City Clustering Secretariat [IVL] (YOU, CAR, SIG)

This task will establish a City Secretariat (the CITyFiED Secretariat) aiming at enlarging the cities' baseline to constitute a City Cluster of 10 cities and to collect Letters of Interest from an increasing number of European

WT3: Work package description

municipalities (40 LoI). The CITYFiED Secretariat is managed by IVL with the support of youris.com, Cartif, Steinbeis and the Dissemination and Communication Secretariat as described in WP6. All project partners involved in the enlargement of the cities' baseline will refer to the Secretariat to co-ordinate activities and undertake action.

The CITYFiED City Secretariat will coordinate all the networking activities foreseen in WP1 and described in detail in Tasks 1.2 and 1.3. The CITYFiED secretariat will directly interface with a Board of Representatives of City Members representing a contact point between the project – represented by the Secretariat – and the cities. The board will include representatives of the 10 Cluster Cities and at least 5 representatives of the community of interest. The Board will supply specific data on the cities upon request of the consortium for the scope of the project's activities and will receive information from the project in terms of results, events and studies to be performed around the city cluster. The board will play an important role in dispatching project information at local level, thus providing an additional support to the localization of the project communication activities. This task is closely connected to the dissemination Work Package WP5.

Task 1.2: City Cluster: planning and development [IVL] (YOU, CAR, SIG, LAG, LUND, SOM)

The objective of this task is to develop and establish a City Cluster of 10 European cities starting with the cities that already have signed the Letter of Interest during the proposal preparation phase. The City Cluster will consist of cities that will highly benefit from the results created in the CITYFiED project. The clustering will emphasize on a mix of relevant typologies for city size, density, climate conditions, existing infrastructure, small and large scale systems, investment plans and business models, public private partnership relationship and willingness to go beyond business as usual for retrofitting, energy system upgrade and smart grid solutions. This task will:

- Establish a City Cluster platform with 10 cities for replication purposes that shall facilitate data exchange a collection for development of individual virtual smart city models with high replication potential for smart city concepts. The 10 cities will be chosen from the 18 that already signed Letters of Interest and that represent the cities with the greatest potential for replication.
- Establish and conclude plans and activities with each city to conduct a virtual model evaluation of replication potential for smart city concepts.
- Establish a plan for workshops, meetings and visits that can be used and refined during the project duration to facilitate the replication and dissemination potential of the CITYFiED results and the establishment of virtual near zero district developments.
- Establish a dedicated web section reserved to the City Cluster to exchange information and develop a virtual community to stimulate discussions on specific topics through web 2.0 applications (such as LinkedIn discussion groups). The city cluster will represent the core of the projects virtual community that will be developed in WP5 (Task 5.11)
- Establish specific communication tools addressing the City Cluster, such as a dedicated periodical newsletter highlighting project results and a focus on each city.

The CITYFiED City Secretariat (see Task 1.1) will coordinate this activity.

Task 1.3: The broader Community of Interest addressed to other cities [YOU] (IVL, CAR, SIG, LAG, LUND, SOM)

This task aims to include into the project structure a second layer of cities acting as potential replication targets for the project results. These cities will access the project via the signature of a Letter of Interest, enabling their participation to some of the project events (e.g. 3 workshops) and will be offered for free additional services such as specific, limited analyses of similar interventions on a city district. This shall include a bottom-up component into the building of the broad community of cities, highlighting the benefits that might derive for the municipalities in signing the Letter of Interest and becoming a member of the CITYFiED city network.

The project will exploit its own contact network with European public administrations but will especially exploit its contacts within existing European initiatives, such as CONCERTO and the Smart Cities Stakeholder Platform. CITYFiED will proactively contact these and other platforms in order to enlarge the baseline of cities potentially interested in being involved in Tasks 1.2 and 1.3.

WT3: Work package description

The project has the objective to collect 40 Letters of Interest from European municipalities, representing the broader CITYFiED City Community of Interest. The CITYFiED City Secretariat (see Task 1.1) will coordinate this activity.

Task 1.4: Model for evaluation of replication potential [IVL] (CAR, SIG, LAG, LUND, SOM, DAL)

The purpose of this task is to identify important aspects in the Cluster Cities to achieve high potential for replication of the CITYFiED project results. In order to be able to replicate near zero energy measures among the Cluster Cities, current energy demand and supply, retrofitting possibilities and planned interventions and investment plans need to be collected and evaluated thoroughly. In this task a virtual model that can take in to account different typologies such as density of districts, building technology and renovation need, current energy demand, energy supply including energy sources and smart grid solutions and plans will be developed.

- Firstly there will be a refining process on how to choose appropriate city districts for detailed analysis in order to make the Cluster City approach as relevant and representative when it comes to e.g.; energy typology, climate, how well the city represents the area it is located in, financial options etc.
- Then an evaluation model will be developed based on known concepts for how to model energy demand in buildings with energy system modeling approaches such as (MARKAL TIMES or similar with a holistic approach). The two systemic approaches will be merged in order to be able to result in an evaluation of the potential for energy savings in retrofitting that includes the proposed technologies in WP3 for near zero building technologies, district heating and cooling options and smart grid solutions.
- Finally the model will also incorporate the business models developed in WP3 together with actual investment plans from the Cluster cities in order to assess the energy saving potentials and replication prospects against possible business cases and cost effectiveness.
- As a complement to the quantitative model for calculations also semi structured interview methodologies (Green et al 2006) will be performed in order to find out what non-technological aspects such as financial, organizational, cultural, juridical and social can either boost the replication potential or hinder it.
- A case city among the partner cities will be used during the development of the model.

IVL will develop the model together with the partner who develops the business model concept (DAL). Input is also needed from WP3 and from Lund as case city for this task.

Task 1.5: Evaluation of actual replication potential [IVL] (YOU, CAR, SIG, TUB, ITU, TEC)

The objective of this Task is to evaluate the replication potential in 10 districts in the Cluster Cities using the methodology developed in Task 1.4 with the following activities:

- Identify and select appropriate city districts with the greatest replication potential in the cluster cities for a more detailed analysis based on the method developed in Task 1.4.
- Collection of necessary data for the evaluation of the potential according to the model and planned measures at city and district level, financial plans and partnership identification and public innovative procurement procedures (Energy Performance Contracting, Public Private Partnership, etc.).
- Complementary data collection and information sharing through a visit of the cities and municipalities and interviews with key stakeholders for determination of non-technological issues.
- Evaluation of collected data and analysis of the results and writing of a report that include all evaluated cities.
- Workshops at the beginning, middle and end of project with the cities belonging to the cluster.

IVL will synthesize and make the calculations; partners connected to each Cluster City will collect data and information and also participate in all contacts with the Cluster Cities.

Task 1.6: Replication, deployment and dissemination [SIG] (IVL, CAR, YOU)

An expanded city clustering plan will be developed that can be fed in to the WP6 Exploitation, market and replication work package. Several aspects will be identified to cluster other potential city districts and cities with conditions similar to the Cluster Cities.

Results of the replication potential that is developed in this work package will be assembled into information package e.g. series of workshops, seminars, publications, web products, etc. that will be used in WP5, under the supervision of the project Communication Secretariat.

WT3: Work package description

Person-Months per Participant

Participant number ¹⁰	Participant short name ¹¹	Person-months per participant
1	CARTIF	6.00
3	Ayto. Laguna de Duer	5.00
4	DALKIA ES	2.00
7	LUND	10.00
8	IVL	25.00
11	Soma Belediyesi	5.00
12	TUBITAK	3.00
13	ITU	3.00
16	YOU	12.00
17	SIG	5.00
18	TEC	2.00
	Total	78.00

List of deliverables

Deliverable Number ⁶¹	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature ⁶²	Dissemination level ⁶³	Delivery date ⁶⁴
D1.1	Report of activities of CITYFiED City Clustering Secretariat	8	8.00	R	PU	60
D1.2	City Cluster platform with 10 cities	8	14.00	O	PU	6
D1.3	40 Letters of Interest	16	16.00	R	PU	60
D1.4	Report of model for evaluation of potential	8	15.00	R	PU	12
D1.5	Preliminary report of potential for replication in 10 city districts	8	8.00	R	PU	24
D1.6	Final report of potential for replication in 10 city districts	8	8.00	R	PU	48
D1.7	Replication plan for other city districts	17	5.00	R	PU	54
D1.8	Information package for further dissemination and exploitation activities	17	4.00	R	PU	48
	Total		78.00			

Description of deliverables

D1.1) Report of activities of CITYFiED City Clustering Secretariat: [month 60]
D1.2) City Cluster platform with 10 cities: [month 6]
D1.3) 40 Letters of Interest: [month 60]
D1.4) Report of model for evaluation of potential: [month 12]

WT3: Work package description

- D1.5) Preliminary report of potential for replication in 10 city districts: [month 24]
- D1.6) Final report of potential for replication in 10 city districts: [month 48]
- D1.7) Replication plan for other city districts: [month 54]
- D1.8) Information package for further dissemination and exploitation activities: [month 48]

Schedule of relevant Milestones

Milestone number ⁵⁹	Milestone name	Lead beneficiary number	Delivery date from Annex I ⁶⁰	Comments
MS2	Cluster of cities launched	8	6	Report