Part A - Project summary

A.1 Project Identification

Acronym	AIRe NET	
Title	Air Improvement Reducing Emissions with a Networking Enrollment of Towns. Networking multi-level approach for medium size urban authorities with local stakeholders breaks boundaries and proves efficacy of coordinated actions to enhance air quality.	
Project Number	UIA03-074	
(Main) Urban Authority	Granollers city council - GR	
ERDF rate	80.00%	
Project Duration	**Start Date**	01/11/2018
	End Date	31/10/2021
	Total Months	36
Topic	Air quality	

A.2 Project summary

Description

Air pollution has no boundaries. Understanding the territorial scope, the causes and solutions need coordinated efforts at many levels.
Air pollution is not always visible and it is difficult to agree solutions when the analysis is done city by city.
Scattered estimates on emissions from traffic flows, industrial and agricultural burning of vegetable waste inventories are updated separately multiplying the cost to get them and lacking relevant information from neighbor cities.
Isolated cities' actions use resources inefficiently: mobility plans, separated mechanisms to face pollution episodes, or different modeling methods among cities.
The direct and indirect effects a local policy go beyond that urban authority territory.
Citizens and economic activities implication asks for clear facts and evidence on the need and direct effects of their actions in the air they breathe.
"Together is better". The project will develop means to favor cooperation in a multi-level governance approach that goes beyond the urban authorities borders, and shares information to understand the scope of the problem and the coordinated local solutions that are effective according to source contribution.
The innovation is the bottom up coordination sought by a continuous urban area made of seventeen medium size cities who need to add up capacities and resources to start new coordination channels with regional authorities, nearby metropolis, industry, economic sectors, research centers and citizens.

Partner		ERDF co-financing		Contribution			Total	
Partner	Country	EUR	ERDF rate	Public	Private	Total	Budget	%of project budget
PP 1 - Granollers city council - GR	ES	434,094.48	80.00%	108,523.62	0.00	108,523.62	542,618.10	11.04%
PP 2 - Mollet del Vallès City Council - MOLL	ES	329,536.04	80.00%	82,384.01	0.00	82,384.01	411,920.05	8.38%
PP 3 - Montornes del Valles town council - MON	ES	159,140.80	80.00%	39,785.20	0.00	39,785.20	198,926.00	4.05%
PP 4 - Barcelona Provincial Council - DIBA	ES	416,999.64	80.00%	104,249.91	0.00	104,249.91	521,249.55	10.60%
PP 5 - THIGIS SERVEIS AMBIENTALS, S.L. - TH	ES	267,094.08	80.00%	0.00	66,773.52	66,773.52	333,867.60	6.79%
PP 6 - Barcelona Supercomputing Center - BSC	ES	358,919.04	80.00%	89,729.76	0.00	89,729.76	448,648.80	9.13%
PP 7 - CSIC (Spanish National Research Council)	ES	429,117.80	80.00%	107,279.45	0.00	107,279.45	536,397.25	10.91%
PP 8 - Government of Catalonia	ES	744,778.04	80.00%	186,194.51	0.00	186,194.51	930,972.55	18.94%
PP 9 - BUSUP TECHNOLOGIES SL	ES	140,741.52	80.00%	0.00	35,185.38	35,185.38	175,926.90	3.58%
PP 10 - CTRL4 ENVIRO, S.L. - CTRL4	ES	203,283.04	80.00%	0.00	50,820.76	50,820.76	254,103.80	5.17%
PP 11 - UNIVERSITAT POLITECNICA DE CATALUNYA - InLUPC	ES	449,127.00	80.00%	112,281.75	0.00	112,281.75	561,408.75	11.42%
Total (€)		**3,932,831.48**	**80.00%**	**830,428.21**	**152,779.66**	**983,207.87**	**4,916,039.35**	**100.00%**

Part B - Partnership

Relevance of the Partnership

Since 2016, Air Quality (AQ) issues have been discussed in the Supra-Municipal Group, led by (GR), with neighbor cites, the scientific community and the regional government. GR and MOLL, both DEGURBA1, have automatic stations on AQ. The rest of SMG's cities are part of the wider group coordinated by DIBA and DTES of Generalitat of Catalonia which guarantee vertical governance integration, developing systems to share emission registers, model estimates and communication. The bottom up participation (citizens, economic activities) will be boosted by TH, which will coordinate day to day AIRe NET and is in charge to prompt the Air Pollution Abatement Marathon, and, by BUP who will define opportunities for collective transport. AQ modeling activities will be led by BSC with traffic simulations by InLUPC complemented with traffic flows analysis with cameras by CTRL4. The last; one local innovative business will research on image indicators to complement the tasks of AQ monitoring by CSIC.

B.1 - (Main) Urban Authority

Organisation name (Original)	Ajuntament de Granollers
Organisation name (English)	Granollers city council - GR
Member state	SPAIN
Number of inhabitants	59,954
Comments, if necessary	
Department(s)/unit(s)/division(s) concerned	Environmental Department will be the leader, accompanied by other services Services, Maintenance and Constructions. People involved: Superior technical environment - Marta Chillida Chief service environment - Quim Comas Engineering services and public roads - Miquel Pujadas Chief municipal services - Josep Lluis Castell

Address	**Street**	Pl. Porxada 6	**Contact Person**	**Position**	Technician of environmental department
	Post Code	08401		**Title**	Ms
	Town	Granollers		**Forename**	Marta
	NUTS 2	Cataluña		**Surname**	Chillida Munguet
	NUTS 3	Barcelona		**Email Address**	mchillida@ajuntament.granollers.cat
				Phone Number	+34 938 603 206

Legal representative	**Position**	Major
	Title	Mr
	Forename	Josep
	Surname	Mayoral Antigas
	Email Address	alcaldia@ajuntament.granollers.cat
	Phone Number	+34 938 426 603

Legal status of the organisation	Public	**Partner type**	Local public authority
VAT number	P0809500B		
VAT recoverable	No		

Involvement in the design phase

In the initial phase (January 2018) GR organized a meeting with the delivery partners to review the"call for needs". In addition, had meetings a part with Consell Comarcal, and DIBA to find the best way to coordinate actions with the rest of the municipalities in the wider group of stakeholders. GR had different meetings with other civil collectives and institutions: Granollers Pedala , ASOCPARC , schools VallesBot, industry firms, ISL Global, and Techinicians in charge of SmartCAT in Catalonia

Involvement in the implementation phase

GR will lead AIRe NET and is in charge of the project management. The projects' territorial scope and the multilevel governance (DTES has competence in AQ policies, industrial emissions, traffic and agriculture in the region) have made necessary to design a distinct project management with the cooperation of two PP: DIBA and TH. GR will be responsible as well, with the associated UA (MOLL and MON) of the design of abatement measures and the implementation of those actions and their impact assessment.

Competences and experiences in relation to the challenge addressed?

GR had a previuous The Mobility Plan's and its about to approve a new one. With the help of DIBA could make an AQ plan in GR (2011) but the dimension of the problem leaft out important issues beyond municipal boundaries. The seventeen SMG municipalities in AIRe NET have (2016), with the leadership of GR, set actions to be taken individually but so far none of the municipalities has approved any, because they need to act jointly.

Experience in participating in and/or managing EU co-financed projects or other international projects.

2018 CEMOWAS2 Interreg SUDOE.
2017 ALNUS – Aigua. Millora del riu Congost. Life +. LIFE16 NAT/ES/000768 - LIFE ALNUS
2016 COMPOSE Interreg Mediterranean 1MED15_2.2_M23_209
2016 THERMOS RIA Research and Innovation action 723636
2014 Alera Convocatòria Euroregió Pirineus – Mediterrània

Total Partner Budget

PROGRAMME CO-FINANCING		CONTRIBUTION			Total (€)
ERDF (€) (a)	ERDF Co-financing rate (%)	Public Contribution (€) (b)	Private Contribution (€) (c)	Total Contribution (€) (d)=(b)+(c)	Total Eligible Cost (€) (e)=(a)+(d)
434,094.48	80.00%	108,523.62	0.00	108,523.62	542,618.10

Breakdown of Partner Budget per Work Package/ Budget Line

Work Package	Staff Costs (€)	Office and administration (€)	Travel and accommodation (€)	External expertise and services (€)	Equipment (€)	Infrastructure and Works (€)	Sub-total (€)	Revenues (€)	Total (€)
WP 1	0.00	0.00	0.00	20,000.00	0.00	0.00	0.00	0.00	20,000.00
WP 2	32,000.00	4,800.00	6,500.00	0.00	0.00	0.00	43,300.00	0.00	43,300.00
WP 3	2,000.00	300.00	0.00	14,000.00	0.00	0.00	16,300.00	0.00	16,300.00
WP 4	6,000.00	900.00	0.00	35,000.00	0.00	0.00	41,900.00	0.00	41,900.00
WP 5	28,340.00	4,251.00	0.00	36,000.00	0.00	0.00	68,591.00	0.00	68,591.00
WP 6	52,000.00	7,800.00	0.00	15,100.00	0.00	0.00	74,900.00	0.00	74,900.00
WP 7	26,054.00	3,908.10	0.00	15,200.00	0.00	0.00	45,162.10	0.00	45,162.10
WP 8	12,000.00	1,800.00	0.00	15,000.00	48,665.00	140,000.00	217,465.00	0.00	217,465.00
WP 9	0.00	0.00	0.00	15,000.00	0.00	0.00	0.00	0.00	15,000.00
Total (€)	**158,394.00**	**23,759.10**	**6,500.00**	**165,300.00**	**48,665.00**	**140,000.00**	**542,618.10**	**0.00**	**542,618.10**
%of total budget	29.19%	4.38%	1.20%	30.46%	8.97%	25.80%	100.00%	0.00%	100.00%

B.2 - Associated Urban Authority (Partner 2)

Organisation name (Original)		Ajuntament de Mollet del Vallès			
Organisation name (English)		Mollet del Vallès City Council - MOLL			
Member state		SPAIN			
Number of inhabitants		52,242			
Comments, if necessary					
Department(s)/unit(s)/division(s) concerned		PUPAMA: Urban landscape and Environment.			
Address	**Street**	Plaça Major 1	**Contact Person**	**Position**	Environmental technician
	Post Code	08100		**Title**	Ms
	Town	Mollet del Vallès		**Forename**	Maria
	NUTS 2	Cataluña		**Surname**	Busquets
	NUTS 3	Barcelona		**Email Address**	mabusquets@molletvalles.cat
				Phone Number	+34 935 719 500
Legal representative	**Position**	Mayor			
	Title	Mr			
	Forename	Jose			
	Surname	Monras			
	Email Address	epallares@molletvalles.cat			
	Phone Number	+34 935 719 500			
Legal status of the organisation		Public	**Partner type**		Local public authority
VAT number		ESP0812300B			
VAT recoverable		No			

Involvement in the design phase

Gathering with several urban authorities of the shire of Vallès Oriental and some companies involved in air quality control and possible partners.
Attended weekly meetings with cities partners and companies partners
Phone calls and skype with cities partners and companies partners
Mail conversations with cities partners and company's partners.

Involvement in the implementation phase

Mollet del Vallès participates as an Associated Urban Authority.
Our technicians and experience in air quality management, will help to achieve the goals of the project.
We are involved in all the work packages, some of them in more participation than the other ones.
The main work packages we are involved are:
Work package 5: Definition, design and monitoring of local and regional strategies: mobility, industry and agriculture.
Work package 6: Efficacy assessments of the measures implemented
Work package 8: Pilot network and investment to coordinate actions to reduce the local emissions and to manage air pollution (sensors/electronic platform)

Competences and experiences in relation to the challenge addressed?

In 2006 the city was declared Special Protection Area for PM10 pollution and in 2012 as Special Protection Area for NO2 since it surpassed acceptable levels regarding the air quality of these two pollutants. Given this context, the city works with the aim of reducing the emission values of these two pollutants and therefore improve air quality in the municipality, focusing in the areas of transport (public and private) and municipal facilities.

Experience in participating in and/or managing EU co-financed projects or other international projects.

It has been participating in several EU co-financed and international projects. The main are:
■ Horizon 2020 (2015-2017): Societal and political engagement of young people in environmental issues.
Status organisation: partner.
■ Erasmus Ravensburg (2015 & 2017): students exchange.
Status organisation: partner.
■ Erasmus Rivoli (2017): students exchange.
Status organisation: partner.
■ URBACT III (2016-2018): Agriurban: to promote healthy eating habits.
Status organisation: partner.

Total Partner Budget

PROGRAMME CO-FINANCING		CONTRIBUTION			Total (€)
ERDF (€) (a)	ERDF Co-financing rate (%)	Public Contribution (€) (b)	Private Contribution (€) (c)	Total Contribution (€) (d)=(b)+(c)	Total Eligible Cost (€) (e)=(a)+(d)
329,536.04	80.00%	82,384.01	0.00	82,384.01	411,920.05

Breakdown of Partner Budget per Work Package/ Budget Line

Work Package	Staff Costs (€)	Office and administration (€)	Travel and accommodation (€)	External expertise and services (€)	Equipment (€)	Infrastructure and Works (€)	Sub-total (€)	Revenues (€)	Total (€)
WP 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP 2	21,162.00	3,174.30	6,500.00	0.00	0.00	0.00	30,836.30	0.00	30,836.30
WP 3	1,638.00	245.70	0.00	14,000.00	0.00	0.00	15,883.70	0.00	15,883.70
WP 4	6,000.00	900.00	0.00	12,000.00	0.00	0.00	18,900.00	0.00	18,900.00
WP 5	27,350.00	4,102.50	0.00	36,000.00	0.00	0.00	67,452.50	0.00	67,452.50
WP 6	43,356.00	6,503.40	0.00	14,000.00	0.00	0.00	63,859.40	0.00	63,859.40
WP 7	25,481.00	3,822.15	0.00	0.00	0.00	0.00	29,303.15	0.00	29,303.15
WP 8	14,800.00	2,220.00	0.00	0.00	28,665.00	140,000.00	185,685.00	0.00	185,685.00
WP 9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total (€)	**139,787.00**	**20,968.05**	**6,500.00**	**76,000.00**	**28,665.00**	**140,000.00**	**411,920.05**	**0.00**	**411,920.05**
%of total budget	33.94%	5.09%	1.58%	18.45%	6.96%	33.99%	100.00%	0.00%	100.00%

B.2 - Associated Urban Authority (Partner 3)

Organisation name (Original)	Ajuntament de Montornès del Vallés
Organisation name (English)	Montornes del Valles town council - MON
Member state	SPAIN
Number of inhabitants	16,240
Comments, if necessary	Correspondence table LAU – NUTS 2016, EU-28 and EFTA/ available Candidate Countries. 2017
Department(s)/unit(s)/division(s) concerned	Territory Area. Pere Pascual Mariné. Head of Area Environment Dep. & Mobility Dep. José Manuel Pérez Rodríguez. Environmental technician Josep Pérez Amatller. Mobility technician

Address	**Street**	Av. de la Llibertat, 2	**Contact Person**	**Position**	Environmental technician
	Post Code	08170		**Title**	Mr
	Town	Montornès del Vallès		**Forename**	José Manuel
	NUTS 2	Cataluña		**Surname**	Pérez Rodríguez
	NUTS 3	Barcelona		**Email Address**	perezjm@montornes.cat
				Phone Number	+34 935 721 170
Legal representative	**Position**	Major			
	Title	Mr			
	Forename	José Antonio			
	Surname	Montero Domínguez			
	Email Address	alcaldia@montornes.cat			
	Phone Number	+34 935 721 170			

Legal status of the organisation	Public	**Partner type**	Local public authority
VAT number	ESP0813500F		
VAT recoverable	No		

Involvement in the design phase	Gathering with several urban authorities of the shire of Vallès Oriental and some companies involved in air quality control and possible partners. Attended weekly meetings with cities partners and companies partners Phone calls and skype with cities partners and companies partners Mail conversations with cities partners and company's partners.
Involvement in the implementation phase	Montornès del Vallès participates as an Associated Urban Authority. Our technicians and experience in air quality management, will help to achieve the goals of the project. We are involved in all the work packages, some of them in more participation than the other ones. The main work packages we are involved are: Work package 5: Definition and efficacy assessments of the measures implemented: by regional authority, by Barcelona metropolitan area, by the networking of AIR-e NET Work package 6: Participative co- design with wider group of stakeholders of pollution abatement actions (Granollers, Mollet, Montornès)
Competences and experiences in relation to the challenge addressed?	Work Group + air-noise. Network of Cities and villages towards Sustainability DB Supramunicipal table for air quality Network of atmospheric collectors DB European Symposium on air quality noise and health effects in urban agglomerations 2015 Historical data in continuous of PM10, and campaigns data of VOCs, NOx.. Studies VOCs and odors UPC Items local A21 and Action Plan Need of the project to know what actions to implement are efficient locally Sufficient competences to approach the project
Experience in participating in and/or managing EU co-financed projects or other international projects.	None

Total Partner Budget

PROGRAMME CO-FINANCING		CONTRIBUTION			Total (€)
ERDF (€) (a)	ERDF Co-financing rate (%)	Public Contribution (€) (b)	Private Contribution (€) (c)	Total Contribution (€) (d)=(b)+(c)	Total Eligible Cost (€) (e)=(a)+(d)
159,140.80	80.00%	39,785.20	0.00	39,785.20	198,926.00

Breakdown of Partner Budget per Work Package/ Budget Line

Work Package	Staff Costs (€)	Office and administration (€)	Travel and accommodation (€)	External expertise and services (€)	Equipment (€)	Infrastructure and Works (€)	Sub-total (€)	Revenues (€)	Total (€)
WP 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP 2	9,813.00	1,471.95	2,000.00	0.00	0.00	0.00	13,284.95	0.00	13,284.95
WP 3	1,000.00	150.00	0.00	6,000.00	0.00	0.00	7,150.00	0.00	7,150.00
WP 4	3,500.00	525.00	0.00	0.00	0.00	0.00	4,025.00	0.00	4,025.00
WP 5	16,000.00	2,400.00	0.00	18,000.00	0.00	0.00	36,400.00	0.00	36,400.00
WP 6	20,000.00	3,000.00	0.00	12,000.00	0.00	0.00	35,000.00	0.00	35,000.00
WP 7	11,887.00	1,783.05	0.00	0.00	0.00	0.00	13,670.05	0.00	13,670.05
WP 8	10,200.00	1,530.00	0.00	0.00	18,666.00	59,000.00	89,396.00	0.00	89,396.00
WP 9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total (€)	**72,400.00**	**10,860.00**	**2,000.00**	**36,000.00**	**18,666.00**	**59,000.00**	**198,926.00**	**0.00**	**198,926.00**
%of total budget	36.40%	5.46%	1.01%	18.10%	9.38%	29.66%	100.00%	0.00%	100.00%

B.2 - Associated Urban Authority (Partner 4)

Organisation name (Original)	Diputació de Barcelona - DIBA
Organisation name (English)	Barcelona Provincial Council - DIBA
Member state	SPAIN
Number of inhabitants	5,576,037
Comments, if necessary	
Department(s)/unit(s)/division(s) concerned	It is the public administration of the province of Barcelona, provides technical and economic support to the 311 municipalities of territory. The unit responsible for the project is the Technical Office of Environmental Assessment and Management. Its fundamental mission is the improvement of the Quality of the air in collaboration with the Municipalities. Besides, the Department of Activities (OA) will participate with the GIA platform in order to manage the data at the municipal level.

Address	**Street**	Rambla de Catalunya, 126	**Contact Person**	**Position**	Manager of the Environment Department
	Post Code	08008		**Title**	Ms
	Town	Barcelona		**Forename**	Inma
	NUTS 2	Cataluña		**Surname**	Pruna González
	NUTS 3	Barcelona		**Email Address**	prunagi@diba.cat
				Phone Number	+34 934 022 485
Legal representative	**Position**	President			
	Title	Ms			
	Forename	Mercè			
	Surname	Conesa Pagès			
	Email Address	presidencia@diba.cat			
	Phone Number	+34 934 049 210			

Legal status of the organisation	Public	**Partner type**	Local public authority
VAT number	P0800000B		
VAT recoverable	No		

Involvement in the design phase	It has formed a technical group of work of several units: the technical for the environment of Granollers, the controller of the atmospheric pollution, two experts in information technologies, an expert in management of municipal databases of the OA and the person in charge of management of European funds of Department of Environment. On-line meetings are held on-site and permanent email exchange. The contribution of DIBA is the coordination of all the Municipalities involved.
Involvement in the implementation phase	DIBA will be responsible for the communication between the members of the partnership: It will guarantee the functioning of the steering committee, coordinate the procedures and responsibilities, strategic meetings and ensure the effective participation of all the partners in the project. We will be responsible for the planning, programming and implementation of all communication activities, will promote, coordinate, design and produce the publications and establish the divulgation in the social networks. Besides, for implementing of environmental data, the Office of Activities (OA) will take part with the GIA platform in order to manage the data at the municipal level. It will be necessary to adapt it to the purposes of the project.
Competences and experiences in relation to the challenge addressed?	DIBA supports municipalities for the analysis of air quality and the development of studies for more than 40 years It has mobile units with automatic analyzers and manuals of atmospheric pollutants, specific units for the capture of particles, conducts studies and supports the municipalities for the drafting of plans to improve the quality of the air The Office of Activities has the GIA platform deployed in the territory. From 17 municipalities which are in the project, 12 have implanted the GIA
Experience in participating in and/or managing EU co-financed projects or other international projects.	LIFE-CLINOMICS Fostering resilience. Opportunities and challenges of the local economy and society to adapt to climate change, 2016. Lead partner. H2020: MAYORS IN ACTION Empoering supporting structure of the Covenant of Mayors to assist Local Authorities, 2014. Partner. EURONET 50-50 MAX Roll-out of 50/50 initiative to unclock energy saving in schools and other public buildings, 2013. Lead partner. INTERREG: SERPENTE Surpassing Energy Targets through Efficient Public Building, 2012. Partner.

Total Partner Budget

PROGRAMME CO-FINANCING		CONTRIBUTION			Total (€)
ERDF (€) (a)	ERDF Co-financing rate (%)	Public Contribution (€) (b)	Private Contribution (€) (c)	Total Contribution (€) (d)=(b)+(c)	Total Eligible Cost (€) (e)=(a)+(d)
416,999.64	80.00%	104,249.91	0.00	104,249.91	521,249.55

Breakdown of Partner Budget per Work Package/ Budget Line

Work Package	Staff Costs (€)	Office and administration (€)	Travel and accommodation (€)	External expertise and services (€)	Equipment (€)	Infrastructure and Works (€)	Sub-total (€)	Revenues (€)	Total (€)
WP 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP 2	74,270.00	11,140.50	1,030.00	23,850.00	0.00	0.00	110,290.50	0.00	110,290.50
WP 3	58,490.00	8,773.50	3,000.00	52,360.00	8,000.00	0.00	130,623.50	0.00	130,623.50
WP 4	3,200.00	480.00	0.00	0.00	0.00	0.00	3,680.00	0.00	3,680.00
WP 5	7,201.00	1,080.15	0.00	35,965.00	0.00	0.00	44,246.15	0.00	44,246.15
WP 6	3,524.00	528.60	0.00	0.00	0.00	0.00	4,052.60	0.00	4,052.60
WP 7	45,680.00	6,852.00	2,000.00	0.00	0.00	0.00	54,532.00	0.00	54,532.00
WP 8	10,152.00	1,522.80	0.00	0.00	122,150.00	40,000.00	173,824.80	0.00	173,824.80
WP 9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total (€)	**202,517.00**	**30,377.55**	**6,030.00**	**112,175.00**	**130,150.00**	**40,000.00**	**521,249.55**	**0.00**	**521,249.55**
%of total budget	38.85%	5.83%	1.16%	21.52%	24.97%	7.67%	100.00%	0.00%	100.00%

B.3 - Delivery Partner (Partner 5)

Organisation name (Original)	THIGIS SERVEIS AMBIENTALS, S.L.
Organisation name (English)	THIGIS SERVEIS AMBIENTALS, S.L. - TH
Member state	SPAIN
Department(s)/unit(s)/division(s) concerned	The main objective of Thigis Serveis Ambientals is to provide environmental services to public administration an to private sector as well. It's main work fields are: GIS development and consultancy and environmental education. Geoservices (headed by Xavier Serra) and education (headed by Laia Serra) departments will be involved in the Project Management of AIRe NET, the Air Pollution Abatement Marathon and those sections concerning participation, education and comunication (WP3).

Address	**Street**	Bassols, 26	**Contact Person**	**Position**	Administrator
	Post Code	08026		**Title**	Mr
	Town	Barcelona		**Forename**	Xavier
	NUTS 2	Cataluña		**Surname**	Serra Sellarès
	NUTS 3	Barcelona		**Email Address**	xavier.serra@thigis.com
				Phone Number	+34 935 330 308

Legal representative	**Position**	Administrator
	Title	Mr
	Forename	Xavier
	Surname	Serra Sellarès
	Email Address	xavier.serra@thigis.com
	Phone Number	+34 935 330 308

Legal status of the organisation	Private	**Partner type**	Enterprise
VAT number	ES B65655144		
VAT recoverable	Yes		

Involvement in the design phase	It includes: - Identification and review of current European projects related to support policy makers to improve air quality. - Project management design attending partnership contributions - Education, participation and communication procedures design. Ej. Development and monitoring of the participation and communicational activities. Coordination of the Air Pollution Abatement Marathon. Regular meetings with to the three participating Municipalities to inform about the project.
Involvement in the implementation phase	Thigis has the delegation of the AIRe NET project management given the scope of the project and the need of the MUA and the associated authorities to organize the governance of the project with the other 14 municipalities. The structure, responsibilities and procedures for the day to day management, quality and risk management will be carried by Thigis. In the WP 3 and WP 5 Thigis will design and will carry the Air Pollution Abatement Marathon to boost participatory approaches to reduce local emissions. The general objective is to raise awareness on air pollution and make the population of the 17 municipalities aware of the advantages that can generate the measures to reduce the use of private vehicles and other emitting centers.
Competences and experiences in relation to the challenge addressed?	AtmOOs: http://www.atmoos.com App – web citizen science platform design and development. It drives users through air quality knowledge. Under an educational scope, alumni from Barcelona can experiment with their mobility patterns (Aj. Barcelona) Planttes: http:// www.planttes.com App – web citizen science platform design and development. Pollen presence maps to avoid allergic episodes through user reports (Aerobiological Information Point, UAB)
Experience in participating in and/or managing EU co-financed projects or other international projects.	Development of the Landfill Monitoring proposal for the GMES European Innovation Call for monitoring through remote sensing landfill gas emitions and topographic evolution through time. Awarded 2nd place. During 2017 and 2018 we have made the CAMPAÑA of local awareness for energy saving and the promotion of renewable energies in Palou, within the framework of the COMPOSE project of the MED program of the EU.

Total Partner Budget

PROGRAMME CO-FINANCING		CONTRIBUTION			Total (€)
ERDF (€) (a)	ERDF Co-financing rate (%)	Public Contribution (€) (b)	Private Contribution (€) (c)	Total Contribution (€) (d)=(b)+(c)	Total Eligible Cost (€) (e)=(a)+(d)
267,094.08	80.00%	0.00	66,773.52	66,773.52	333,867.60

Breakdown of Partner Budget per Work Package/ Budget Line

Work Package	Staff Costs (€)	Office and administration (€)	Travel and accommodation (€)	External expertise and services (€)	Equipment (€)	Infrastructure and Works (€)	Sub-total (€)	Revenues (€)	Total (€)
WP 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP 2	134,266.00	20,139.90	4,000.00	0.00	0.00	0.00	158,405.90	0.00	158,405.90
WP 3	16,805.00	2,520.75	0.00	51,000.00	12,000.00	0.00	82,325.75	0.00	82,325.75
WP 4	4,700.00	705.00	0.00	0.00	0.00	0.00	5,405.00	0.00	5,405.00
WP 5	13,200.00	1,980.00	0.00	0.00	0.00	0.00	15,180.00	0.00	15,180.00
WP 6	23,543.00	3,531.45	0.00	0.00	0.00	0.00	27,074.45	0.00	27,074.45
WP 7	4,560.00	684.00	0.00	0.00	0.00	0.00	5,244.00	0.00	5,244.00
WP 8	4,550.00	682.50	0.00	0.00	35,000.00	0.00	40,232.50	0.00	40,232.50
WP 9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total (€)	**201,624.00**	**30,243.60**	**4,000.00**	**51,000.00**	**47,000.00**	**0.00**	**333,867.60**	**0.00**	**333,867.60**
%of total budget	60.39%	9.06%	1.20%	15.28%	14.08%	0.00%	100.00%	0.00%	100.00%

B.3 - Delivery Partner (Partner 6)

Organisation name (Original)	Barcelona Supercomputing Center- Centro Nacional de Supercomputación (BSC)
Organisation name (English)	Barcelona Supercomputing Center - BSC
Member state	SPAIN
Department(s)/unit(s)/division(s) concerned	The BSC has the mission to research and develop information technologies in order to facilitate scientific progress. The BSC Earth Sciences department (BSC-ES) conducts multi-facet research in Earth-system modelling. The BSC-ES units involved in the project are Atmospheric Composition (air quality modelling) and Earth System Services (science communication): Oriol Jorba (unit co-leader), Marc Guevara (postdoc researcher), Isadora Jiménez (postdoc researcher) and Carles Tena (junior developer).

Address	**Street**	Jordi Girona 29	**Contact Person**	**Position**	Postdoctoral researcher
	Post Code	08034		**Title**	Mr
	Town	Barcelona		**Forename**	Marc
	NUTS 2	Cataluña		**Surname**	Guevara
	NUTS 3	Barcelona		**Email Address**	marc.guevara@bsc.es
				Phone Number	+34 934 137 725
Legal representative	**Position**	Director Of BSC			
	Title	Mr			
	Forename	Mateo			
	Surname	Valero Cortés			
	Email Address	mateo.valero@bsc.es			
	Phone Number	+34 934 134 053			

Legal status of the organisation	Public	**Partner type**	Other
VAT number	ES S0800099D		
VAT recoverable	Partly		

Involvement in the design phase	The contribution of the BSC-ES in the design phase included: (i) identification and review of current European projects related to support policy makers to improve air quality (e.g. LIFE-IP PREPAIR), (ii) feedback on the selection of the air quality measures proposed to be implemented, (iii) identification of the emission inventory databases currently available for the area of study and (iv) definition of the air quality modelling exercises to be performed.
Involvement in the implementation phase	The contribution of the ES-BSC to the project implementation is to develop, run and evaluate high resolution meteorological, emission and air quality modelling tools with the aim of identifying and characterising emission sources (WP4, activity XX), assessing regional and urban air pollution levels and quantifying source contribution (WP4, activities XX and YYY) and evaluating the potential implementation of air quality plans (WP5, activity ZZ). The ES-BSC knowledge transfer team will also contribute to the creation of dissemination and communication contents (WP3, T3.2) and supporting media relations (WP3, T3.6).
Competences and experiences in relation to the challenge addressed?	The ES-BSC has a wide experience in running air quality modelling systems for assessment, forecasting and planning purposes at regional and urban scales. The department has developed multiple services for public administrations such as the CALIOPE air quality system (www.bsc.es/caliope), which delivers forecast products for Europe and Spain, and the AIRE forecasting system (www.aire.cdmx.gob.mx/pronostico-aire/), developed in close collaboration with the Secretary of Environment of Mexico City.
Experience in participating in and/or managing EU co-financed projects or other international projects.	The expertise of the ES-BSC in air quality modelling and planning is the result of the group's participation in several European and international projects: FIELD_AC (FP7-SPACE-2009-1, partner), ACTRIS (FP7-INFRASTRUCTURES-2010-1, partner), APPRAISAL (FP7-ENV-2012-one-stage, partner), IS-ENES2 (FP7-INFRASTRUCTURES-2012-1, partner), ACTRIS-2 (H2020-INFRAIA-2014-2015, partner), CAMS_84 (ECMWF/COPERNICUS/2015/CAMS_84_KNMI, partner) and CAMS_81 (ECMWF/COPERNICUS/2017/CAMS_81_CNRS, partner).

Total Partner Budget

PROGRAMME CO-FINANCING		CONTRIBUTION			Total (€)
ERDF (€) (a)	ERDF Co-financing rate (%)	Public Contribution (€) (b)	Private Contribution (€) (c)	Total Contribution (€) (d)=(b)+(c)	Total Eligible Cost (€) (e)=(a)+(d)
358,919.04	80.00%	89,729.76	0.00	89,729.76	448,648.80

Breakdown of Partner Budget per Work Package/ Budget Line

Work Package	Staff Costs (€)	Office and administration (€)	Travel and accommodation (€)	External expertise and services (€)	Equipment (€)	Infrastructure and Works (€)	Sub-total (€)	Revenues (€)	Total (€)
WP 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP 2	23,444.00	3,516.60	3,000.00	0.00	0.00	0.00	29,960.60	0.00	29,960.60
WP 3	23,020.00	3,453.00	0.00	0.00	0.00	0.00	26,473.00	0.00	26,473.00
WP 4	189,588.00	28,438.20	0.00	0.00	0.00	0.00	218,026.20	0.00	218,026.20
WP 5	127,080.00	19,062.00	0.00	0.00	26,000.00	0.00	172,142.00	0.00	172,142.00
WP 6	1,100.00	165.00	0.00	0.00	0.00	0.00	1,265.00	0.00	1,265.00
WP 7	680.00	102.00	0.00	0.00	0.00	0.00	782.00	0.00	782.00
WP 8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP 9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total (€)	**364,912.00**	**54,736.80**	**3,000.00**	**0.00**	**26,000.00**	**0.00**	**448,648.80**	**0.00**	**448,648.80**
%of total budget	81.34%	12.20%	0.67%	0.00%	5.80%	0.00%	100.00%	0.00%	100.00%

B.3 - Delivery Partner (Partner 7)

Organisation name (Original)	Agencia Estatal Consejo Superior de Investigaciones Científicas (CSIC)
Organisation name (English)	CSIC (Spanish National Research Council)
Member state	SPAIN
Department(s)/unit(s)/division(s) concerned	CSIC is Spain's largest public research institution, and ranks third among Europe's research organization. CSIC has 123 Institutes spread across the country. Within CSIC, the Institute of Environmental Assessment and Water research (IDAEA) has a large experience in air quality science and technology, particularly aimed at the understanding the chemical and physical processes responsible for the emission, transport, fate and removal of atmospheric pollutants with impact on human health.

Address	**Street**	Serrano, 117	**Contact Person**	**Position**	Tenured Scientist
	Post Code	28006		**Title**	Mr
	Town	Madrid		**Forename**	Fulvio
	NUTS 2	Comunidad de Madrid		**Surname**	Amato
	NUTS 3	Madrid		**Email Address**	fulvio.amato@idaea.csic.es
				Phone Number	+34 934 006 129
Legal representative	**Position**	Vice-president for Scientific and Technical Research			
	Title	Mr			
	Forename	Jesús			
	Surname	Marco de Lucas			
	Email Address	vicyt@csic.es			
	Phone Number	+34 915 681 685			

Legal status of the organisation	Public	**Partner type**	Higher education and research
VAT number	Q2818002D		
VAT recoverable	Partly		

Involvement in the design phase	CSIC participated in the design of the innovative measures to improve air quality in collaboration with the cities involved and the BSC partner, responsible for the modelling tasks. CSIC led the design of experimental set-up to evaluate the effectiveness of tested measures in local and regional air quality.
Involvement in the implementation phase	CSIC will lead the experimental evaluation of tested measures to improve air quality both at local and regional scale. The evaluation will be performed with state-of-the-art instrumentation and receptor modelling (PMF) which will be crucial to validate the dispersion modelling results of the BSC partner team. CSIC will lead the activities related to monitoring campaigns in cities in order to evaluate the effectiveness of the tested measures. http://www.idaea.csic.es/egar/
Competences and experiences in relation to the challenge addressed?	The CSIC group is an international reference in air quality monitoring and evaluation of improvement measures. More than 500 publications on air quality. CSIC provides external expert support to environmental authorities and participates in the workgroup on particulate matter of the Clean Air For Europe (CAFE) program of the DG Environment for the evaluation of the EU air quality directives. CSIC members work on EC and UNECE experts groups to assess policy actions on air quality.
Experience in participating in and/or managing EU co-financed projects or other international projects.	CSIC led two LIFE+ projects focused on design and evaluation of measures to improve air quality outdoor and in the subway system (AIRUSE and IMPROVE projects). CSIC members are included in the Scientific Assessing Committee of WHO REVIHAAP and WHO HRAPIE projects, as well as the APHEKOM and MEDHISS projects to assess on air quality to health related studies.

Total Partner Budget

PROGRAMME CO-FINANCING		CONTRIBUTION			Total (€)
ERDF (€) (a)	ERDF Co-financing rate (%)	Public Contribution (€) (b)	Private Contribution (€) (c)	Total Contribution (€) (d)=(b)+(c)	Total Eligible Cost (€) (e)=(a)+(d)
429,117.80	80.00%	107,279.45	0.00	107,279.45	536,397.25

Breakdown of Partner Budget per Work Package/ Budget Line

Work Package	Staff Costs (€)	Office and administration (€)	Travel and accommodation (€)	External expertise and services (€)	Equipment (€)	Infrastructure and Works (€)	Sub-total (€)	Revenues (€)	Total (€)
WP 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP 2	26,182.00	3,927.30	300.00	3,023.00	0.00	0.00	33,432.30	0.00	33,432.30
WP 3	16,150.00	2,422.50	2,000.00	1,000.00	0.00	0.00	21,572.50	0.00	21,572.50
WP 4	161,877.00	24,281.55	1,000.00	2,500.00	32,821.00	0.00	222,479.55	0.00	222,479.55
WP 5	139,497.00	20,924.55	1,000.00	2,500.00	32,821.00	0.00	196,742.55	0.00	196,742.55
WP 6	7,050.00	1,057.50	0.00	0.00	0.00	0.00	8,107.50	0.00	8,107.50
WP 7	493.00	73.95	0.00	0.00	0.00	0.00	566.95	0.00	566.95
WP 8	10,866.00	1,629.90	1,000.00	0.00	40,000.00	0.00	53,495.90	0.00	53,495.90
WP 9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total (€)	**362,115.00**	**54,317.25**	**5,300.00**	**9,023.00**	**105,642.00**	**0.00**	**536,397.25**	**0.00**	**536,397.25**
%of total budget	67.51%	10.13%	0.99%	1.68%	19.69%	0.00%	100.00%	0.00%	100.00%

B.3 - Delivery Partner (Partner 8)

Organisation name (Original)	Generalitat de Catalunya
Organisation name (English)	Government of Catalonia
Member state	SPAIN
Department(s)/unit(s)/division(s) concerned	The sub-directorate general for the prevention and control of air pollution with objective of prevention of emissions of air pollutants, monitoring of air quality, control of pollutants emissions. The Department of Agriculture will work with rural agents who have competences of fire permits when agricultures want to burn vegetable waste. And finally, Telecomunications Department which promotes the creation and deployment of the digital and electronic communications infrastructures

Address	**Street**	Diagonal 523-525	**Contact Person**	**Position**	Subdirectorate of Prevention and Control of Atmospheric Pollution
	Post Code	08029		**Title**	Ms
	Town	Barcelona		**Forename**	Mònica
	NUTS 2	Cataluña		**Surname**	Cuen Llacuna
	NUTS 3	Barcelona		**Email Address**	monica.cuen@gencat.cat
				Phone Number	+34 934 445 124
Legal representative	**Position**	Deputy Director-General of Prevention and Control of Atmospheric Pollution			
	Title	Ms			
	Forename	Isabel			
	Surname	Hernandez Cardona			
	Email Address	Isabel.hernandezc@gencat.cat			
	Phone Number	+34 934 445 000			

Legal status of the organisation	Public	**Partner type**	Regional public authority
VAT number	S0811001G		
VAT recoverable	Yes		

Involvement in the design phase	It has been focused on proposing a series of actions that are considered key in order to improve the current operation with the aim of being practical. The proposed lines are those associated with the development of pilot new tools and mechanisms for sharing information and coordination for the improvement of control, forecast of pollutants, communication of available information, and the reduction of emissions of pollutants: in industry, activity of agricultural-vegetable burning, and traffic.
Involvement in the implementation phase	It will disseminate the air quality information, forecast and measures to be taken in case of high pollution episode. We will develop the pilot IT systems for air quality network control and the improvement in the coordination to implement the networking decision support system for air quality management (WP7) to resolve market and policy fragmentation. The IT System will permit an updated and coordinated inventory of stationary sources: industrial and agriculture. With the Diputacion de Barcelona there will be developed an IT software to share information between municipalities and the regional authority. Besides, the Agricultural Department will develop a new IT system to manage the permits for risk of air pollution episodes.
Competences and experiences in relation to the challenge addressed?	It has the competence to evaluate air quality and define action plans for improvement of quality of air. In this regard, it is necessary to carry out a good characterization of sources that allow us to define the most appropriate measures. Given the problem of atmospheric pollution in Valles area, it is necessary to have a small-scale modelling tool as well as other equipment to get data that can be very important entry data in the models and an essential tool for managing episodes of pollution.
Experience in participating in and/or managing EU co-financed projects or other international projects.	From the General Directorate of Environmental Quality and Climate Change we have collaborated in the CITI-SENSE, CAPTOR, AIRUSE, BREATHE and PASTA projects

Total Partner Budget

PROGRAMME CO-FINANCING		CONTRIBUTION			Total (€)
ERDF (€) (a)	ERDF Co-financing rate (%) 	Public Contribution (€) (b)	Private Contribution (€) (c)	Total Contribution (€) (d)=(b)+(c)	Total Eligible Cost (€) (e)=(a)+(d)
744,778.04	80.00%	186,194.51	0.00	186,194.51	930,972.55

Breakdown of Partner Budget per Work Package/ Budget Line

Work Package	Staff Costs (€)	Office and administration (€)	Travel and accommodation (€)	External expertise and services (€)	Equipment (€)	Infrastructure and Works (€)	Sub-total (€)	Revenues (€)	Total (€)
WP 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP 2	54,719.00	8,207.85	2,300.00	0.00	0.00	0.00	65,226.85	0.00	65,226.85
WP 3	25,800.00	3,870.00	0.00	0.00	0.00	0.00	29,670.00	0.00	29,670.00
WP 4	36,675.00	5,501.25	0.00	0.00	0.00	0.00	42,176.25	0.00	42,176.25
WP 5	15,850.00	2,377.50	0.00	0.00	0.00	0.00	18,227.50	0.00	18,227.50
WP 6	19,800.00	2,970.00	0.00	17,000.00	0.00	0.00	39,770.00	0.00	39,770.00
WP 7	129,104.00	19,365.60	0.00	60,000.00	0.00	0.00	208,469.60	0.00	208,469.60
WP 8	28,029.00	4,204.35	0.00	0.00	463,199.00	32,000.00	527,432.35	0.00	527,432.35
WP 9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total (€)	**309,977.00**	**46,496.55**	**2,300.00**	**77,000.00**	**463,199.00**	**32,000.00**	**930,972.55**	**0.00**	**930,972.55**
%of total budget	33.30%	4.99%	0.25%	8.27%	49.75%	3.44%	100.00%	0.00%	100.00%

B.3 - Delivery Partner (Partner 9)

Organisation name (Original)	BUSUP TECHNOLOGIES SL
Organisation name (English)	BUSUP TECHNOLOGIES SL
Member state	SPAIN
Department(s)/unit(s)/division(s) concerned	BusUp allows travelers to book on-demand crowd-sourced buses, for leisure and commuting. BusUp was created to solve a need in medium-distance travel (suburban areas), essentially anywhere where public transport is limited or non-existent. BusUp team involved in the project: co-founder and CIO; COO and Country Manager; and Product Development. They will be in charge of Data management, data analysis, web platform development, as well as dissemination and operational management of the pilot site.

Address	**Street**	Carrer Plom 25	**Contact Person**	**Position**	Co-founder and CIO
	Post Code	08038		**Title**	Ms
	Town	Barcelona		**Forename**	Eva
	NUTS 2	Cataluña		**Surname**	Romagosa
	NUTS 3	Barcelona		**Email Address**	eva@busup.com
				Phone Number	+34 607 363 036
Legal representative	**Position**	CEO			
	Title	Mr			
	Forename	Rui			
	Surname	Stoffel Fernandes			
	Email Address	rui@busup.com			
	Phone Number	+34 650 369 193			

Legal status of the organisation	Private	**Partner type**	SME
VAT number	B66864307		
VAT recoverable	Yes		
Involvement in the design phase	We would be able to contribute in the proposal definition phase, both in the project definition, the partner search and the proposal writing		
Involvement in the implementation phase	We would be able to contribute in WP5-Definition and efficacy assessments of the measures implemented and WP6-Improve the coordination to implement the networking measures: design a new tool/method/approach. We have experience in designing economic incentives and in implementing bus-sharing mobility solutions for both young students (https://estiuesteu.busup.com), university students (https://campusmundet.busup.com) and workers (https://baixllobregat.busup.com).		
Competences and experiences in relation to the challenge addressed?	Major relevant experience related to the project: Pilot AMB-Baix Llobregat (Barcelona, ES). Attending the mobility needs of up to 13K employees by providing On-demand Bus-shared Commuting routes for Industrial and Business Parks. Catalan Youth Agency (ES). Attending the mobility needs of up to 10K youngsters attending the governmental summer camp programs by providing On-demand Bus-shared routes.		
Experience in participating in and/or managing EU co-financed projects or other international projects.	BUSUP (H2020-SMEINST-2-2016-2017-757004). LEAD. "Multi-platform On-demand Crowdsourced Bus Transportation for Smart City Mobility". INCLUSION (H2020-MG-2017-SingleStage-INEA-770115). PARTNER. Title: "Towards more accessible and iNCLUSIve mObility solutions for EuropeaN prioritised areas". Furthermore, Eva Romagosa, has a personal experience of more than 10 years of experience in coordinating EU R&D funded projects (FP5, FP6, FP7 & H2020).		

Total Partner Budget

PROGRAMME CO-FINANCING		CONTRIBUTION			Total (€)
ERDF (€) (a)	ERDF Co-financing rate (%)	Public Contribution (€) (b)	Private Contribution (€) (c)	Total Contribution (€) (d)=(b)+(c)	Total Eligible Cost (€) (e)=(a)+(d)
140,741.52	80.00%	0.00	35,185.38	35,185.38	175,926.90

Breakdown of Partner Budget per Work Package/ Budget Line

Work Package	Staff Costs (€)	Office and administration (€)	Travel and accommodation (€)	External expertise and services (€)	Equipment (€)	Infrastructure and Works (€)	Sub-total (€)	Revenues (€)	Total (€)
WP 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP 2	9,749.00	1,462.35	2,125.00	0.00	0.00	0.00	13,336.35	0.00	13,336.35
WP 3	1,000.00	150.00	0.00	32,000.00	0.00	0.00	33,150.00	0.00	33,150.00
WP 4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP 5	56,851.00	8,527.65	0.00	0.00	0.00	0.00	65,378.65	0.00	65,378.65
WP 6	48,252.00	7,237.80	0.00	0.00	0.00	0.00	55,489.80	0.00	55,489.80
WP 7	7,454.00	1,118.10	0.00	0.00	0.00	0.00	8,572.10	0.00	8,572.10
WP 8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP 9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total (€)	**123,306.00**	**18,495.90**	**2,125.00**	**32,000.00**	**0.00**	**0.00**	**175,926.90**	**0.00**	**175,926.90**
%of total budget	70.09%	10.51%	1.21%	18.19%	0.00%	0.00%	100.00%	0.00%	100.00%

B.3 - Delivery Partner (Partner 10)

Organisation name (Original)	CTRL4 ENVIRO, S.L.
Organisation name (English)	CTRL4 ENVIRO, S.L. - CTRL4
Member state	SPAIN
Department(s)/unit(s)/division(s) concerned	Ctrl4 Enviro (C4E) is a computer vision and automation solutions company based in Barcelona. It provides solutions for a wide range of people and vehicle detection, counting and analytics solutions using real time analysis of images from different type of video cameras. It uses latest artificial intelligence techniques to provide customized solutions for customers ranging from cities, parking lot operators, ski resorts, swimming pools... Its Technical dept. will be in charge of current project

Address	**Street**	c/ Filadors, 15	**Contact Person**	**Position**	CEO
	Post Code	25200		**Title**	Mr
	Town	Cervera		**Forename**	Anton
	NUTS 2	Cataluña		**Surname**	Gomà Huguet
	NUTS 3	Lleida		**Email Address**	anton.goma@ctrl4enviro.com
				Phone Number	+34 935 868 760

Legal representative	**Position**	CEO
	Title	Mr
	Forename	Anton
	Surname	Gomà Huguet
	Email Address	anton.goma@ctrl4enviro.com
	Phone Number	+34 935 868 760

Legal status of the organisation	Private	**Partner type**	SME
VAT number	ES-B25611542		
VAT recoverable	Yes		

Involvement in the design phase	C4E provides five years expertise in the use of sensor and monitoring systems to measure and classify urban mobility flows. Hence, its involvement in the design phase is basic to advice about feasible and effective methods to obtain the right data.
Involvement in the implementation phase	C4E is basically an engineering and software company. Therefore, its involvement in the implementation phase will consist in the direction and coordination during the on-site deployment of the hardware and the software production and customisation during the commissioning of the system. WP assignment pending.
Competences and experiences in relation to the challenge addressed?	Main differential feature of C4E is the fact that the company is not only an Image Analysis software producer but also it can provide expertise on deployment of hardware outdoor in real field conditions, dealing with rough environments such cold, rain, snow, hot, pollution and vandalism. Legal requirements regarding Personal Data Protection have been successfully managed by C4E in former projects. The company is also trusted for and used to public procurement proceedings.
Experience in participating in and/or managing EU co-financed projects or other international projects.	C4E has been granted and participated in the following EU projects: 2016: H2020 SME Instrument phase I for a transport project. Lead partner 2014-2016: Fluidra + Hospital Clínic de Barcelona + Universitat Autònoma de Barcelona (UAB) + C4E: Research project on swimming pool monitoring. Partner 2007-2009: UAB + C4E: Research project on swimming pool air pollution from Dinsinfection By-Products. Partner C4E has applied for other founded projects as member of international partnerships

Total Partner Budget

PROGRAMME CO-FINANCING		CONTRIBUTION			Total (€)
ERDF (€) (a)	ERDF Co-financing rate (%)	Public Contribution (€) (b)	Private Contribution (€) (c)	Total Contribution (€) (d)=(b)+(c)	Total Eligible Cost (€) (e)=(a)+(d)
203,283.04	80.00%	0.00	50,820.76	50,820.76	254,103.80

Breakdown of Partner Budget per Work Package/ Budget Line

Work Package	Staff Costs (€)	Office and administration (€)	Travel and accommodation (€)	External expertise and services (€)	Equipment (€)	Infrastructure and Works (€)	Sub-total (€)	Revenues (€)	Total (€)
WP 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP 2	13,143.00	1,971.45	2,600.00	0.00	0.00	0.00	17,714.45	0.00	17,714.45
WP 3	1,700.00	255.00	0.00	2,300.00	0.00	0.00	4,255.00	0.00	4,255.00
WP 4	4,969.00	745.35	0.00	0.00	0.00	0.00	5,714.35	0.00	5,714.35
WP 5	114,617.00	17,192.55	0.00	30,000.00	58,926.00	0.00	220,735.55	0.00	220,735.55
WP 6	1,003.00	150.45	0.00	0.00	0.00	0.00	1,153.45	0.00	1,153.45
WP 7	3,940.00	591.00	0.00	0.00	0.00	0.00	4,531.00	0.00	4,531.00
WP 8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP 9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total (€)	**139,372.00**	**20,905.80**	**2,600.00**	**32,300.00**	**58,926.00**	**0.00**	**254,103.80**	**0.00**	**254,103.80**
%of total budget	54.85%	8.23%	1.02%	12.71%	23.19%	0.00%	100.00%	0.00%	100.00%

B.3 - Delivery Partner (Partner 11)

Organisation name (Original)	UNIVERSITAT POLITECNICA DE CATALUNYA. In LAB UPC.
Organisation name (English)	UNIVERSITAT POLITECNICA DE CATALUNYA - InLUPC
Member state	SPAIN
Department(s)/unit(s)/division(s) concerned	The Universitat Politècnica de Catalunya (UPC) is a public institution that offers higher education in a wide range of technical, artistic and humanistic fields. Its participation in this proposal will be through the inLab FIB, the Barcelona School of Informatics innovation and research lab. In particular, the Smart Mobility research group, specialized in using traffic simulation modelling, will developed a model of the studied area to evaluate different mobility policies.

Address	**Street**	C/Jordi Girona, 31	**Contact Person**	**Position**	Smart Cities / Mathematical Programming, Logistic
	Post Code	08034		**Title**	Ms
	Town	Barcelona		**Forename**	MªPaz
	NUTS 2	Cataluña		**Surname**	Linares Herreros
	NUTS 3	Barcelona		**Email Address**	mari.paz.linares@upc.edu
				Phone Number	+34 934 011 019

Legal representative	**Position**	Rector
	Title	Mr
	Forename	Francesc
	Surname	Torres Torres
	Email Address	rector@upc.edu
	Phone Number	+34 934 016 101

Legal status of the organisation	Public	**Partner type**	Higher education and research
VAT number	ESQ0818003F		
VAT recoverable	No		

Involvement in the design phase	UPC (inLab FIB) is actively involved in the project proposal from the first beginning. UPC incorporates to the proposal design its knowledge and expertise about how to use traffic simulation modelling to evaluate mobility policies as well as the suitable timing and tasks organization (from the technical point of view) in order to achieve the agreed objectives. In addition, UPC brings to the consortium its background in the European projects proposals preparation.
Involvement in the implementation phase	UPC (inLab FIB) will lead the WP4 task 4.2.Traffic modelling related to the development of a traffic simulation model of the selected area of study including the First Crown of the Barcelona Metropolitan Area. This development consists in the construction of the network (including all the needed details to emulate the private and public transport), the demand analysis (using origin-destination matrices built from mobile data) and the calibration process (including speed data from floating car data). UPC also will contribute in WP5, in particular in task 5.2. Modelling assessment of permanent strategies with the emulation of the proposed traffic policies using the model developed in Task 4.2.
Competences and experiences in relation to the challenge addressed?	UPC is currently involved in the Barcelona Virtual Mobility Lab Project where the first detailed multimodal model of the Barcelona Metropolitan Area (1st Crown) has been developed in the 1st phase (2017). In the AIR-e NET project, UPC will take advantage of the possibility to start from this BCN model by integrating it with the model of the proposed area of study. This will allow assess the impact of the Barcelona air quality measures and mobility policies in the area of study (and vice versa).
Experience in participating in and/or managing EU co-financed projects or other international projects.	Bridging the Interoperability Gap of the Internet of Things (BIG IoT). (2016-2018). UPC is leading the piloting work package, coordinating the Barcelona pilot related with traffic monitoring, parking and bus monitoring using infrastructure based traffic detectors to measure speed, car count and related parameters Connected Car Barcelona Simulative Evaluation Project (2014/16) and Simulative evaluation of a cooperative urban mobility concept (2014/15). CARNET project funded by Volkswagen Research

Total Partner Budget

PROGRAMME CO-FINANCING		CONTRIBUTION			Total (€)
ERDF (€) (a)	ERDF Co-financing rate (%)	Public Contribution (€) (b)	Private Contribution (€) (c)	Total Contribution (€) (d)=(b)+(c)	Total Eligible Cost (€) (e)=(a)+(d)
449,127.00	80.00%	112,281.75	0.00	112,281.75	561,408.75

Breakdown of Partner Budget per Work Package/ Budget Line

Work Package	Staff Costs (€)	Office and administration (€)	Travel and accommodation (€)	External expertise and services (€)	Equipment (€)	Infrastructure and Works (€)	Sub-total (€)	Revenues (€)	Total (€)
WP 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP 2	27,198.00	4,079.70	3,593.00	0.00	0.00	0.00	34,870.70	0.00	34,870.70
WP 3	3,727.00	559.05	0.00	0.00	0.00	0.00	4,286.05	0.00	4,286.05
WP 4	256,350.00	38,452.50	0.00	110,000.00	0.00	0.00	404,802.50	0.00	404,802.50
WP 5	93,185.00	13,977.75	0.00	0.00	0.00	0.00	107,162.75	0.00	107,162.75
WP 6	1,491.00	223.65	0.00	0.00	0.00	0.00	1,714.65	0.00	1,714.65
WP 7	7,454.00	1,118.10	0.00	0.00	0.00	0.00	8,572.10	0.00	8,572.10
WP 8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP 9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total (€)	**389,405.00**	**58,410.75**	**3,593.00**	**110,000.00**	**0.00**	**0.00**	**561,408.75**	**0.00**	**561,408.75**
%of total budget	69.36%	10.40%	0.64%	19.59%	0.00%	0.00%	100.00%	0.00%	100.00%

Part C - Project description

C.1 Project relevance and innovativeness

C.1.1 Main challenge(s) to be addressed

Main challenge(s) to be addressed

Air quality is not an issue limited to larger cities. Small and medium-sized cities, close to large urban conurbations, such as the (AMB), receive the direct impact of mobility and production models of large cities, without the resources for research, innovation and development that AQ management needs. In addition, Barcelona's mitigation measures might create unexpected problems of spatial misfit and resources that affected other medium size cities surrounding AMB.

The territorial dimension of AQ policies makes necessary to built administrative tools for policy coordination not only with regional authorities, but also with other medium-sized cities that form a single urban continuum. Traditional isolated approaches taken by each city separately to address the issue, do not favor the needed cooperative solutions. In addition, it is highly inefficient multiplying plans, emission inventories, modeling tools, diffusion of AQ information or abatement costs mechanisms. Coordination not only will provide means at lower costs of time and money, but also will allow an accurate common AQ assessment with regards sources contribution and effectiveness of mitigation measures. Nowadays, there is no agreement about the contribution of local and supra-local sources, and therefore, no evidence of the effective solutions cities will have to adopt. A common approach, will exploit the benefits of spatial and cultural proximity with social and economic organizations and citizens, and will tackle pollution at the right territorial scope.

The challenge was chosen because seventeen contiguous municipalities (with 293.366 population and 261,4 km2) have a common air quality problem, but not enough resources or common social awareness to tackle it city by city. The municipalities located all along the Congost river basin are part of the Air Quality Zone 2 in Catalonia. Eight have been declared area of special protection with exceedances regarding PM10 and NO2 in the only two automatic stations in GR and MOLL. Historically GR exceeds the daily limits of PM10 (2009-11-12-13-15), while MOLL has been exceeding the last ten years the annual limit of NO2. Granollers (2004,2010,2012) exceeded this limit as well.

The area is crossed by important highways and has a high industrial activity closely related to the AMB. 74,8% of NOx and 58% of PM10 emissions come from supramunicipal traffic. 11.000 Ha are cropping land, burning much of the vegetable waste in winter, when levels of pollution are higher and dispersion factors lower, in a plain surrounded by mountains except in the South, where AMB is.

Social awareness of AQ problems is unbalanced among citizens from the seventeen municipalities and only GR and MOLL, where the permanent stations are, sense to have a problem. Besides, the AQ problem shows a multi-level governance dimension that waters down responsibilities. Not until new tools to coordinate information and actions exist the problem can be well addressed.

C.1.2 Proposed solution

Proposed solution

AIRe NET methods and tools break administrative boundaries to make visible air pollution and keep updated information to better manage it. The innovative municipal bottom up approach will optimize resources by sharing public and private sector capacities and information that is nowadays scattered. This cooperation, adding up capabilities, will help shaping and implementing AQ policies effectively helping medium size cities to manage own competencies, enter into negotiations, align their policies and conclude agreements with authorities and citizens or economic activities from other levels or locations.
AIRe NET co-designs measures and mobilizes participation using scientific knowledge and evidences to test the effectiveness of the different mitigation measures taken in this multi-level governance approach.

The main activities are :

1) Make territorially visible AQ in the 17 towns and cities (WP4)thanks to:

a) AQ modelling using a combination of mesoscale and street scale models to estimate high-resolution emissions (A4.2 and A4.3) and assess the levels and origins of air pollution in the AIRe net zone (A4.4) and efectiveness of air quality policies (A5.2)
b) Monitoring and characterization of particles (A4.1),and innovative image analysis (A5.5)
c) A wider, common analysis of the contribution of different sources
d) Maps and geographic information to publish

2) Design in WP6-WP7 and test WP5 pilot

a) mechanisms and IT-systems of multi-level governance (WP7;WP8.3):

i) To maintain updated emission inventories:
(1) of mobile emissions (A5.5) (A5.4) (A7.3)
(2) of industrial sources(A7.1) (A7.5))
(3) of vegetable waste burnings (A7.2, A7.5) with new rules and channels to manage the vegetable waste of agricultural sector(A6.5)

ii) management of local pollution abatement actions:
(1) Co-designed in alliance with NGOs, universities and private sector (A6.1;A6.2;A6.3;A6.4) and other government levels (A6.5)
(2) With a joint efficacy assessment of local pilot measures taken(WP5) to reduce private transport with the Air Pollution Abatement Marathon (A3.10)which includes:
(a) Mobility plans for industrial areas in the AIRe NET municipalities (A7.2)(A6.1)
(b) New collective or low carbon transport opportunities (A6.1, A6.3),
(c) Subsidies to change and rationalize freight transport (A6.2)
(d) New passenger intermodality boost(A6.3, A8.1)
(e) New evidence of emissions from old vehicles (A7.3)
(3) With new systems for multi-level coordination in AQ matters and in case of high pollution episodes (A7.4)with new IT Systems, road and street signs to inform(A. 3.9, A. 8.2, A8.3)

b) Systematized Communication to boost coordination and participation of processes and results with different levels of access according to the different user profiles :scientific community, companies and local farmers (A7.2), citizens (A7.4), between cities and departments.

C.1.3 Innovativeness of the proposed solution

Innovativeness of the proposed solution

AIRe NET has a technological research innovation when testing a new low cost way to estimate pollution with landscape's images (A.5.5) but the main project innovation is the multi-level governance approach impulsed by medium size urban authorities.The new bottom up approach to tackle AQ, inspired partially in some projects but mostly due to the SMG's challenges, will optimize knowledge and resources by sharing public and scientific capacities to co-design and disseminate the most effective local mitigation measures.

The Mobility Plan's in GR, MOLL or MON identified the weight of supramunicipal traffic flows trips but their municipal scope leaves out issues beyond municipal boundaries. AQ plan in GR (2011) had the same territorial limitation problem. The seventeen SMG municipalities in AIRe NET have (2016) set of actions to be taken individually but so far none of the municipalities has approved any, because they need to act jointly
Life-AIRUSE focus on big metropolis and does not work with medium size cities or test the impacts of local mitigation measures. There's no modeling development or simulation of scenarios to make AQ territorially visible: The biomass burning only considers domestic sources. The project does not consider participatory bottom up approaches.
LifePrepAir analyzes mainly traffic and domestic heating sources and does not analyze the coordination to update industry and agricultural sources inventories together with municipal authorities.
The AWAIR project has no modeling or common AQ assessment goals but gives evidences of lack of coordination in AQ policies between core urban areas and their surroundings.Some monitoring of the effectiveness of actions at each functional urban area is also foreseen and aims at promoting innovative preventive approaches by introducing new indicators (e.g. ultrafine particles, black carbon) and including air quality forecasting systems).
The OPERA project does not establish new mechanisms to keep updated inventories between local and regional authorities and it has not a high resolution modeling or a scientifical AQ assessment among medium size cities.
ClairCity uses a citizens participatory approach without addressing the needed coordination among local authorities. The participation is not provided scientific graphic AQ information from a territorial scope and do not embrace them in the co-design and implementation of pilot measures.
The coordinated updating of traffic, industrial and agricultural source inventories and the common SMG's AQ assessment and modeling with the regional authority DTES and DIBA, make revolutionary steps towards "Government as a Platform" (GaaP), not only to develop technology and the building of technical components but also to embrace of a new organizational model, breaking administrative boundaries, with the potential to improve the way local and regional Government operates, helping resolve the binary political debate about centralized versus localized models.

C.1.4 Potential obstacles and resistance

Potential obstacles and resistance

There has been an historical distrustful feeling among administrations, either between local authorities or with regional government departments, especially when they are headed by different political parties. On the other hand, local authorities and the private sector take opposite roles and they often see each other as enemies. This could lead to a lack of interest and effort of AMB, OS and SMG cities, to support AIRe NET ,:

Having scientific evidence concerning AQ impacts and on line information to spread it will be an important support to demostrate the need to legislate and implement measures potentially unpopular.

In relation to the collective civil, AIRe NET should be seen as an effort by the driving organs (from urban authorities to European financing mechanisms) to raise the level of commitment in the treatment of a serious problem that affects the public health, while the scientific community involved could boost applied R+D.

The implementation of AIRe NET would have high interest in the technical layer of municipal management, proposing new work methods, adding up capacities such their operational and communicative competences. AIRe NET provides a superior maneuverability through a much more detailed knowledge of the reality, but individual reluctance to modify dynamics or work flows can emerge. Proper users training and tracking their degree of adaptation to new tasks, protocols and friendly user front-end's would be required to minimize such reticence

C.1.5 Integrated Approach

Integrated approach

AIRe NET builds strong partnerships between three local innovative business, scientific community, civil society, industry and various levels of government. All contribute to cause air pollution and all can help to clean it up, adding up capacities at the right territorial scope. AIRe NET's scope overcomes economically and scientifically inefficient separate approaches, and takes advantage of cities proximity with social and economic organizations and citizens. In addition, Air Pollution Abatement Marathon. (APAM), will involve civil society, industry and schools to co-design local measures and reduce the discriminatory and injustice feelings that some social sectors have when measure are taken by the top-down'method.
The AQ assessment will boost and balance social awareness on the contribution of local and supra-local sources and give common evidence to agree on measures effectiveness in the seventeen municipalities. The source contribution will help to discuss with AMB the coordination to address the effects AMB's mitigation measures have on the SMG.
The multi-level governance dimension will develop IT systems with DTES and DIBA to update AQ graphic information and industrial, agricultural and traffic inventories, with new sharing of resources horizontally (between the seventeen municipalities thanks to province and regional government) and vertically (with regional government and scientific community) reducing the present scattered information and responsibilities.

C.1.6 Link to ERDF thematic objectives and investment priorities

Link to ERDF Thematic Objectives and Investment Priorities

OT1/IP.1.a and OT1/IP.1.b: AIRe NET develops links and synergies between enterprises, research and development centres and the higher education sector with recognized excellence in the R&I, such as BSC or inLAB, in order to reify integrated solutions.

OT2/IP.2.a, OT2/IP.2.b and OT2/IP.2.c: DTES and DIBA ensure the scalar character of the initiative and newer and/or better products related with ICT and e-governance will be demanded.

OT3/IP.3.d: Innovative local business contributions (BUP, CTRL4 & TH) with new service development will promote business investment and local operative success.

OT4/IP.4.e: The new shared mobility information will boost better connectivity with collective transport to schools, the industrial areas and the rest of the citizens that will collaborate in the Air Pollution Abatement Marathon

OT5/IP.A. Air pollution from fuel combustion is a climate change contributor, and the project aims directly to its mitigation.

OT6/IP.6.e and OT6/IP.6.f: AIRe NET's main objective to reduce air pollution promoting innovative technologies to improve environmental protection and resource efficiency.

OT7/IP.7.b and OT7/IP.7.c: measures for improving intermodal mobility are present in different layers of the project.

OT11/IP.11: as a summary, AIRe NET has will help to start channels for an e-governance network that will enhance institutional capacity of public authorities in AQ policies.

C.2 Project context and local partnership

C.2.1 Link with other local/regional/national strategies and policies (incl. smart specialisation strategies)

Link with other local/regional/national strategies and policies

National strategies on AQ action plans (in accordance with Directive 2008/50/EC and Clean Air for EU) are approved in Spain, Plan Aire 2017-2019 and Catalonia (AQAP, 2014) for the protected 40 cities in Barcelona, 27 in the AMB and eight in AIRe NET, given their PM10 and NO2 exceedances.
An institutional agreement was signed (2017) with different administrations involved around Barcelona, to adopt a series of commitments to protect health and AQ. They commited to work together to cut traffic pollution by 30% in fifteen years, to reach WHO recommended levels. Among the measures agreed, restrictions will apply for the most polluting vehicles. Since last year, whenever the an air pollution episode is declared, Barcelona city restricts the access of vehicles so far, but there is still no agreement with the rest of institutions who signed the agreement over their jurisdiction.
There have been approved individual municipal plans for AQ in Barcelona (2015-2018), Sabadell, Terrassa, Badalona, S.Coloma and GR. GR's AQ plan (2011) showed clear evidence that AQ policies require supramunicipal coordination and impulsed a plan (2016)with the SMG's cities. The plan leaves to each city, the choice to approve measures separately, which difficults to coordinate actions.
The Strategy (RIS3CAT) defines the framework for Catalan Government to R&I and the smartCAT strategy aims for make Catalonia an international smart region benchmark, encouraging innovation in public services.

C.2.2 Synergies with other projects and initiatives

Synergies with other projects and initiatives	Some of the AIRe NET partners are members of Fairmode (Forum for Air Quality Modeling in Europe). Due to the main role that modeling procedures will have to improve territorial measurements (WP4), it is expected high level of cooperation for mutual enrichment and knowledge transfer. In addition, synergies are warranted in this field for standardization and homogenization of the models produced. LifePrepAir, The AWAIR project and ClairCityare will be strongly taken into account, settling an AQ Experts Committee (AQEC) to collect their feedback and experiences, and build upon them. Finished projects contributions, such as the OPERA project, will be studied to get the lessons learned. UIA awarded projects will be also taken as a guideline. TMaas in the city of Ghent and SASMob in Szeged, are closely related with WP6 and WP7. Those projects are seen as both, technological and conceptual achievements regarding mobility, so coordination with their Urban Authorities will be necessary to get their contributions and assessment.

C.2.3 Involvement of wider stakeholders in project design

Involvement of wider stakeholders in project design	Since the first meeting in 2014 the 17 municipalities part of the SMG (Supra Municipal Group) had identified 67 actions to improve AQ. In the initial phase (January 2018) some of the delivery partners (BSC, In Lab, CSIC, DTES) and the SMG were convened in a preliminary "call for needs" meeting. There were established some guidelines to prioritize the 67 actions and after a month, the municipalities and scientific partners gave their feedback. The AIRe Net design fit them all across its transversal scope. UIA officers strongly recommended do not apply the 17 municipalites. Then the convenience of either joining the Consell Comarcal as Urban Authority, DTES or DIBA to coordinate the rest of the municipalities in the wider group of stakeholders was discussed, with the three of them. Finally, the long experience in municipal working groups, their plataform GIA as starting point for a shared updated industrial inventory and the high interest showed by DIBA led to the final partnership definition. Other civil collectives were involved. Mobility matters were proposed by Granollers Pedala A.6.1, tackling freight transport A.6.2 and sustainable mobility A.6.3, and an important package of measures were proposed by ASOCPARC (affected by circulatory restrictions platform). Mobility measures were proposed by different schools with in the awarded robotics program, VallesBot A.6.1,. Two different meetings were held with industry firms (APC Europe, Benckiser, Ferimet….) who showed interest in mobility coordination measures A.6.1,, and gave total support to the project. ISL Global, proposed the inclusion in AIRe NET of A.4.5 Health Impact assessment of AQ in the AIRe NET zone. Techinicians in charge of SmartCAT in Catalonia will gave MUA in AIRe NET advice on how to transcend the 'smart city' concept, including and coordinating local and supralocal initiatives, and how much could cost to develop the exiting IT sofwares (such as SENTILO) to share information.

C.2.4 Involvement of wider stakeholders in project implementation

Involvement of wider stakeholders in project implementation	Most of the actors mentioned in the section above will be involved in several phases of AIRe NET implementation: SMG: 14 municipalities, under DIBA coordination, will work to continually quantify and share local activities identified as emitting hot spots. share data to have updated traffic, industry and agriculture emission inventories. develop work procedures focused on inventories actualization. implant those pilot measures locally pointed in the project design, especially those ones related with episodes mitigation (driven by DTES). participate in the APA Marathon and promoting intermodal platforms. GP will actively promote bicycle mobility and measures to boost safety parking boxes installation in strategic locations that ensure intermodal exchange. Freight transport will also be tackled. Asociació habitats will provide assessment for conditioning specific nearly-river points, connecting train stations and industrial areas of AIRe NET. ISL Global: Data collection procedure for both air pollution and population health data (collected by health centers in the area) that will help AIRe NET zone to provide more foundation for epidemiological research, hereinafter, with regard to the exposure of contaminants and its human response. Other wider group of stakeholders that will be part of the wider group of stakeholders in AIRe NET's implementation: ASIN (Industrial Associacions in the AIRe NET zone) recruiting companies participation in the APA Marathon and incentivizing collective transport methods. SCT (Servei Català de Trànsit) adding real time data at the traffic monitoring models. AMB (Metropolitan Area of Barcelona) and AEU (Agència d'Ecologia Urbana) setting key issues in the local emission effects discussion and the measures to be applied in ZQA1 and ZQA2. OS (Osona County) building discussions about emission contribution and analizing replicability among municipalities with ozone levels exceedances and biomass burning.

C.3 Project objectives, results and outputs

C.3.1 Overall objectives and expected results (changes in the local situation)

PROJECT main objective(s)	AIRe NET main objectives are: 1- Add up multi-level governance resources to get : a. more accurate characterization of AQ and source appointment b. shared information to keep emission inventories (industry, agriculture, domestic and, traffic sources) and AQ monitoring updated for the AIRe NET zone c. efficient coordination among local an regional AQ policies and abatement measures 2- Make visible AQ with modeling and disseminate results throughout the AIRe NET municipalities, to spread the knowledge and responsibilities on the dimension of the problems, included the health conseqüences, and the solutions. 3- Co-design with social and economic sectors local abatement measures, and report on their efficacy reducing local pollution levels 4- Development of pilot networking decision support system to resolve data fragmentation and easy the coordination of AQ management in the AIRe NET zone
PROJECT main result(s)	If the project is successful: 1- AIRe NET will have developed and tried new IT systems to reach a multi-level governance coordination. Thanks to this, the urban authorities will have a common scientifically formulated AQ source appointment, that does not focus in one municipality but gives facts, maps images and figures of the emissions and pollution in the whole AIRe NET zone. In addition, the effect of inter-provincial migration on air between AMB and OS (ZQA6) will be explained. 2- Thanks to AIRe NET, different multi-level governance resources will have been added up, UA will be able to share information that was scattered before about industrial activities, about traffic flows , agricultural biowaste burning, and domestic sources of air pollution. This sharing should not end with the project. Therefore, the settlement a new decision support system for AQ management will be settle, and no more individual studies will be needed to update information and to know opportunities of collective transport in the AIRe NET zone. 3- The maps and reports will give clear information to the SMG, the citizens and authorities to sense the dimension of the problem and the need to change habits in many ways. With a bottom up approach the social and economic sectors will be informed and asked to find common solutions to reduce air pollution. This will lead to concrete local abatement measures socially co designed, that will be tested during the pilot implementation of them. Then, again the common scientific evidence will show the impact that those measures have in the local AQ. On one hand, with simulation methods to scale up the pilot measures and on the other hand, with real information on levels of pollution and traffic flows that will help calibrate modelling scenarios. In summary, AIRe NET's methods and tools will break administrative boundaries to make visible air pollution and keep updated information to better manage it.

C.3.2 Outputs

Work package	Output Number	Project output	Target value of project expected output(s)
WP.4 The contribution of all emission sectors in the air citizens breathe: modelling and measuring	O 4.1.1	State-of-the-art characterization of air quality and source apportionment in the region	1
	O 4.1.2	Involvement of citizens in science and in urban challenges	500
	O 4.2.1	Traffic simulation model	1
	O 4.2.2	Traffic Simulation Results	1
	O 4.3.1	Web-based emission data warehouse	1
	O 4.4.1	Modelled air quality maps for the AIRe Net zone	1
	O 4.4.2	Source apportionment database	1
	O 4.5.1	Estimate report on health and economic benefits	1
	O 4.5.2	Instructions and new mechanisms to collect data by health centers	1
WP.5 Definition and efficacy assessments of the measures implemented: by regional authority, by Barcelona metropolitan area, by the networking of AIR-e NET	O 5.1.1	Means available to manage the implementation of local	9
	O 5.1.2	Implementation of the air pollution abatement strategies	9
	O 5.2.1	Efficacy of implementation of external air quality policies on reducing NO2, O3 and PM levels	1
	O 5.3.1	State-of-the-art experimental evaluation of effectiveness of tested measures	1
WP.6 Participative co- design with wider group of stakeholders of pollution abatement actions (Granollers, Mollet, Montornès)	O 6.1.1	Agreement on local pilot abatement	3
	O 6.2.1	Approved measures to be taken in A.5.1 about urban freight transport to test pilot abatement	3
	O 6.3.1	Information of APAM and promotion of passenger intermodality in the AIRe NET zone	9
	O 6.4.1	Instructions and procedures to stop burning of vegetable agricultural	1
	O 6.5.1	Agreement on measures	3
WP.7 Development of networking decision support system for AQ management: new tools and methods to resolve data fragmentation	O 7.1.1	Industrial emissions inventory platform	5
	O 7.2.1	Agricultural emissions inventory platform	4
	O 7.2.2	Inventory of domestic biomass burning sources	1
	O 7.3.1	Agreement on coordination procedures to keep updated traffic flows data	5
	O 7.4.1	New web to exchange information and opportunity to collective transport and car sharing	1
	O 7.5.1	Local, regional, and national coordination tools and agreements to manage abatement measures	20
WP.8 Investment	I 8.1	Investment 1. Bicycle cages to boost and survey intermodal transportation	1
	I 8.2	Investment 2. LED screens to keep citizens informed	1
	I 8.3	Investment 3. Development of IT Systems	1
	I 8.4	Investment 4. Equipment for the Air Pollution Abatement Marathon	1
	I 8.5	Investment 5. Ceilometer	1
	I 8.6	Investment 6. Equipment to monitor AQ and evaluate efficiency of measures (for A.4.1 and A.5.3)	1

C.3.3 Measurement of results

Measurement of results

1- AIRe NET's out put indicators (the products that result from activities) will have a binary answer in the major out puts expected:
a. developed and tried new multi-level governance IT systems
b. common scientiflcally made AQ source appointment,
c. characterization of AQ and source apportionment,
d. traffic simulation model,
e. web-based emission data warehouse,
f. report on health and economic impact of AQ, ...and many more.

2- AIRe NET's key indicator performance will measure in different time periods (target value):
a. No of citizens involved in AQ measurements (500)
b. No of estimate citizens taking part of Air Pollution Abatement Marathon (4.000)
c. No of citizens officially registered to take part of the APAM (1000)
d. Efficacy of implementation of air quality policies on reducing NO2, O3 and PM levels
i. NO2: (10%)
ii. PM10: (7-10%)
iii. BC: (20%)
e. Noise reduction in the three main streets of each UA (5%)
f. No of local pilot abatement measures approved in each city (10) and for each type of source (1)
g. No of stakeholders in the workshops of APAM
h. No of freight transport measures taken to test pilot abatemen
i. Increase in the number of passangers using public transport in the APAM
j. No of users of the bicycle cages installed
k. No of measures taken from the wider group of stakeholders
l. No of priorities listed through suveys on collective transport
m. No of surveys collected on the proposal of new low emission zones
n. No of surveys collected on the intermodality transport
o. No of surveys collected from schools
p. No of surveys collected from sports facilities
q. No of surveys collected form UA's staff
r. No of cars reduced in the streets and roads of the AIRe NET zone
s. No of visits of the web systems developed with open data
t. No of users/visits of the IT systems developed on Mobility (1000)
u. No of users of the IT systems developed for industry (30)
Number of users and visits to the virtual community of AIRe NET

C.3.4 Methodology for monitoring and measurement of outputs and results

Methodology for monitoring and measurement of ouputs and results

There will be permanent AQ monitoring at 5 stations (2 traffic, 2 urban background and 1 regional background in the AIRe NET zone) during three years and several short-term campaigns with high spatial resolution. Reference, scientific and low cost instrumentation for the monitoring of PMx, NOx, black carbon, SO2, ozone and VOCswill be used favouring also the participation of citizens in scienc. Source appointment before, during and after the implementation of strategies will be carried out by means of full chemical characterization of PM samples and application of receptor modelling for source apportionment. A research innovation will be testing a possible new low cost way to estimate pollution with landscape's images. So far "remote sensing" professionals have used satellite images and quantitative aerosol optical depth data, but nobody has used ground images of smog clouds from a conventional camera.

From CRTL 's image analysis sensors and traffic counting road bands, in addition to several remote sensing studies to calibrate car emission factors and simulation modelling, traffic changes will be measured before and after the measures have been taken.

The users of the new IT systems are easily tracked as the visitors to different web sites. Furthermore, there will be a register of all professionals and citizens who will take part of the APAM and registers "in person" for meetings and workshops. In addition, there are planned several surveys in the street close to the bike cage parkings, in schools, in meetings, in sports faciliteis ...and other events organised in each UA territory.

BUP will register all the needs of commuters to industrial areas and school families and a very accurate information of changes to collective transport use will be registered.

C.3.5 Target groups

Target Groups

1-The main target groups are the own partners in the project
The three UA GR, MOLL and MON with a population all together of 128.388 inhabitants
DIBA (311municipalites that have 5.543.000 inhabitants with 2.300.000 without AMB, the Metropolitan area of Barcelona)
DTES (Regional Government)
The scientific community: CSIC, UPC, BSC
And three innovative and young business CTRL, TH and BUP

2-The main local authorities (apart form the AIRe NET participants) represent 164.290inhabitants
8105 Llagosta, La 13.612
8115 Martorelles 4.927
8135 Montmeló 8.830
8159 Parets del Vallès 18.492
8209 Sant Fost de Campsentelles 8.441
8108 Lliçà de Vall 6.394
8181 Roca del Vallès, La 10.393
8041 Canovelles 16.090
8086 Franqueses del Vallès, Les 19.023
8107 Lliçà d'Amunt 14.584
8902 Vilanova del Vallès 5.062
8033 Caldes de Montbui 17.271
8198 Sant Antoni de Vilamajor 5.699
8088 Garriga, La 15.472
3-Economic activities 1.000 activities in the AIRe NET zone
4-Local Farmers 100
5-Scientific community
6-Citizens of the SMG municipalities 290.000
7-Local NGOs 15
8-Freight transport delivers 100
Different administrations and governance levels (municipal, regional, state and European) as well as other European projects related and technicians of the UIA

C.4 Project Project scaling up and transferability

C.4.1 Scaling up of the project

Scaling up of the project	The decision support system for AIRe NET zone means a pilot experience that could easily be scale up, to share information and add up local capacities. The fact that it does not exist nowadays the connection among different administration data on stationary and mobile sources, and the IT systems developed build on the old ones owned by the different government levels of administration, makes highly feasible that they will go on and develop this pilot case in AIR e NET with the rest of local authorities in the province (DIBA) or the regions (DTES). Actually, both PP have expressed the plan to scale up the experience if it works, once the project finishes, because the marginal cost will be much lower than it is now. The AIRe NET's experience sharing local resources to add up capacities and reduce inefficiency is a very inspiring project to those medium size cities close to large urban conurbations from which they receive the direct impact of mobility and production models without the resources for research, innovation and development that AQ management needs. To start a new coordinated way to model AQ and air pollution source appointment will not only benefit the accuracy of the results but will also reduce the individual costs to get it.

C.4.2 Transferability of the project: evidence of demand for your project in other cities

Transferability of the project: evidence of demand for your project in other cities	The monitoring of stationary and mobile source emissions and the monitoring of AQ traditionally have been collected individually by regional government, local governments and private sectors. Traditional isolated approaches taken by each city separately to address the issue, do not favor the needed cooperative solutions. In addition, it is highly inefficient multiplying plans, emission inventories, modeling tools, diffusion of AQ information or abatement costs mechanisms. The territorial dimension of AQ policies makes necessary to build administrative tools for policy coordination not only with regional authorities, but also with other medium-sized cities that form a single urban continuum. At the different levels of governance becomes evident that computer application with web technologies facilitate local authorities adminsitrative procedures and gives the opportunity to share data than before had a high human cost. New common registers of traffic, industrial, domestic and agricultural will help to cooridinate AQ management Scientific based communication, such as in AIRe NET, can give evidence to different social sectors and local authorities that do not recognize their influence in the air we breathe. To ensure that practitioners and decision makers at all levels have access to lessons learnt on all aspects of the AIRe NET project, theexperience will be shared in the networking iniciative URBACT.

C.5 References

C.5.1 References of the project

References	Life-AIRUSE addresses only the deterioration of AQ due to ambient air particulate matter (PM) in Southern Europe and prioritize the sources to point out cost-effective air pollution mitigation strategies. But the aims for the implementation is by the National and Regional authorities. LifePrepAir is a networking structure in Italian northern Region that involves the environmental agencies of the Po Valley and of the eastern border regions and Northern Adriatic basin. The AWAIR project aims at improving the environmental management capacity in central Europe through the promotion and adoption of agreed measures and strategies. The OPERA project developed a methodology and a tool, RIAT+, that functions as a Decisional Support System (DSS) for regional authorities in designing and assessing efficient air quality action plans ClairCity is an innovative project with a quantification toolkit that simulate the public engagement necessary to allow citizens to define a range of future city scenarios for reducing their emissions. ClairCity will source apportion current emissions/concentrations and carbon emissions not only by technology but by citizens' activities, behavior and practices AIRe NET delivery partners are part of, Forum for air quality modelling in Europe. The Forum for Air quality Modelling (FAIRMODE) is a joint response action of the European Environment Agency (EEA) and the European Commission Joint Research Centre (JRC). Its aim is to bring together air quality modellers and users in order to promote and support the harmonised use of models. For the innovative benchmarking of A.5.5 to explain that several "remote sensing" professionals have used satellite images and quantitative aerosol optical depth data from the Moderate Resolution Imaging Spectroradiometer, but nobody has used ground images of smog clouds from a conventional camera. The the latest and closest research done in geosciences and remote sensing is one funded by China University of Geosciences

Part D - Work plan

WP Nr.	Title	Work package type	Start date	End date
1	Preparation	Preparation	12/2017	10/2018
2	Project Management	Project Management	11/2018	10/2021
3	Communication	Communication	11/2018	10/2021
4	The contribution of all emission sectors in the air citizens breathe: modelling and measuring	Implementation	11/2018	10/2021
5	Definition and efficacy assessments of the measures implemented: by regional authority, by Barcelona metropolitan area, by the networking of AIR-e NET	Implementation	11/2018	10/2021
6	Participative co- design with wider group of stakeholders of pollution abatement actions (Granollers, Mollet, Montornès)	Implementation	11/2018	01/2021
7	Development of networking decision support system for AQ management: new tools and methods to resolve data fragmentation	Implementation	11/2018	10/2021
8	Investment	Investment	11/2018	10/2021
9	Closure and knowledge transfer	Closure	11/2021	10/2022

Number	WP Title	Start Date	End Date	WP budget
1	Project preparation	15/12/2017	31/10/2018	20,000.00

Partners' involvement

WP responsible partner Granollers city council - GR

Summary

Preparation and submission of the application form

Work Package Budget

Partner name	Staff cost (€)	Office and administration (€)	Travel and accommodation (€)	External expertise and services (€)	Equipment (€)	Infrastructure and construction works (€)	Sub-Total (€)	Revenues (€)	Total (€)
Granollers city council - GR	0.00	0.00	0.00	20,000.00	0.00	0.00	0.00	0.00	20,000.00

Work Plan Per Work Packages - WorkPackage 2 (Project Management Work Package)

Title	Project management
Start Date	01/11/2018
End Date	31/10/2021
Budget	550,658.90

Partners Involvement

Responsible Partner	PP 1 - Granollers city council - GR
Involved Partners	PP1 - Granollers city council - GR PP2 - Mollet del Vallès City Council - MOLL PP3 - Montornes del Valles town council - MON PP4 - Barcelona Provincial Council - DIBA PP5 - THIGIS SERVEIS AMBIENTALS, S.L. - TH PP6 - Barcelona Supercomputing Center - BSC PP7 - CSIC (Spanish National Research Council) PP8 - Government of Catalonia PP9 - BUSUP TECHNOLOGIES SL PP10 - CTRL4 ENVIRO, S.L. - CTRL4 PP11 - UNIVERSITAT POLITECNICA DE CATALUNYA - InLUPC
Summary	GR will lead AIRe NET and is in charge of the project management eventhough, the scope of the urban authorities (associatied and wider group of delivery partners) and the competences and responsibility of some of the PP in AIRe NET (DTES, representing the Governement of Catalonia, for instance because has the main competence in AQ policies, industrial emissions, traffic and agriculture in the region), have made necessary to design a distinct project management than the usual. The internal coordination of the project will be carried by DIBA and GR concerning the communication decision-making within the partnership and the governance of the project. DIBA will coordinate the associated authorities and delivery partners and the wider group of stakeholders within the SMG, helped in some aspects by the main delivery partner in the project. Regular meetings, at least every three months of the SMG with PP and wider group of stakeholders will allow both, physical and virtual cooperative work environments. GR has delegated to the delivery partner TH the management of the day to day management linked to the coordination among PP of financial and administrative documents for accounting expenditure and reporting on the activities implemented. There will be developed collaborative tools and project management systems. Aside from all the partners involved, an AQ Experts Committee (AQEC) will be created with experts from other European projects that have similarities to AIRe Net.

Activities and Deliverables

Activity number	Activity title	Activity description and partners involved	Start date	End date

A2.1	Definition of structure, responsibilities and procedures	Co-creation of the project management plan through collaborative tools that will allow to facilitate communication and coordination, besides of the control and monitoring of the project between all parties: Meetings and working tables with the different partners. Design and implementation of collaborative management systems (Kanban I Gannt model). Collaborative platforms for the exchange of information. This process will be led by Thigis Serveis Ambientals in coordination with the urban authority, and all the agents will be involved.	Start date: 01/11/2018	End date: 31/12/2018

Deliverable number	Deliverable and partners involved		Target value	Delivery date
D 2.1.1	Title	Collaborative project management tools.	Target value: 1	Delivery date: 31/12/2018
	Description	Joint work tables. Collaborative project management tools, Kanban and Gannt model. Collaborative platforms for the exchange of information.		

A2.2	Coordination of the project TH	The PC (TH) will: ensure technical, financial and risk management as well as dissemination; act as intermediary between partners and the UIA Permanent Secretariat (PS). Coordination of the project includes: ensuring timely provision and quality of Deliverables; Managing the EC contribution and ensuring audit trails; Preparing andreporting on the PS meetings; maintaining the Grant and the Consortium Agreement	Start date: 01/11/2018	End date: 31/10/2021

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 2.2.1	Title	Partnership agreement	Target value: 1	Delivery date: 30/11/2018
	Description	Full Consortium Agreement will be prepared by the Project coordinator and agreed and signed by all participants before the entering into force of the Grant Agreement		

A2.3	Reporting to the UIA Permanent Secretariat (PS)	The Project coordinator will be responsible for the production and timely submission of all reports required by the PS including regular technical and financial reports. All participants will be provided with documents and financial templates to ensure that information is submitted to the project secretariat in a standardised format. The Project coordinator will establish internal quality control on all deliverables. Partners: UA (leader) and all Partners.	Start date: 01/01/2019	End date: 31/10/2021

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 2.3.1	Title	Financial and progress report	Target value: 6	Delivery date: 31/10/2021
	Description	Every six months a progress report including financial and technical issues will be prepared (04/2019 10/2019 04/2020 10/2020 04/2021 10/2021).		
D 2.3.2	Title	Final report	Target value: 1	Delivery date: 31/10/2021
	Description	Final report where it will be concluded the results achieved and the transferability, replicability and durability of the project.		

A2.4	Communication within the partnership	Coordination procedures and responsibilities by DIBA within the SMG among PP and stakeholders Strategic meetings and conference calls will be planned to ensure that the established protocol is being followed and to provide advice and troubleshoot when necessary. Definition of coordination mechanisms to ensure the effectiveness of the engagement of the wider group in the project implementation. DIBA will be in charge with the support of Thigis Serveis Ambientals and the other PP	Start date: 01/01/2019	End date: 31/10/2021

Deliverable number	Deliverable and partners involved		Target value	Delivery date
D 2.4.1	Title	Follow-up meetings	Target value: 10	Delivery date: 31/10/2021
	Description	Follow-up meetings and coordination at different levels with the PP and stakeholders.		
D 2.4.2	Title	Available coordination tools	Target value: 3	Delivery date: 31/10/2021
	Description	Available coordination tools to communication and information update		
D 2.4.3	Title	Coordination tools	Target value: 25	Delivery date: 31/05/2021
	Description	Coordination tools approved and used by all partners and wider group of stakeholders.		

A2.5	Auditing	Verification of the management effectiveness and the internal control systems of the project implementation and funds expenses. Compliance with the programmed guidelines and legal regulations, actions specified in the description as well as with the works schedule and costs, the degree of fulfillment of the goals in terms of work and direct and indirect costs. Assessment of the accounting system accuracy and financial statements. Documentation and verification of costs in the context of their eligibility. Creation a AQ Experts Committee (AQEC), composed by atmosphere polices experts in the regional and international scope and representatives of european projects related to atmosphere contamination. Task by Granollers and Thigis	Start date: 01/11/2018	End date: 31/10/2021

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 2.5.1	Title	Audit report of risk and quality management.	Target value: 3	Delivery date: 30/04/2021
	Description	Audit report of risk and quality management.		
D 2.5.2	Title	Creation of the AQ Experts Committee (AQEC) group.	Target value: 1	Delivery date: 31/05/2019
	Description	Creation of the AQ Experts Committee (AQEC) group.		
D 2.5.3	Title	Meetings of the AQ Experts Committee (AQEC)	Target value: 3	Delivery date: 31/05/2019
	Description	Meetings of the AQ Experts Committee (AQEC)		

A2.6	Capitalisation	Capturing the knowledge produced by the project and drawing lessons on an ongoing basis. Involvement of UIA experts during the project implementation. Participation in the activities of the Urban Development Network (UDN). Participation in national/international conferences to share good practice and lessons learnt on ongoing basis.	Start date: 01/11/2018	End date: 31/10/2021

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 2.6.1	Title	Thematic deliverables	Target value: 11	Delivery date: 31/10/2021
	Description	Thematic deliverables produced by UIA Experts on ongoing basis.		
D 2.6.2	Title	Other deliverables related to capitalization activities.	Target value: 4	Delivery date: 31/10/2021
	Description	Other deliverables related to capitalization activities.		
D 2.6.3	Title	Participation in national/international conferences	Target value: 10	Delivery date: 31/10/2021
	Description	Participation in national/international conferences		

Work Package Budget

PP1 - Granollers city council - GR	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Management and coordination of the project by 0.5 part time project assistant for the organization of all project events and meetings.	N/A	Team buildings meeting Partners meetings					
Amount (€)	32,000	4,800.00	6,500	0	0	43,300.00	0	43,300.00

PP2 - Mollet del Vallès City Council - MOLL	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A	Team buildings meeting Partners meetings					
Amount (€)	21,162	3,174.30	6,500	0	0	30,836.30	0	30,836.30

PP3 - Montornes del Valles town council - MON	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A	Team buildings meeting Partners meetings					
Amount (€)	9,813	1,471.95	2,000	0	0	13,284.95	0	13,284.95

PP4 - Barcelona Provincial Council - DIBA	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A	Team buildings meeting Partners meetings	Communication plan within the partnership. Steering group, coordination procedures and responsabilities. There will be a "experts" steering comitee with representatives of european projects related.				
Amount (€)	74,270	11,140.50	1,030	23,850	0	110,290.50	0	110,290.50

PP5 - THINK SERVEIS AMBIENTALS, S.L. - TH	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP. It will assign a full time person that will work along with the urban authority, as well as a half-time other person.	N/A	Team buildings meeting Partners meetings					
Amount (€)	134,266	20,139.90	4,000	0	0	158,405.90	0	158,405.90

PP6 - Barcelona Supercomputing Center - BSC	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A	Team buildings meeting Partners meetings					
Amount (€)	23,444	3,516.60	3,000	0	0	29,960.60	0	29,960.60

PP7 - CSIC (Spanish National Research Council)	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A	Team buildings meeting Partners meetings	Development of web based scientific communication with universities and other projects related 1000 eur x year to update information and collect proposals and feedback				
Amount (€)	26,182	3,927.30	300	3,023	0	33,432.30	0	33,432.30

PP8 - Government of Catalonia	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A	Team buildings meeting Partners meetings					
Amount (€)	54,719	8,207.85	2,300	0	0	65,226.85	0	65,226.85

PP9 - BUSUP TECHNOLOGIES SL	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A	Team buildings meeting Partners meetings					
Amount (€)	9,749	1,462.35	2,125	0	0	13,336.35	0	13,336.35

PP10 - CTRL4 ENVIRO, S.L. - CTRL4	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A	Team buildings meeting Partners meetings					
Amount (€)	13,143	1,971.45	2,600	0	0	17,714.45	0	17,714.45

PP11 - UNIVERSITAT POLITECNICA DE CATALUNYA - InLUPC	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A	Team buildings meeting Partners meetings					
Amount (€)	27,198	4,079.70	3,593	0	0	34,870.70	0	34,870.70

Total (€)	425,946.00	63,891.90	33,948.00	26,873.00	0.00	550,658.90	0.00	550,658.90

Indicative budget breakdown per year					
Year	2018	2019	2020	2021	Total
Amount (%)	5 %	40 %	30 %	25 %	100.00 %
Budget (€)	27,532.94	220,263.56	165,197.67	137,664.72	550,658.90

Work Plan Per Work Packages - WorkPackage 3 (Communication Work Package)

Title	Communication
Start Date	01/11/2018
End Date	31/10/2021
Budget	371,689.50

Partners Involvement

Responsible Partner	PP 4 - Barcelona Provincial Council - DIBA
Involved Partners	PP1 - Granollers city council - GR PP2 - Mollet del Vallès City Council - MOLL PP3 - Montornes del Valles town council - MON PP4 - Barcelona Provincial Council - DIBA PP5 - THIGIS SERVEIS AMBIENTALS, S.L. - TH PP6 - Barcelona Supercomputing Center - BSC PP7 - CSIC (Spanish National Research Council) PP8 - Government of Catalonia PP9 - BUSUP TECHNOLOGIES SL PP10 - CTRL4 ENVIRO, S.L. - CTRL4 PP11 - UNIVERSITAT POLITECNICA DE CATALUNYA - InLUPC
Summary	The main aim of this package is the definition of the dissemination strategy in AIRe NETbetween partners and with the wider group of stakeholders. The design of material and messages for the workshops held in A.6.1 and A.6.2 are established. There will be an starting and a clousure event (DIBA) with all PP and the wider stakeholder groups, for bringing together the local partnership, local politicians, elected members and the PS staff. Other urban authorities in Barcelona will be invited. A virtual community among PP will be developed and boost from DIBA. This work packages includes the communication of the project actions and results. This must be done from the beginning until the project's closure The communication officer (DIBA) will approve different target group, to establish the right support and content of deliverables: local authorities, mobility and environment technicians, social and health sectors, farmers, schools, economic activities, citizens and other levels of government. Communication protocols will be established and new digital channels will be created to manage them. APAM (TH) communication support will be designed in this work package in accordance with the rest of the communication strategy but focus on the workshops in A.6.1 to boost participation. Two exhibitions (DIBA) will give support in events and meetings planned through the project. There will be reports to keep up dates the evolution of the project to disseminate AIRe Net
Communication objective	Communication activities enable effective information flow among partners. Each partner will appoint a member responsible for communication so as to personalise contact with WP3 leader and help develop communication networks with and amongst local communities. Good internal communication will contribute to successful completion of the project (on time and on budget). Successful external communication will lead to more extensive adoption of the solutions.
Target groups	Where possible, please also indicate the expected number of target groups you aim to reach. Aire NET's PP -11 Local SMG authorities 17 Economic activities 1.000 Farmers 100 Scientific community Citizens of the SMG municipalities 290.000 Local NGOs 15 Freight transport delivers 100 Different administrations and governance levels (municipal, regional, state and European) as well as other European projects related and technicians of the UIA

Activities and Deliverables

Activity number	Activity title	Activity description and partners involved	Start date	End date

A3.1	Start up activities	Partners meeting with wider group of stakeholders for an initial Start-up activity of AIRe NET The aim is to make the coordination and the involvement of these actors (scientific, business, agricultural community) visible to the citizenship to bring the project closer to them.	Start date: 01/11/2018	End date: 31/12/2018

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 3.1.1	Title	Start up activity to bring together partnership, politicians, elected members and the PS staff	Target value: 1	Delivery date: 31/12/2018
	Description	Start up activity to bring together local partnership, local politicians, elected members and the PS staff (DIBA)		
D 3.1.2	Title	Initial document with the basic information of the project with the work plan for all partners (Th)	Target value: 1	Delivery date: 31/12/2018
	Description	Initial document with the basic information of the project with the work plan for all partners (Th)		

A3.2	Publications	DIBA in the virtual space shared by partners will publish periodically reports with the latest information on the project to summarize and share the lessons learned in each action. Reports every three months will be available. Some of them will be publically shared with the rest of wider group of stakeholders and the other urban authorities of Barcelona's province . There will be published on paper two reports of the project at the end with different target readers (one more technological, and the other for public in general)	Start date: 01/11/2018	End date: 31/10/2021

Deliverable number	Deliverable and partners involved		Target value	Delivery date
D 3.2.1	Title	Reports with the latest information on the project to summarize and share the lessons learned	Target value: 30	Delivery date: 31/10/2021
	Description	Reports with the latest information on the project to summarize and share the lessons learned in the main actions implemented		

A3.3	Digital activity	Social network accounts managed by the officer and a communication list will be made to be sure to reach the agreed social targets. There will be messages sorted by target groups: generalist, international, regional, local, and specialized media. The communication officer will manage and communicate social networks interactions and response and will be responsible of the updated content of the information. Creation of a virtual space shared between all PP with publishing tools, discussion, exchange, etc. DIBA virtual community network will support project's governance.	Start date: 01/11/2018	End date: 31/10/2021

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 3.3.1	Title	Approved list of target groups to reach the agreed social targets with digital activity	Target value: 1	Delivery date: 31/12/2018
	Description	Approved list of target groups to reach the agreed social targets with digital activity		
D 3.3.2	Title	Virtual community creation in virtual space in DIBA's web site	Target value: 1	Delivery date: 31/12/2018
	Description	Virtual community creation in virtual space in DIBA's web site		
D 3.3.3	Title	New social accounts for the project (Twitter, Linkedin, Youtube)	Target value: 3	Delivery date: 31/01/2019
	Description	New social accounts for the project (Twitter, Linkedin, Youtube)		
D 3.3.4	Title	Creation of the channels to manage digital activity	Target value: 4	Delivery date: 31/01/2019
	Description	Creation of the channels to manage digital activity		

A3.4	Public events	Different public events will be held during the APAM for well-defined target groups to find opportunities to reduce the number of vehicles in the AIRe NET zones	Start date: 01/01/2019	End date: 30/11/2019

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 3.4.1	Title	Public events during the Air Pollution Abatement Marathon	Target value: 30	Delivery date: 30/11/2019
	Description	Public events during the Air Pollution Abatement Marathon		

A3.5	Promotional material	There will be produced two different exhibitions with roll up stand systems to support the meetings and activitites the project will have.	Start date: 01/02/2019	End date: 31/10/2021

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 3.5.1	Title	Exhibition with roll up stand systems	Target value: 2	Delivery date: 31/10/2021
	Description	Exhibition with roll up stand systems		

A3.6	Media relations	A person designed by DIBA will establish the style procedures, messages, images and instructions to give and send information to local and international media in the AIRe Net project. The communication officer will prepare periodically the contents of the messages to release to media by the partners. The officer will prepare media kits and clear instructions to partners . There will be messages sorted by target groups: generalist, international, regional, local, and specialized DIBA in charge with a communication officer designed .	Start date: 01/01/2019	End date: 31/10/2021

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 3.6.1	Title	Kit for the press	Target value: 6	Delivery date: 31/10/2021
	Description	Kit for the press: articles, media files, interest resources, contact of the person responsible of the communication, etc.) and releases of content for media (target number?)		
D 3.6.2	Title	Articles published	Target value: 30	Delivery date: 31/10/2021
	Description	Articles published		
D 3.6.3	Title	Style manual	Target value: 1	Delivery date: 31/10/2021
	Description	Style manual: messages content, images, and instructions to PP		
D 3.6.4	Title	List of communication targets by typologies and by media support	Target value: 1	Delivery date: 31/10/2021
	Description	List of communication targets by typologies and by media support (generalist, regional, specialized, digital, written)		

A3.7	Final dissemination activity (mandatory)	The final presentation of the results and the measures to continue the networking in the multilevel of governance approach, will be discussed in the event with all partners and shared with the wider group of stakeholders. DIBA in charge and all PP involved	**Start date** 01/09/2021	**End date** 31/10/2021

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 3.7.1	**Title**	Dissemination final event	**Target value** 1	**Delivery date** 31/10/2021
	Description	Dissemination final event will be held to showcase what cas been achieved of the project to showcase the results (DIBA)		

A3.8	Making pollution visible: Dissemination local and regional emissions and AQ information, forecast and health consequences	To develop a web based front-end interface for data retrieval to produce and disseminate AQ information: monitoring, assessment of pollutant concentrations and health consequences in ZQA2 VO. Information products will be addressed to AIR-e NET partners, stakeholders and citizens. An improved fore cast will be possible within the project with better characterization details (nowadays within 4 kilometre detail) after nourishiing it with the emissions measured and estimated in A.4 (activity 4.3) This activity carried out by DIBA is aimed to make visible AQ to the zone. Specific targets will be municipal technicians, political and civil society in general, since it must allow a basic understanding of the problem and help to find the solutions	Start date: 01/06/2019	End date: 31/10/2021

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 3.8.1	Title	Maps and territorial views	Target value: 1	Delivery date: 31/10/2021
	Description	Maps and territorial views		
D 3.8.2	Title	Monitoring viewers	Target value: 4	Delivery date: 31/10/2021
	Description	Monitoring viewers		
D 3.8.3	Title	Technical reports	Target value: 8	Delivery date: 31/10/2021
	Description	Technical reports		

A3.9	Air Pollution Abatement Marathon (APAM)	The co-design of the local pollution abatement measures will be organized with an awareness campaign among citizens and users of different facilities (schools, sports, cultural, administrative...) APAM the objective will center in raising awareness in the AIRe NET zone and organize workshops to boost participation and collect mobility data on the use of private vehicles. The training measurements will be done and indicators calculated to get a reference to check later when the pilot measures are implemented. The data will be used as well by BUSUP to propose collective ways of transport, carsharing and low carbon transport. Installation of emission registration devices and sensors. It will be coordinated by Th with each municipality.	Start date: 01/02/2019	End date: 28/02/2019

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 3.9.1	Title	Design of Communication, awareness and sensitization material for workshops	Target value: 1	Delivery date: 28/02/2019
	Description	Design of Communication, awareness and sensitization material for workshops		
D 3.9.2	Title	Design and planning of workshops and actions with different stakeholders .	Target value: 1	Delivery date: 28/02/2019
	Description	Design and planning of workshops and actions with different stakeholders .		
D 3.9.3	Title	Production of material for the workshops in the different facilities	Target value: 5	Delivery date: 28/02/2019
	Description	Production of material for the workshops in the different facilities		

Work Package Budget

PP1 - Granollers city council - GR	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A		Design of page for AIRe NET with in the UA's web site				
Amount (€)	2,000	300.00	0	14,000	0	16,300.00	0	16,300.00

PP2 - Mollet del Vallès City Council - MOLL	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A		Design of page for AIRe NET with in the UA's web site				
Amount (€)	1,638	245.70	0	14,000	0	15,883.70	0	15,883.70

PP3 - Montornes del Valles town council - MON	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A		Design of page for AIRe NET with in the UA's web site				
Amount (€)	1,000	150.00	0	6,000	0	7,150.00	0	7,150.00

PP4 - Barcelona Provincial Council - DIBA	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A	Participation to 2 international scientific conferences	Services related to the organisation snf implementation of events (rollups, ...)or meetings and support on the communication plan tasks within the partnership	depreciation of computers for AIRe NET project			
Amount (€)	58,490	8,773.50	3,000	52,360	8,000	130,623.50	0	130,623.50

PP5 - THINK SERVEIS AMBIENTALS, S.L. - TH	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A		Services related to the organisation snf implementation of events (rollups, ...)or meetings and support on the communication plan tasks within the partnership	depreciation of computers for AIRe NET project			
Amount (€)	16,805	2,520.75	0	51,000	12,000	82,325.75	0	82,325.75

PP6 - Barcelona Supercomputing Center - BSC	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	23,020	3,453.00	0	0	0	26,473.00	0	26,473.00

PP7 - CSIC (Spanish National Research Council)	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A	Participation to 2 international scientific conferences	Development of web based scientific communication with universities and other projects related 1000 eur x year to update information and collect proposals and feedback				
Amount (€)	16,150	2,422.50	2,000	1,000	0	21,572.50	0	21,572.50

PP8 - Government of Catalonia	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	25,800	3,870.00	0	0	0	29,670.00	0	29,670.00

PP9 - BUSUP TECHNOLOGIES SL	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A		Dissemination costs				
Amount (€)	1,000	150.00	0	32,000	0	33,150.00	0	33,150.00

PP10 - CTRL4 ENVIRO, S.L. - CTRL4	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A		Dissemination costs				
Amount (€)	1,700	255.00	0	2,300	0	4,255.00	0	4,255.00

PP11 - UNIVERSITAT POLITECNICA DE CATALUNYA - InLUPC	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	3,727	559.05	0	0	0	4,286.05	0	4,286.05

Total (€)	151,330.00	22,699.50	5,000.00	172,660.00	20,000.00	371,689.50	0.00	371,689.50

Indicative budget breakdown per year					
Year	2018	2019	2020	2021	Total
Amount (%)	5 %	40 %	25 %	30 %	100.00 %
Budget (€)	18,584.48	148,675.80	92,922.38	111,506.85	371,689.50

Work Plan Per Work Packages - WorkPackage 4 (Implementation Work Package)

Title	The contribution of all emission sectors in the air citizens breathe: modelling and measuring
Start Date	01/11/2018
End Date	31/10/2021
Budget	967,108.85

Partners Involvement

Responsible Partner	PP 6 - Barcelona Supercomputing Center - BSC
Involved Partners	PP1 - Granollers city council - GR PP2 - Mollet del Vallès City Council - MOLL PP3 - Montornes del Valles town council - MON PP4 - Barcelona Provincial Council - DIBA PP5 - THIGIS SERVEIS AMBIENTALS, S.L. - TH PP6 - Barcelona Supercomputing Center - BSC PP7 - CSIC (Spanish National Research Council) PP8 - Government of Catalonia PP10 - CTRL4 ENVIRO, S.L. - CTRL4 PP11 - UNIVERSITAT POLITECNICA DE CATALUNYA - InLUPC

Summary

The combination of models is essential and encouraged by the European Air Quality Directive 2008/50/EC (AQD) as a tool for supporting air quality policy making.
This WP will combine both approaches in order to:
Assess the current air quality levels in the AIRe Net region.
Quantify the sources' and regions' contributions to the air quality levels of the AIRe-Net region.
The AIRe NET project will improve considerably the air quality monitoring in the area of study, allowing obtaining regional background to urban to traffic gradients (Lenschow approach) for several pollutants including Black carbon and ozone. Morever, the full chemical composition of PM10 samples, at 5 sites (1 regional, 2 urban background and 2 traffic) will allow receptor modeling (Positive Matrix Factorization) for separating daily source contributions (from traffic exhaust, traffic non-exhaust, biomass combustion, industry, regional aerosol and diffuse dust emissions among others). In addition, an overwhleing deployment of passive diffusion tubes directly by local citizens will allow for a comprehensive spatial distribution of NO2, ozone and VOCs in the region, ensuring a good compromise between citizen involvement and quality data.
An emission data warehouse will be implemented to store and share emission data between the local authorities.
Measurements will be contrasted against modelled results to evaluate the system, which will be also used for the air quality planning works performed in WP5.

Activities, Deliverables and Outputs

Activity number	Activity title	Activity description and partners involved	Start date	End date

A4.1	Air quality assessment monitoring: source apportionment	Permanent air quality monitoring at 5 stations (2 traffic, 2 urban background and 1 regional background; in the AIRe NET zone) during 3 years and several short-term campaigns with high spatial resolution. Reference, scientific and low cost instrumentation for the monitoring of PMx, NOx, black carbon, SO2, ozone and VOCs will be used favoring also the participation of citizens in science. Source apportionment before, during and after the implementation of strategies will be carried out by means of full chemical characterization of PM samples and application of receptor modeling for source apportionment. Partner(s): CSIC (in charge) with contribution of Granollers, Mollet and Montornès and the other municipalities in the AIRe NET zone.	Start date: 01/11/2018	End date: 31/10/2021

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 4.1.1	Title	High quality air quality data in the AIRe NET zone	Target value: 1	Delivery date: 31/10/2021
	Description	High quality air quality data in the AIRe NET zone (responsible partner: CSIC)		
D 4.1.2	Title	Source apportionment study	Target value: 5	Delivery date: 31/10/2021
	Description	Source apportionment study based on experimental chemical data and receptor modelling (PMF) (responsible partner: CSIC)		
D 4.1.3	Title	Citizens training on the use of low-cost instruments	Target value: 500	Delivery date: 31/10/2021
	Description	Citizens training on the use of low-cost instruments (responsible partner: CSIC)		

Output Number		Project output	Target value	Delivery date
O 4.1.1	Title	State-of-the-art characterization of air quality and source apportionment in the region	Target value: 1	Delivery date: 31/10/2021
	Description	State-of-the-art characterization of air quality and source apportionment in the region. High temporal and spatial resolution. (responsible partner: CSIC)		
O 4.1.2	Title	Involvement of citizens in science and in urban challenges	Target value: 500	Delivery date: 31/10/2021
	Description	Involvement of citizens in science and in urban challenges (responsible partner: CSIC)		

A4.2	Traffic modelling	Development of a traffic simulation model of the selected area of study. This development consists in the construction of the network (including all the needed details to emulate the private and public transport), the demand analysis (using origin-destination matrices built from mobile data) and the calibration process (including speed data from floating car data). The model construction will not start from the scratch. It will reuses a current existent model of the First Crown of the AMB from 2017 and will be expand with the new proposed study area. This calibrated traffic simulation model will allow to generate inputs for the emission data warehouse with respect to traffic issues. InLab FIB UPC (in charge) and all the municipalities	Start date: 01/11/2018	End date: 31/08/2019

Deliverable number	Deliverable and partners involved		Target value	Delivery date
D 4.2.1	Title	Demand Data Analysis Report	Target value: 1	Delivery date: 31/08/2019
	Description	Demand Data Analysis Report (responsible partner: inLab FIB)		
D 4.2.2	Title	Traffic Simulation Data KPIs Report	Target value: 1	Delivery date: 31/08/2019
	Description	Traffic Simulation Data KPIs Report (responsible partner: inLab FIB)		

Output Number	Project output		Target value	Delivery date
O 4.2.1	Title	Traffic simulation model	Target value: 1	Delivery date: 31/08/2019
	Description	A calibrated traffic simulation model in VISUM (http://vision-traffic.ptvgroup.com/en-us/products/ptv-visum/) that will reproduce the current situation in the proposed area of study (responsible partner: inLab FIB).		
O 4.2.2	Title	Traffic Simulation Results	Target value: 1	Delivery date: 31/08/2019
	Description	Traffic Simulation Results for the current scenario (datafiles) (responsible partner: inLab FIB)		

A4.3	Emission data warehouse	Design and implementation of a web-based emission data warehouse system to manage, store and visualize emissions for the AIRe Net zone. The system will include existing emission inventories as well as emissions estimated during the project. The focus will be traffic, industry, agriculture, non-road mobile sources, residential combustion and biogenic sources. The modelled traffic data from A4.2 will be used for the estimation of street scale traffic emissions. The industrial emissions will be based on the new inventory that will be shared and updated by municipalities (7.1), DIBA and DTES. The estimated emissions will be used for the air quality modelling tasks in A4.4. Partners: BSC (in charge), DTES, Granollers, Mollet.	Start date: 01/11/2018	End date: 31/10/2019

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 4.3.1	Title	Emission inventory report.	Target value: 1	Delivery date: 31/10/2019
	Description	Emission inventory report for the AIRe Net zone (responsible partner: BSC). A comprehensive summary of air pollutant emissions from each emission sources and estimation methodologies applied.		

Output Number		Project output	Target value	Delivery date
O 4.3.1	Title	Web-based emission data warehouse	Target value: 1	Delivery date: 31/10/2019
	Description	Web-based emission data warehouse (responsible partner: BSC). An open access system to manage, store and visualize emissions for the AIRe Net zone in a common format that will allow consistency and shared access.		

A4.4	Air quality modelling: source appointment	Combination of the CALIOPE system () and the R-Line street scale model to simulate the current regional (AIRe Net zone, 1km2) and urban (Granollers and Mollet, 10m) air quality levels. Application of a source contribution modelling technique to quantify the contribution of traffic and industry from the ZQA1 to the AIRe Net and ZQ6 zones (and vice versa) in terms of NO2 and O3 concentrations. The emission data compiled in A4.3 will be used as a basis together with already existing emissions estimated by CALIOPE for the rest of the study area. All the modelling results will be contrasted against the measurements performed in A4.1 in order to calibrate and validate the system. Partner(s): BSC (in charge), CSIC.	Start date: 01/07/2019	End date: 30/04/2020

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 4.4.1	Title	Air quality modelling report	Target value: 1	Delivery date: 30/04/2020
	Description	Air quality modelling report (responsible partner: BSC). A comprehensive summary of the air quality modelling results and the comparison with observed data and the limit values set out in the AQD.		
D 4.4.2	Title	Source apportionment study based	Target value: 1	Delivery date: 30/04/2020
	Description	Source apportionment study based on modelling techniques (responsible partner: BSC). A comprehensive report of the sources' and regions' shares to ambient PM10, PM2.5, NO2 and O3 in the AIRe Net zone and vicinity areas (ZQA6)and the comparison with observations.		

Output Number		Project output	Target value	Delivery date
O 4.4.1	Title	Modelled air quality maps for the AIRe Net zone	Target value: 1	Delivery date: 30/04/2020
	Description	Modelled air quality maps for the AIRe Net zone (1km2, NO2, O3 and PM) and Mollet and Granollers urban areas (10m, NO2), in NetCDF / shapefile formats to be combined with other layers of information (responsible partner: BSC).		
O 4.4.2	Title	Source apportionment database	Target value: 1	Delivery date: 30/04/2020
	Description	Source apportionment database. Systematic collection of sources' and regions' shares to ambient NO2,O3 and PM concentrations in the AIRe Net and ZQA6 zones.		

A4.5	Health Impact assessment of AQ in the AIRe NET zone	Studies will be carried out to establish a common quality urban environment assessments with to historical data and characterization of air quality from A4.1, the health impacts of local air pollution will be evaluated. The mean weighted concentration of PM(10) or NO2 for the study population will be estimated through the different concentration surface maps developed by AIRe NET. One study will measure the health and economic benefits of reducing air pollution in the would result in substantial. Another study will focus in establishing procedures of cooperation to a better and systematic collection of health costs and AQ data in the AIRe NET to facilitate epidemiological research and urban quality management Partner(s): GR(in charge), MOLL	Start date: 01/07/2019	End date: 30/04/2020

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 4.5.1	Title	A comprehensive summary of the health effects air quality	Target value: 1	Delivery date: 30/04/2020
	Description	A comprehensive summary of the health effects air quality concentrations are estimate to have in the AIRe NET zone the last twenty years.		
D 4.5.2	Title	Evaluation of registers	Target value: 2	Delivery date: 30/04/2020
	Description	Evaluation of registers and indicators available on health in the AIRe NET.		
D 4.5.3	Title	An estimation of the health effects the reductions of air quality concentrations	Target value: 1	Delivery date: 30/04/2020
	Description	An estimation of the health effects the reductions of air quality concentrations are estimate to have in the AIRe NET zone when local measures and supralocal measures are taken		

Output Number		Project output	Target value	Delivery date
O 4.5.1	Title	Estimate report on health and economic benefits	Target value: 1	Delivery date: 30/04/2020
	Description	Estimate report on health and economic benefits that would result from the pilot AIRe NET scenarios of improved air quality.		
O 4.5.2	Title	Instructions and new mechanisms to collect data by health centers	Target value: 1	Delivery date: 30/04/2020
	Description	Instructions and new mechanisms to collect data by health centers to provide more foundation for epidemiological research with regard to the exposure of contaminants and the human response to this exposure		

Work Package Budget

PP1 - Granollers city council - GR	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A		Estimate report on health and economic benefits that would result from the pilot AIRe NET scenarios of improved air quality.				
Amount (€)	6,000	900.00	0	35,000	0	41,900.00	0	41,900.00

PP2 - Mollet del Vallès City Council - MOLL	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A		Estimate report on health and economic benefits that would result from the pilot AIRe NET scenarios of improved air quality.				
Amount (€)	6,000	900.00	0	12,000	0	18,900.00	0	18,900.00

PP3 - Montornes del Valles town council - MON	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	3,500	525.00	0	0	0	4,025.00	0	4,025.00

PP4 - Barcelona Provincial Council - DIBA	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	3,200	480.00	0	0	0	3,680.00	0	3,680.00

PP5 - THINK SERVEIS AMBIENTALS, S.L. - TH	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	4,700	705.00	0	0	0	5,405.00	0	5,405.00

PP6 - Barcelona Supercomputing Center - BSC	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	189,588	28,438.20	0	0	0	218,026.20	0	218,026.20

PP7 - CSIC (Spanish National Research Council)	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A	Participation to 1 international scientific conference	Development of web based scientific communication with universities and other projects related 1000 eur x year to update information and collect proposals and feedback	1 GRIMM for the concentrations of PM10, PM2.5 and PM1 in continuous			
Amount (€)	161,877	24,281.55	1,000	2,500	32,821	222,479.55	0	222,479.55

PP8 - Government of Catalonia	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	36,675	5,501.25	0	0	0	42,176.25	0	42,176.25

PP10 - CTRL4 ENVIRO, S.L. - CTRL4	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	4,969	745.35	0	0	0	5,714.35	0	5,714.35

PP11 - UNIVERSITAT POLITECNICA DE CATALUNYA - InLUPC	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A		Demand Data (KINEO) 80.000,00 € Software Licenses (VISUM PTV) 30.000,00 €				
Amount (€)	256,350	38,452.50	0	110,000	0	404,802.50	0	404,802.50

Total (€)	672,859.00	100,928.85	1,000.00	159,500.00	32,821.00	967,108.85	0.00	967,108.85

Indicative budget breakdown per year					
Year	2018	2019	2020	2021	Total
Amount (%)	0 %	40 %	40 %	20 %	100.00 %
Budget (€)	0.00	386,843.54	386,843.54	193,421.77	967,108.85

Indicative budget breakdown per activity		
Activity	Amount (%)	Budget (€)
A 4.1	15 %	145,066.33
A 4.2	25 %	241,777.21
A 4.3	25 %	241,777.21
A 4.4	20 %	193,421.77
A 4.5	15 %	145,066.33
Total	100.00 %	967,108.85

Work Plan Per Work Packages - WorkPackage 5 (Implementation Work Package)

Title	Definition and efficacy assessments of the measures implemented: by regional authority, by Barcelona metropolitan area, by the networking of AIR-e NET
Start Date	01/11/2018
End Date	31/10/2021
Budget	1,012,258.65

Partners Involvement

Responsible Partner	PP 7 - CSIC (Spanish National Research Council)
Involved Partners	PP1 - Granollers city council - GR PP2 - Mollet del Vallès City Council - MOLL PP3 - Montornes del Valles town council - MON PP4 - Barcelona Provincial Council - DIBA PP5 - THIGIS SERVEIS AMBIENTALS, S.L. - TH PP6 - Barcelona Supercomputing Center - BSC PP7 - CSIC (Spanish National Research Council) PP8 - Government of Catalonia PP9 - BUSUP TECHNOLOGIES SL PP10 - CTRL4 ENVIRO, S.L. - CTRL4 PP11 - UNIVERSITAT POLITECNICA DE CATALUNYA - InLUPC
Summary	With the participatory design of measures in (A.6) this (A.5) implements the co-design measures at local and regional level, getting the support to take them with most of the investment the project uses for road signs, for save bike parking spaces close to public stations, for the IT systems develop to communicate with farmers, the improvement of walking and biking paths. Those investments not only will be used to the pilot implementation of the measures, but also will be new opportunities to reduce the use of cars and to communicate with drivers when ther could be a pollution episode. The main goal of A.5 is to assess with the scientific partners the impact that those actions have in the quality of the air if we could scale them up. Furthermore, the assessment will be taking into account and quantified the effects of an external policy (for instance permanent low emission zone in the AMB) on the AIRe net zone. There fore, this work package will quantify what is the effect of the implementation of an action in a certain zone on the air quality levels of another region.

Activities, Deliverables and Outputs

Activity number	Activity title	Activity description and partners involved	Start date	End date

A5.1	Implementation of local (Granollers, Mollet, Montornès, DIBA): mobility, industry, agriculture and citizens	After the co-design with the Air Pollution Abatement Marathon and other participatory process the pilot measures to reduce local air emissions will be tried. Those will be measures such as restriction of speed in regional drive ways, intermodal areas (safe parking and better paths for bicycles, incentives for collective transport supply...), incentives for better management freight/commodities distribution centres, new intermodal and collective transport opportunities, restriction of vehicles in GR and MOLL in low emissions areas, economic incentives to use public transport and bike/carsharing, collective transport for local work, no permits for agricultural biomass burning. Partner(s): Granollers (in charge), Mollet, Montornès, DTES	Start date: 01/03/2019	End date: 30/11/2019

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 5.1.1	Title	Communication strategy	Target value: 1	Delivery date: 31/08/2019
	Description	Communication strategy and elaborations of instructions messages in public transport stations, mass media, schools, firms, other facilities, road signs Activity description and partners involved To develop a protocol for the communication of the measures established according to the development of the project: state of affairs, results of simulations, social and environmental impacts of measures, communication of indicators ... To elaborate a protocol of communication system of alerts in cases of high atmospheric contamination. These protocols must be carried out in a coordinated way between the municipalities and will be led by the Barcelona Provincial Council.		
D 5.1.2	Title	Incentives officially approved by each authority for the pilot abatement marathon measures	Target value: 20	Delivery date: 30/09/2019
	Description	Incentives officially approved by each authority for the pilot abatement marathon measures		
D 5.1.3	Title	Action communication protocol	Target value: 1	Delivery date: 30/09/2019
	Description	Action communication protocol		
D 5.1.4	Title	Atmosphere contamination alerts protocol.	Target value: 1	Delivery date: 30/09/2019
	Description	Atmosphere contamination alerts protocol.		
D 5.1.5	Title	Approved instructions to municipal services to water the streets	Target value: 17	Delivery date: 31/08/2019
	Description	Approved instructions to municipal services to water the streets		
D 5.1.6	Title	Approved low emissions zones in Granollers and Mollet	Target value: 2	Delivery date: 30/09/2019
	Description	Approved low emissions zones in Granollers and Mollet		

Output Number		Project output	Target value	Delivery date
O 5.1.1	Title	Means available to manage the implementation of local	Target value: 9	Delivery date: 30/09/2019
	Description	Means available to manage the implementation of local (Granollers, Mollet, Montornès, DIBA) and regional strategies for the abatement pollution marathon.		
O 5.1.2	Title	Implementation of the air pollution abatement strategies	Target value: 9	Delivery date: 30/11/2019
	Description	Implementation of the air pollution abatement strategies		

A5.2	Modelling assessment of abatement strategies	Modelling of the potential impact of a complete/permanent implementation of selected measures from A.5.1, including vehicle restrictions in Granollers and Mollet (local measure), restriction of speed in regional drive ways and restriction of agricultural waste burning (regional measures). The impacts will be quantified at the street-level and regional level (inside and outside the AIRe net zone). The effect of an external policy (permanent low emission zone in the AMB) on the AIRe net zone will be also quantified. To emulate the measures related with traffic policies, the traffic simulation model developed in A.4.2 will be used. The modelled results will be compared with the observations obtained in A.5.3. Partner(s): BSC (in charge), Inlab	Start date: 01/04/2020	End date: 30/04/2021

Deliverable number	Deliverable and partners involved		Target value	Delivery date
D 5.2.1	Title	Air Quality evaluation report	Target value: 1	Delivery date: 30/04/2021
	Description	Air Quality evaluation report. Comprehensive assessment of the impact of permanent local, regional and external air quality policies on the AIRe Net zone's pollutant levels (responsible partner: BSC)		

Output Number	Project output		Target value	Delivery date
O 5.2.1	Title	Efficacy of implementation of external air quality policies on reducing NO2, O3 and PM levels	Target value: 1	Delivery date: 30/04/2021
	Description	Quantification of the efficacy of complete/permanent implementation of local, regional and external air quality policies on reducing NO2, O3 and PM levels in the AIRe Net zone (responsible partner: BSC)		

A5.3	Monitoring the effects of strategies	Experimental evaluation of tested strategies at the permanent sites and additional locations of short-term campaigns (A4.1). Experimental efficiency will be used to validate modelling results (A5.2). Beside the effect of local and regional measures, also the effect of measures applied in the city of Barcelona will be evaluated and also the impact of Air-e Net measures on ozone formation at downwind area (Vic plane) where the highest European Ozone concentrations are registered. Partner(s): CSIC (in charge) will lead the monitoring activity with contribution of personal staff from Granollers, Mollet, Montornès and the rest of the fourteen municipalities that would have equipment in their terrories.	Start date: 01/04/2020	End date: 31/10/2021

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 5.3.1	Title	Quantitative efficiency of Air-e Net measures	Target value: 1	Delivery date: 31/10/2021
	Description	Quantitative efficiency of Air-e Net measures in terms of NOx, PMx and other relevant parameters, including the targeted source contributions such as road traffic and agriculture (responsible partner: CSIC)		
D 5.3.2	Title	Quantitative effect of "Barcelona LEZ" on ZQA2VO region	Target value: 1	Delivery date: 31/10/2021
	Description	Quantitative effect of "Barcelona LEZ" on ZQA2VO region (responsible partner: CSIC)		
D 5.3.3	Title	Quantitative effect of Air-e Net measures in terms of ozone and precursors	Target value: 1	Delivery date: 31/10/2021
	Description	Quantitative effect of Air-e Net measures in terms of ozone and precursors in the Osona region (responsible partner: CSIC)		

Output Number		Project output	Target value	Delivery date
O 5.3.1	Title	State-of-the-art experimental evaluation of effectiveness of tested measures	Target value: 1	Delivery date: 31/10/2021
	Description	State-of-the-art experimental evaluation of effectiveness of tested measures (responsible partner: CSIC)		

A5.4	Real time traffic and road monitoring through a network of smart sensors placed at strategic location in city streets, on roads and on highways	Generating information about the traffic flows in the area, from image analysis sensors of the company or from other conventional devices already existing including: - Main itineraries by tracking vehicles through their number plate recognised recognized in several monitored points of the network. - Traffic intensity. Done through simple counting from the computer vision sensors combined - Traffic characterisation characterization –type of vehicle-. Implemented also with vision and deep learning techniques. - Mean speed. - Journey times for segments of the network, according tracked vehicles. - Use of the dissuasive parking lots. - Noise pollution measured in dBA scale. CRTL4Enviro in charge, Granollers, Mollet, DIBA; DTES, BSC, In LAB	Start date: 01/11/2018	End date: 31/10/2021

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 5.4.1	Title	Images good enough to provide information.	Target value: 25	Delivery date: 28/02/2019
	Description	After camera and IA installation, each one of the 25 scenes will be customized till their images are ready to be analysed for the specified purpouses.		
D 5.4.2	Title	Web showing availability of parking lot	Target value: 1	Delivery date: 30/04/2019
	Description	Final result of the deployment and commissioning of two cameras and one IA per parking lot. It is directly useful for citizens –they can choose the right parking to drive forehand- and for traffic managers. (Accuracy > 93%)		
D 5.4.3	Title	First vehicle tracked and classified	Target value: 1	Delivery date: 31/10/2019
	Description	As indicative of good enough image captures and providing first results on ride times and types of vehicles. (Accuracy > 90%)		
D 5.4.4	Title	Noise level published	Target value: 1	Delivery date: 31/10/2019
	Description	Signal from microphone integrated in each camera will be treated to convert the IA also into a sonometer, to provide noise level in dBA. Validation will be done with a calibrated sonometer in the same point than camera. (Accuracy > 85%)		
D 5.4.5	Title	Conclusions document	Target value: 1	Delivery date: 31/10/2021
	Description	Gathering main facts of the company's participation and as user manual in order someone else can resume the provided service by themselves at the end of the project after paying the stipulated residual cost of equipment.		

Output Number	Project output	Target value	Delivery date

A5.5	Estimation of pollution level through image analysis.	With the AQ pollution measures obtained in AIRe NET and images taken in different locations of the landscape, research will be done by means of deep learning techniques on the development of an innovative automatic image determination of good, medium or bad AQ. This part has been considered to check if cameras could represent low cost sensors that give basic AQ information for a area within the AIRe NET. The activity will consist in the creation of a new Neural Network (NN) specifically intended to treat images and pollution data, preparation of the dataset of images, labelled with the respective pollution levels measured by CSIC, its training and its test and validation. CRTL4Enviro (in charge), Granollers, Mollet, Montornès and CSIC; DTES	Start date: 01/11/2018	End date: 31/10/2021

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 5.5.1	Title	Neural network with specific functions and weights for pollution determination.	Target value: 1	Delivery date: 28/02/2019
	Description	Neural network with specific functions and weights for pollution determination. A specific NN will be designed and programmed to better meet this unique case. Several approaches are expected to be assessed before finding the best model.		
D 5.5.2	Title	Dataset of images from deployed cameras and measures from CSIC.	Target value: 1,000	Delivery date: 30/04/2019
	Description	Dataset of images from deployed cameras and measures from CSIC. Result of labelling of at least 1.000 images with their corresponding pollution levels will be necessary to train, later, the NN. (1.000 images + pollution levels)		
D 5.5.3	Title	Trained neural network	Target value: 1	Delivery date: 31/10/2019
	Description	Trained neural network Operational NN providing pollution levels.		
D 5.5.4	Title	Neural network first test report	Target value: 1	Delivery date: 29/02/2020
	Description	Neural network first test report Report about the validation results after four months operation Accuracy > 65%		
D 5.5.5	Title	Pollution determination from image	Target value: 1	Delivery date: 31/10/2021
	Description	Pollution determination from image Acceptable accuracy for pollution determinations from images Accuracy > 85%		

Output Number	Project output	Target value	Delivery date

Work Package Budget

PP1 - Granollers city council - GR	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A		21,000 study to evaluate traffic from data collected in A.5.4 15,000 surveys				
Amount (€)	28,340	4,251.00	0	36,000	0	68,591.00	0	68,591.00

PP2 - Mollet del Vallès City Council - MOLL	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A		21,000 study to evaluate traffic from data collected in A.5.4 15,000 surveys				
Amount (€)	27,350	4,102.50	0	36,000	0	67,452.50	0	67,452.50

PP3 - Montornes del Valles town council - MON	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A		18,000 surveys				
Amount (€)	16,000	2,400.00	0	18,000	0	36,400.00	0	36,400.00

PP4 - Barcelona Provincial Council - DIBA	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A		Study to evaluate traffic from data collected in A.5.4				
Amount (€)	7,201	1,080.15	0	35,965	0	44,246.15	0	44,246.15

PP5 - THINKS SERVEIS AMBIENTALS, S.L. - TH	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	13,200	1,980.00	0	0	0	15,180.00	0	15,180.00

PP6 - Barcelona Supercomputing Center - BSC	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A			3 workstations, 3 years of ArcGIS ® license for geoprocessing and visualizing data and 1 TomTom speed profiles ® license for estimating traffic emissions			
Amount (€)	127,080	19,062.00	0	0	26,000	172,142.00	0	172,142.00

PP7 - CSIC (Spanish National Research Council)	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Transport, installation and maintenance of instruments. Data validation and interpretation. Citizens training. Sampling. Chemical characterization of PM samples. Receptor modelling	N/A	Travels for transport, installation and maintenance of instruments. Project meetings.	Auditing. Analysis of passive diffusion tubes	Depreciation of: - 3 aethalometers MA300 (Magee scientific) - 1 GRIMM EDM 180 D. Consumables.			
Amount (€)	139,497	20,924.55	1,000	2,500	32,821	196,742.55	0	196,742.55

PP8 - Government of Catalonia	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	15,850	2,377.50	0	0	0	18,227.50	0	18,227.50

PP9 - BUSUP TECHNOLOGIES SL	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	56,851	8,527.65	0	0	0	65,378.65	0	65,378.65

PP10 - CTRL4 ENVIRO, S.L. - CTRL4	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A		The connection of occasional images of the cameras to the Catalan Traffic Service, as a service that centralizes this publication.	Depretation			
Amount (€)	114,617	17,192.55	0	30,000	58,926	220,735.55	0	220,735.55

PP11 - UNIVERSITAT POLITECNICA DE CATALUNYA - InLUPC	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	93,185	13,977.75	0	0	0	107,162.75	0	107,162.75

Total (€)	639,171.00	95,875.65	1,000.00	158,465.00	117,747.00	1,012,258.65	0.00	1,012,258.65

Indicative budget breakdown per year					
Year	2018	2019	2020	2021	Total
Amount (%)	0 %	30 %	40 %	30 %	100.00 %
Budget (€)	0.00	303,677.60	404,903.46	303,677.60	1,012,258.65

Indicative budget breakdown per activity		
Activity	Amount (%)	Budget (€)
A 5.1	15 %	151,838.80
A 5.2	15 %	151,838.80
A 5.3	25 %	253,064.66
A 5.4	25 %	253,064.66
A 5.5	20 %	202,451.73
Total	100.00 %	1,012,258.65

Work Plan Per Work Packages - WorkPackage 6 (Implementation Work Package)

Title	Participative co- design with wider group of stakeholders of pollution abatement actions (Granollers, Mollet, Montornès)
Start Date	01/11/2018
End Date	31/01/2021
Budget	312,386.85

Partners Involvement

Responsible Partner	PP 1 - Granollers city council - GR
Involved Partners	PP1 - Granollers city council - GR PP2 - Mollet del Vallès City Council - MOLL PP3 - Montornes del Valles town council - MON PP4 - Barcelona Provincial Council - DIBA PP5 - THIGIS SERVEIS AMBIENTALS, S.L. - TH PP6 - Barcelona Supercomputing Center - BSC PP7 - CSIC (Spanish National Research Council) PP8 - Government of Catalonia PP9 - BUSUP TECHNOLOGIES SL PP10 - CTRL4 ENVIRO, S.L. - CTRL4 PP11 - UNIVERSITAT POLITECNICA DE CATALUNYA - InLUPC
Summary	The activities are all addressed to define the scope and co-design the pilot measures with the wider group of stakeholders, schools and other facilties, citizens and work force, freight transport and public transport. The speed and vehicle restrictions in several roads and low emissions zones will be establish in a participatory way. The worshops and other events will collect the information with users and will debate with a bottom up approach under the Air Pollution Abatement Marathon strategy A.3 ? Once the mitigation measures have been agreed municipalities will test it A.5.1 and assess their impact in A. 5.2 on one hend, modeling the pilot measures as if they were permanent and on the other, monitoring concentrations A.5.3 The models will be tested as well, and traffic flows registers and analysis by cameras in city streets, roads and highways will assess the change in patterns the abatement measures have had A.5.4. In this work package lessons will be learnt not only on the effectiveness of abatement measures, but also on awareness about the air we breathe in our cities and how could we change habits to improve it.

Activities, Deliverables and Outputs

Activity number	Activity title	Activity description and partners involved	Start date	End date

A6.1	Measures to reduce air emissions from transport	Workshops about AQ and new collective and low carbon transport will be discussed. There will be held other with facilties users in the AIRe NET zone. There will be professional and citizens meetings (TH) and surveys on the low emission zones in the cities and where the restriction of vehicles has to take place in GR and MOLL, with local technicians and AQ experts CSIC, PP Municipalities will debate and agree with Sagalés and AMB economic incentives to use public transport and bike/carpooling to move here Road and street signs will be placed to communicate on intermodality and parking opportunities BUP will propose collective transport and it will study mobility plans for connecting urban and public transport stations with industrial areas	Start date: 01/12/2018	End date: 31/10/2019

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 6.1.1	Title	Worshops in schools	Target value: 10	Delivery date: 30/09/2019
	Description	Workshops about AQ and new collective and low carbon transport in schools will be discussed and data collected with the support of BUP's data analysis and the participatori activitites organized under the APAM by TH		
D 6.1.2	Title	Conferences and meetings with sports, cultural and other types of facilties in AIRe NET	Target value: 10	Delivery date: 30/09/2019
	Description	Conferences and meetings with sports, cultural and other types of facilties in AIRe NET		
D 6.1.3	Title	Citizens meetings to debate low emission zone limits	Target value: 2	Delivery date: 30/06/2019
	Description	Citizens meetings to debate low emission zone limits		
D 6.1.4	Title	Proposal agreement of economic incentives	Target value: 1	Delivery date: 30/06/2019
	Description	Final proposal agreement of economic incentives to use public transport and other collective transport in the area		
D 6.1.5	Title	Surveys on the limits	Target value: 2,000	Delivery date: 30/06/2019
	Description	Surveys on the limits of the ZUAP GR and MOLL (meetings, mail, web, street...)		
D 6.1.6	Title	Agreement on incentives to be approved in the pilot test of measures A.5.1	Target value: 3	Delivery date: 31/08/2019
	Description	Agreement on incentives to be approved in the pilot test of measures A.5.1		
D 6.1.7	Title	Municipal streets to be watered during the pilot Air pollution abatement marathon A.5.1	Target value: 10	Delivery date: 30/09/2019
	Description	Municipal streets to be watered during the pilot Air pollution abatement marathon A.5.1		
D 6.1.8	Title	Number of collective transport settle to be used in A.5.1	Target value: 25	Delivery date: 30/09/2019
	Description	Number of collective transport settle to be used in A.5.1		
D 6.1.9	Title	Road signs instal.lation	Target value: 25	Delivery date: 31/08/2019
	Description	Road signs instal.lation of LEAD screens to communicate APAM and information on intermodality and parking opportunities		

Output Number		Project output	Target value	Delivery date
O 6.1.1	Title	Agreement on local pilot abatement	Target value: 3	Delivery date: 31/10/2019
	Description	Agreement on local pilot abatement measures to test GR, MOLL,MON		

A6.2	Definition and design of urban freight transport and integration centers	After the URBACT project network FREIGHT TAILS six key themes will be review with local stake holders to define and design integration centers : a-map and involvement of relevant stakeholders (governments, police, vehicle manufacturers, purchasing business, fleet operators, environmental health care professionals ... b-Data collection and Integration d-Regulation and enforcement e-Voluntary behaviour change f-Procurement g-economic incentives : type vehicles and time table	Start date: 01/01/2019	End date: 30/09/2019

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 6.2.1	Title	Map and involvement of relevant stakeholders	Target value: 9	Delivery date: 31/03/2019
	Description	Map and involvement of relevant stakeholders (governments, police, vehicle manufacturers, purchasing business, fleet operators, environmental health care professionals		
D 6.2.2	Title	Meetings to discuss regulation and enforcement	Target value: 9	Delivery date: 30/06/2019
	Description	Meetings to discuss regulation and enforcement and Voluntary behaviour change		
D 6.2.3	Title	Report on data collected and feasibility onf integration centers	Target value: 9	Delivery date: 31/08/2019
	Description	Report on data collected and feasibility onf integration centers		

Output Number		Project output	Target value	Delivery date
O 6.2.1	Title	Approved measures to be taken in A.5.1 about urban freight transport to test pilot abatement	Target value: 3	Delivery date: 30/09/2019
	Description	Approved measures to be taken in A.5.1 about urban freight transport to test pilot abatement		

A6.3	Definition and design of Passenger intermodality	Promotion of intermodal transport "hot spots" in AIRe NET zone on which ten Bicycle parking cages will be installed for secure space to park Information about APAM and u rban mixed-mode commuting i each one will be shown on the bike cages because each one will have different alternatives . They will serve as a reference point to answer surveys, announce information on abatement measures to take in each city. Surveys will be givinginformation on intermodality in the city and asking priority measures to improve it. The results will help to improve passenge to implement 3MOLL 3GR 4 DIBA	Start date: 01/11/2018	End date: 31/01/2021

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 6.3.1	Title	Public transportation stations	Target value: 10	Delivery date: 30/09/2019
	Description	Iinformation in public transportation stations about the Air Pollution Abatement Marathon and safe paths to other cities by bicycle		
D 6.3.2	Title	Parking for bicycles in 10 locations in the AIRe NET	Target value: 10	Delivery date: 31/05/2019
	Description	Parking for bicycles in 10 locations in the AIRe NET		
D 6.3.3	Title	Surveys on user's needs for u rban mixed-mode commuting	Target value: 5,000	Delivery date: 30/09/2019
	Description	Surveys on user's needs for u rban mixed-mode commuting		
D 6.3.4	Title	Report on new connexions to all public stations in the AIRe NET and priorities of investment	Target value: 9	Delivery date: 31/12/2019
	Description	Report on new connexions to all public stations in the AIRe NET and priorities of investment		
D 6.3.5	Title	Report on surveys results and analaysis of user priorities to implement D7.4.4 later on	Target value: 1	Delivery date: 29/02/2020
	Description	Report on surveys results and analaysis of user priorities to implement D7.4.4 later on		
D 6.3.6	Title	Report on the use of the new cages to disseminate importance of intermodality	Target value: 1	Delivery date: 31/01/2021
	Description	Report on the use of the new cages to disseminate importance of intermodality		

Output Number		Project output	Target value	Delivery date
O 6.3.1	Title	Information of APAM and promotion of passenger intermodality in the AIRe NET zone	Target value: 9	Delivery date: 30/09/2019
	Description	Information of APAM and promotion of passenger intermodality in the AIRe NET zone		

			Start date	End date
A6.4	Definition and design of measures to reduce air pollutant emissions from agriculture	Development of New legislation based on a flexible permit taking into account the real-time ceilometer data of planetary boundary layer Study and proposal of new management methods for green waste Measures to be taken when atmospheric risk: develop instructions to give DTES in charge	01/01/2019	31/12/2019

Deliverable number	Deliverable and partners involved		Target value	Delivery date
D 6.4.1	Title	Instal.lation of ceilometers and register of data to measure the air pollution risk	Target value: 1	Delivery date: 31/08/2019
	Description	Instal.lation of ceilometers and register of data to measure the air pollution risk		
D 6.4.2	Title	Report on new management methods for green waste	Target value: 1	Delivery date: 31/03/2019
	Description	Report on new management methods for green waste		
D 6.4.3	Title	Instruccions and proposal of legislation to control the burning of vegetable waste	Target value: 1	Delivery date: 30/04/2019
	Description	Instruccions and proposal of legislation to control the burning of vegetable waste		
D 6.4.4	Title	Initial inventory of all farmers in the area	Target value: 1	Delivery date: 31/12/2019
	Description	Initial inventory of all farmers in the area		

Output Number	Project output		Target value	Delivery date
O 6.4.1	Title	Instructions and procedures to stop burning of vegetable agricultural	Target value: 1	Delivery date: 30/06/2019
	Description	Approved the instructions and procedures to stop burning of vegetable agricultural waste while pilot is going on		

			Start date	End date
A6.5	Regional pilot strategies (DTES, DIBA) on speed reduction, vehicles restrictions and incentives to use public transport	The approval of measures to be taken in highways, state's competency and other intermunicipal roads where DTES and DIBA will decide. Approve road information , and procedures to organize the speed or vehicle reduction and cleaning of roads for the pilot A.5.1 Measuring the emissions of cars with remote sensing and testing pilot solutions Inform of gas stations for hybrid cars fueled with natural gas and electric charging stations Report on new low carbon vehicles and new technologies to reduce emissions in old cars	01/07/2019	31/10/2019

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 6.5.1	Title	Approved instructions to water street cleaning supramunicipal roads	Target value: 2	Delivery date: 31/08/2019
	Description	Approved instructions to water street cleaning supramunicipal roads by DTES and DIBA		
D 6.5.2	Title	Approved instruction of speed reduction	Target value: 4	Delivery date: 30/09/2019
	Description	Approved instruction of speed reduction for each administration with competence		
D 6.5.3	Title	Approved road information in road signs	Target value: 9	Delivery date: 31/10/2019
	Description	Approved road information in road signs to announce instructions and information about the with information about the Air Pollution Abatement Marathon		
D 6.5.4	Title	Report on new low carbon vehicles	Target value: 20	Delivery date: 31/08/2019
	Description	Report on new low carbon vehicles and new technologies to reduce emissions in old cars		

Output Number		Project output	Target value	Delivery date
O 6.5.1	Title	Agreement on measures	Target value: 3	Delivery date: 31/08/2019
	Description	Agreement on measures to be taken in A.5.1 by supramunicipal authorities with competence in intemunicipal roads		

Work Package Budget

PP1 - Granollers city council - GR	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A		surveys on the limits of the low emissions zone and intemodality GR D.6.1.5				
Amount (€)	52,000	7,800.00	0	15,100	0	74,900.00	0	74,900.00

PP2 - Mollet del Vallès City Council - MOLL	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A		surveys on low emission zone and intermodality				
Amount (€)	43,356	6,503.40	0	14,000	0	63,859.40	0	63,859.40

PP3 - Montornes del Valles town council - MON	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A		Surveys on definition and design of passanger mobility				
Amount (€)	20,000	3,000.00	0	12,000	0	35,000.00	0	35,000.00

PP4 - Barcelona Provincial Council - DIBA	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	3,524	528.60	0	0	0	4,052.60	0	4,052.60

PP5 - THINK SERVEIS AMBIENTALS, S.L. - TH	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	23,543	3,531.45	0	0	0	27,074.45	0	27,074.45

PP6 - Barcelona Supercomputing Center - BSC	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	1,100	165.00	0	0	0	1,265.00	0	1,265.00

PP7 - CSIC (Spanish National Research Council)	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	7,050	1,057.50	0	0	0	8,107.50	0	8,107.50

PP8 - Government of Catalonia	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A		study other steps of the plant remains in the municipalities of the VO				
Amount (€)	19,800	2,970.00	0	17,000	0	39,770.00	0	39,770.00

PP9 - BUSUP TECHNOLOGIES SL	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	48,252	7,237.80	0	0	0	55,489.80	0	55,489.80

PP10 - CTRL4 ENVIRO, S.L. - CTRL4	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	1,003	150.45	0	0	0	1,153.45	0	1,153.45

PP11 - UNIVERSITAT POLITECNICA DE CATALUNYA - InLUPC	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	1,491	223.65	0	0	0	1,714.65	0	1,714.65

Total (€)	221,119.00	33,167.85	0.00	58,100.00	0.00	312,386.85	0.00	312,386.85

Indicative budget breakdown per year					
Year	2018	2019	2020	2021	Total
Amount (%)	0 %	30 %	40 %	30 %	100.00 %
Budget (€)	0.00	93,716.06	124,954.74	93,716.06	312,386.85

Indicative budget breakdown per activity		
Activity	Amount (%)	Budget (€)
A 6.1	15 %	46,858.03
A 6.2	20 %	62,477.37
A 6.3	20 %	62,477.37
A 6.4	25 %	78,096.71
A 6.5	20 %	62,477.37
Total	100.00 %	312,386.85

Work Plan Per Work Packages - WorkPackage 7 (Implementation Work Package)

Title	Development of networking decision support system for AQ management: new tools and methods to resolve data fragmentation
Start Date	01/11/2018
End Date	31/10/2021
Budget	379,405.05

Partners Involvement

Responsible Partner	PP 8 - Government of Catalonia
Involved Partners	PP1 - Granollers city council - GR PP2 - Mollet del Vallès City Council - MOLL PP3 - Montornes del Valles town council - MON PP4 - Barcelona Provincial Council - DIBA PP5 - THIGIS SERVEIS AMBIENTALS, S.L. - TH PP6 - Barcelona Supercomputing Center - BSC PP7 - CSIC (Spanish National Research Council) PP8 - Government of Catalonia PP9 - BUSUP TECHNOLOGIES SL PP10 - CTRL4 ENVIRO, S.L. - CTRL4 PP11 - UNIVERSITAT POLITECNICA DE CATALUNYA - InLUPC
Summary	The networking procedures developed will maintain information among partners and reduce marginal cost of updating. This will be the decision support system for AIRe NET zone that will add up local capacities. Once the contribution of sources has scientific evidence (A4.1) and the effective abatement strategies clear (A5.2) new cooperative procedures are approved to keep this cooperation in time. The new systems will reduce time, money and inefficiency and make possible to share local data and manage abatement measures, such as when there's a high pollution episode The information associated with the measurement of pollutants emitted by industrial activities is scattered, in different administrations that have competence in the environmental control of the activities. The evolution of GIA, a computer application which is a web technology designed and created by DIBA, will evolve to improve and share updated information in A4.3. The monitoring of stationary and mobile source emissions traditionally have been collected individually by regional government, local governments and private sectors, but the support system will collect data on stationary sources (industry, agriculture, or domestic emissions) and mobile sources (traffic flows). Thanks to the co-designed measures in A6.1 will be review and the check of opportunities will be explored. The aim is to reduce cars in the streets with a with multi-level governance approach and with the private sector too.

Activities, Deliverables and Outputs

Activity number	Activity title	Activity description and partners involved	Start date	End date

A7.1	Updated and coordinated inventory of industrial sources	To develop GIA to facilitate the legal permits for economic activities of its municipalities. The applications does not include air emissions among the variables collected, but its is updated frequently by each municipality. MOLL and MON use GIA, but GR does not. The migration of GR's inventories to GIA will be done. DIBA will change the variables collected by GIA to include DTES information. DTES has information: -real-time and in-situ measurements in chimneys of 46 companies within the area of influence of AIRe NET. -periodic measurement in Electronic Register Books of Focus Emitters with more than 190 establishments located in the area of AIRe NET. The Connection of data will allow a permanently updated industrial emissions inventory	Start date: 01/11/2018	End date: 31/10/2021

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 7.1.1	Title	Change of variables collected by GIA to include emission related data	Target value: 1	Delivery date: 31/08/2019
	Description	Change of variables collected by GIA to include emission related data: NOX, PM10, PM2.5, PM1, VOC, SO2, CO, PST, NH3, HCl, HF, benzè, CO2, CH4, N2O, SF6, Metalls pesants (As, Cd, Hg, Ni, Pb, Mn, Se, V, Zn, Cr, Cu), PCDD_F, PCB, HCB, PAHs Aromàtics Policíclics (BaP , BbF, BkF, Indpy, BghiPe, BaA, BahA, FluorA, BjF,) , CO2, CH4, N2O i SF6		
D 7.1.2	Title	Migration of data	Target value: 1	Delivery date: 31/01/2020
	Description	Migration of data between DTES and GIA.		
D 7.1.3	Title	New inventory developed in the current program	Target value: 1	Delivery date: 31/05/2019
	Description	New inventory developed in the current program in GR		
D 7.1.4	Title	Connection of data	Target value: 5	Delivery date: 31/01/2021
	Description	Connection of data between DIBA, DTES, GR, MOLL and MON :;		
D 7.1.5	Title	Open data to share with GIS with PP	Target value: 11	Delivery date: 30/06/2021
	Description	Open data to share with GIS with PP		
D 7.1.6	Title	Migration of data from GR to GIA	Target value: 1	Delivery date: 31/08/2019
	Description	Migration of data from GR to GIA		
D 7.1.7	Title	Adjustments of connected data	Target value: 1	Delivery date: 31/10/2021
	Description	Adjustments of connected data and development of front end viewer		

Output Number		Project output	Target value	Delivery date
O 7.1.1	Title	Industrial emissions inventory platform	Target value: 5	Delivery date: 31/08/2021
	Description	Industrial emissions inventory platform sharing data with DIBA,DTES,GR, MOLL, MON		

A7.2	Updated and coordinated inventory of stationary sources of biomass burning form domestic and agriculture sectors DTES, GR, MOLL, MON	The development of a new GIS based system to register all agricultural permits to burn vegetable waste will make possible AIRe NET's authorities register the license and keep tract of the source points in case of bad AQ. DTES, with the Government of Catalonia's Agricultural Department, will develop a computer application which could be web technology designed to ask local authorities to tramit the register of permits. Nowadays the farmers in winter register the application in the local offices with no information about location, and the fire risk makes their control by DTES not enforced by law. There is no inventory of domestic biomass burning in the zone and the AIRe NET will conduct one on biomass and biogas burning in the AIRe NET zone.	Start date: 01/03/2019	End date: 31/01/2021

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 7.2.1	Title	Computer application and to keep tract of the source points	Target value: 1	Delivery date: 31/08/2019
	Description	Computer application and to keep tract of the source points		
D 7.2.2	Title	Connection of data	Target value: 4	Delivery date: 29/02/2020
	Description	Connection of data between DTES, GR, MOLL and MON		
D 7.2.3	Title	Report in domestic biogas burning	Target value: 1	Delivery date: 31/01/2020
	Description	Report in domestic biogas burning		
D 7.2.4	Title	Instructions to keep tract of the domestic emissions inventory	Target value: 1	Delivery date: 30/06/2020
	Description	Instructions to keep tract of the domestic emissions inventory		

Output Number		Project output	Target value	Delivery date
O 7.2.1	Title	Agricultural emissions inventory platform	Target value: 4	Delivery date: 31/01/2021
	Description	Agricultural emissions inventory platform sharing data with DTES,GR, MOLL, MON		
O 7.2.2	Title	Inventory of domestic biomass burning sources	Target value: 1	Delivery date: 31/03/2020
	Description	Inventory of domestic biomass burning sources in AIRe NET zone		

A7.3	Coordinated registers of mobile sources, comprising any form of combustion-engine vehicle	- Selection of representative measurement points of urban and interurban roads in coordination with DIBA, GR, MOLL, MON, CTRL4, In Lab and SCT- -Reading of license plates, (A5.4).crossed with the data base of the General Directorate of Traffic to get information on type of vehicle, EURO classification and type of fuel. - Determination of emissions associated to vehicles using non-intrusive methods: modeling and with remote measurement equipment (RSD) based on the absorption of polluting gases at a given wavelength.. - Measures to reduce air pollutant emissions from old vehiclesThe CO, NOx, PM, HC would be measured. Agreement on coordination procedures to update traffic flows data to share with DIBA, DTES, GR, MOLL, MON, CTRL4, In LAB	Start date: 01/03/2020	End date: 31/08/2021

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 7.3.1	Title	Selection of representative measurement points of urban and interurban roads	Target value: 50	Delivery date: 31/08/2020
	Description	Selection of representative measurement points of urban and interurban roads		
D 7.3.2	Title	Determination of emissions associated to vehicles	Target value: 4	Delivery date: 30/06/2021
	Description	Determination of emissions associated to vehicles by different studies		
D 7.3.3	Title	Report on coordination procedures	Target value: 1	Delivery date: 31/07/2021
	Description	Report on coordination procedures between SCT, DIBA, GR, MOLL, MON		

Output Number		Project output	Target value	Delivery date
O 7.3.1	Title	Agreement on coordination procedures to keep updated traffic flows data	Target value: 5	Delivery date: 31/08/2021
	Description	Agreement on coordination procedures to keep updated traffic flows data shared with DIBA, DTES, GR, MOLL, MoN		

A7.4	Public- private collaborative cooperation as a strengthening partners to find collective transport solutions and better intermodal connexions	As a result of the analysis carried by BUP there will be developed new channels to collect mobility surveys on the urban authorities web sites. Mobility flows in industry, services and educational will be updated with the cooperation of the private sector. Opportunities and alternatives for collective transport will be explained and offer to users. Opportunities for school, industry, sport facilities. New measures will be proposed to improve intermodal connections and collective transport by private sector (Granollers/Mollet/Montornès, BUP)	Start date: 01/01/2020	End date: 31/10/2021

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 7.4.1	Title	Report to match opportunities of collective transport	Target value: 1	Delivery date: 31/03/2020
	Description	Report on proposal of content in a new web application to match opportunities of collective transport		
D 7.4.2	Title	Approval of the new application in each municipality to update collective transport opportunities	Target value: 3	Delivery date: 31/12/2020
	Description	Development and approval of the new application in each municipality to update collective transport opportunities		
D 7.4.3	Title	Meetings with private sector to propose business opportunities	Target value: 3	Delivery date: 31/01/2021
	Description	Meetings with private sector to propose business opportunities		
D 7.4.4	Title	Implementation the measures to be taken in their "hot " intermodal transport spots	Target value: 10	Delivery date: 31/10/2021
	Description	Approval, by the responsible UA, the implementation in less than two years the most priority measures to be taken in their "hot " intermodal transport spots		

Output Number		Project output	Target value	Delivery date
O 7.4.1	Title	New web to exchange information and opportunity to collective transport and car sharing	Target value: 1	Delivery date: 30/06/2021
	Description	New web space in GR, MOLL, MON to exchange mobility information and find opportunities to collective transport and car sharing		

A7.5	Local, regional, and national coordination tools to coordinate abatement measures (DTES)	In A6.5 the measures to take in the pilot APAMwere settled. Now, the aim is the approval of permanent of coordination measures with DIBA, DTES. GR, MOLL, MON The approval of coordination to manage mitigation measures and common dissemination strategy when pollution episode occurs in the AIRe NET zone is the final goal to rech with this activity. Common approved measures to be taken when high pollution episode occurs Agreements on intermunicipal traffic speed limits Agreements on vehicles restrictions Agreements on domestic biomass burning control	Start date: 01/12/2020	End date: 31/10/2021

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 7.5.1	Title	Agreements on intermunicipal traffic speed limits	Target value: 6	Delivery date: 30/06/2021
	Description	Agreements on intermunicipal traffic speed limits DTES –DIBA-GR-MOLL-MON		
D 7.5.2	Title	Agreements on vehicles restrictions	Target value: 3	Delivery date: 31/10/2021
	Description	Agreements on vehicles restrictions With in the AIRe NET zone DTESW-DIBA		
D 7.5.3	Title	Approval of instructions and procedures to stop burning of vegetable agricultural waste	Target value: 1	Delivery date: 31/01/2021
	Description	Approval of instructions and procedures to stop burning of vegetable agricultural waste in case of episode A7.5 DTES		
D 7.5.4	Title	Change in legislation to be able to fine cars under restriction to circulate when episode occurs	Target value: 1	Delivery date: 31/12/2020
	Description	Change in legislation to be able to fine cars under restriction to circulate when episode occurs		
D 7.5.5	Title	Officially approved measures to be taken in case of pollution episode	Target value: 1	Delivery date: 28/02/2021
	Description	Officially approved measures to be taken in case of pollution episode		

Output Number		Project output	Target value	Delivery date
O 7.5.1	Title	Local, regional, and national coordination tools and agreements to manage abatement measures	Target value: 20	Delivery date: 30/09/2021
	Description	Local, regional, and national coordination tools and agreements to manage abatement measures		

Work Package Budget

PP1 - Granollers city council - GR	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A		web design to search collective transport opportuniites in the AIRe NET zone ans exachenge mobility information				
Amount (€)	26,054	3,908.10	0	15,200	0	45,162.10	0	45,162.10

PP2 - Mollet del Vallès City Council - MOLL	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	25,481	3,822.15	0	0	0	29,303.15	0	29,303.15

PP3 - Montornes del Valles town council - MON	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	11,887	1,783.05	0	0	0	13,670.05	0	13,670.05

PP4 - Barcelona Provincial Council - DIBA	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A	Participation to 2 international conferences about consortium					
Amount (€)	45,680	6,852.00	2,000	0	0	54,532.00	0	54,532.00

PP5 - THINK SERVEIS AMBIENTALS, S.L. - TH	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	4,560	684.00	0	0	0	5,244.00	0	5,244.00

PP6 - Barcelona Supercomputing Center - BSC	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	680	102.00	0	0	0	782.00	0	782.00

PP7 - CSIC (Spanish National Research Council)	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	493	73.95	0	0	0	566.95	0	566.95

PP8 - Government of Catalonia	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A		Traffic flow measures, report on remote sensing emissions and emissions associated with vehicles. Emission factor calibration				
Amount (€)	129,104	19,365.60	0	60,000	0	208,469.60	0	208,469.60

PP9 - BUSUP TECHNOLOGIES SL	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	7,454	1,118.10	0	0	0	8,572.10	0	8,572.10

PP10 - CTRL4 ENVIRO, S.L. - CTRL4	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	3,940	591.00	0	0	0	4,531.00	0	4,531.00

PP11 - UNIVERSITAT POLITECNICA DE CATALUNYA - InLUPC	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A						
Amount (€)	7,454	1,118.10	0	0	0	8,572.10	0	8,572.10

Total (€)	262,787.00	39,418.05	2,000.00	75,200.00	0.00	379,405.05	0.00	379,405.05

Indicative budget breakdown per year					
Year	2018	2019	2020	2021	Total
Amount (%)	0 %	30 %	40 %	30 %	100.00 %
Budget (€)	0.00	113,821.51	151,762.02	113,821.51	379,405.05

Indicative budget breakdown per activity		
Activity	Amount (%)	Budget (€)
A7.1	40 %	151,762.02
A7.2	15 %	56,910.76
A7.3	20 %	75,881.01
A7.4	10 %	37,940.51
A7.5	15 %	56,910.76
Total	100.00 %	379,405.05

Work Plan Per Work Packages - WorkPackage 8 (Investment Work Package)

Title	Investment
Start Date	01/11/2018
End Date	31/10/2021
Budget	1,287,531.55

Partners Involvement

Responsible Partner	PP 8 - Government of Catalonia
Involved Partners	PP1 - Granollers city council - GR PP2 - Mollet del Vallès City Council - MOLL PP3 - Montornes del Valles town council - MON PP4 - Barcelona Provincial Council - DIBA PP5 - THIGIS SERVEIS AMBIENTALS, S.L. - TH PP7 - CSIC (Spanish National Research Council) PP8 - Government of Catalonia

Summary

The main investment is the development of IT Systems to connect different levels of governance. The regional government (DTES) and DIBA need the higher amount of investment to reach the desired output of industrial sources inventory and the output biomas stationary sources. GR, MOLL and MON will make some investment on their IT Systems as well.
CSIC will invest in equipment to favor the participation of citizens in science A.4.1 and scientifically monitor source appointment in before, during and after strategies are implemented.
DTES will use a ceilometer to register the planetary boundary layer and be able to determine when should be limited the biomass burning from agriculture(A.6.4).
GR, MOLL and MON will develop a software and install LED screens D.6.1.9 to keep citizens informed about APAM, about measures taken when an episode occurs, the transport alternatives and the availability of intermodal parking.
For the APAM there will be different equipment necessary for the implementation of the workshops and activities to boost participation in A.6.1. There will be 10 kits of AIRe NET, 20 roll-up stands, a big floor game for the schools, and bio filters.
Ten "bicycle cages" will be install.led close to public transport stations. Those are enclosed structures capable of storing bikes.They will be close to intermodal hot spots: three in GR, three in MOLL, and four in other municipalities in AIRe NET zone once DIBA agrees with them the terms and location of their installation.

Justification

The IT Systems to connect different levels of governance are the main objective of AIRe NET to add resources to share information, for instance, on emission inventories updated for the AIRe NET zone. The investment in equipment by CSIC, is to get more accurate characterization of AQ and source appointment and to favor the participation of citizens making air pollution visible. The DTES needs a ceilometer for the efficient coordination among local and regional policies and abatement measures. When the planetary boundary layer is low the fire permits will be denied until the conditions are better. The investment will allow DTES to rule on it. LED screens D.6.1.9 to keep citizens informed are necessary to manage traffic and abatement measures throughout the cities. Messages (D.6.1.9) to keep citizens informed about APAM, about measures taken when an episode occurs, or the transport alternatives and the availability of intermodal parking. Th screens will disseminate as well information about AQ in the zone making it visible AQ. The "bicycle cages" , close to public transport stations, will help to co-design with social and economic sectors local abatement measures. They will show information on APAM, intermodality connetions. Surveys will be done there and the results explained there as well, helping A.6.3 with the aim to promote intermodal transport. The APAM will move people to co-design abatement measures, another main objective of AIRe NET.

Work Package Budget

PP1 - Granollers city council - GR	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Infrastructure and works	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A		LED screens	Platform IT Systems	Bicycle cages and LED screens			
I 8.1	2,000	300.00	0	0	0	30,000	32,300.00	0	32,300.00
I 8.2	5,000	750.00	0	15,000	0	110,000	130,750.00	0	130,750.00
I 8.3	5,000	750.00	0	0	48,665	0	54,415.00	0	54,415.00
Partner total (€)	**12,000.00**	**1,800.00**	**0.00**	**15,000.00**	**48,665.00**	**140,000.00**	**217,465.00**	**0.00**	**217,465.00**

PP2 - Mollet del Vallès City Council - MOLL	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Infrastructure and works	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A			Platform IT Systems	Bicycle cages and LED screens			
I 8.1	2,000	300.00	0	0	0	30,000	32,300.00	0	32,300.00
I 8.2	7,800	1,170.00	0	0	0	110,000	118,970.00	0	118,970.00
I 8.3	5,000	750.00	0	0	28,665	0	34,415.00	0	34,415.00
Partner total (€)	**14,800.00**	**2,220.00**	**0.00**	**0.00**	**28,665.00**	**140,000.00**	**185,685.00**	**0.00**	**185,685.00**

PP3 - Montornes del Valles town council - MON	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Infrastructure and works	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A			Platform IT Systems	LED screens			
I 8.2	3,000	450.00	0	0	0	59,000	62,450.00	0	62,450.00
I 8.3	7,200	1,080.00	0	0	18,666	0	26,946.00	0	26,946.00
Partner total (€)	**10,200.00**	**1,530.00**	**0.00**	**0.00**	**18,666.00**	**59,000.00**	**89,396.00**	**0.00**	**89,396.00**

PP4 - Barcelona Provincial Council - DIBA	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Infrastructure and works	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A			Development of GIA Systems to create sources industrial inventory	Bicycle cages			
I 8.1	2,000	300.00	0	0	0	40,000	42,300.00	0	42,300.00
I 8.3	8,152	1,222.80	0	0	122,150	0	131,524.80	0	131,524.80
Partner total (€)	**10,152.00**	**1,522.80**	**0.00**	**0.00**	**122,150.00**	**40,000.00**	**173,824.80**	**0.00**	**173,824.80**

PP5 - THINK SERVEIS AMBIENTALS, S.L. - TH	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Infrastructure and works	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A			Equipment for the Air Pollution Abatement Marathon				
I 8.4	4,550	682.50	0	0	35,000	0	40,232.50	0	40,232.50
Partner total (€)	**4,550.00**	**682.50**	**0.00**	**0.00**	**35,000.00**	**0.00**	**40,232.50**	**0.00**	**40,232.50**

PP7 - CSIC (Spanish National Research Council)	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Infrastructure and works	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A	Participation to international conference		4 sensores KUNAK				
I 8.5	10,866	1,629.90	1,000	0	0	0	13,495.90	0	13,495.90
I 8.6	0	0.00	0	0	40,000	0	40,000.00	0	40,000.00
Partner total (€)	**10,866.00**	**1,629.90**	**1,000.00**	**0.00**	**40,000.00**	**0.00**	**53,495.90**	**0.00**	**53,495.90**

PP8 - Government of Catalonia	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Infrastructure and works	Sub-total	Revenues	Total
Description	Hours of staff dedicated to this WP.	N/A			Investment It Systems to reach the desired output of industrial sources inventory and the output biomas stationary sources	Ceilometer			
I 8.3	28,029	4,204.35	0	0	463,199	0	495,432.35	0	495,432.35
I 8.5	0	0.00	0	0	0	32,000	32,000.00	0	32,000.00
Partner total (€)	**28,029.00**	**4,204.35**	**0.00**	**0.00**	**463,199.00**	**32,000.00**	**527,432.35**	**0.00**	**527,432.35**

Total (€)	**90,597.00**	**13,589.55**	**1,000.00**	**15,000.00**	**756,345.00**	**411,000.00**	**1,287,531.55**	**0.00**	**1,287,531.55**

Indicative budget breakdown per year					
Year	2018	2019	2020	2021	Total
Amount (%)	0 %	25 %	35 %	40 %	100.00 %
Budget (€)	0.00	321,882.89	450,636.04	515,012.62	1,287,531.55

Investment 1

Title

Investment 1. Bicycle cages to boost and survey intermodal transportation

Investment Description

Ten "bicycle cages" will be install.led close to public transport stations. Those are enclosed structures capable of storing bikes.They will be localted close to intermodal hot spots: three in GR, three in MOLL, and four in other municipalities in AIRe NET zone once DIBA agrees with them the terms and location of their installation. They will serve as well, carry out the surveys about passager intermodality A6.3 and disseminate information on A7.4 of the alternatives and connexions available to get to the public transport station . The goal will be to combine the advantages of standard racks, which allow many bicycles to be stored, and lockers, which provide security. Inside the enclosed cage, traditional and bi-level racks will be installed, along with a càmera. Entry to the bicycle cage will be controlled: riders must apply for a free bicycle smart card that allows access to the cage. Unlike bicycle lockers, racks in the cages are not reserved, meaning they are used on a first-come basis. While this may result at times with the racks being at-capacity, it does allow for many more people to use it. A bicycle locker sits empty and unused on days when the person renting the unit chooses not to bike, but a bike cage is available to anyone who has registered an access card.

Involved Partners

PP 1 - Granollers city council - GR
PP 2 - Mollet del Vallès City Council - MOLL
PP 4 - Barcelona Provincial Council - DIBA

Budget

106,900.00

Locations of investment

Number	Country	NUTS 2 level	NUTS 3 level
1	SPAIN	Cataluña	Barcelona
2	SPAIN	Cataluña	Barcelona

Investment Risk

There is the strategic risc that the investment will be transfer to four of the other UA part of the SMG. This could mean that either all of the UA with intermodal locations will compete or that may be they are not interested in having the cage. The mitigation action will be to install them in GR and MOLL as well, as the others. The other risk is between a procurement risk and a strategic risk. The cages must be installed before the APAM starts, and they will be a reference point for many of the activities and information on intermodal connection. If the procurement procedure in DIBA is long and the agreements with the final UA where the cage has to be install take more time than the planned, the instal.lation will not be used for the APAM. To solve that, TH has suggest to create other information points in the cities, where the activities to be done could be develop as well. It will not be that strong the message but the surveys and the information, could temporary be done someplace else.

Investment Documentation

The permissions for GR and Moll will do no be a problem because a location is already proposed and the permits will be easily obtained. The other permits for DIBA's cages to be installed in other "hot " spots in intermodal transport will be known once the location chosen is settled.

Ownership

The site where the investment is located in a public space (GR, MOLL) close to publilc transport stations own by RENFE and Sagalés, both public transport providers.The other four cages bought by DIBA, there is still no location settled to be installed on • Who owns the site where the investment is located? GR, MOLL, • Who will retain ownership of the investment at the end of the project?GR, MOLL and the other UA in the SMG where the rest of the cages will be placed • Who will take care of maintenance of the investment?Each UA where the cage is instal.led. How will this be done? As the rest of the public installations and facilities owned by UA, with its staff or with a contract of maintenance.

Activities, Deliverables

Activity number	Activity title	Activity description and partners involved	Start date	End date

A8.1	Creation of reference “hot spots” for intermodal information	Promotion of intermodal transport “hot spots” in AIRe NET zone on which ten Bicycle parking cages will be installed for secure space to park Information about APAM and urban mixed-mode commuting i each one will be shown on the bike cages because each one will have different alternatives . They will serve as a reference point to answer surveys, announce information on abatement measures to take in each city. Surveys will be giving information on intermodality in the city and asking priority measures to improve it. The results will be analysed in a report that will help to improve intermodal transport connections.	Start date: 01/06/2019	End date: 30/09/2019

Deliverable number	Deliverable and partners involved		Target value	Delivery date
D 8.1.1	Title	Creation of reference spots to boost intermodal information and discuss priorities to improve it.	Target value: 10	Delivery date: 30/09/2019
	Description	Creation of reference spots to boost intermodal information and discuss priorities to improve it.		

Investment 2

Title

Investment 2. LED screens to keep citizens informed

Investment Description

To communicate the pilot measures and different information in a coordinated way GR, MOLL and MON will develop a software and install LED screens D.6.1.9 to keep citizens informed about APAM, about measures taken when an episode occurs, the transport alternatives and the availability of intermodal parking. Th screens will disseminate as well information about AQ in the zone. The screens will disseminate as well, information about AQ in the zone making it visible . They will collaborate to resolve data fragmentation and easy the coordination of AQ management in the AIRe NET zone Management of AQ information, abatement measures, the traffic and parking status will be shown in the screens in real time - Customized management software: € 15.000 (GR) allows to control real-time screens and state systems and traffic, mobility data and information seen on the screens-It can be integrated with the expert system (system to create rules, alerts, etc ...) Each large format LED screen with complete installation and structure: 4800 € (VAT included) - Detector Quercus Technologies: € 1400 + VAT - Miscellaneous equipment for each screen (industrial pc + switchgear + transformer + ...): € 1000 + VAT - Installation of each screen and detector with electrical supply, concrete base, electrical installation: € 2000 + VAT - Wi-Fi or via plc link: € 600 + VAT This will mean 10 LED screens in GR 10 LED screens in MON 5 LED screens in MON

Involved Partners

PP 1 - Granollers city council - GR
PP 2 - Mollet del Vallès City Council - MOLL
PP 3 - Montornes del Valles town council - MON

Budget

312,170.00

Locations of investment

Number	Country	NUTS 2 level	NUTS 3 level
1	SPAIN	Cataluña	Barcelona
2	SPAIN	Cataluña	Barcelona
3	SPAIN	Cataluña	Barcelona

Investment Risk

The investment plan could present risk because of the timming of public procurements that will have to follow the legal procedures established.

Investment Documentation

Permissions are not required because it is planned to install the equipment on public roads and streets. The only requirement would be if the competence of the road is DIBA or DTES , and then a common agreement among partners could be settled

Ownership

GR,MOLL and MON own the public streets and they will retain ownership and maintain the investment .

Activities, Deliverables

Activity number	Activity title	Activity description and partners involved	Start date	End date

A8.2	New road signs with coordinated information on traffic, AQ and abatement measures	This activity is closely related to A.5.1 because the screens will be one of the main information sources to citizens and drivers when abatement measures have to take place, either for the Air Pollution Abatement Marathon or for a high pollution episode	Start date: 01/01/2019	End date: 30/09/2019

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 8.2.1	Title	New road information system with LED screens	Target value: 10	Delivery date: 30/09/2019
	Description	New road information system with LED screens in GR, MOLL and MON		

Investment 3

Title

Investment 3. Development of IT Systems

Investment Description

The evolution of GIA, a computer application which is a web technology designed and created by DIBA, will evolve to improve and update information in A4.3.and make the changes needed to share multi level governance information on industrial emissions A7.1. Furthermore the DTES IT Systems with information on industrial emissions will evolve to communicate with the new improved GIA platform.A7.2 GR will build a inventory of activities with its own system and will adapt later the data to be migrated to the GIA plarform. MOLL and MON are already using GIA and will have les investment to do. The three municipalities and DTES will work in their web pages the site to show information on transport A7.4.3 or the wharehouse emission inventory A4.3, AQ maps and the opendata about industries in their cities and agricultural activitites. Making pollution visible will be carried by the WP3 activity to develop a web base dinterface for data retrieval.
DTES will develop the new IT systems with a GIS about to reach the output of A7.2 (biomas stationary sources) and GR, MOLL and MON and the rest of SMG will incorporate information in their webs ant tramit fire permits through the new application. DTES will also ensure the front view web space to share A7.3 and DIBA will work in the A.3.3 virtual community.

Involved Partners

PP 1 - Granollers city council - GR
PP 2 - Mollet del Vallès City Council - MOLL
PP 3 - Montornes del Valles town council - MON
PP 4 - Barcelona Provincial Council - DIBA
PP 8 - Government of Catalonia

Budget

742,733.15

Locations of investment

Number	Country	NUTS 2 level	NUTS 3 level
1	SPAIN	Cataluña	Barcelona

Investment Risk

The fact that it does not exist nowadays the connection among different administration data on stationary and mobile sources, seems to indicate some technology risk in this investment. But the responsible of the IT system is in each investment described the administration that nowadays have more sophisticated applications and the new development builts in them the innovation. In addition, the PP who retains the ownership of the investment could develop this pilot case in AIR e NET to the rest of the province (DIBA) or the regions (DTES) which lowers tge finance risks or the communication and engagement risk. The multi level governance that is related with the new IT systems might present a strategic risk for the timely delivery objective, but all PP have agreed that it is reasonable the delivering established for the key project out puts.

Investment Documentation

There is no permit needed except for the agreements to be made by DTES, DIBA, GR, MOLL, MON.

Ownership

DIBA owns the virtual community network A.3.3 will retain the ownership and will take care of maintenance of the investment and the dissemination of local and regional emissions (A.3.6), together with DTES. DIBA will own the improvements in GIA application and DTES the development in their system to share industrial data with PP. MOLL, GR, andMON will own the investment in their systems to reach AIRe NET outputs DTES will retain ownwer ship of the new IT system A.7.2 (biomas stationary sources) and the Mobilty data shared thanks to AIRe NET A.7.3 A4.3 emission ware house will remain as DIBA owner ship who will transfer to the AIRe NET authorities the acces to keep its maintenance after the project ends

Activities, Deliverables

Activity number	Activity title	Activity description and partners involved	Start date	End date

A8.3	IT systems developments to share information in a multilevel-governance approach	Evolution of GIA, a computer application which is a web technology designed and created by DIBA, will make possible to improve and update information to share multi level governance information on industrial emissions A7.1. DTES IT Systems with information on industrial emissions will evolve to communicate with the new improved GIA platform.A7.2 GR will build a inventory of activities with its own system and will adapt later the data to be migrated to the GIA program. Making pollution visible will be carried by the WP3 activity to develop a web base interface for data retrieval. DTES will develop the new IT systems with a GIS about to reach. DTES will also ensure to share A7.3 and DIBA will work in the A3.3 virtual community.	Start date: 01/01/2019	End date: 31/05/2021

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 8.3.1	Title	Individual systems to adapt and share information on industrial activities	Target value: 5	Delivery date: 31/10/2020
	Description	Changes and new developments in individual systems to adapt and share information on industrial activities		
D 8.3.2	Title	Individual systems to adapt and share information on fire permits for biomass burning	Target value: 5	Delivery date: 31/01/2020
	Description	Changes and new developments in individual systems to adapt and share information on fire permits for biomass burning		
D 8.3.3	Title	Individual systems to adapt and share information on traffic flows, intermodality and parking space	Target value: 5	Delivery date: 31/05/2021
	Description	Changes and new developments in individual systems to adapt and share information on traffic flows, intermodality and parking space		

Investment 4

Title	Investment 4. Equipment for the Air Pollution Abatement Marathon
Investment Description	For the APAM there will be different equipment necessary for the implementation of the workshops and activities to boost participation in A.6.1. There will be 10 kits of AIRe NET (in catalan means CLEAN AIR), 20 roll-up stands, a big floor game for the schools, and bio filters. During the months of April and September2019 , information will be disseminated, among facilities, buildings and the Bike cages in the intermodal "hot spots". With the complicity of CSIC scientific community , citizens and different social groups A.6.1, A.6.2 will be addressed. The message will be: how we contribute on AQ and how can we reduce the number of vehicles in the streets. In October, biofilters will be installed inside the chosen buildings. The Air Pollution Abatement Marathon will have its most visual and concrete part from November to January 2020. During the campaign, there will be weekly measures that allow us to see if there are improvements in air quality. Each week the participants will be informed about the quality of the air they breathe and whether or not there are improvements in quality. These results will be exhibited visibly in the various participating building and the LED screens in the streets. During the Air Pollution Abatement Marathon, bicycle parking areas or other efficient means will be proposed and information will be given on public and pedestrian vehicle routes. A video clip of the Marathon pilot test and its environmental and social.
Involved Partners	PP 5 - THIGIS SERVEIS AMBIENTALS, S.L. - TH
Budget	40,232.50

Locations of investment

Number	Country	NUTS 2 level	NUTS 3 level
1	SPAIN	Cataluña	Barcelona

Investment Risk	The investment risk is a communication and engagement risk if the equipment is not effective enough to engage people and professionals with the Air Pollution Abatement Marathon. The long experience of TH with personnel that has been responsible of other Marathons on Energy efficiency will allow to change strategy and use the equipment with other activities than the initially planned.
Investment Documentation	Permissions are not required because it is a mobile equipment.
Ownership	GR,MOLL and MON will receive form TH the equipment and offer it to the schools interestedalong with the rest of educational resources that yearly offers to centers.

Activities, Deliverables

Activity number	Activity title	Activity description and partners involved	Start date	End date

A8.4	AIRe NET kit (in catala CLEAN AIR kit)	An AIRe NET kit (in catala CLEAN AIR kit) with different measuring devices to measure: particles, nitrogen oxides, carbon oxides, humidity, temperature and other parameters according to the scientific community.	Start date 01/02/2019	End date 31/05/2019

Deliverable number	Deliverable and partners involved		Target value	Delivery date
D 8.4.1	Title	Production of AIRe NET kit to support activities to be done in schools and with young people	Target value 12	Delivery date 31/05/2019
	Description	Production of AIRe NET kit to support activities to be done in schools and with young people		

A8.5	Bio filters to discuss relation between indoor and outdoor air quality	They will be 5 biofilters to explain AQ. Each biofiltre is a mobile and autonomous unit composed of a structure and 8 panels, where there are 400 plants with proven air regenerative effect. The dimensions are 200x200x40 cm. The unit already includes the irrigation system. How will we use biofilters? The placing of biofilters will be in facilities with many users, to announce AIRe NET pilot measures and generate enrollment in the Air Pollution Abatement Marathon. They will be placed before the pilot measures are taken and discuss the effects of indoor air quality where they are place, to see their effects.	Start date: 01/01/2019	End date: 28/02/2019

Deliverable number	Deliverable and partners involved		Target value	Delivery date
D 8.5.1	Title	Bio filters to discuss relation between indoor and outdoor air quality	Target value: 5	Delivery date: 28/02/2019
	Description	Bio filters to discuss relation between indoor and outdoor air quality		

A8.6	APAM game	APAM, a great format game will be played in the main squares and schools of the SMG Taking advantatge that during the month of September the European Sustainable Mobility Week is celebrated, many actions will concentrate and many information about the next pilot measures (A5.1) to approve will be announced.	Start date: 01/01/2019	End date: 28/02/2019

Deliverable number	Deliverable and partners involved		Target value	Delivery date
D 8.6.1	Title	Production of the APAM game	Target value: 3	Delivery date: 28/02/2019
	Description	Production of the APAM game		

Investment 5

Title	Investment 5. Ceilometer
Investment Description	Ceilometer data are very useful to monitor the planetary boundary layer (PBL) which is the atmosphere depth where pollutants are dispersing, therefore offering a real time “dilution” factor of the emissions produced in the AIReNET area. This data will be used to allow/ban agricultural wastes in the AIReNET region, basing on the concept that under low PBL height, no permissions will be awarded (Activity D.6.4.1).
Involved Partners	PP 7 - CSIC (Spanish National Research Council) PP 8 - Government of Catalonia
Budget	45,495.90

Locations of investment

Number	Country	NUTS 2 level	NUTS 3 level
1	SPAIN	Cataluña	Barcelona

Investment Risk	There are no specific risks associated to the ceilometer investment. The only drawback of the instrument is that it is not able to estimate PBL height when it is below 400 m, but this is not a problem for the project because any value below 400 m will automatically provoke a burning ban (too low dispersion of pollutants). The contingency plan in case of no data availability (very small risk) is not to allow ban on that specific day, until the malfunctioning of the ceilometer is resolved
Investment Documentation	There are no specific needs. The laser is totally eye-safe. The only requirement is to be installed in a relatively open space (10 m away from high buildings) and preferably at ground level with power supply and with no access from unauthorized persons.
Ownership	The ceilometer will be installed in the municipal terrain of GR. DTES will retain ownership of the investment at the end of the project, even if the ceilometer will continue working in the AIReNET region during its lifetime. The maintenance costs will be charge to DTES, while CSIC will give staff support in data management.

Activities, Deliverables

Activity number	Activity title	Activity description and partners involved	Start date	End date

A8.7	Mangament of ceilometer data to allow/ban agricultural waste	The permission to burn agricultural waste will be awarded directly to the private citizen (by telephone call) under the requirement that the PBL height is above a pre-determined threshold. The PBL will be checked real-time by DTES staff with a online interface. Partners involved: DTES (responsible of the telephone service) and CSIC (training DTES staff and support for data management)	Start date: 01/06/2019	End date: 31/10/2021

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 8.7.1	Title	Report on the viability of innovative PBL	Target value: 1	Delivery date: 31/10/2021
	Description	Report on the viability of innovative PBL height monitoring to allow/ban agricultural waste burning		

Investment 6

Title: Investment 6. Equipment to monitor AQ and evaluate efficiency of measures (for A4.1 and A5.3)

Investment Description: CSIC will invest in equipment low cost sensors to favor the participation of citizens in science (A4.1) and scientifically monitor air quality before, during and after strategies are implemented (A5.3)

Involved Partners: PP 7 - CSIC (Spanish National Research Council)

Budget: 40,000.00

Locations of investment

Number	Country	NUTS 2 level	NUTS 3 level
1	SPAIN	Cataluña	Barcelona

Investment Risk: The KUNAK low cost sensors represent an innovative way to monitor air quality in real time offering a quite good balance between data quality and cost, in order to improve spatial distribution of measurements. The risk is represented by possible loss of quality (precision and/or accuracy) within the project duration. The mitigation actions consist in a periodic calibration of each sensor with reference method. Contingency plan includes the use of additional passive diffusion tubes which offers same or higher quality of data although they lose time resolution.

Investment Documentation: The only requirement is the permit from the municipalities to install them in public locations, which does not imply risk since the municipalities are partners of the project.

Ownership: The site where low cost sensors are located belong to the municipality. The ownership of the sensors at the end of the project will be of CSIC but with a free rent to the municipalities of GR and MOLL during their lifetime (5 years). The maintenance will be charged to CSIC during the duration of the project and to the municipalities during their lifetime.

Activities, Deliverables

Activity number	Activity title	Activity description and partners involved	Start date	End date

A8.8	Deployment of low cost sensors to monitor air qualily	Air quality monitoring (CO, CO2, NOX, H2S, SO2, PM10, PM2.5 and PM1) by means of 4 low cost sensors, which will be deployed in several locations of the AIRe NET region, according to specific requirements such as: - creating pollution maps in AIReNET cities - help evaluating the efficiency of the air quality improvement measures, mostly for those measures expected to have an impact far away of the 5 permanent air quality stations. - specific measurement campaigns performed by local citizens Partner(s): CSIC (in charge) will lead the monitoring activity with contribution of personal staff from Granollers, Mollet and Montornès and the other municipalities in the AIRe NET zone	Start date: 01/11/2018	End date: 31/10/2021

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 8.8.1	Title	Report on the reliability of measurements performed	Target value: 1	Delivery date: 31/10/2021
	Description	Report on the reliability of measurements performed by means of low cost sensors (calibration values, lifetime of performance) including instruction protocol for use by private citizens.		

Work Plan Per Work Packages - WorkPackage 9 (Closure and knowledge transfer work package)

Title	Closure and knowledge transfer
Start Date	01/11/2021
End Date	31/10/2022
Budget	15,000.00

Partners Involvement

Responsible Partner	PP 1 - Granollers city council - GR
Involved Partners	PP1 - Granollers city council - GR PP2 - Mollet del Vallès City Council - MOLL PP3 - Montornes del Valles town council - MON PP4 - Barcelona Provincial Council - DIBA PP5 - THIGIS SERVEIS AMBIENTALS, S.L. - TH PP6 - Barcelona Supercomputing Center - BSC PP7 - CSIC (Spanish National Research Council) PP8 - Government of Catalonia PP9 - BUSUP TECHNOLOGIES SL PP10 - CTRL4 ENVIRO, S.L. - CTRL4 PP11 - UNIVERSITAT POLITECNICA DE CATALUNYA - InLUPC
Summary	The administrative closure of the project will be a smooth task as it is related with a planned and organised project management where different progress reports are envisaged. They will accumulate the necessary information from all the partners to facilitate the closure procedure at the end of the project. The transfer of knowledge based on the project experience, it will be gathered lessons from all partners in order to capitalize their own experiences and provide useful and practical recommendations for future replications. It will be prepared a final report as a strategy assessment and recommendations which will include the lessons learned through the project covering social, economic, technical issues (lead by UA but with contributions from all other project participants). This final report should be useful for future projects. Moreover, fostering knowledge exchange will build and enhance the capacity of the different stakeholders involved at local but also at national and EU level.

Activities and Deliverables

Activity number	Activity title	Activity description and partners involved	Start date	End date

A9.1	Transfer of knowledge activities	• Drafting and submission of the final qualitative report • Participation to Urban Development Network (UDN) • Project evaluation with UIA Experts	Start date: 01/11/2021	End date: 31/10/2022

Deliverable number	Deliverable and partners involved		Target value	Delivery date
D 9.1.1	Title	Final qualitative report	Target value: 1	Delivery date: 31/10/2022
	Description	Final qualitative report		

A9.2	Administrative closure	Preparation and submission of final progress report	Start date: 01/11/2021	End date: 01/02/2022

Deliverable number		Deliverable and partners involved	Target value	Delivery date
D 9.2.1	Title	Final progress report	Target value: 1	Delivery date: 01/02/2022
	Description	Final progress report		

Work Package Budget

Partner name	Staff cost (€)	Office and administration (€)	Travel and accommodation (€)	External expertise and services (€)	Equipment (€)	Infrastructure and construction works (€)	Sub-Total (€)	Revenues (€)	Total (€)
Granollers city council - GR	0.00	0.00	0.00	15,000.00	0.00	0.00	0.00	0.00	15,000.00

Part E - Project Budget

E.1 Project Budget Co-Financing Source (Fund) - Breakdown per Partner

Partner		ERDF co-financing		Contribution			Total	
Partner	Country	EUR	ERDF rate	Public	Private	Total	Budget	%of project budget
PP 1 - Granollers city council - GR	ES	434,094.48	80.00%	108,523.62	0.00	108,523.62	542,618.10	11.04%
PP 2 - Mollet del Vallès City Council - MOLL	ES	329,536.04	80.00%	82,384.01	0.00	82,384.01	411,920.05	8.38%
PP 3 - Montornes del Valles town council - MON	ES	159,140.80	80.00%	39,785.20	0.00	39,785.20	198,926.00	4.05%
PP 4 - Barcelona Provincial Council - DIBA	ES	416,999.64	80.00%	104,249.91	0.00	104,249.91	521,249.55	10.60%
PP 5 - THIGIS SERVEIS AMBIENTALS, S.L. - TH	ES	267,094.08	80.00%	0.00	66,773.52	66,773.52	333,867.60	6.79%
PP 6 - Barcelona Supercomputing Center - BSC	ES	358,919.04	80.00%	89,729.76	0.00	89,729.76	448,648.80	9.13%
PP 7 - CSIC (Spanish National Research Council)	ES	429,117.80	80.00%	107,279.45	0.00	107,279.45	536,397.25	10.91%
PP 8 - Government of Catalonia	ES	744,778.04	80.00%	186,194.51	0.00	186,194.51	930,972.55	18.94%
PP 9 - BUSUP TECHNOLOGIES SL	ES	140,741.52	80.00%	0.00	35,185.38	35,185.38	175,926.90	3.58%
PP 10 - CTRL4 ENVIRO, S.L. - CTRL4	ES	203,283.04	80.00%	0.00	50,820.76	50,820.76	254,103.80	5.17%
PP 11 - UNIVERSITAT POLITECNICA DE CATALUNYA - InLUPC	ES	449,127.00	80.00%	112,281.75	0.00	112,281.75	561,408.75	11.42%
Total (€)		**3,932,831.48**	**80.00%**	**830,428.21**	**152,779.66**	**983,207.87**	**4,916,039.35**	**100.00%**

E.2 Project Budget - Overview per Partner/ per Period

Partner	Preparation (Period 0)	Jan - Dec 2018	Jan - Dec 2019	Jan - Dec 2020	Jan - Dec 2021	Closure	Total
PP 1	20,000.00	2,980.00	151,562.18	185,398.99	167,676.93	15,000.00	542,618.10
PP 2	0.00	2,336.00	120,853.77	150,017.59	138,712.70	0.00	411,920.05
PP 3	0.00	1,021.75	57,654.00	72,699.61	67,550.65	0.00	198,926.00
PP 4	0.00	12,045.70	172,143.03	169,186.01	167,874.82	0.00	521,249.55
PP 5	0.00	12,036.58	122,762.32	103,345.96	95,722.74	0.00	333,867.60
PP 6	0.00	2,821.68	162,040.62	172,492.51	111,293.99	0.00	448,648.80
PP 7	0.00	2,750.24	185,992.82	205,305.00	142,349.20	0.00	536,397.25
PP 8	0.00	4,744.84	266,627.46	335,044.22	324,556.03	0.00	930,972.55
PP 9	0.00	2,324.32	57,426.71	64,064.63	52,111.25	0.00	175,926.90
PP 10	0.00	1,098.47	78,999.52	99,231.83	74,773.98	0.00	254,103.80
PP 11	0.00	1,957.84	212,818.55	220,433.52	126,198.84	0.00	561,408.75
Total (€)	**20,000.00**	**46,117.42**	**1,588,880.95**	**1,777,219.85**	**1,468,821.13**	**15,000.00**	**4,916,039.35**
%of total budget	0.41%	0.94%	32.32%	36.15%	29.88%	0.31%	100.00%

E.3 Project Budget - Overview per Partner/ per Work Package

Partner	Preparation (WP 1)	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Closure (WP 9)	Total
PP 1	20,000.00	43,300.00	16,300.00	41,900.00	68,591.00	74,900.00	45,162.10	217,465.00	15,000.00	542,618.10
PP 2	0.00	30,836.30	15,883.70	18,900.00	67,452.50	63,859.40	29,303.15	185,685.00	0.00	411,920.05
PP 3	0.00	13,284.95	7,150.00	4,025.00	36,400.00	35,000.00	13,670.05	89,396.00	0.00	198,926.00
PP 4	0.00	110,290.50	130,623.50	3,680.00	44,246.15	4,052.60	54,532.00	173,824.80	0.00	521,249.55
PP 5	0.00	158,405.90	82,325.75	5,405.00	15,180.00	27,074.45	5,244.00	40,232.50	0.00	333,867.60
PP 6	0.00	29,960.60	26,473.00	218,026.20	172,142.00	1,265.00	782.00	0.00	0.00	448,648.80
PP 7	0.00	33,432.30	21,572.50	222,479.55	196,742.55	8,107.50	566.95	53,495.90	0.00	536,397.25
PP 8	0.00	65,226.85	29,670.00	42,176.25	18,227.50	39,770.00	208,469.60	527,432.35	0.00	930,972.55
PP 9	0.00	13,336.35	33,150.00	0.00	65,378.65	55,489.80	8,572.10	0.00	0.00	175,926.90
PP 10	0.00	17,714.45	4,255.00	5,714.35	220,735.55	1,153.45	4,531.00	0.00	0.00	254,103.80
PP 11	0.00	34,870.70	4,286.05	404,802.50	107,162.75	1,714.65	8,572.10	0.00	0.00	561,408.75
Total (€)	**20,000.00**	**550,658.90**	**371,689.50**	**967,108.85**	**1,012,258.65**	**312,386.85**	**379,405.05**	**1,287,531.55**	**15,000.00**	**4,916,039.35**
%of total budget	0.41%	11.20%	7.56%	19.67%	20.59%	6.35%	7.72%	26.19%	0.31%	100.00%

E.4 Project Budget - Overview per Work Package/ per Period

Work Package	Preparation	Jan - Dec 2018	Jan - Dec 2019	Jan - Dec 2020	Jan - Dec 2021	Closure	Total
WP 1	20,000.00						20,000.00
WP 2		27,532.95	220,263.56	165,197.67	137,664.73		550,658.90
WP 3		18,584.48	148,675.80	92,922.38	111,506.85		371,689.50
WP 4		0.00	386,843.54	386,843.54	193,421.77		967,108.85
WP 5		0.00	303,677.60	404,903.46	303,677.60		1,012,258.65
WP 6		0.00	93,716.06	124,954.74	93,716.06		312,386.85
WP 7		0.00	113,821.52	151,762.02	113,821.52		379,405.05
WP 8		0.00	321,882.89	450,636.04	515,012.62		1,287,531.55
WP 9						15,000.00	15,000.00
Total (€)	**20,000.00**	**46,117.42**	**1,588,880.95**	**1,777,219.85**	**1,468,821.13**	**15,000.00**	**4,916,039.35**
%of total budget	0.41%	0.94%	32.32%	36.15%	29.88%	0.31%	100.00%

E.5 Project Budget - Overview per Partner/ per Budget Line

Partner	Staff	Office and administration	Travel and accommodation	External expertise and services	Equipment	Infrastructure and construction works	Sub-total	Revenues	Total
PP 1	158,394.00	23,759.10	6,500.00	165,300.00	48,665.00	140,000.00	542,618.10	0.00	542,618.10
PP 2	139,787.00	20,968.05	6,500.00	76,000.00	28,665.00	140,000.00	411,920.05	0.00	411,920.05
PP 3	72,400.00	10,860.00	2,000.00	36,000.00	18,666.00	59,000.00	198,926.00	0.00	198,926.00
PP 4	202,517.00	30,377.55	6,030.00	112,175.00	130,150.00	40,000.00	521,249.55	0.00	521,249.55
PP 5	201,624.00	30,243.60	4,000.00	51,000.00	47,000.00	0.00	333,867.60	0.00	333,867.60
PP 6	364,912.00	54,736.80	3,000.00	0.00	26,000.00	0.00	448,648.80	0.00	448,648.80
PP 7	362,115.00	54,317.25	5,300.00	9,023.00	105,642.00	0.00	536,397.25	0.00	536,397.25
PP 8	309,977.00	46,496.55	2,300.00	77,000.00	463,199.00	32,000.00	930,972.55	0.00	930,972.55
PP 9	123,306.00	18,495.90	2,125.00	32,000.00	0.00	0.00	175,926.90	0.00	175,926.90
PP 10	139,372.00	20,905.80	2,600.00	32,300.00	58,926.00	0.00	254,103.80	0.00	254,103.80
PP 11	389,405.00	58,410.75	3,593.00	110,000.00	0.00	0.00	561,408.75	0.00	561,408.75
Total (€)	**2,463,809.00**	**369,571.35**	**43,948.00**	**700,798.00**	**926,913.00**	**411,000.00**	**4,916,039.35**	**0.00**	**4,916,039.35**
%of total budget	50.12%	7.52%	0.89%	14.26%	18.85%	8.36%	100.00%	0.00%	100.00%

E.6 Project Budget - Overview per Work Package/ per Budget Line

Work Package	Staff Costs (€)	Office and administration (€)	Travel and accommodation (€)	External expertise and services (€)	Equipment (€)	Infrastructure and Works (€)	Sub-total (€)	Revenues (€)	Total (€)
WP 1	0.00	0.00	0.00	20,000.00	0.00	0.00	0.00	0.00	20,000.00
WP 2	425,946.00	63,891.90	33,948.00	26,873.00	0.00	0.00	550,658.90	0.00	550,658.90
WP 3	151,330.00	22,699.50	5,000.00	172,660.00	20,000.00	0.00	371,689.50	0.00	371,689.50
WP 4	672,859.00	100,928.85	1,000.00	159,500.00	32,821.00	0.00	967,108.85	0.00	967,108.85
WP 5	639,171.00	95,875.65	1,000.00	158,465.00	117,747.00	0.00	1,012,258.65	0.00	1,012,258.65
WP 6	221,119.00	33,167.85	0.00	58,100.00	0.00	0.00	312,386.85	0.00	312,386.85
WP 7	262,787.00	39,418.05	2,000.00	75,200.00	0.00	0.00	379,405.05	0.00	379,405.05
WP 8	90,597.00	13,589.55	1,000.00	15,000.00	756,345.00	411,000.00	1,287,531.55	0.00	1,287,531.55
WP 9	0.00	0.00	0.00	15,000.00	0.00	0.00	0.00	0.00	15,000.00
Total (€)	**2,463,809.00**	**369,571.35**	**43,948.00**	**700,798.00**	**926,913.00**	**411,000.00**	**4,916,039.35**	**0.00**	**4,916,039.35**
%of total budget	50.12%	7.52%	0.89%	14.26%	18.85%	8.36%	100.00%	0.00%	100.00%

Part F - Partners contribution

Source(s) of Contribution

Total Contribution	983,207.87	Total Contribution Target	983,207.87

PP1 - Granollers city council - GR

Name of Organisation/ Source of Contribution	Legal Status	%of Total Partner Contribution	Amount (€)	Cash or In-kind Contribution	Comment
Granollers city council	Public	100.00 %	108,523.62	cash	Cofinancing by urban authority
Total (€)		**100.00**	**108,523.62**		**Contribution Target** **108,523.62**

PP2 - Mollet del Vallès City Council - MOLL

Name of Organisation/ Source of Contribution	Legal Status	%of Total Partner Contribution	Amount (€)	Cash or In-kind Contribution	Comment
Mollet del Vallès City Council	Public	100.00 %	82,384.01	cash	Cofinancing by urban authority
Total (€)		**100.00**	**82,384.01**		**Contribution Target** **82,384.01**

PP3 - Montornes del Valles town council - MON

Name of Organisation/ Source of Contribution	Legal Status	%of Total Partner Contribution	Amount (€)	Cash or In-kind Contribution	Comment
Montornes del Valles town council	Public	100.00 %	39,785.20	cash	Cofinancing by urban authority
Total (€)		**100.00**	**39,785.20**		**Contribution Target** **39,785.20**

PP4 - Barcelona Provincial Council - DIBA

Name of Organisation/ Source of Contribution	Legal Status	%of Total Partner Contribution	Amount (€)	Cash or In-kind Contribution	Comment
Barcelona Provincial Council	Public	100.00 %	104,249.91	cash	Cofinancing by partner with staff and administration costs dedicated to the project
Total (€)		**100.00**	**104,249.91**		**Contribution Target** **104,249.91**

PP5 - THIGIS SERVEIS AMBIENTALS, S.L. - TH

Name of Organisation/ Source of Contribution	Legal Status	%of Total Partner Contribution	Amount (€)	Cash or In-kind Contribution	Comment
THIGIS SERVEIS AMBIENTALS, S.L.	Private	100.00 %	66,773.52	cash	Cofinancing by partner with staff and administration costs dedicated to the project
Total (€)		**100.00**	**66,773.52**		**Contribution Target** **66,773.52**

PP6 - Barcelona Supercomputing Center - BSC

Name of Organisation/ Source of Contribution	Legal Status	%of Total Partner Contribution	Amount (€)	Cash or In-kind Contribution	Comment
Barcelona Supercomputing Center	Public	100.00 %	89,729.76	cash	Cofinancing by partner with staff and administration costs dedicated to the project
Total (€)		**100.00**	**89,729.76**		**Contribution Target** **89,729.76**

PP7 - CSIC (Spanish National Research Council)

Name of Organisation/ Source of Contribution	Legal Status	%of Total Partner Contribution	Amount (€)	Cash or In-kind Contribution	Comment
CSIC (Spanish National Research Council)	Public	100.00 %	107,279.45	cash	Cofinancing by partner with staff and administration costs dedicated to the project
Total (€)		**100.00**	**107,279.45**		**Contribution Target** **107,279.45**

PP8 - Government of Catalonia

Name of Organisation/ Source of Contribution	Legal Status	%of Total Partner Contribution	Amount (€)	Cash or In-kind Contribution	Comment
Government of Catalonia	Public	100.00 %	186,194.51	cash	Cofinancing by partner with staff and administration costs dedicated to the project
Total (€)		**100.00**	**186,194.51**		**Contribution Target** **186,194.51**

PP9 - BUSUP TECHNOLOGIES SL

Name of Organisation/ Source of Contribution	Legal Status	%of Total Partner Contribution	Amount (€)	Cash or In-kind Contribution	Comment
BUSUP TECHNOLOGIES SL	Private	100.00 %	35,185.38	cash	Cofinancing by partner with staff and administration costs dedicated to the project
Total (€)		**100.00**	**35,185.38**		**Contribution Target** **35,185.38**

PP10 - CTRL4 ENVIRO, S.L. - CTRL4

Name of Organisation/ Source of Contribution	Legal Status	%of Total Partner Contribution	Amount (€)	Cash or In-kind Contribution	Comment
CTRL4 ENVIRO, S.L.	Private	100.00 %	50,820.76	cash	Cofinancing by partner with staff and administration costs dedicated to the project
Total (€)		**100.00**	**50,820.76**		**Contribution Target** **50,820.76**

PP11 - UNIVERSITAT POLITECNICA DE CATALUNYA - InLUPC

Name of Organisation/ Source of Contribution	Legal Status	%of Total Partner Contribution	Amount (€)	Cash or In-kind Contribution	Comment
UNIVERSITAT POLITECNICA DE CATALUNYA	Public	100.00 %	112,281.75	cash	Cofinancing by partner with staff and administration costs dedicated to the project
Total (€)		**100.00**	**112,281.75**		**Contribution Target** **112,281.75**

Part G - Risk Management

Description of the risk	Properties		Actions to mitigate the risk
The KUNAK low cost sensors represent an innovative way to monitor air quality in real time offering a quite good balance between data quality and cost, in order to improve spatial distribution of measurements	Impact	Minor	he risk is represented by possible loss of quality (precision and/or accuracy) within the project duration. The mitigation actions consist in a periodic calibration of each sensor with reference method. Contingency plan includes the use of additional passive diffusion tubes which offers same or higher quality of data although they lose time resolution.
	Likelihood	Possible	

Part H - Confirmation

(Main) Urban Authority confirmation and signature

(Main) Urban Authority Granollers city council - GR

By signing the application form the (Main) Urban Authority hereby confirms that:

- **the Urban Authorities involved in this project proposal are not involved in other proposals submitted to the UIA Initiative as part of this current Call for Proposals;**
- **the project neither in whole nor in part has or will receive any other complementary EU funding (except for the funding indicated in this application form) during the whole duration of the project;**
- **the project partners listed in the application form are committed to take part in the project's activities and financing;**
- **the (Main) Urban Authority and the project partners will act according to the provisions of the relevant national and EU legislation and policies (especially regarding structural funds, public procurement, state aid, environment and equal opportunities) as well as the specific provisions of the UIA Initiative;**
- **the information in the Application Form is accurate and true to the best knowledge of the (Main) Urban Authority**
- **general information about this project can be used by the UIA Initiative to liaise with national and regional authorities in charge of implementation of operational programmes funded by the European Structural and Investment Funds**

Forename, Surname	Mayoral Antigas, Josep	**Date**	30/03/2018
Position	Mayor	**Place**	Granollers
Authorized signature of (Main) Urban Authority			