

A - Project identification

A.1 Project identification

Project id (automatically created)	ASP0100097
Name of the lead partner organisation	Zavod Energetska agencija za Savinjsko, Šaleško in Koroško
Name of the lead partner organisation in English	Energy Agency of Savinjska, Saleska and Koroska Region
Project title	Green Hydrogen Mobility for Alpine Region Transportation (H2MA)
Project acronym	H2MA
Programme priority	Carbon neutral and resource sensitive Alpine region
Specific objective	SO 2.1: Promoting energy efficiency and reducing greenhouse gas emissions
Project duration in months	36

A.2 Project summary

Please inform in one introduction sentence on the focus of the project: is it a “setting-the-scene” project or a “roll-out”/“capitalisation” project?

Roll-out-projects are intended to be highly hands-on, using identified tools and solutions developed in other projects and various programmes. These tools/solutions are to be widely promoted in the Alpine Space regions to ensure the uptake by the largest possible target group in order to achieve a large-scale effect and thus the desired change.

Set the scene projects operate in fields that are rather new to transnational cooperation. Those projects prepare the ground for these innovative and new topics, enabling the relevant target groups to engage with them. Another option is to test innovative instruments, tools or policies, through exploratory activities.

For more information on the different focuses of small-scale projects please consult chapter A.3 on the typology of projects in the programme manual.

Then, please give a short overview of the project (in the style of a press release) and describe:

- the common challenge of the alpine area you are jointly tackling in your project; and why there is a need for the project
- the overall objective of the project and how it will contribute to the programme specific objective
- the expected change your project will make to the current situation
- the outputs you will produce and those who will benefit from them, also after the end of the project
- the approach you plan to take to tackle the identified challenges
- the added value of the transnational approach: why must the challenge be tackled at transnational level? and what is new/innovative about the project.

This summary delivers the first presentation/impression of the project. In case the project is approved, this summary will also be used by the programme for communication purposes. Therefore, make sure the text will be understandable by a non-expert public and will be both informative and appealing.

It is recommended to identify the focus of the project right from the beginning and to write or adapt the overview of the project summary once all AF sections are filled in.

PROJECT DESCRIPTION

H2MA brings together 11 partners from all 5 Interreg Alpine Space EU countries (SI, IT, DE, FR, AT), to coordinate and accelerate the transnational roll-out of green hydrogen (H2) infrastructure for transport and mobility in the Alpine region. Through the joint development of cooperation mechanisms, strategies, tools, and resources, H2MA will increase the capacities of territorial public authorities and stakeholders to overcome existing barriers and collaboratively plan and pilot test transalpine zero-emission H2 routes.

H2MA's integrated planning and implementation solutions for H2 mobility will enable the synchronised deployment of transnational infrastructure for freight and passenger transport (heavy-duty trucks and railway in the short-term, maritime and aviation in the long-term), in tandem with urban mobility planning (buses), amplifying the macro-regional impact of currently siloed initiatives. As a result, H2MA will contribute to climate change mitigation (by curbing GHG emissions), reduce air and noise pollution, and further support the growth of Alpine space as a sustainable transportation hub, significantly advancing the shift to low-carbon mobility.

TERRITORIAL CHANGE

H2MA will:

1. Improve the governance of green H2 mobility in the Alpine region, as over 20 policy authorities and 80 stakeholders will use and upscale project outputs (resources, tools, strategies), optimising mobility plans.
2. Boost the uptake of green H2 for heavy-duty transportation across the Alpine space by supporting infrastructure development for at least 2,000 H2-powered vehicles, thus contributing to saving approximately 240 thousand CO2 tons (per year) by 2030.
3. Unlock green financing and improve the cooperation framework between public authorities and businesses involved in green H2 mobility in the Alpine region, by deepening public-private synergies and harmonising policy planning with automotive and green H2 production and distribution value chains.

A.3 Project budget overview

Programme funding			Contribution					Total project budget
Funding source	Funding amount	Co-financing rate (%)	Automatic public contribution	Other public contribution	Total public contribution	Private contribution	Total contribution	
ERDF	1,704,866.00	75.00 %	144,158.75	163,053.75	307,212.50	261,076.18	568,288.68	2,273,154.68
Total EU funds	1,704,866.00	75.00 %	144,158.75	163,053.75	307,212.50	261,076.18	568,288.68	2,273,154.68
Total project budget	1,704,866.00	75.00 %	144,158.75	163,053.75	307,212.50	261,076.18	568,288.68	2,273,154.68

A.4 Project outputs and result overview

Programme Output Indicator	Aggregated value per Programme output indicator	Measurement Unit	Output	Output Title	Output target value	Programme result indicator	Baseline	Result in indicator target value	Measurement unit
Pilot actions developed jointly and implemented in projects	1.00	pilot actions	Output 2.1	Common 'green H2 mobility routes' interconnecting current with upcoming/planned infrastructure across the Alpine space	1.00				
Jointly developed solutions	1.00	solutions	Output 3.1	Transferability toolbox for uptaking and/or upscaling the H2MA approach for green H2 mobility in partnership areas and beyond	1.00				
Other	3.00		Output 1.1	Common planning and decision-making resource set to jointly coordinate the roll-out of green H2 mobility infrastructure across Alpine transportation networks	1.00				

Programme Output Indicator	Aggregated value per Programme output indicator	Measurement Unit	Output	Output Title	Output target value	Programme result indicator	Baseline	Result in indicator target value	Measurement unit
			Output 1.2	Recommendations and updates for local, regional, and national hydrogen strategies and mobility plans, integrating H2MA knowledge, resources, and tools	1.00				
			Output 3.2	Collaboration framework with green H2 mobility actors, ecosystems, and businesses, initiating synergies to tap into green financing and investment opportunities.	1.00				
						Solutions taken up or up-scaled by organisations	000	3.00	solutions

B - Project partners

Partners overview

Number	Status	Name of the Organization in English	Country	Organisation abbreviation	Partner role	Partner total eligible budget
1	Active	Energy Agency of Savinjska, Saleska and Koroska Region	Slovenija (SI)	KSSENA	LP	245,505.00
2	Active	BSC, Business Support Centre, Ltd, Kranj	Slovenija (SI)	BSC Kranj	PP	198,500.00
3	Active	EUROMETROPOLE DE STRASBOURG	France (FR)	EMS	PP	208,210.00
4	Active	Lombardy Foundation for the Environment	Italia (IT)	FLA	PP	220,095.00
5	Active	Cluster Pole Vehicule du Futur	France (FR)	PVF	PP	207,781.25
6	Active	Turin Metropolitan City	Italia (IT)	CMT	PP	181,540.00
7	Active	Climate Partner Upper Rhine Valley	Deutschland (DE)	KPO	PP	216,798.75
8	Active	4ward Energy Research Ltd	Österreich (AT)	4ER	PP	211,974.68
9	Active	Lombardy Region	Italia (IT)	RL	PP	175,000.00
10	Active	Codognotto Austria	Österreich (AT)	COD	PP	190,050.00



Number	Status	Name of the Organization in English	Country	Organisation abbreviation	Partner role	Partner total eligible budget
11	Active	Italian German Chamber of Commerce Munich-Stuttgart	Deutschland (DE)	ITALCAM	PP	217,700.00

B.1 Lead partner	
Partner number	1
Partner role	LP
Name of the Organization in original language	Zavod Energetska agencija za Savinjsko, Šaleško in Koroško
Name of the Organization in English	Energy Agency of Savinjska, Saleska and Koroska Region
Organisation abbreviation	KSSENA
Department / unit / division	
Partner main address	
Country	Slovenija (SI)
NUTS 2	Vzhodna Slovenija (SI03)
NUTS 3	Savinjska (SI034)
Street, House number, Postal code, City	Koroška cesta 37a 3320 Velenje
Homepage	www.kssena.si
Address of department / unit / division (if applicable)	
Country	
NUTS 2	
NUTS 3	
Street, House number, Postal code, City	
Legal and financial information	
Type of partner	Sectoral agency
Legal status	Public
VAT number (if applicable)	SI 58743359
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No

Contact

Legal representative	Legal representative Bostjan Krajnc
Contact person	Niko Natek
Email	niko.natek@kssena.velenje.eu
Telephone no.	+386038961521

Motivation

Which are the partner's thematic competences and experiences relevant for the project? What are the institutional role and policy addressing capacity of the partner?

Please indicate with which thematic/institutional/policy related competences and experiences the partner organisation can contribute to the project.

KSSENA is the leading and largest energy agency in SI, with a mandate to support national and regional H2 deployment. It is co-developing the national H2 strategy and coordinates a 'H2 valley' project in Savinjska, Šaleška and Koroška areas, aiming to introduce green H2 in energy and transport; this entails the upgrade of green H2 production capacity and storage facilities, the construction of a refuelling station and the purchase of the H2-powered heavy duty vehicles for public transport.

What is the partner's role and responsibility in the project? / OPTIONAL: Is the involvement of observers foreseen and is there any specific information you would like to share on their involvement? Please outline briefly the role of the partner in the project (WP, activities). Is the organisation performing any economic activity within the project or as a result of it? This information is only required for project partners implementing activities such as provision of services – this information will be used to assess potential state aid relevance. You can mention here the most relevant observer (s) for the partner and the role of the observer(s) in the project. This information will not be subject to the assessment of the project proposal.

KSSENA will lead H2MA, capitalising upon its extensive experience in EU-funded projects and coordinating H2 initiatives to ensure timely project implementation, incl. the project communication. KSSENA will lead WP1, A1.1, and A1.4, employing its expertise in data collection and technical analysis, and will lead the evaluation of the H2 plans in A2.4. KSSENA will also organize a capacity building workshop with EU stakeholders (A3.3) and a regional matchmaking workshop with businesses (A3.4).

OBSERVERS

The Ministry of Infrastructure (EUSALP AG4 & AG9 member; key for national H2 infrastructure development) will work with KSSENA for the integration of A1.6 recommendations in SI's national H2 strategy. FEDARENE, an EU network of organisations, agencies and governments that implement energy and environment policies, incl. H2 projects (e.g. Green Hysland), will offer insights to all partners for their H2 strategies. [Hydrogen Europe members to be engaged: ZSIS/SIPLIN, RENN, INEA].

If applicable and relevant, please describe the organisation's experience in participating in and/or managing EU co-financed projects. Please mention here the most recent and relevant experiences, especially in Interreg projects.

Motivation

KSSENA has participated in or led ~30 EU-funded projects in various EU programmes (incl. Interreg Europe/Alpine Space/Central Europe, Horizon 2020), on areas such as energy transition, alternative energy sources (incl. H2), energy efficiency and sustainable economy. KSSENA has also been involved as external expert in EU & national projects, providing a wide range of services (incl. communication, policy research/overview, technical studies, market research).

Co-financing

Source	Amount	Percentage
ERDF	184,128.75	75.00 %
Partner contribution	61,376.25	25.00 %
Partner total eligible budget	245,505.00	100.00 %

Origin of partner contribution

Source of contribution	Legal status of contribution	Amount	% of total partner budget
KSSENA	Public	61,376.25	25.00 %

Total

Sub-total public contribution	61,376.25	25.00 %
Sub-total automatic public contribution	0.00	0.00 %
Sub-total private contribution	0.00	0.00 %
Total	61,376.25	25.00 %

B.1 Project Partner 2	
Partner number	2
Partner role	PP
Name of the Organization in original language	BSC, poslovno podporni center, d.o.o., Kranj
Name of the Organization in English	BSC, Business Support Centre, Ltd, Kranj
Organisation abbreviation	BSC Kranj
Department / unit / division	
Partner main address	
Country	Slovenija (SI)
NUTS 2	Zahodna Slovenija (SI04)
NUTS 3	Gorenjska (SI042)
Street, House number, Postal code, City	Cesta Staneta Žagarja 37 4000 Kranj
Homepage	www.bsc-kranj.si
Address of department / unit / division (if applicable)	
Country	
NUTS 2	
NUTS 3	
Street, House number, Postal code, City	
Legal and financial information	
Type of partner	Sectoral agency
Legal status	Public
VAT number (if applicable)	SI 32865597
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	Partly
Contact	
Legal representative	Rok Šimenc

Contact

Contact person	Lidija Kovac
Email	Lidija.kovac@bsc-kranj.si
Telephone no.	0038642817230

Motivation

Which are the partner's thematic competences and experiences relevant for the project? What are the institutional role and policy addressing capacity of the partner?

Please indicate with which thematic/institutional/policy related competences and experiences the partner organisation can contribute to the project.

BSC, as the agency responsible for the development of the Gorenjska region, has consistently promoted zero-emission mobility and developed relevant infrastructure across the 18 municipalities under its jurisdiction. It has initiated and put in place a network of e-charging stations to connect SI with IT & AT transportation routes; it currently plans to couple this with H2 infrastructure for long distance freight transport, making the region a transit corridor for commercial heavy duty vehicles.

What is the partner's role and responsibility in the project? / **OPTIONAL:** Is the involvement of observers foreseen and is there any specific information you would like to share on their involvement? Please outline briefly the role of the partner in the project (WP, activities). Is the organisation performing any economic activity within the project or as a result of it? This information is only required for project partners implementing activities such as provision of services – this information will be used to assess potential state aid relevance. You can mention here the most relevant observer (s) for the partner and the role of the observer(s) in the project. This information will not be subject to the assessment of the project proposal.

BSC will lead A2.1 and develop guidelines for pilot-testing transalpine green H2 mobility plans. BSC will oversee the development of green H2 mobility plans from each partner (A2.2), utilizing its experience in developing the e-station network. BSC will lead A3.2, developing resources (strategic framework, harmonization pathways) to support the growth of green H2 mobility. BSC will organize a capacity building workshop with stakeholders (A3.3) and a matchmaking workshop with businesses (A3.4).

OBSERVERS

Grosuplje (SI, municipality) has recently introduced a sustainable mobility strategy for public transport in the context of the 'Grosuplje Goes Green' framework, highlighting the importance of H2 as a tool to decarbonise the transportation sector. Through its involvement in H2MA, Grosuplje will augment its capacity to work with (to ensure critical mass) neighbouring municipalities (e.g. Ljubljana) to design H2 urban transportation routes and infrastructure.

If applicable and relevant, please describe the organisation's experience in participating in and/or managing EU co-financed projects. Please mention here the most recent and relevant experiences, especially in Interreg projects.

Motivation

BSC has extensive experience in EU projects, having participated in over 40 projects, primarily in areas related to green economy and energy transition. In particular, through its participation in EU-funded projects on sustainable mobility (Alpine Space: e-SMART, e-MOTICON, SaMBA | Interreg Europe: e-MOPOLI | Interreg Danube: LENA), BSC has gained thematic expertise in planning infrastructure networks and sustainable mobility business models, which will be valorised in relevant H2MA activities.

Co-financing

Source	Amount	Percentage
ERDF	148,875.00	75.00 %
Partner contribution	49,625.00	25.00 %
Partner total eligible budget	198,500.00	100.00 %

Origin of partner contribution

Source of contribution	Legal status of contribution	Amount	% of total partner budget
BSC Kranj	Public	49,625.00	25.00 %

Total

Sub-total public contribution	49,625.00	25.00 %
Sub-total automatic public contribution	0.00	0.00 %
Sub-total private contribution	0.00	0.00 %
Total	49,625.00	25.00 %

B.1 Project Partner 3	
Partner number	3
Partner role	PP
Name of the Organization in original language	EUROMETROPOLE DE STRASBOURG
Name of the Organization in English	EUROMETROPOLE DE STRASBOURG
Organisation abbreviation	EMS
Department / unit / division	Higher education, research and innovation department
Partner main address	
Country	France (FR)
NUTS 2	Alsace (FRF1)
NUTS 3	Bas-Rhin (FRF11)
Street, House number, Postal code, City	Parc de l'etoile 1 67076 Strasbourg
Homepage	www.strasbourg.eu
Address of department / unit / division (if applicable)	
Country	France (FR)
NUTS 2	Alsace (FRF1)
NUTS 3	Bas-Rhin (FRF11)
Street, House number, Postal code, City	Parc de l'etoile 1 67076 Strasbourg
Legal and financial information	
Type of partner	Local public authority
Legal status	Public
VAT number (if applicable)	FR12246700488
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No

Contact

Legal representative	Vice-president Anne-Marie Jean
Contact person	Philippe Portelli
Email	philippe.portelli@strasbourg.eu
Telephone no.	0033368988310

Motivation

Which are the partner's thematic competences and experiences relevant for the project? What are the institutional role and policy addressing capacity of the partner?

Please indicate with which thematic/institutional/policy related competences and experiences the partner organisation can contribute to the project.

EMS, led by the City of Strasbourg, manages 33 municipalities that jointly own and operate the metropolitan urban transport network, the road infrastructure, and the city's port. EMS oversees a pilot project that will deliver an H2 refuelling station (R-Hynoca project), which supplies clean H2 from locally sourced biomass to metropolitan buses (~30 daily) and trucks, and aims to expand the utilisation of green H2 to cover the industrial and transportation needs in the port of Strasbourg.

What is the partner's role and responsibility in the project? / OPTIONAL: Is the involvement of observers foreseen and is there any specific information you would like to share on their involvement? Please outline briefly the role of the partner in the project (WP, activities). Is the organisation performing any economic activity within the project or as a result of it? This information is only required for project partners implementing activities such as provision of services – this information will be used to assess potential state aid relevance. You can mention here the most relevant observer (s) for the partner and the role of the observer(s) in the project. This information will not be subject to the assessment of the project proposal.

EMS will lead WP3, overseeing the development of resources that will facilitate the transfer and adoption of H2MA results; it will also lead A1.2 and organize a study visit on integrating green H2 in urban transportation (buses), valorising the experience from its involvement in initiatives that seek to develop the local green H2 production capacity to support H2 buses. EMS will also organize a capacity building workshop with stakeholders (A3.3) and a matchmaking workshop with businesses (A3.4).

OBSERVERS

Hynamics (subsidiary of Électricité de France SA) develops green H2 solutions for industrial applications and mobility, addressed to public organisations and businesses; it is also involved in a number of H2 projects (e.g. AUXR_H2, H2SHIPS). EIFHYTEC (Hydrogen Europe member) develops innovative thermal compressors for H2 stations. Both these observers will provide insights on the deployment of H2 stations, to be incorporated in project activities (A1.5 and WP2 pilots).

If applicable and relevant, please describe the organisation's experience in participating in and/or managing EU co-financed projects. Please mention here the most recent and relevant experiences, especially in Interreg projects.

Motivation

EMS has considerable experience in participating in EU-funded projects. Indicatively, EMS has participated in the innovation-promoting project BoostInno (URBACT) and is involved in the KTUR project (Interreg Upper Rhein). Regarding mobility, EMS is a core partner in EIT urban mobility initiative, participating in 2 projects (UMOS, FlexCURB). In addition, EMS has participated in the CATS project on automated mobility (H2020) and was involved in the CROME project on infrastructure for EVs.

Co-financing

Source	Amount	Percentage
ERDF	156,157.50	75.00 %
Partner contribution	52,052.50	25.00 %
Partner total eligible budget	208,210.00	100.00 %

Origin of partner contribution

Source of contribution	Legal status of contribution	Amount	% of total partner budget
EMS	Public	52,052.50	25.00 %

Total

Sub-total public contribution	52,052.50	25.00 %
Sub-total automatic public contribution	0.00	0.00 %
Sub-total private contribution	0.00	0.00 %
Total	52,052.50	25.00 %

B.1 Project Partner 4	
Partner number	4
Partner role	PP
Name of the Organization in original language	Fondazione Lombardia per l'Ambiente
Name of the Organization in English	Lombardy Foundation for the Environment
Organisation abbreviation	FLA
Department / unit / division	Sustainable Development Department
Partner main address	
Country	Italia (IT)
NUTS 2	Lombardia (ITC4)
NUTS 3	Milano (ITC4C)
Street, House number, Postal code, City	Via Pola 12 20124 Milano
Homepage	www.flanet.org
Address of department / unit / division (if applicable)	
Country	Italia (IT)
NUTS 2	Lombardia (ITC4)
NUTS 3	Milano (ITC4C)
Street, House number, Postal code, City	Via Pola 12 20124 Milano
Legal and financial information	
Type of partner	Sectoral agency
Legal status	Public
VAT number (if applicable)	Codice fiscale 08365380156
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No

Contact

Legal representative	Matteo Fumagalli
Contact person	Mita Lapi
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Telephone no.	00390280616112

Motivation

Which are the partner's thematic competences and experiences relevant for the project? What are the institutional role and policy addressing capacity of the partner?

Please indicate with which thematic/institutional/policy related competences and experiences the partner organisation can contribute to the project.

FLA is a key body in the regional governance system; it is the principal scientific advisor of the Lombardy region; it provides public administration and private companies with expert technical support and bolsters their capacities to address environmental and energy issues. In particular, FLA is responsible for the strategic evaluation and analysis of policies related to climate change, green mobility, and transboundary pollution, providing targeted policy interventions to the Lombardy Region.

What is the partner's role and responsibility in the project? / OPTIONAL: Is the involvement of observers foreseen and is there any specific information you would like to share on their involvement? Please outline briefly the role of the partner in the project (WP, activities). Is the organisation performing any economic activity within the project or as a result of it? This information is only required for project partners implementing activities such as provision of services – this information will be used to assess potential state aid relevance. You can mention here the most relevant observer (s) for the partner and the role of the observer(s) in the project. This information will not be subject to the assessment of the project proposal.

FLA will lead WP2; it will oversee and facilitate the organisation of a peer-review workshop (A2.3) that will incorporate regional green H2 plans into an integrated transalpine green H2 mobility plan, and compile the results and lessons learned to foster capacity building among the H2MA partners. FLA will also organize (with RL) a capacity building workshop for stakeholders (A3.3) to diffuse project results and a matchmaking workshop (A3.4) with businesses in the green H2 value chain.

OBSERVERS

ATM (Municipal transport company of Milan; represents 46 municipalities) plans purchases of 350 H2 and electric buses; SEA Aeroporto di Milano plans for green H2 for ground logistics. Through H2MA, both will build capacities to scale-up their H2 mobility plans. Ferrovienord (manages Lombardy's rail network; expected to operate 6 H2 trains), will diffuse H2MA results to FNM (parent company) and promote A3.4 workshop. H2IT, Tenaris, VIAR (Hydrogen Europe members) will be engaged in LWG.

If applicable and relevant, please describe the organisation's experience in participating in and/or managing EU co-financed projects. Please mention here the most recent and relevant experiences, especially in Interreg projects.

Motivation

Over the last 30 years, FLA has acquired extensive experience through its participation in ~20 EU-funded projects and has developed, as a result, a well-established expertise in environmental protection policies. Indicatively, FLA has participated as LP or PP (and as WPs leader) in Interreg Alpine Space (ALPSTAR, OPENALPS, YOUrALPS, GoApply, CHEERS, LUIGI)/Europe (INNOGROW, AQUARES, INVALIDIS), LIFE (IP GESTIRE 2020, IP PREPAIR, Gestire, MasterAdapt, Biosource) projects.

Co-financing

Source	Amount	Percentage
ERDF	165,071.25	75.00 %
Partner contribution	55,023.75	25.00 %
Partner total eligible budget	220,095.00	100.00 %

Origin of partner contribution

Source of contribution	Legal status of contribution	Amount	% of total partner budget
FLA	Public	0.00	0.00 %
Fondo di rotazione nazionale	Automatic Public	55,023.75	25.00 %

Total

Sub-total public contribution	0.00	0.00 %
Sub-total automatic public contribution	55,023.75	25.00 %
Sub-total private contribution	0.00	0.00 %
Total	55,023.75	25.00 %

B.1 Project Partner 5	
Partner number	5
Partner role	PP
Name of the Organization in original language	Pôle Véhicule du Futur
Name of the Organization in English	Cluster Pole Vehicule du Futur
Organisation abbreviation	PVF
Department / unit / division	
Partner main address	
Country	France (FR)
NUTS 2	Franche-Comté (FRC2)
NUTS 3	Doubs (FRC21)
Street, House number, Postal code, City	Rue Armand Japy 15 25461 Etupes
Homepage	https://www.vehiculedufutur.com/
Address of department / unit / division (if applicable)	
Country	
NUTS 2	
NUTS 3	
Street, House number, Postal code, City	
Legal and financial information	
Type of partner	Business support organisation
Legal status	Public
VAT number (if applicable)	FR 38 487 585 770
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	Yes
Contact	
Legal representative	Marc Becker

Contact

Contact person	Clotilde Nadé
Email	cn@vehiculedefutur.com
Telephone no.	0033389327625

Motivation

Which are the partner's thematic competences and experiences relevant for the project? What are the institutional role and policy addressing capacity of the partner?

Please indicate with which thematic/institutional/policy related competences and experiences the partner organisation can contribute to the project.

PVF, a business cluster of >500 members from the automotive and mobility industries, has been tasked by the Bourgogne-Franche-Comté and Grand Est Regions to develop the regional H2 ecosystem in cooperation with relevant actors (public authorities, companies, research institutions). PVF has led numerous relevant projects, including on H2 infrastructure, while it currently runs two H2 clubs; in 2020 it absorbed the regional automotive industry association (ARIA) of Champagne-Ardenne & Lorraine.

What is the partner's role and responsibility in the project? / **OPTIONAL:** Is the involvement of observers foreseen and is there any specific information you would like to share on their involvement? Please outline briefly the role of the partner in the project (WP, activities). Is the organisation performing any economic activity within the project or as a result of it? This information is only required for project partners implementing activities such as provision of services – this information will be used to assess potential state aid relevance. You can mention here the most relevant observer (s) for the partner and the role of the observer(s) in the project. This information will not be subject to the assessment of the project proposal.

PVF will lead A1.3, identifying and evaluating models and design parameters for H2 mobility planning. PVF will utilize the expertise from its participation in the e-Smart project and its experience in advancing regional H2 policies, to organize (with EMS) the study visit on planning requirements for integrating green H2 production in urban transport (A1.2). Also, PVF will organize (with EMS) a capacity building workshop with stakeholders (A3.3) and a matchmaking workshop with businesses (A3.4).

OBSERVERS

'Mulhouse Alsace Agglomeration' acts as a regional H2 ecosystem accelerator (e.g. via the RHYN project that develops H2 pipelines to cover Mulhouse's H2 mobility needs). Euro Rhein Ports oversees the operation and infrastructure development of Mulhouse ports; currently it prepares H2 distribution stations for the introduction of H2 barges. Both observers, together with Region Grand Est (Hydrogen Europe member), will provide input for recommendations to update territorial H2 strategies.

If applicable and relevant, please describe the organisation's experience in participating in and/or managing EU co-financed projects. Please mention here the most recent and relevant experiences, especially in Interreg projects.

Motivation

Since its inception, PVF Cluster has consistently sought to participate in EU/national projects in order to promote innovation and growth in mobility. In terms of EU-funded projects, PVF has participated in the following projects in (sustainable) mobility: 'e-Moticon' and 'e-Smart' (Interreg Alpine Space), Pôle Automobile Européen (Interreg VA Greater Region), and led the European Automotive Cluster Network for Joint Industrial Modernisation Investments project (COSME ESCP-S3).

Co-financing

Source	Amount	Percentage
ERDF	155,835.93	75.00 %
Partner contribution	51,945.32	25.00 %
Partner total eligible budget	207,781.25	100.00 %

Origin of partner contribution

Source of contribution	Legal status of contribution	Amount	% of total partner budget
PVF	Private	51,945.32	25.00 %

Total

Sub-total public contribution	0.00	0.00 %
Sub-total automatic public contribution	0.00	0.00 %
Sub-total private contribution	51,945.32	25.00 %
Total	51,945.32	25.00 %

B.1 Project Partner 6	
Partner number	6
Partner role	PP
Name of the Organization in original language	Città Metropolitana di Torino
Name of the Organization in English	Turin Metropolitan City
Organisation abbreviation	CMT
Department / unit / division	Territory, building and road department management
Partner main address	
Country	Italia (IT)
NUTS 2	Piemonte (ITC1)
NUTS 3	Torino (ITC11)
Street, House number, Postal code, City	Corso Inghilterra 7 10038 Torino
Homepage	http://www.cittametropolitana.torino.it/cms/
Address of department / unit / division (if applicable)	
Country	Italia (IT)
NUTS 2	Piemonte (ITC1)
NUTS 3	Torino (ITC11)
Street, House number, Postal code, City	Corso Inghilterra 7 10038 Torino
Legal and financial information	
Type of partner	Local public authority
Legal status	Public
VAT number (if applicable)	IT 01907990012
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No

Contact

Legal representative	Deputy Councilor Jacopo Suppo
Contact person	Giuseppe Estivo
Email	Giuseppe.estivo@cittametropolitana.torino.it
Telephone no.	00390118616862

Motivation

Which are the partner's thematic competences and experiences relevant for the project? What are the institutional role and policy addressing capacity of the partner?

Please indicate with which thematic/institutional/policy related competences and experiences the partner organisation can contribute to the project.

CMT oversees the city's public transport service, which includes the metro, the suburban railway, and 180 bus lines. Through a shared ownership of public transport companies with the Piedmont Region, they have jointly obtained funds from the National Resilience Plan for H2 infrastructure development to produce green H2, build H2 refuelling stations for both commercial and public transport heavy duty vehicles, introduce H2-powered trains, and convert selected railway lines to H2.

What is the partner's role and responsibility in the project? / OPTIONAL: Is the involvement of observers foreseen and is there any specific information you would like to share on their involvement? Please outline briefly the role of the partner in the project (WP, activities). Is the organisation performing any economic activity within the project or as a result of it? This information is only required for project partners implementing activities such as provision of services – this information will be used to assess potential state aid relevance. You can mention here the most relevant observer (s) for the partner and the role of the observer(s) in the project. This information will not be subject to the assessment of the project proposal.

CMT will lead A1.5 and provide guidance for the development of a planning tool that will facilitate the joint design of green H2 mobility infrastructure. Additionally, CMT will compile the experts' recommendations, developed in the course of the workshop (organized by CMT), for improving the tool's prototype version. CMT will also organize a capacity building workshop with stakeholders (A3.3) and a matchmaking workshop with businesses of the green H2 value chain (A3.4).

OBSERVERS

IVECO is a leading HDV manufacturer currently transitioning to H2 vehicles (member of H2Accelerate and Hydrogen Europe). Iren, an energy and electricity provider, is building an H2 plant (EVERYWH2ERE project). PUNCH Hydrocells (Hydrogen Europe member) develops H2-based propulsion and energy storage systems. All 3 will offer technical insights on planning requirements for H2 routes; IVECO and PUNCH Hydrocells will directly support H2 mobility ecosystem development (WP3).

If applicable and relevant, please describe the organisation's experience in participating in and/or managing EU co-financed projects. Please mention here the most recent and relevant experiences, especially in Interreg projects.

Motivation

Mobility has been a major focus of CMT. Over the last programming period (2014-2020), the organization has participated in 5 mobility-related EU-funded projects, thereby gaining valuable experience in EU project implementation and expertise in sustainable mobility. In particular, CMT has led three Interreg ALCOTRA projects (Co&Go, Graies MobiLab, Cuore delle Alpi Mobilita), and participated in an Interreg Alpine Space project (LinkingAlps) and an Interreg Central Europe project (SOLEZ).

Co-financing

Source	Amount	Percentage
ERDF	136,155.00	75.00 %
Partner contribution	45,385.00	25.00 %
Partner total eligible budget	181,540.00	100.00 %

Origin of partner contribution

Source of contribution	Legal status of contribution	Amount	% of total partner budget
CMT	Public	0.00	0.00 %
Fondo di rotazione nazionale	Automatic Public	45,385.00	25.00 %

Total

Sub-total public contribution	0.00	0.00 %
Sub-total automatic public contribution	45,385.00	25.00 %
Sub-total private contribution	0.00	0.00 %
Total	45,385.00	25.00 %

B.1 Project Partner 7	
Partner number	7
Partner role	PP
Name of the Organization in original language	Strategische Partner – Klimaschutz am Oberrhein e. V.
Name of the Organization in English	Climate Partner Upper Rhine Valley
Organisation abbreviation	KPO
Department / unit / division	
Partner main address	
Country	Deutschland (DE)
NUTS 2	Freiburg (DE13)
NUTS 3	Freiburg im Breisgau, Stadtkreis (DE131)
Street, House number, Postal code, City	Hanferstraße 6 79108 Freiburg
Homepage	www.klimaschutz-oberrhein.de
Address of department / unit / division (if applicable)	
Country	
NUTS 2	
NUTS 3	
Street, House number, Postal code, City	
Legal and financial information	
Type of partner	Interest groups including NGOs
Legal status	Private
VAT number (if applicable)	Steuernummer: 06470/19352
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No

Contact

Legal representative	Dr. Fabian Burggraf
Contact person	Dr. Fabian Burggraf
Email	Fabian.burggraf@klimaschutz-oberrhein.de
Telephone no.	0049076115109821

Motivation

Which are the partner's thematic competences and experiences relevant for the project? What are the institutional role and policy addressing capacity of the partner?

Please indicate with which thematic/institutional/policy related competences and experiences the partner organisation can contribute to the project.

KPO is an NGO consisting of 130 members (30 public authorities, 10 R&D institutes, 90 industry partners) responsible for Upper Rhine valley's sustainable development and climate protection, with direct access to policymakers (regional government & mayors participate in the board). It is currently developing territorial solutions for green H2 roll-out (incl. generation, storage, transport) in collaboration with the Fraunhofer Institute (ISE) & the German Hydrogen and Fuel Cell Association (DWV).

What is the partner's role and responsibility in the project? / OPTIONAL: Is the involvement of observers foreseen and is there any specific information you would like to share on their involvement? Please outline briefly the role of the partner in the project (WP, activities). Is the organisation performing any economic activity within the project or as a result of it? This information is only required for project partners implementing activities such as provision of services – this information will be used to assess potential state aid relevance. You can mention here the most relevant observer (s) for the partner and the role of the observer(s) in the project. This information will not be subject to the assessment of the project proposal.

KPO will employ its expertise in policy making and green economy to identify an optimal governance model for monitoring and coordinating planning efforts (A3.1). KPO will lead Activity 3.3; it will organize a regional workshop with stakeholders and compile the lessons learned, based on the results of all the A3.3 workshops, to facilitate exchange of experience between the partnership. Finally, KPO will organize a matchmaking workshop with businesses in the green H2 value chain (A3.4).

OBSERVERS

DWV, the German H2 and fuel cell association (Hydrogen Europe member), is an umbrella organisation for H2 value chain actors. The Regional Association Southern Upper Rhine (RSO) represents 126 municipalities and promotes sustainable mobility (Mobility pact Lahr) and H2 technologies (H2-SO project). All will diffuse pilot results to their stakeholders and will also engage local actors (public authorities, businesses) to facilitate the emergence of regional H2 ecosystems.

If applicable and relevant, please describe the organisation's experience in participating in and/or managing EU co-financed projects. Please mention here the most recent and relevant experiences, especially in Interreg projects.

Motivation

KPO has considerable experience in EU-funded projects, implemented at a national level. KPO participated in the 'H2-SO Hydrogen technologies in the southern Upper Rhine' project, which involved technical demonstrations to identify obstacles for the proliferation of H2 technologies. KPO has also participated in the KEFF (Competence-Center for Energy Efficiency) project and the InnoEFF project, involving the establishment of an innovation and efficiency cluster to promote energy efficiency.

Co-financing

Source	Amount	Percentage
ERDF	162,599.06	75.00 %
Partner contribution	54,199.69	25.00 %
Partner total eligible budget	216,798.75	100.00 %

Origin of partner contribution

Source of contribution	Legal status of contribution	Amount	% of total partner budget
KPO	Private	54,199.69	25.00 %

Total

Sub-total public contribution	0.00	0.00 %
Sub-total automatic public contribution	0.00	0.00 %
Sub-total private contribution	54,199.69	25.00 %
Total	54,199.69	25.00 %

B.1 Project Partner 8	
Partner number	8
Partner role	PP
Name of the Organization in original language	4ward Energy Research GmbH
Name of the Organization in English	4ward Energy Research Ltd
Organisation abbreviation	4ER
Department / unit / division	
Partner main address	
Country	Österreich (AT)
NUTS 2	Steiermark (AT22)
NUTS 3	Graz (AT221)
Street, House number, Postal code, City	Reininghausstrasse 13A 8020 Graz
Homepage	www.4wardenergy.at
Address of department / unit / division (if applicable)	
Country	
NUTS 2	
NUTS 3	
Street, House number, Postal code, City	
Legal and financial information	
Type of partner	Higher education and research organisations
Legal status	Private
VAT number (if applicable)	ATU65912989
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	Yes
Contact	
Legal representative	Alois Kraussler

Contact

Contact person	Alois Kraussler
Email	alois.kraussler@4wardenergy.at
Telephone no.	004366488500339

Motivation

Which are the partner's thematic competences and experiences relevant for the project? What are the institutional role and policy addressing capacity of the partner?

Please indicate with which thematic/institutional/policy related competences and experiences the partner organisation can contribute to the project.

4ER is a research institution providing regional, national, and international public authorities and businesses with innovation and management solutions regarding energy technologies. It has extensive experience in project implementation, being involved in >150 relevant projects, and a broad thematic expertise, spanning H2 production and system integration, microgrids, energy economics, demand side management, as well as business and operation models for intelligent energy systems.

What is the partner's role and responsibility in the project? / OPTIONAL: Is the involvement of observers foreseen and is there any specific information you would like to share on their involvement? Please outline briefly the role of the partner in the project (WP, activities). Is the organisation performing any economic activity within the project or as a result of it? This information is only required for project partners implementing activities such as provision of services – this information will be used to assess potential state aid relevance. You can mention here the most relevant observer (s) for the partner and the role of the observer(s) in the project. This information will not be subject to the assessment of the project proposal.

4ER will lead A3.4 and will organize a match-making workshop with businesses in the green H2 value chain; it will also present the lessons learnt from all regional workshops to facilitate capacity building among partners. In A2.4, 4ER will contribute to the evaluation of pilot testing H2 mobility plans by preparing a comparative analysis (incl. lessons learned) of the results of the pilot tests. 4ER will also organize a capacity building workshop with stakeholders (A3.3).

OBSERVERS

AustriaTech is a public agency promoting innovative mobility solutions, a subsidiary of the Ministry of Climate Action and Energy (BMK). Land Carinthia (AG4 member) plans to modernise its bus fleet with 40 new H2 buses ('H2 Carinthia' project). Both will ensure compliance of H2MA planning with national and regional H2 strategies in the transport sector, and they will facilitate the adoption of A1.6 recommendations. Hydrogen Europe members ANDRITZ and AVL List will participate in LWG.

If applicable and relevant, please describe the organisation's experience in participating in and/or managing EU co-financed projects. Please mention here the most recent and relevant experiences, especially in Interreg projects.

Motivation

4ER has extensive experience in EU/national projects, including various projects on sustainable mobility. In terms of EU projects, 4ER has participated, inter alia, in projects on sustainable mobility (E-mobility in the Muerztal-Mariazellerland), RES uptake (ALPGRIDS, R2EC), energy storage and management (Store4HUC) and environmental protection (E&C Toolbox), through which 4ER has acquired thematic knowledge (incl. designing infrastructure network) that will be utilized in the context of H2MA.

Co-financing

Source	Amount	Percentage
ERDF	158,981.01	75.00 %
Partner contribution	52,993.67	25.00 %
Partner total eligible budget	211,974.68	100.00 %

Origin of partner contribution

Source of contribution	Legal status of contribution	Amount	% of total partner budget
4ER	Private	52,993.67	25.00 %

Total

Sub-total public contribution	0.00	0.00 %
Sub-total automatic public contribution	0.00	0.00 %
Sub-total private contribution	52,993.67	25.00 %
Total	52,993.67	25.00 %

B.1 Project Partner 9	
Partner number	9
Partner role	PP
Name of the Organization in original language	Regione Lombardia
Name of the Organization in English	Lombardy Region
Organisation abbreviation	RL
Department / unit / division	Environment and Climate Department
Partner main address	
Country	Italia (IT)
NUTS 2	Lombardia (ITC4)
NUTS 3	Milano (ITC4C)
Street, House number, Postal code, City	Piazza Città di Lombardia 1 20124 Milan
Homepage	https://www.regione.lombardia.it/wps/portal/istituzionale
Address of department / unit / division (if applicable)	
Country	Italia (IT)
NUTS 2	Lombardia (ITC4)
NUTS 3	Milano (ITC4C)
Street, House number, Postal code, City	Piazza Città di Lombardia 1 20124 Milan
Legal and financial information	
Type of partner	Regional public authority
Legal status	Public
VAT number (if applicable)	Codice fiscale: 80050050154
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	No

Contact

Legal representative	Dario Fossati
Contact person	Gian Luca Gurrieri
Email	gian_luca_gurrieri@regione.lombardia.it
Telephone no.	00390267655461

Motivation

Which are the partner's thematic competences and experiences relevant for the project? What are the institutional role and policy addressing capacity of the partner?

Please indicate with which thematic/institutional/policy related competences and experiences the partner organisation can contribute to the project.

RL, a regional coordinator of EUSALP and an AG9 and AG4 member, oversees key transportation corridors in the Alpine area and the development of a hydrogen valley in Valcamonica, to promote, inter alia, H2 mobility. Thus, RL is coordinating the development of green H2 infrastructure for a) H2-powered rail transport along the Brescia-Iseo-Edolo route (H2iseO project) b) 40 local public transport vehicles and freight logistics, and c) H2-powered airport logistics and aircrafts in Malpensa Airport.

What is the partner's role and responsibility in the project? / OPTIONAL: Is the involvement of observers foreseen and is there any specific information you would like to share on their involvement? Please outline briefly the role of the partner in the project (WP, activities). Is the organisation performing any economic activity within the project or as a result of it? This information is only required for project partners implementing activities such as provision of services – this information will be used to assess potential state aid relevance. You can mention here the most relevant observer (s) for the partner and the role of the observer(s) in the project. This information will not be subject to the assessment of the project proposal.

RL will co-lead A1.5, developing a tool for jointly planning green H2 mobility infrastructure. RL will lead A1.6 and employ its experience in the development of the regional H2 infrastructure to prepare a report on the expected impact from the incorporation of the recommendations in the H2 strategies. RL will also organize a capacity building workshop with stakeholders (A3.3) and a matchmaking workshop with businesses (A3.4).

OBSERVERS

Friuli Venezia Giulia, member of EUSALP AG4, is a pioneer EU region in green H2, as the co-developer (with SI and HR) of a transnational H2 ecosystem ('North Adriatic H2 Valley'). It will assist RL to develop and implement updates in its upcoming territorial H2 strategy (A1.6) and will uptake H2MA results for the purposes of its H2 valley. SNAM, Seicos, H2 ENERGY SRL (regional Hydrogen Europe members) will be involved in LWG, to assist in post-project H2 ecosystem development.

If applicable and relevant, please describe the organisation's experience in participating in and/or managing EU co-financed projects. Please mention here the most recent and relevant experiences, especially in Interreg projects.

Motivation

Through its participation in various EU projects, RL has built its capacities in a number of areas (incl. sustainable mobility and sustainable economy) relevant to H2MA. It has participated in 4 Interreg Alpine Space projects, AlpGov2 (lead partner), GRETA, E-MOTICON and The4Bees, along with numerous other EU-funded projects. Indicatively, RL has participated in Interreg Europe (CircE (lead partner), GPP4Growth, PLASTEKO), H2020 (SCREEN) and LIFE (ETA-BETA, PREFER) projects.

Co-financing

Source	Amount	Percentage
ERDF	131,250.00	75.00 %
Partner contribution	43,750.00	25.00 %
Partner total eligible budget	175,000.00	100.00 %

Origin of partner contribution

Source of contribution	Legal status of contribution	Amount	% of total partner budget
RL	Public	0.00	0.00 %
Fondo di rotazione nazionale	Automatic Public	43,750.00	25.00 %

Total

Sub-total public contribution	0.00	0.00 %
Sub-total automatic public contribution	43,750.00	25.00 %
Sub-total private contribution	0.00	0.00 %
Total	43,750.00	25.00 %

B.1 Project Partner 10	
Partner number	10
Partner role	PP
Name of the Organization in original language	Codognotto Austria GmbH
Name of the Organization in English	Codognotto Austria
Organisation abbreviation	COD
Department / unit / division	
Partner main address	
Country	Österreich (AT)
NUTS 2	Wien (AT13)
NUTS 3	Wien (AT130)
Street, House number, Postal code, City	Am Tabor 36 1020 Vienna
Homepage	http://www.codognotto.eu
Address of department / unit / division (if applicable)	
Country	
NUTS 2	
NUTS 3	
Street, House number, Postal code, City	
Legal and financial information	
Type of partner	SME
Legal status	Private
VAT number (if applicable)	ATU64785511
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	Yes
Contact	
Legal representative	Szymon Pyzik

Contact

Contact person	Matteo Codognotto
Email	matteo.codognotto@codognotto.com
Telephone no.	+390422744609

Motivation

Which are the partner's thematic competences and experiences relevant for the project? What are the institutional role and policy addressing capacity of the partner?

Please indicate with which thematic/institutional/policy related competences and experiences the partner organisation can contribute to the project.

COD is a logistics supplier and operator company heavily invested in sustainable transport, with nearly 2,000 trucks in operation, 1000 professionals in staff, and 50 offices located in more than 20 countries. It has collaborated and provided services to key stakeholders from the European transport industry, and is one of the main drivers of innovation and sustainability in the sector, aiming to completely decarbonise its fleet and operations, introducing H2 trucks in Alpine roads.

What is the partner's role and responsibility in the project? / OPTIONAL: Is the involvement of observers foreseen and is there any specific information you would like to share on their involvement? Please outline briefly the role of the partner in the project (WP, activities). Is the organisation performing any economic activity within the project or as a result of it? This information is only required for project partners implementing activities such as provision of services – this information will be used to assess potential state aid relevance. You can mention here the most relevant observer (s) for the partner and the role of the observer(s) in the project. This information will not be subject to the assessment of the project proposal.

COD will utilize its expertise in logistics and infrastructure network design to prepare key capacity building deliverables. In A2.1, COD will develop training resources for local stakeholders to facilitate their participation in the pilot tests. In A3.2, COD will identify enablers and barriers for the growth of green H2 value chains in Alpine area. COD will organize (with 4ER) a capacity building workshop with stakeholders (A3.3) and organize a matchmaking workshop with businesses (A3.4).

OBSERVERS

Stadt Graz has made concerted efforts to green its urban transportation. In the context of the move2zero project, a comprehensive implementation and deployment plan for the decarbonisation of the bus network is developed, including a demonstration phase utilising 7 H2 buses. Graz will utilize project results (e.g. planning tool) in local policy making and will pursue, along with Carinthia and AustriaTech, the incorporation of project's recommendations into the national H2 strategies.

If applicable and relevant, please describe the organisation's experience in participating in and/or managing EU co-financed projects. Please mention here the most recent and relevant experiences, especially in Interreg projects.

Motivation

COD has participated in several EU-funded projects, primarily in the areas of transportation, mobility and logistics, through which it has gained thematically relevant insights, to be transferred to the rest of the partnership and incorporated in the project results. Indicatively, COD has participated in the following mobility/logistics projects: e-SMART (Interreg Alpine Space), LOGISTAR (H2020), MultiAPPRO (Interreg ADRION), TALKNET (Interreg Central Europe), LNG BLUE CORRIDORS (H2020).

Co-financing

Source	Amount	Percentage
ERDF	142,537.50	75.00 %
Partner contribution	47,512.50	25.00 %
Partner total eligible budget	190,050.00	100.00 %

Origin of partner contribution

Source of contribution	Legal status of contribution	Amount	% of total partner budget
COD	Private	47,512.50	25.00 %

Total

Sub-total public contribution	0.00	0.00 %
Sub-total automatic public contribution	0.00	0.00 %
Sub-total private contribution	47,512.50	25.00 %
Total	47,512.50	25.00 %

B.1 Project Partner 11	
Partner number	11
Partner role	PP
Name of the Organization in original language	Italienische Handelskammer München-Stuttgart
Name of the Organization in English	Italian German Chamber of Commerce Munich-Stuttgart
Organisation abbreviation	ITALCAM
Department / unit / division	European & Special Projects
Partner main address	
Country	Deutschland (DE)
NUTS 2	Oberbayern (DE21)
NUTS 3	München, Kreisfreie Stadt (DE212)
Street, House number, Postal code, City	Landaubogen 10 81373 Munich
Homepage	www.itacldcam.de
Address of department / unit / division (if applicable)	
Country	Deutschland (DE)
NUTS 2	Oberbayern (DE21)
NUTS 3	München, Kreisfreie Stadt (DE212)
Street, House number, Postal code, City	Landaubogen 10 81373 Munich
Legal and financial information	
Type of partner	Business support organisation
Legal status	Private
VAT number (if applicable)	DE129517078
Is your organisation entitled to recover VAT based on national legislation for the activities implemented in the project?	Yes

Contact

Legal representative	Annamaria Andretta
Contact person	Martina Agosti
Email	agosti@italcam.de
Telephone no.	0049-89-96166172

Motivation

Which are the partner's thematic competences and experiences relevant for the project? What are the institutional role and policy addressing capacity of the partner?

Please indicate with which thematic/institutional/policy related competences and experiences the partner organisation can contribute to the project.

ITALCAM, a cross-border Chamber of Commerce, facilitates collaboration between German and Italian businesses, utilising its extensive business network to organize international B2B meetings and capacity building events. Its main priorities include the promotion of initiatives in the areas of sustainable mobility and commercial transport, digitalization, and innovative start-ups. In addition, ITALCAM has organised seminars on the energy transition and participated in a number of relevant projects.

What is the partner's role and responsibility in the project? / OPTIONAL: Is the involvement of observers foreseen and is there any specific information you would like to share on their involvement? Please outline briefly the role of the partner in the project (WP, activities). Is the organisation performing any economic activity within the project or as a result of it? This information is only required for project partners implementing activities such as provision of services – this information will be used to assess potential state aid relevance. You can mention here the most relevant observer (s) for the partner and the role of the observer(s) in the project. This information will not be subject to the assessment of the project proposal.

ITALCAM will co-lead A1.2, organising a study visit on employing green H2 in freight transportation. It will lead A3.1, developing capitalisation resources for the adoption of the project approach in green H2 mobility planning and provide a methodology for the identification of market maturity and trends in H2 mobility (A1.4). It will organize a capacity building workshop with stakeholders (A3.3) and a matchmaking workshop with businesses (A3.4).

OBSERVERS

Bavarian Hydrogen Center, a coordinator of key H2 initiatives (incl. Hydrogen Alliance Bavaria), will aid in developing the A1.6 recommendations. E-Mobil BW, a state agency promoting innovative sustainable mobility, will aid in WP1 planning tool and promote the matchmaking workshop in DE. Bayernhafen, which operates 6 ports in Bavaria, will valorise H2MA results to introduce H2 solutions in port logistics. LBST and FuelCell Energy (Hydrogen Europe members) will participate in LWG.

Motivation

If applicable and relevant, please describe the organisation's experience in participating in and/or managing EU co-financed projects. Please mention here the most recent and relevant experiences, especially in Interreg projects.

In addition to its proven expertise in facilitating international cooperation, ITALCAM has extensive experience in EU-funded projects, having led and/or participated in 14 projects.; these cover a broad thematic range, with the thematically most relevant to H2MA being the following:
 Sustainable mobility: e-SMART (Interreg Alpine Space), TalkNET (Interreg Central Europe)
 Business innovation in the Alps: BIFOCAlps project (Interreg Alpine Space), BE-READI ALPS (Interreg Alpine Space)

Co-financing

Source	Amount	Percentage
ERDF	163,275.00	75.00 %
Partner contribution	54,425.00	25.00 %
Partner total eligible budget	217,700.00	100.00 %

Origin of partner contribution

Source of contribution	Legal status of contribution	Amount	% of total partner budget
ITALCAM	Private	54,425.00	25.00 %

Total

Sub-total public contribution	0.00	0.00 %
Sub-total automatic public contribution	0.00	0.00 %
Sub-total private contribution	54,425.00	25.00 %
Total	54,425.00	25.00 %

C - Project description

C.1 Project overall objective

Below, you can see the Programme priority specific objective your project will contribute to (chosen in section A.1.).

SO 2.1: Promoting energy efficiency and reducing greenhouse gas emissions

Project overall objective

Now think about your main objective - what do you aim to achieve by the end of your project? Remember: your project needs to contribute to one programme objective.

Your objective should:

- be realistic and achievable by the end of the project, or shortly after;
- specify who needs project results and in which territory;
- be measurable - indicate the change you are aiming for.

Make sure to provide a clear, concise description of the project overall objective. Explain its contribution to the Programme priority specific objective you have selected in the section A.1.

H2MA will coordinate and advance the infrastructure roll-out for green hydrogen mobility across the Alpine region, to curb GHG emissions from freight and public transportation. It will establish transnational collaboration mechanisms and increase the capacities of territorial public authorities and stakeholders (incl. energy and transport agencies, H2 infrastructure providers, RES producers) to jointly plan and pilot test transalpine zero-emission 'green H2 routes' and urban mobility solutions.

C.2 Project relevance and context

C.2.1 What are the common territorial challenge and/or joint assets that will be tackled by the project?

Please describe the need for and relevance of the project for the alpine area in terms of common challenges and/or opportunities addressed. Be precise and focus on the specific issues tackled by your project.

CHALLENGE

Heavy-Duty Transportation (HDT) is a major contributor to Alpine GHG emissions, causing, on top of that, air and noise pollution. Green H2 represents a highly promising decarbonisation pathway for hard-to-electrify HDT (e.g., trucks and buses); for example, the EC plans for ~60,000 Heavy-Duty Vehicles (HDVs) until 2030 [1].

However, to realise the full potential of green H2, Alpine public authorities and stakeholders lack a) policy know-how and tested solutions for facilitating uptake in commercial and urban mobility, b) resources to coordinate and build a critical mass out of siloed initiatives, c) capacities to synergise with businesses for achieving economies of scale that will drive down costs and ensure ecosystems' sustainability. For this reason, they stand to benefit from H2MA's joint approach on infrastructure planning.

ISSUES TACKLED

H2MA will enhance partners and target groups' capacities to:

1. Streamline and coordinate territorial H2 roll-out plans for both commercial/transnational and urban HDT, to promote an integrated approach to supply and distribution planning and build a critical mass for further business development.
2. Design measures to connect H2 production for mobility with renewables, to facilitate the planning of transalpine zero-emission routes for HDVs.
3. Propose areas of harmonisation between H2 Alpine strategies on green mobility, to improve existing policy frameworks.

1-Study on Fuel Cells H2 Trucks, Fuel Cells&H2 Joint Undertaking

C.2.2 How does the project tackle identified common challenges and/or opportunities and what is new about the approach the project takes?

If your project is a “setting-the-scene” project, please put a specific focus on that question and the innovative character of your project. For “roll-out”/“capitalisation” projects, your answer may rather focus on the first part of this question and may not be extensive. Please describe innovative solutions that will be developed during the project and/or existing solutions that will be adapted and implemented during the project lifetime. In addition, please describe in what way the approach goes beyond existing practices in the sector/programme area/participating countries. Please sketch out the main activities, which shall lead to your project result.

JOINT INTEGRATED APPROACH

H2MA will offer novel planning and implementation solutions to coordinate the development of Alpine green H2 mobility; its competitive advantage is the integration of transnational infrastructure planning with urban installations for trucks and trains (already existing in DE, FR, AT, IT participating territories), thus creating economies of scale and strengthening the case for green H2 deployment through commercial applications. H2MA results will also build upon and upscale partners’ H2 roll-out initiatives (upcoming refuelling stations for HDVs; H2 production & storage; trains & planes in IT; ships in FR) in tandem with Alpine space’s existing green energy capacities, employing these for decarbonising transnational heavy-duty mobility.

ACTIVITIES

Partners will survey current infrastructure gaps and business development barriers, conduct study visits, and carry out joint studies for developing a planning tool for common H2 mobility roll-out. They will develop ‘Transalpine green H2 routes’ in joint workshops, working with target groups and observers in Local Working Groups; pilots will be used to validate proposed changes to current H2 mobility plans (territorial/national). Transferability and policy resources will be developed for further infrastructure roll-out and policy harmonisation, amplifying H2MA results with workshops for policy makers to build capacities, and matchmaking events with businesses to unlock investments and partnerships.

C.2.3 Why is transnational cooperation needed to achieve project objectives and results?

Please explain why the project objectives cannot be efficiently reached acting only on a national/regional /local level or cross-border. Describe what benefits the project partners/target groups/project area /programme area gain in taking a transnational approach. Transnational cooperation should exceed the mere exchange of experiences and should enable joint development of solutions and implementation.

Commercial routes by definition surpass national borders, and the deployment of H2 mobility solutions for freight and passenger transport requires coordinated transnational planning to avoid infrastructure redundancies and unnecessary spending. Additionally, building an investment case for H2 mobility and driving down costs for economic actors requires a critical mass beyond single regional or national markets.

Target groups will benefit from streamlining their H2 mobility activities, being not only responsible for the optimal placement of key H2 infrastructure nodes across Alpine road networks, but also for combining transnational routes with current/upcoming local H2 deployment (e.g., buses), as well as the integration of H2 with renewables.

Finally, H2MA focus on transnational cooperation will provide the entire cooperation area (i.e., beyond the partnership) with an enabling policy framework for transalpine green H2 mobility, as well as an accelerated roll-out of infrastructure.

C.2.4 Who will benefit from your project outputs?

In the first column of each row, please select one of the pre-defined target groups from the drop-down list (see annex 1). In the second column explain in more detail exactly who will benefit from your project and your direct target groups. For example, if you choose the category 'education', you need to explain which specific schools or groups of schools and in which territory or if the target group type selected is a 'sectoral agency', then specify the type: environmental, energy/local or regional etc. and in which territories. The programme is eager to reach as many target groups as possible with roll-out projects to ensure widest possible up-take. Therefore applicants are advised to cover larger parts of the programme area with their activities. A rather simple first step for the PP could be to act even stronger as multipliers, work across regions by opening invitations to events/activities offered by the project to neighboring regions that are not part of the partnership. For more information on roll-out projects please consult chapter A.3 of the programme manual.

Target Group	Specification
Local public authority	<p>Municipalities/communes:</p> <ul style="list-style-type: none"> -Across transalpine routes that also cover TEN-T Corridors & the 'EU H2 Backbone plan' (e.g., Marseille-Lyon-Mulhouse-Strasbourg-Metz; Basel-Mannheim-Vienna-Ljubljana-Lyon; Munich-Turin-Genova-Strasbourg) -With existing (e.g., Innsbruck, Bozen) and upcoming H2 mobility infrastructure plans (e.g. Venice) -With the potential to combine multiple H2 mobility uses (e.g., marine-road - train; Mulhouse, Genova, Milan) -Managing public transport services (e.g., Bologna, Graz)

Target Group	Specification
Regional public authority	<p>Regions and Regional departments:</p> <ul style="list-style-type: none"> -Hosting transalpine freight routes along TEN-T Corridors (e.g., Oberbayern, Zahodna Slovenija, Veneto) -With H2 mobility infrastructure & plans, incl. the 'EU H2 Backbone plan' (such as Auvergne-Rhone-Alps, Grand Est, Friuli Venezia Giulia, Freiburg, Salzburg) -Managing public transport infrastructure/services (e.g., Piedmont, Trento, Stuttgart) -Hosting/managing transit routes with heavy CO2 pollution; e.g., Bardonecchia (Piedmont), Haute-Savoie (Chamonix)
National public authority	<p>Ministries managing H2 Strategies and infrastructure roll-out, including:</p> <ul style="list-style-type: none"> -Ministry of the Economy and Finance (FR) -Ministry for Climate Protection, Environment, Energy, Mobility, Innovation and Technology (AT) -Ministry for Economic Affairs and Climate Action (DE) -Ministries of Infrastructure & of Environment and Spatial Planning (SI) -Ministry of Infrastructure and Transport (IT) -Swiss Federal Office of Energy <p>National H2 planning committees, such as the National H2 Council in FR & in DE</p>
Sectoral agency	<p>Regional and national agencies in Alpine space that are involved in green H2 mobility & RES infrastructure planning and development:</p> <ul style="list-style-type: none"> -Transport agencies, incl. Autorita di Regolazione dei Trasporti (IT), Agenzia della Lombardia Orientale per i Trasporti e la Logistica (IT), Bayerische Eisenbahngesellschaft (DE) -Infrastructure agencies, incl. SPIRIT Slovenia (SI), AFIT (FR)) -Energy agencies, incl. ADEME (FR), Österreichische Energieagentur (AT), ENEA (IT), Deutsche Energie-Agentur (DE)
Infrastructure and (public) service provider	<ul style="list-style-type: none"> -Providers of public transport services, such as bus (indicatively ATB, ASF Bus) and train operators (e.g., SNCF, Trenitalia, Deutsche Bahn) -Owners of mobility infrastructure; indicatively Egis (road), RFI, ÖBB (railway), Western Ligurian Sea Port Authority (port) -H2 infrastructure and service providers, including: electrolyser and fuel cells manufacturers, green H2 producers, system integrators, storage providers, mobility manufacturers, and operators of mobility infrastructure.
Business support organisation	<ul style="list-style-type: none"> -H2 and clean energy business clusters, associations, and innovation centres, such as: Hydrogen Europe (EU), German Hydrogen and Fuel Cell Association-DWV (DE), Italian Hydrogen and Fuel Cell Association (IT), France Hydrogène (FR), ZSIS/SIPLIN (SI) -Alpine H2 Valleys and initiatives, including: Zero Emission Valley-ZEV (FR), Hydrogen Valley South Tyrol (IT), HyBayern (DE), H2Rivers (DE), Association Wiva P&G-Hydrogen Initiative (AT)

Target Group	Specification
Higher education and research organisations	University and research institutions working on H2 solutions, clean energy integration and technologies, including: <ul style="list-style-type: none"> -Fraunhofer ISE (DE) -Munich Institute of Integrated Materials (DE) -Energy and Process Engineering, Technical University of Munich (DE) -National Agency for Research-ANR (FR) -Electric Power Research Institute (AT) -Institute for Innovative Technologies Bozen (IT) -Development Centre for Hydrogen Technologies (SI) -Jozef Stefan Institute (SI) -HyCenta National H2 Center (AT)
Enterprise, except SME	<ul style="list-style-type: none"> -Transport and logistics companies with HDV fleets, such as Ekol (IT), ExpoTrans (IT), Raben (DE), Rhenus (AT), Girtaka (FR), Logistics (FR), CEVA (FR), Jerseg (SI), Züst & Bachmeier Sa (CH), Transport Frangež D.O.O (SI) -H2 infrastructure providers, such as SNAM (IT), OGE (DE), H2Energy (CH), Agrola (CH), Pragma Industries (FR) -Operators of mobility infrastructure, such as HRS (FR), Proviridis (FR), Air Liquide (DE), Linde (AU, DE & IT), ENI (IT)
SME	SMEs: <ul style="list-style-type: none"> -Active in the H2 supply and distribution value chain, including electrolyser and fuel cells manufacturers, green H2 production, system integration, storage provision, mobility solutions manufacturing, mobility infrastructure operations -Owning HDV fleets (e.g., in transport and logistics)

C.2.5 How does the project contribute to wider strategies and policies?

Please indicate if your project contributes to EUSALP or any other relevant strategy(ies) (e.g. EU Green Deal, Territorial Agenda 2030, implementation of the Alpine Convention) by ticking the respective box. Then, please further specify and explain in what way you will contribute. Your project should contribute at least to one strategy but can also contribute to more than one strategy. Please make sure to describe the contribution to EUSALP in a clear and concrete manner (what is the contribution your project will make and how will it be made?). The contribution to EUSALP may not only be included in this section, but along the AF in all relevant sections and should be reflected in the work plan with clear descriptions of concrete activities. Please consult the EUSALP website (www.alpine-region.eu), its policy recommendations, as well as the action plan of actions groups to get a clear picture of possible synergies and the contribution your project could make to EUSALP.

Strategy	Contribution
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Strategy	Contribution
EU Strategy for the Alpine Region Strategy	H2MA contributes to the objectives of EUSALP Strategy Thematic Policy Areas 2: 'Mobility and Connectivity' and 3: 'Environment and Energy'. H2MA will ensure close cooperation with a) AG9 and the 'Green Hydrogen for the Alps' initiative and b) AG4 (under priority TA3-Smart and low-carbon mobility), with the aim to synergise and develop common strategies. The JS will act as a liaison with AG9 and AG4, and H2MA observers that are AG members will brief the LP on both AGs' workplan.
European Green Deal Strategy	H2MA is aligned with the EU Green Deal's 'Hydrogen Strategy' (COM(2020) 301 final - 8.7.2020) as it will play a crucial role in facilitating and pilot-testing policy solutions to streamline H2 infrastructure development in a key climate-threatened EU economic & transportation macro-region. To that end, the project will build critical mass for the scale up of H2 production and demand, as well as for clean energy from renewables, contributing to a climate-neutral and zero-emissions EU.
Territorial Agenda 2030 Strategy	H2MA tackles climate change in a sensitive EU macro-region, outlined as a key challenge in the EU Territorial Agenda 2030, and promoting at the same time the territorial priority 'Green Europe'. This is achieved by facilitating the introduction of clean energy in H2 mobility and the development of zero-emission transnational routes, thus coupling the societal transition to a climate-neutral economy with solutions to improve air and noise quality, mitigating climate change.
Other Strategy	H2MA will support the achievement of the Sustainable and Smart Mobility Strategy milestones, as it will contribute to a) the 30 million zero-emission vehicles goal in EU roads (2030), as well as b) the zero-emission heavy-duty vehicles goal (2050), by supporting the design of zero-emission routes and relevant infrastructure roll-out across a key EU transportation hub and GHG emissions producer, the Alpine region.
Other Strategy	H2MA will translate into action Alpine Convention's Climate Action Plan 2.0 and Alpine Climate Target System in the field of transport. By supporting the efforts to decarbonise commercial and urban HDVs, H2MA will specifically assist in realising Target 4 (Decarbonised transport fleet) through Pathways 1 and 3 (decarbonise freight & public transport); that way, the project also contributes to the "Sustainable transport" priority (2017-22 Programme) and Transport Protocol's first objective.
Other Strategy	H2MA is aligned with the 'Alternative Fuels Infrastructure Regulation' (under review; to replace the older Alternative Fuels Infrastructure Directive) of the 'Fit for 55' package (COM(2021)550 final). The project, by coordinating the transnational infrastructure roll-out of green H2 in the Alpine region for heavy-duty transportation, will contribute to achieving the accelerated infrastructure roll-out targets envisioned by the Regulation until 2030 (as it stands by February 2022).

Strategy	Contribution
Other Strategy	Slovenia is on track to develop its National H2 Strategy in 2022/23, which is expected to dictate that 7% of fuel consumption, particularly in the transport sector, can be met by green H2 until 2040. KSSENA participated in the strategy's drafting working group as technical partner; in this capacity, it will employ H2MA's planning approach and knowledge to suggest a) optimal infrastructure roll-out for transalpine routes, and b) H2 ecosystem development pathways for coal-dependent regions.
Other Strategy	The 'Action plan on Alternative Fuels Infrastructure' (2019) of the Slovenian Ministry of Infrastructure prescribes H2 infrastructure roll-out, under Directive 2014/94/EU (transposed in 2017). KSSENA cooperates directly with the Ministry's working group that monitors and yearly revises the plan's measures; KSSENA will improve 2022-24 planning by proposing a) increased deployment targets for H2 infrastructure, b) coordination with Alpine countries, and c) green H2 quotas in the transport sector.
Other Strategy	The Regional Development Programme (RDP) of Gorenjska 2021-2027 includes measures and investments to promote alternative fuels infrastructure (under Objective 6.5 'Green Connected Gorenjska'; Measure 6.5.1 'Introduction of smart mobility modes on alternative fuel sources'). BSC is the author and managing authority of the RDP; H2MA knowledge will enable BSC to establish a Regional Mobility Centre and steer RDP funds towards projects that promote green H2 refuelling infrastructure.
Other Strategy	Austria's H2 Strategy (2022) de-prioritises H2 transport applications. 4ER, as a research partner and consultant to the Ministry of Environment (BMK), will use H2MA knowledge and pilot results to suggest the re-prioritisation of green H2 for mobility in the strategy's upcoming 2023 consultation. Also, policy and governmental observers (BMK, Land Carinthia, AustriaTech) will safeguard that H2MA plans and A1.6 recommendations for Austria comply with both national and regional H2 strategies and infrastructure plans for the transport sector.
Other Strategy	The Strasbourg Climate Plan 2030 (2020) outlines measures to promote the development of an infrastructure network for H2 mobility and relevant technological innovations, under Priorities 1.2 "Improve air quality for all" and 1.2 "Promoting sustainable mobility". Through H2MA, EMS, the owner and implementer of the Plan, will improve its knowledge on how to coordinate the territorial H2 roll-out and achieve 2023 targets, creating synergies between HDV and port H2 refuelling infrastructure.
Other Strategy	Baden-Württemberg adopted a H2 Roadmap (2020), in which the creation of refuelling network and introduction of H2-powered HDVs in public and commercial transportation feature prominently. KPO will valorise H2MA resources and pilot experience to a) coordinate H2 infrastructure roll-out in tandem with the ongoing H2-SO project (mapping regional H2 demand in mobility, funded by Baden-Württemberg Ministry of the Environment) and b) accelerate local business ecosystem development.

Strategy	Contribution
Other Strategy	PVF was one of the primary authors of the Bourgogne-Franche-Comté H2 Roadmap (2019) and participates in its monitoring (as the Region's thematic expert). Drawing from the H2MA experience and planning approach, PVF will a) provide suggestions on how to streamline the regional investment planning under a transalpine angle, and b) suggest revisions to the Roadmap's sections 4 ('Mobility uses') on H2 infrastructure combinations for trains and HDVs.
Other Strategy	PVF was one of the primary authors of the Grand Est H2 2020-2030 Strategy (2020) and participates in its monitoring (as the Region's thematic expert). Based on H2MA pilot results and resources, PVF will aim to steer the Strategy's implementation towards a) widening green H2 mobility applications, promoting the coordinated infrastructure roll-out for HDVs, trains, and ships, and b) securing the growth of relevant business ecosystems, by identifying and encouraging public-private synergies.
Other Strategy	CMT is in the process of drafting an Urban Logistics Plan (to be finalised in 2023), which will feature H2 as a decarbonisation solution for mobility and industry. As its main author and implementer of the Plan, CMT will valorize H2MA resources, planning approach, and pilot results to a) fine-tune planning requirements for H2 mobility refueling infrastructure, b) promote the connection of H2 production and distribution ecosystems with renewable energy production.
Other Strategy	The Piedmont H2 Valley Protocol, a collaboration framework with the Italian government for the H2 roll-out in the region, aims to accelerate infrastructure development in the mobility sector and promote R&D efforts. Through its H2MA involvement, CMT, as a key actor in realizing the Protocol, will support it by a) streamlining and unlocking relevant investment opportunities (through WP3), b) improving the location planning of upcoming refuelling infrastructure (via WP1 resources and WP2 pilot).
Other Strategy	Lombardy Region is on track to develop a H2 Strategy in 2024, with particular reference to the mobility sector in the Alpine area. H2MA experience, resources, and pilot results will be integrated in the upcoming strategy in the following ways: a) WP2 pilot results will be used to plan infrastructure roll-out and set targets for refuelling stations, and b) the WP3 business development approach will be used as a model to set up the regional H2 mobility business ecosystem.
Other Strategy	Strasbourg, KPO, and PVF, in collaboration with regions, municipalities, and green H2 mobility actors across the river Rhine (within and beyond the Alpine space) are planning to initiate in 2023/4 an interregional H2 strategy to coordinate H2 port infrastructure. H2MA will function as the precursor to the envisioned pan-Rhine H2 strategy, which will aim to coordinate separate territorial H2 strategies, emphasizing interconnections with renewables, marine, and road transport.

C.2.6 Which synergies with past or current EU and other projects or initiatives will the project make use of?

Project or Initiative	Synergy
Clean Hydrogen Joint Undertaking	H2MA will draw from the Undertaking's (and its previous version, Fuel Cells & Hydrogen JU) pool of knowledge, through KSSENA's involvement with the 'Cities and Regions initiative', making use of its 'European Hydrogen Refuelling Station Availability System' and 'Observatory'. To that end, the project will make use of relevant project resources (e.g., h2-map.eu), to identify gaps in H2 infrastructure for transnational and urban heavy-duty transportation vis-à-vis territorial hydrogen strategies.
H2ME2	H2MA will a) synergise with H2ME2 partners located in the Alpine region so as to work together in WP2 Local Working Groups, as well as in WP3 matchmaking workshops, setting up a public-private collaboration framework; and b) take into account technical and supply chain solutions developed by H2ME2, as the project performed a large-scale market test of hydrogen refuelling infrastructure, passenger and commercial H2-powered vehicles across the EU.
E-SMART	H2MA will build upon the e-SMART project to develop its transnational cooperation approach. In particular, it will a) valorise the knowledge on transnational mobility planning acquired by partners BSC, PVF, COD who are common between the two projects, b) use the 'e-SMART Mobility Road Map' as complementary input for planning zero-emission H2 routes, and c) valorise the Smart Energy Toolkit when developing approaches for RES energy integration with H2 infrastructure.
e-Moticon	H2MA will build upon the e-Moticon project to develop its transnational cooperation approach. In particular, it will a) valorise the knowledge on transnational mobility and interoperability planning acquired by partners BSC, PVF, and RL, who are common between the two projects, and b) use the 'e-MOTICON' whitebook and guidelines on integrating infrastructure as input for planning zero-emission H2 routes.
DINAMHySE	DINAMHySE was launched in 2019 under the "Be Est Filières" call for projects, to drive and accelerate the development of an industrial hydrogen sector in the Grand Est region, FR. To that end, it will result in commissioning 10 stations powered by locally produced hydrogen, introducing 500 light utility vehicles and 20 HDVs, as well as the production of 9,000t of carbon-free H2. H2MA will take into account these H2 infrastructure network when designing zero-emission H2 commercial routes in WP2.
H2 REAL-WORLD LABORATORY BURGHAUSEN / CHEMDELTA BAVARIA	The Laboratory, in which ITALCAM's members actively participate, aims to become the nucleus of the Bavarian industrial H2 economy, planning to initiate H2 infrastructure for rail, heavy-duty and local public transport. H2MA will synergise with the Laboratory to a) jointly work in WP2 Local Working Groups and WP3 matchmaking workshops, setting up a public-private collaboration framework; b) take into account infrastructure solutions developed by the Laboratory.

Project or Initiative	Synergy
Hydrogen Valley in the SAŠA region	The Municipality of Velenje in Saleska valley aims to develop a hydrogen ecosystem, focusing on zero-emission public transport. The project, in which H2MA LP KSSENA is involved, will include the construction of a H2 refueling station, modernization of bus fleet with H2 HDVs and EVs, and upgrade of local H2 production facilities. H2MA will include the Municipality in WP2's Working Groups, using as input the local infrastructure plans.
ALPGOV 2	AlpGov 2, an EUSALP project led by RL, horizontally enhances the Strategy's governance structures and mechanisms, to mainstream policies and improve collaboration with stakeholders. H2MA will make use of a) AlpGov 2's innovative & integrated approach for governance when establishing Local Working Groups in WP2, especially as regards target groups' involvement, and b) the synergies mapped by AlpGov 2 between funding instruments and investments, to conduct matchmaking and develop WP3 resources.
H2iseO	H2iseo aims to achieve a H2-powered railway mobility and transform the region of Lombardy into the first Italian "hydrogen valley", with a RES district that includes production, storage, distribution, and consumption of H2. The project will make use of H2iseO by a) taking it into account when designing zero-emission H2 commercial routes in WP2, b) strengthen and extend the public-private collaborations that already exist, through WP2 Local Working Groups and WP3 matchmaking workshops.
SOLEZ	SOLEZ, an Interreg Central project, aimed to improve low-carbon mobility planning for cities, assisting in updating regional strategies and developing smart services around the concept of Low Emission Zones (LEZs) in urban areas. H2MA will capitalise the knowledge on low carbon mobility acquired by CMT, which was a project partner, and in particular it valorise SOLEZ' 'E-Bus Planning Tool' methodological approach and lessons learnt to develop the H2MA H2 route planning tool in WP1.
R-Hynoca	R-Hynoca, a joint venture between R-ENS and Haffner Energy, will produce clean H2 from locally sourced biomass and will provide refuelling services to the local transport industry. H2MA will valorise R-Hynoca by a) visiting the facility during WP1, to better understand planning requirements, b) involving the R-ENS and Haffner Energy into WP2's Local Working Group, as well as c) WP3's matchmaking workshops, to further develop green mobility collaborations in the Alpine Space.
UMOS	UMOS, an EIT Urban Mobility project, aims to develop a pan-European urban mobility operating system, to offer a one-stop platform for customized and optimised mobility. H2MA will capitalise on the knowledge on multi-modal mobility acquired by EMS, a project partner and EIT Urban Mobility core member, by using a) UMOS' business model as an example for WP3's matchmaking workshops and b) UMOS' methodological and lessons learnt to develop the H2MA route planning tool in WP1.

Project or Initiative	Synergy
EUSALP Action Group 9	H2MA will establish a two-way communication channel for synergies development with EUSALP Action Group 9, consolidated through RL (group member) and the Slovenian Ministry of Infrastructure (group member; KSSENA's observer), by involving AG9 leadership and members in A1.5, A2.3, and A3.3 meetings and events, to a) provide feedback on key activities, b) develop data sharing synergies with AG9 H2 studies, and c) integrate the H2MA transnational green H2 mobility masterplan in AG9 planning.
EUSALP Action Group 4	H2MA will establish two-way communication for synergising with EUSALP Action Group 4, consolidated through RL (group member) and several project observers (SI Ministry of Infrastructure, Carinthia, Friuli-Venezia Giulia), by involving AG4 leadership and members in A1.5, A2.3, and A3.3 meetings and events, to a) provide feedback on key activities, b) develop data sharing synergies for AG4 mobility studies, and c) integrate the H2MA transnational green H2 mobility masterplan in AG4 planning.

C.2.7 How does the project build on available knowledge?

Please describe the experiences/lessons learned that the project draws on and other available knowledge the project capitalises on as well as the added value of the project compared to the status quo in the field tackled by your proposal. This question may be of specific relevance if your project is a “roll-out”/“capitalisation” project. Please also explain how you intend to build on the knowledge of your “predecessor” project(s) and create synergies with them. For “setting-the-scene” projects that have not answered on question C.2.6 an explanation/justification for this should be included here too.

LESSONS LEARNT

H2MA builds upon EC's Clean Hydrogen JU [1] and EUSALP AG9 [2] studies documenting the merits of green H2 mobility as a pathway to decarbonise heavy-duty transportation and couple mobility with clean energy. In addition, H2MA consolidates the political commitment shown by Alpine regions to promote green H2 synergies in the field of mobility through the 'Green Hydrogen for the Alps' initiative, especially now that many project partners have working experience with H2 roll-out (studies & previous pilots for buses, trains, refuelling) and relevant technologies are maturing.

ADDED VALUE TO ALPINE TRANSPORTATION

H2MA will improve the competitiveness of Alpine road networks and will further support the growth of Alpine Space as a sustainable transportation hub. It will also make green H2 mobility an attractive investment case, contributing to a market and societal shift in Alpine HDV transportation.

- 1 Study on Fuel Cells Hydrogen Trucks
- 2 5th EUSALP Energy Conference

C.3 Project partnership

Please describe the structure of your partnership and summarise how the single partners will contribute to jointly implement the project and achieve the project objectives. Please explain how the relevant territory (namely the Alps and the peri-alpine area) will benefit from the participation of the single partners.

H2MA comprises 11 partners from SI, IT, DE, FR & AT; 3 public administrations (RL, CMT, EMS), 4 RDAs/business support organisations (KSSENA, BSC, ITALCAM, KPO), 2 research organisations (FLA, 4ER), a business cluster (PVF) and a logistics company (COD). Partners cover all aspects of planning and implementation pertaining to H2 deployment, thus benefiting the Alpine region with far-reaching and encompassing solutions.

JOINT IMPLEMENTATION

KSSENA, EMS & ITALCAM will survey H2 infrastructure gaps and set up joint planning mechanisms, assisted by CMT & RL; BSC & COD will provide pilot-testing resources. All partners will set up Local Working Groups, to jointly plan hydrogen mobility routes (guided by FLA); 4ER will lead the evaluation; all partners will recommend changes to their territorial H2 strategies. KPO & ITALCAM will develop a transferability toolbox and BSC policy resources, for all partners to organise workshops with policymakers (led by KPO) and businesses (led by PVF).

C.4 Project work plan

Number	Work package name
1	Joint strategic planning for green H2 mobility
2	Pilot testing green transalpine H2 mobility routes
3	Capitalisation and ecosystem development

Work package 1

Work package title

Joint strategic planning for green H2 mobility

Objectives

Your objectives should be:

- realistic and achievable by the end of the project;
- specific (who needs project outputs delivered in this work package and in which territory);
- measurable – indicate the change you are aiming for.

Define one project specific objective that will be achieved when all activities are implemented and outputs delivered.

WP1 develops and employs tools, resources and H2 maturity scenarios to jointly coordinate trans-Alpine green H2 infrastructure roll-out and design commercial and urban mobility routes; WP1 results will culminate in territorial H2 strategies updates.

Then think about the communication objective that will contribute to the achievement of the specific objective. Communication objectives aim at changes in a target audience's behaviour, knowledge or belief. Please define one or several communication objectives in relation with your project specific objective and your target audience. For example, it could be “raising awareness”, “influencing attitude”, “increasing knowledge” or “changing behaviour”, etc. We recommend defining SMART objectives: Specific, Measurable, Achievable, Relevant and Timed. Further recommendations are available in the Communication toolkit at www.alpine-space.eu.

WP1 will:

- Increase the knowledge and cooperation opportunities on green H2 mobility planning for target groups, primarily public authorities and agencies, transport and road service providers/SMEs, HRS contractors and operators, and H2 producers/infrastructure providers;
- Highlight the gaps for green H2 mobility infrastructure across the Alpine space and increase visibility for H2MA approach, aiming to influence policymakers (public authorities, agencies) to adopt H2MA planning solutions.

Activities

Activity 1.1	
Title	Mapping and analysis of Alpine space infrastructure gaps in green H2 mobility vis-a-vis upcoming plans for H2 roll-out in partnership territories
Start period	Period 1, 1 - 6

Activity 1.1	
End period	Period 1, 1 - 6
Description	Based on KSSENA's methodology, partners will map own territories' existing and planned H2 infrastructure (e.g., refueling, supply network) and compare it with the H2 mobility roll-out envisioned in EU/national/regional/local plans (e.g., 'EU hydrogen backbone' plan). KSSENA will analyse the data to identify infrastructure gaps, focusing on H2 production from renewables and refuelling stations, and highlight Alpine infrastructure gaps that impede commercial and urban green H2 mobility.

Deliverables 1.1			
Running number	Deliverable title	Description	Delivery period
D.1.1.1	Methodology and tools for mapping green H2 mobility infrastructure gaps in Alpine space	KSSENA will deliver a methodology with tools (questionnaire, KPIs, resources) and thematic instructions on how partners will collect territorial data regarding green H2 mobility infrastructure gaps.	Period 1 , 1 - 6
D.1.1.2	Final report on green H2 mobility infrastructure gaps in Alpine space	KSSENA will deliver a final report, presenting an analysis of the data collected from each partnership territory according to D1.1.1 methodology, outlining key Alpine infrastructure gaps and needs.	Period 1 , 1 - 6

Activity 1.2	
Title	Study visits on planning specifications and requirements for setting up green H2 mobility commercial and urban routes, to improve partners and stakeholders' coordination and implementation capacities
Start period	Period 1, 1 - 6
End period	Period 1, 1 - 6

Activity 1.2
Description

Based on EMS' guidelines, partners, stakeholders and observers will visit HRS infrastructures in Strasbourg (organised by EMS & PVF) and Bavaria (organised by ITALCAM), to gain hands-on knowledge on planning requirements needed for integrating green H2 production in a) urban transportation, focusing on buses and b) commercial long-distance transportation, focusing on trucks and trains. EMS and ITALCAM will each draft a study visit report, summarising key planning specifications identified.

Deliverables 1.2

Running number	Deliverable title	Description	Delivery period
D.1.2.1	Input paper on planning specifications and requirements for setting up green H2 mobility routes	EMS will develop an input paper with guidelines to streamline the organisation of both on-site visits, providing also the thematic background on H2 planning requirements, to prepare participants.	Period 1 , 1 - 6
D.1.2.2	Lessons learnt on planning specifications and requirements for urban H2 infrastructure	EMS will summarise the lessons learnt from the Strasbourg on-site visit, outlining the technical, economic, and safety requirements identified as essential in green H2 mobility planning for buses.	Period 1 , 1 - 6
D.1.2.3	Lessons learnt on planning specifications and requirements for long-distance H2 infrastructure	ITALCAM will summarise the lessons learnt from the Bavaria on-site visit, presenting the technical, economic, and safety requirements essential for green H2 mobility planning for trucks and trains.	Period 1 , 1 - 6

Activity 1.3
Title

Scoping and evaluation analysis of H2 mobility planning models to define optimal design parameters for the 'H2MA planning tool'

Start period

Period 1, 1 - 6

End period

Period 1, 1 - 6

Activity 1.3
Description

Partners will survey a pre-selected thematic pool of H2 mobility planning approaches and models (to be outlined in instructions provided by PVF), to evaluate the design parameters and set the course for adaptations that will be needed to develop the 'H2MA planning tool' to support H2 routes design. PVF will collect the data and partners' evaluations, and deliver a specifications report defining the architecture, functionalities and development steps of the H2MA tool.

Deliverables 1.3

Running number	Deliverable title	Description	Delivery period
D.1.3.1	Methodology and tools for identifying H2 mobility planning models and parameters	PVF will deliver instructions on how partners will identify and evaluate H2 mobility planning approaches and specifications, employing the dedicated input forms and assessment criteria provided.	Period 1 , 1 - 6
D.1.3.2	Evaluation analysis on optimal H2 mobility planning models and parameters	PVF, based on partners' evaluations, will present the optimal design specifications of the H2MA tool, which will take into account countries' current and future infrastructure plans as core parameter.	Period 1 , 1 - 6

Activity 1.4

Title	Development of maturity scenarios on green H2 production and supply in the Alpine space, to improve transnational intelligence and coordination for green H2 mobility in the participating territories
Start period	Period 2, 7 - 12
End period	Period 2, 7 - 12

Activity 1.4
Description

ITALCAM will provide a methodology to guide partners in identifying and ranking the importance of trends and factors (e.g., policy, economic, technical) that drive H2 and renewables roll-out in each territory. KSSENA will compile the data and develop forecasting scenarios (e.g., baseline, pessimistic, optimistic) which will be used by partners to situate A1.3 tool's planning and adapt the green H2 mobility routes (e.g., number and locations of stations) according to infrastructure maturity.

Deliverables 1.4

Running number	Deliverable title	Description	Delivery period
D.1.4.1	Guidelines for developing maturity scenarios on green H2 production and distribution	ITALCAM will deliver a methodology with tools and guidelines on how partners can identify territorial factors influencing H2/RES maturity, outlining also the scenarios development process.	Period 2 , 7 - 12
D.1.4.2	Scenarios forecasting the maturity of green H2 production and distribution in the Alpine space	KSSENA will compile partners' data and deliver forecasting scenarios on H2 deployment and renewables maturity in Alpine space, prescribing their use for steering green H2 mobility planning.	Period 2 , 7 - 12

Activity 1.5

Title	Joint development of the 'H2MA planning tool' to cooperatively design transnational green H2 mobility supply and distribution networks across the Alpine space
Start period	Period 2, 7 - 12
End period	Period 2, 7 - 12

Activity 1.5

Description

RL will develop a prototype of the H2MA tool; based on CMT's guidelines, partners with observers and EUSALP members will convene in Turin to review and discuss it. CMT will summarise the workshop results (recommendations) on how to customise and improve the tool according to partner areas' specificities. RL will fine-tune and deliver the final version, to support the design of infrastructure networks of green H2 mobility as well as the optimisation of key nodes location (e.g., stations).

Deliverables 1.5

Running number	Deliverable title	Description	Delivery period
D.1.5.1	Organisational and thematic guidelines for the joint development of the 'H2MA planning tool'	CMT will deliver organisational guidelines, including tools to facilitate collaborations, on how partners can develop (jointly with stakeholders and experts) the H2MA planning tool in a workshop.	Period 2 , 7 - 12
D.1.5.2	Recommendations on how to improve and finalise the 'H2MA planning tool'	CMT will analyse participants' suggestions to deliver recommendations on how to improve and finalise the tool, focusing on how it could integrate all key parameters (e.g., technical, territorial).	Period 2 , 7 - 12
D.1.5.3	H2MA tool for transnational green H2 mobility planning in the Alpine space	RL will deliver the 'H2MA planning tool', developing its user interface and operational model, so that partners propose optimal infrastructure roll-out based on technoeconomic and safety parameters.	Period 2 , 7 - 12

Activity 1.6

Title	Integrating H2MA knowledge and resources into partnership territories' H2 and mobility strategies
Start period	Period 2, 7 - 12
End period	Period 2, 7 - 12

Activity 1.6
Description

FLA will provide guidelines on how partners can integrate the A1.1/1.2 infrastructure requirements, A1.4 scenarios, and A1.5 tool into territorial H2 strategies and mobility plans (national/regional /local, according to each partners' policy-influencing capacity). KSSENA, BSC, CMT, RL, EMS, PVF, KPO, 4ER –assisted by own country partners- will suggest specific updates to existing documents or will develop a new H2 strategy'RL will compile changes /developments into a policy paper.

Deliverables 1.6

Running number	Deliverable title	Description	Delivery period
D.1.6.1	Guidelines on how to update and develop H2 and mobility strategies	FLA will provide guidelines to all partners on how to integrate WP1 resources into national/regional/local H2 strategies and mobility plans, providing indicative examples, measures and wordings.	Period 2 , 7 - 12
D.1.6.2	Summary of updates and developments achieved in Alpine space H2 and mobility strategies	RL, with input from all partners that implemented changes in H2 strategies and plans, will summarise and outline the impact expected by integrating the H2MA resources in relevant policy documents.	Period 2 , 7 - 12

Outputs
Output 1.1

Output Title	Common planning and decision-making resource set to jointly coordinate the roll-out of green H2 mobility infrastructure across Alpine transportation networks
Programme Output Indicator	OI 2.1.3: Other
Measurement Unit	
Target Value	1.00
Delivery period	Period 2, 7 - 12

Output 1.1	
Output Description	<p>The mechanism will function as an instrument for optimizing the location of key H2 infrastructure (e.g. refueling stations and green H2 supply chains) between different Alpine territories/countries.</p> <p>The mechanism will be addressed to policymakers & relevant stakeholders; it will include green H2 maturity scenarios, to assist in making informed decisions. Its parameters will be selected in a study by PVF and will be jointly finalized by partners & stakeholders in a workshop organized by CMT.</p>
Output 1.2	
Output Title	Recommendations and updates for local, regional, and national hydrogen strategies and mobility plans, integrating H2MA knowledge, resources, and tools
Programme Output Indicator	OI 2.1.3: Other
Measurement Unit	
Target Value	1.00
Delivery period	Period 2, 7 - 12
Output Description	<p>Partners with policy-influencing capacity (KSSENA, BSC, CMT, RL, EMS, PVF, KPO, 4ER), based on WP1 resources, studies, and tools, will prepare proposals on how to integrate project knowledge in strategies they address (12 in total; identified in C2.5 section) in the form of recommendations. Thus, they will deliver updates in own strategies (or measures in case strategy has not yet materialised); KSSENA and 4ER, as actors covering their whole country, will focus on national H2 strategies.</p>

WP description and responsibilities

1.1

Overall description of this WP and responsibilities

Please summarise the foreseen activities within this WP.

KSSENA will map H2 mobility infrastructure gaps in Alpine territorial H2 strategies; ITALCAM and EMS will organise study visits on model planning approaches. PVF will provide specifications for setting up a tool to design green H2 routes; KSSENA will develop H2 maturity scenarios to situate planning. CMT and RL will organise a workshop with stakeholders to jointly finalise and validate the tool; all partners will use WP1 knowledge to implement or recommend updates to territorial H2 strategies.

Work package 2

Work package title

Pilot testing green transalpine H2 mobility routes

Objectives

Your objectives should be:

- realistic and achievable by the end of the project;
- specific (who needs project outputs delivered in this work package and in which territory);
- measurable – indicate the change you are aiming for.

Define one project specific objective that will be achieved when all activities are implemented and outputs delivered.

WP2 puts into practice WP1 outputs by pilot testing the joint development of transalpine green H2 routes, advancing territorial mobility plans and increasing partners' capacities on interconnected H2 supply & distribution planning across Alpine space

Then think about the communication objective that will contribute to the achievement of the specific objective. Communication objectives aim at changes in a target audience's behaviour, knowledge or belief. Please define one or several communication objectives in relation with your project specific objective and your target audience. For example, it could be "raising awareness", "influencing attitude", "increasing knowledge" or "changing behaviour", etc. We recommend defining SMART objectives: Specific, Measurable, Achievable, Relevant and Timed. Further recommendations are available in the Communication toolkit at www.alpine-space.eu.

WP2 will:

A) Increase the participation and coordination capacities of green H2 infrastructure actors (such as HRS contractors/operators, H2 infrastructure providers, RES producers) to effectively plan transalpine green H2 mobility routes, through the deployment of Local Working Groups as pilot implementors.

B) Improve the implementation knowledge of municipalities, regional councils, and energy agencies in facilitating and monitoring the delivery of interoperable green H2 mobility solutions.

Activities

Activity 2.1

Title

Development of pilot-testing resources guiding partners to set up Local Working Groups (LWGs) and streamline pilot action implementation

Activity 2.1	
Start period	Period 3, 13 - 18
End period	Period 3, 13 - 18
Description	BSC will provide pilot action guidelines for all 6 pilot territories (Slovenia, Austria, Lombardy, Upper Rhine Valley, Strasbourg Metropolitan Area, Torino), defining a) implementation steps, participants, timeline, expected results, and b) the procedures for setting up LWGs, which will jointly test the H2MA tool and design transalpine green H2 mobility routes. COD will provide a training package to be used in LWG meetings for building participants' planning capacities on H2 mobility.

Deliverables 2.1			
Running number	Deliverable title	Description	Delivery period
D.2.1.1	Pilot-testing action plan with guidelines on how to establish and manage Local Working Groups	BSC will deliver pilot action guidelines for pilot territories, defining steps, participants, timeline, expected results, as well as the procedures for setting up working groups (LWGs).	Period 3 , 13 - 18
D.2.1.2	Training package on green H2 mobility planning	COD will develop a training package addressed to LWG participants to improve their understanding on H2 mobility planning and outline how the H2MA tool will be employed in the context of the pilots.	Period 3 , 13 - 18

Activity 2.2	
Title	Joint design of transalpine green H2 mobility plans integrating commercial and urban routes and interconnecting infrastructure for buses, trucks, trains, ports and airports
Start period	Period 3, 13 - 18
End period	Period 3, 13 - 18

Activity 2.2

Description

All partners will organise LWG meetings with stakeholders to a) train participants on how to deploy the H2MA tool in a green H2 mobility framework, and b) design green H2 routes in pilot territories, considering WP1 planning knowledge and specifications; each design will suggest the creation of a territorial green H2 supply and distribution network and will be submitted for review to the relevant national authority. PVF will compile all meeting summaries and KPO will present individual designs.

Deliverables 2.2

Running number	Deliverable title	Description	Delivery period
D.2.2.1	Summary report of Local Working Group meetings	PVF will collect input from all meetings, to be used for summarising the lessons learnt of the meetings, focusing on participants' experiences with the design of territorial green H2 networks.	Period 3 , 13 - 18
D.2.2.2	Compilation of territorial green H2 route plans /designs	KPO will collect and present each territory's designs for green H2 routes, focusing on the nodes each LWG opted to interconnect for the purposes of optimising existing with future infrastructure.	Period 3 , 13 - 18

Activity 2.3

Title	Peer-review workshop to establish a common trans-Alpine green H2 mobility masterplan, to advance commercial/long-distance and urban mobility infrastructure planning
Start period	Period 4, 19 - 24
End period	Period 4, 19 - 24

Activity 2.3

Description

FLA will guide partners on how to peer-review A2.2 territorial route designs, and jointly merge them into a common transalpine green H2 masterplan. All partners will participate in FLA's workshop, sharing and reviewing their designs, and contribute to the masterplan that will a) establish transnational green H2 routes across the Alpine road network, interconnecting partners' infrastructure nodes, b) recommended optimal locations for future infrastructure. FLA will summarise workshop results.

Deliverables 2.3

Running number	Deliverable title	Description	Delivery period
D.2.3.1	Peer-review guidelines on how to jointly develop a common transalpine green H2 route masterplan	FLA will deliver workshop guidelines, addressing how partners will a) conduct peer-review of each other's A2.2 territorial designs and b) fine-tune and combine them into a common masterplan.	Period 4 , 19 - 24
D.2.3.2	Green H2 route masterplan for the Alpine space	FLA, based on workshop results, will present the transalpine masterplan for green H2 mobility and workshop's lessons learnt, focusing on the procedures employed to arrive at the masterplan.	Period 4 , 19 - 24

Activity 2.4

Title	Evaluation, fine-tuning, and validation of pilot-testing results
Start period	Period 4, 19 - 24
End period	Period 4, 19 - 24

Activity 2.4
Description

All pilot partners will submit the A2.3 masterplan to corresponding national and EU bodies responsible for the development of H2 strategies (e.g., Ministry of Energy/Transport; EUSALP AG4/AG9, Hydrogen Europe), to receive feedback. All partners will organise the final LWG meeting to integrate feedback and evaluate pilots' impact in the Alpine space. 4ER will present a comparative evaluation of pilot results and the lessons learnt for participating territories, based on partners' evidence.

Deliverables 2.4

Running number	Deliverable title	Description	Delivery period
D.2.4.1	Comparative analysis of pilot results and joint lessons learnt	4ER will collect and compile partner's summary reports from the last LWG meeting, to compare the pilot results achieved per territory, analyse pilot impact, and sum up the lessons learnt.	Period 4 , 19 - 24

Outputs
Output 2.1

Output Title	Common 'green H2 mobility routes' interconnecting current with upcoming/planned infrastructure across the Alpine space
Programme Output Indicator	OI 2.1.1: Pilot actions developed jointly and implemented in projects
Measurement Unit	pilot actions
Target Value	1.00
Delivery period	Period 4, 19 - 24

Output 2.1

Output Description

Pilot testing will result in setting up transalpine routes and proposing a corresponding green H2 infrastructure network for commercial/freight and urban mobility. Local Working Groups will carry out the pilots, building capacities on how to combine territorial requirements with Alpine specificities, to deliver route designs for the 6 pilot territories, submitted for feedback to relevant national, Alpine, and EU bodies. All designs will be peer-reviewed and merged into a route masterplan.

WP description and responsibilities

2.1

Overall description of this WP and responsibilities

Please summarise the foreseen activities within this WP.

BSC will develop resources to steer and monitor pilot actions; all partners will establish Local Working Groups (LWGs) to train target groups to jointly design route plans combining territorial and transalpine requirements; they will also liaise with H2-responsible national bodies to test routes' deployment potential. FLA will organise a peer-review workshop to optimise all plans and partners will jointly merge them into a common transalpine masterplan. LWGs will evaluate scale-up potential.

Work package 3

Work package title

Capitalisation and ecosystem development

Objectives

Your objectives should be:

- realistic and achievable by the end of the project;
- specific (who needs project outputs delivered in this work package and in which territory);
- measurable – indicate the change you are aiming for.

Define one project specific objective that will be achieved when all activities are implemented and outputs delivered.

WP3 increases target groups' capacities and involvement in green H2 mobility planning to secure the further uptake of the H2MA pilot approach, harmonise relevant policies across the Alpine region, and accelerate relevant ecosystems' growth.

Then think about the communication objective that will contribute to the achievement of the specific objective. Communication objectives aim at changes in a target audience's behaviour, knowledge or belief. Please define one or several communication objectives in relation with your project specific objective and your target audience. For example, it could be "raising awareness", "influencing attitude", "increasing knowledge" or "changing behaviour", etc. We recommend defining SMART objectives: Specific, Measurable, Achievable, Relevant and Timed. Further recommendations are available in the Communication toolkit at www.alpine-space.eu.

WP3 will transfer and multiply H2MA impact by engaging green H2 mobility actors (such as logistics and energy sector companies/SMEs, public and freight transport providers) and policy-makers (EU /national/regional/local) from across Alpine space in matchmaking events and capacity building workshops. Thus, WP3 will increase the participation, motivation, and awareness of key adopters (businesses) and enablers (policy-makers) on H2MA tools, resources, and transnational route planning approach.

Activities

Activity 3.1	
Title	Governance and implementation resources for transferring the H2MA pilot approach and results beyond the partnership
Start period	Period 5, 25 - 30

Activity 3.1

End period	Period 5, 25 - 30
Description	ITALCAM will provide an implementation handbook, addressed to businesses and policy-makers, on how to employ the H2MA approach (tool, resources, pilot results) in planning for green H2 mobility and relevant infrastructure development. KPO will define a governance model for coordinating transalpine green H2 roll-out after the project end (based on the WP2 'Local Working Groups' model), to enable the monitoring and coordination of planning efforts and ensure optimal infrastructure roll-out.

Deliverables 3.1

Running number	Deliverable title	Description	Delivery period
D.3.1.1	Implementation handbook on how to employ the H2MA approach in planning for green H2 mobility	ITALCAM will deliver an implementation handbook, addressed to business stakeholders and policy-makers, on how to employ the H2MA approach and results when involved in green H2 mobility planning.	Period 5 , 25 - 30
D.3.1.2	Governance model for monitoring H2 infrastructure roll-out and planning	KPO will define (in a report) the governance model for monitoring project efforts after the project end, extending WP2 'LWG' model beyond the partner areas, to coordinate transalpine planning.	Period 5 , 25 - 30

Activity 3.2

Title	Supporting the growth of green H2 mobility value chains in the Alpine space
Start period	Period 5, 25 - 30
End period	Period 5, 25 - 30

Activity 3.2
Description

COD will lay out a roadmap and identify key enablers and barriers for the proliferation and interconnection of green H2 valleys across the Alps. BSC will a) define a strategic framework on how transport services and H2 businesses can develop interoperability synergies on infrastructure roll-out between commercial and public mobility, and b) recommend harmonisation pathways on Alpine policies for streamlining regulatory issues on green H2, to accelerate transnational infrastructure roll-out.

Deliverables 3.2

Running number	Deliverable title	Description	Delivery period
D.3.2.1	Roadmap for developing H2 mobility valleys and creating synergies	COD will deliver a roadmap on how to further develop and connect Alpine space H2 valleys, identifying factors that enable and/or hinder the growth of green H2 supply and distribution value chains.	Period 5 , 25 - 30
D.3.2.2	Strategic framework for interoperability	BSC will deliver a strategic framework defining how transport services and H2 businesses can combine multiple transportation means and deepen interoperability synergies, benefiting end-users.	Period 5 , 25 - 30
D.3.2.3	Policy harmonization recommendations	BSC will identify mismatches on H2 regulatory provisions and definitions (e.g. "green H2") across Alpine policies, to deliver recommendations on streamlining transalpine infrastructure roll-out.	Period 5 , 25 - 30

Activity 3.3

Title	Joint training workshop to build the capacities of green H2 mobility businesses, stakeholders, and policy-makers
Start period	Period 5, 25 - 30
End period	Period 6, 31 - 36

Activity 3.3
Description

All partners will organise training workshops with public authorities, energy/transport agencies, H2 infrastructure providers, green H2 producers, and relevant organisations beyond partner areas, to train them on how to employ the H2MA tool, resources, and implementation approach. KSSENA will organise an EU-wide policy development workshop (Brussels), with EUSALP (AG4, AG9) and FEDARENE members' participation. KPO will elaborate on the results and lessons learnt from the training workshops.

Deliverables 3.3

Running number	Deliverable title	Description	Delivery period
D.3.3.1	Comparative lessons learnt for transferability	KPO, based on reports from all partners, will compile and present the lessons learnt from the workshops, focusing on the procedures followed and the results attained, for future replication.	Period 5, 25 - 30

Activity 3.4

Title	Matchmaking workshops with the participation of green H2 mobility infrastructure providers, RES producers, and H2 businesses, to support the development of green H2 value chains in the Alpine space
Start period	Period 6, 31 - 36
End period	Period 6, 31 - 36
Description	All partners, assisted by LWG members, will conduct matchmaking workshops to stimulate the emergence of green H2 hubs/'valleys' for mobility ecosystems in own territories, with the aim to sign a critical mass of Memoranda of Cooperation (MoC) between each partner and relevant actors. 4ER will collect all partners' feedback and workshop results, to delineate how relevant businesses could unlock investments and plan ahead for the green H2 roll-out in commercial and urban mobility.

Deliverables 3.4

Running number	Deliverable title	Description	Delivery period
D.3.4.1	Identifying investment pathways and business ecosystem synergies for H2MA territories	4ER, based on partners' workshops input, will develop roadmaps per partnership area on how H2 mobility value chains can capitalise upon green financing opportunities and synergies establishment.	Period 6 , 31 - 36

Outputs
Output 3.1

Output Title	Transferability toolbox for uptaking and/or upscaling the H2MA approach for green H2 mobility in partnership areas and beyond
Programme Output Indicator	OI 2.1.2: Jointly developed solutions
Measurement Unit	solutions
Target Value	1.00
Delivery period	Period 5, 25 - 30
Output Description	The toolbox comprises WP3.1 and WP3.2 business and policy resources (i.e., implementation handbook, governance model, policy harmonisation recommendations, roadmap for developing green H2 mobility ecosystems, interoperability synergies). It will guide and support business ecosystems and policy-makers both within partner areas and beyond to take-up and continue building on the project approach, building and/or strengthening collaboration with H2MA partners.

Output 3.2

Output Title	Collaboration framework with green H2 mobility actors, ecosystems, and businesses, initiating synergies to tap into green financing and investment opportunities.
Programme Output Indicator	OI 2.1.3: Other
Measurement Unit	
Target Value	1.00

Output 3.2	
Delivery period	Period 6, 31 - 36
Output Description	Partners, LWGs members, and stakeholders will liaise with H2 ecosystems and relevant businesses to sign Memoranda of Cooperation. As a result, H2MA will deliver an 'Alpine collaboration framework' that will enable targeted actors to jointly pool resources and capacities to unlock (transalpine) financing opportunities (e.g., setting up public-private partnerships). In this way, H2 ecosystems will be empowered to build upon and expand the transalpine route designs pilot-tested by H2MA.

WP description and responsibilities

3.1

Overall description of this WP and responsibilities

Please summarise the foreseen activities within this WP.

ITALCAM and KPO will develop a pilot results transferability toolbox; BSC will provide roadmaps for the proliferation of territorial H2 mobility valleys, including recommendations to streamline Alpine regulatory policies on green H2 and initiate interoperability synergies. Using these, partners will organise seminars to build stakeholders' capacities (incl. beyond the partner areas), and conduct matchmaking workshops with businesses to unlock collaborations and tap into investment opportunities.

C.5 Project results

What do you expect to change because of the activities you plan to implement and the outputs you plan to deliver? Please have a look at the programme result indicators for the priority you choose and select the one or those that you will contribute to. If your project result(s) do(es) not contribute to one of the programme result indicators, please select "other" and precise your indicator. For more information on the programme result indicators, the definition of these and the related target value please refer to the Interreg Programme).

For small-scale projects a maximum of 2 results are expected.

Result 1	
Programme result indicator	RI 2.1: Solutions taken up or up-scaled by organisations
Measurement unit	solutions
Baseline	0.00
Target value	1.00
Delivery period	Period 4, 19 - 24
Result description	H2MA will establish a transnational collaboration mechanism enabling Alpine public authorities and relevant target groups to jointly plan H2 infrastructure roll-out for heavy-duty transportation. Thus, H2MA will enhance the governance of green H2 mobility in the Alpine macro-region, as >20 policy authorities (local, regional, national) and >80 stakeholders will use and upscale project outputs (resources, tools, strategies), optimising and advancing H2 territorial plans.
Result 2	
Programme result indicator	RI 2.1: Solutions taken up or up-scaled by organisations
Measurement unit	solutions
Baseline	0.00
Target value	1.00
Delivery period	Period 6, 31 - 36

Result 2

Result description

H2MA will improve the uptake of green hydrogen for commercial and public HDV fleets across the Alpine Space by introducing an integrated planning solution that couples clean energy production with H2 mobility. To that end, the project will result in accelerating zero-emission mobility, supporting infrastructure development for at least 2,000 H2-powered HDVs, resulting in savings of approx. 240 thousand CO2 tons (per year) by 2030, mitigating climate change and environmental pollution.

Result 3

Programme result indicator

RI 2.1: Solutions taken up or up-scaled by organisations

Measurement unit

solutions

Baseline

0.00

Target value

1.00

Delivery period

Period 6, 31 - 36

Result description

H2MA will improve the cooperation framework between public authorities and businesses involved in green H2 mobility in the Alpine region. Through MoUs and matchmaking, target groups will be able to deepen public-private synergies (e.g., EMS with Hynamics, IVECO with CMT and Piedmont; all commitment letters to be provided), further integrating policy planning with green mobility H2 value chains. Also, improved collaboration conditions will enable businesses to tap into Green Deal & ROP funds.

C.6 Project time plan

	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
WP1 Joint strategic planning for green H2 mo...						
A1.1 Mapping and analysis of Alpine spac...	D1.1.1					
	D1.1.2					
A1.2 Study visits on planning specificat...	D1.2.1					
	D1.2.2					
	D1.2.3					
A1.3 Scoping and evaluation analysis of ...	D1.3.1					
	D1.3.2					
A1.4 Development of maturity scenarios o...		D1.4.1				
		D1.4.2				
A1.5 Joint development of the 'H2MA plan...		D1.5.1				
		D1.5.2				
		D1.5.3				
A1.6 Integrating H2MA knowledge and reso...		D1.6.1				
		D1.6.2				
OI 2.1.3		O1.1				
		O1.2				
WP2 Pilot testing green transalpine H2 mobil...						
A2.1 Development of pilot-testing resou...			D2.1.1			
			D2.1.2			

A2.2 Joint design of transalpine green H...			D2.2.1		
			D2.2.2		
A2.3 Peer-review workshop to establish a...			D2.3.1		
			D2.3.2		
A2.4 Evaluation, fine-tuning, and valida...			D2.4.1		
OI 2.1.1			O2.1		
WP3 Capitalisation and ecosystem development					
A3.1 Governance and implementation resou...				D3.1.1	
				D3.1.2	
A3.2 Supporting the growth of green H2 m...				D3.2.1	
				D3.2.2	
				D3.2.3	
A3.3 Joint training workshop to build th...				D3.3.1	
A3.4 Matchmaking workshops with the part...					D3.4.1
OI 2.1.2				O3.1	
OI 2.1.3					O3.2
Result indicator					
RI 2.1				R1	R2
					R3

C.7 Project management

In addition to the thematic work, projects will need time and resources for coordination and internal communication. Please describe below how you plan to organise yourself to ensure the project work runs smoothly.

C.7.1 How will you coordinate your project?

The Lead partner will be responsible for the project coordination. In addition, a project steering group should be installed. Will you have any other bodies/responsibilities (e.g. thematic groups, WP managers)? How will the internal coordination work? How will you steer the implementation of your project? Please precise how the project management will be organised and if it will be externalised.

Project Management will be carried out by the following bodies (not externalised):

STEERING GROUP (SG)

The SG, chaired by the LP, will comprise a representative from each partner. It will convene bi-annually in project meetings, with monthly virtual meetings to review work plans and reports, monitor progress vis á vis KPIs, handle strategic risks and provide implementation guidance.

PROJECT COORDINATOR (PC) & PROJECT MANAGERS (PM)

The PC, appointed by the LP, will handle day-to-day coordination, quality assurance (QA), and adherence to the application form and the workplan. The PMs, appointed by each partner, will form a task group that will update the PC on implementation progress, facilitating QA and risk identification.

WPs & ACTIVITIES LEADERS

WPs and activities have been allocated to partners on the basis of thematic expertise and experience in relevant tasks, assuming responsibility for both implementation and reporting to PC on potential risks and workplan deviations.

C.7.2 - not relevant for small-scale projects

APPROACH

The SG will employ a collaborative approach, favouring consensus-based decision-making, to maximise partners' commitment and integrate all views and insights; yet, to avoid deadlocks, a majority approval will suffice. All Programme recommendations for project greening will be applied during management and implementation.

PROCESSES & TOOLS

The LP will prepare a detailed workplan, updated each semester, to serve as a benchmark for progress evaluation. It will be supported by a QA and Risk Management plan that will identify potential risks regarding progress, impact and target groups' involvement, also establishing evaluation criteria and processes for activities and outputs.

The following (already used for proposal preparation) tools will be employed:

- Online project management platform (ASANA) for work planning, task allocation, and monitoring of progress and deadlines
- Shared storage space for H2MA resources, materials and outputs (Freedcamp)
- Virtual meetings platform (Zoom)

C.7.3 What will be the general approach you will follow to communicate about your project?

Who will coordinate project communication and how will the involvement of all partners be ensured? How will the communication function contribute to transferring of your project results? Please note that all communication activities should be included in the work package, as an integral part of your project. There is no need to repeat this information here. It is expected that projects develop a communication strategy. All information on how to develop a communication strategy are available in the Communication toolkit at www.alpine-space.eu.

PURPOSE

The LP will develop the Communication Strategy (CS), which will prioritise the following:

- Diffuse project results to policy makers, businesses and regional initiatives (e.g. AG4&9) not directly involved in H2MA, to raise awareness and gain support for green H2 transalpine routes.
- Increase participation and commitment of target groups in H2MA activities (especially pilot tests)

COORDINATION

The LP will deliver the CS in Period 1, delineating its aims, task allocation, tools, target groups & KPIs. A Communication Manager (CM), appointed by the LP, will coordinate CS implementation; the CM will oversee communication activities, assess dissemination methods and results and facilitate internal cooperation.

ENGAGEMENT

All partners and observers will engage stakeholders in their territories to promote the emergence of green H2 mobility ecosystems and directly transfer H2MA results; they will valorise their policy and business networks, to reach organisations across Alpine space.

C.7.4 - not relevant for small-scale projects

The LP will be the contact point with the Managing Authority for all financial issues. Financial management will be coordinated by the Financial Manager (FM), appointed by the LP. The FM will ensure compliance with the Programme rules and provide guidance to partners on procurement procedures. Each partner will also appoint a Finance Officer (FO) to overview financial procedures.

Additionally, the following measures are foreseen:

- Detailed budget, developed by the LP before proposal submission.
- Time plan for the reporting procedure, to be shared by the LP every semester.
- Detailed spending plan (per partner and budget line), presented every semester by the LP during project meetings.
- Quarterly virtual meetings with all FOs to monitor actual vs. foreseen expenditure
- Expenditure reports (delivered to LP a month before the end of each reporting period) to ensure sound expenditure (in accordance to AF)
- Timely fund transfer (after receipt of each payment) from the LP to partners.

C.7.5 Cooperation criteria

Please select all cooperation criteria that apply to your project and describe how you will fulfil them. Following the Interreg regulation, Interreg partners should cooperate in development and implementation as well as in staffing or financing, or both. Joint development and joint implementation are therefore considered obligatory (*), in addition either joint staffing or joint financing needs to be selected (or both).

Cooperation criteria		Description
Joint development*	Yes	H2MA structure and activities have resulted from suggestions by all partners (virtual meetings)
Joint implementation*	Yes	All WPs prescribe joint activities and collaboration among all partners, including peer reviewing
Joint staffing	Yes	All WPs include activities to be implemented by jointly staffed (from all partners) working teams
Joint financing	Yes	All partners will contribute own (secured) resources for project implementation

C.7.6 Horizontal principles

Please indicate which type of contribution to horizontal principles applies to the project, and justify your choice. Please be aware that only projects with neutral or positive effects on the horizontal principles can be co-financed. Negative impacts would lead to an ineligible proposal. Please consider for all the principles if realistically your project's activities will create a change. If the principle is acknowledged but not a main focus of the project work, please select neutral.

Horizontal principles	Type of contribution	Description of contribution
Sustainable development	positive effects	By bolstering the capacities of public authorities and stakeholders to jointly plan and pilot test trans-Alpine green H2 routes, H2MA will facilitate the roll out of green H2 mobility plans, accelerating the phase-out of fossil fuels and the reduction of the ecological footprint of transportation.
Equal opportunities and non-discrimination	neutral	Partners will ensure, by consulting experts and representatives of disadvantaged and minority groups, the non-discriminatory nature of H2MA activities and outputs. The selection process for any external support needed in the course of the project will also respect the non-discrimination principle.
Equality between men and women	neutral	The partners will ensure that H2MA activities and outputs, incl. any required external help, will respect gender equality and promote equal participation regardless of the gender. The partnership will also support actors in the H2 value chain in implementing an equal opportunity employment policy.

C.8 Long-term plans

As a programme, we would like to support projects that have a long-lasting effect in the territory and those who will benefit from them. Please describe below what you will do to ensure this.

C.8.1 Ownership

Please describe who will ensure the financial and institutional support for outputs/deliverables developed by the project (e.g. tools), and explain how these outputs/deliverables will be integrated in the work of partner organisations. Please mention concrete measures.

O1.1 (Resource set) & O2.1 (Pilot-tested routes)

These will be integrated in the operational planning of infrastructure & transport departments of public administrations (RL, EMS, CMT), and in the practices and ecosystem development activities of agencies (BSC, KSSENA, FLA), R&D institutes (4ER) and business representatives (PVF, ITALCAM, KPO, COD), using existing staff and budget.

O1.2 (Recommendations)

Partners with policy-making authority (RL, EMS, CMT, BSC) will integrate the recommendations in their policy instruments. KSSENA, KPO, PVF & 4ER will exploit their institutional ties with policy makers and their involvement in H2 technical meetings to effect policy changes.

O3.1 (Toolbox) & O3.2 (MoC)

All partners will appoint staff members, utilising own budget, to build the capacities of stakeholders and engage them in developing H2 ecosystems.

Integration will be accelerated through participation of broader working teams in WP2 & WP3, and intra-organisational capacity building sessions.

C.8.2 Durability

Please describe how your outputs/deliverables will be used after the project ends and by whom. Please consider the target groups mentioned previously and detail concretely the use after the project's end for each output and if relevant major deliverables. For small-scale project "setting the scene", please precise what could be the further steps to implement your recommendations and/or conclusions. For small-scale project "roll-out/capitalisation", please precise how you make sure that your project outcomes will last on the long run and be replicable.

O1.1 will be used by public administrations (PAs), energy/transport agencies, and H2/RES businesses (incl. Friuli-Venezia Giulia, KSSENA, PUNCH), enabling them to optimally design the roll-out of green H2 mobility infrastructure.

O1.2 will be used by policymakers (partners and target groups such as RL & BMK) to update H2 and mobility plans, fostering the emergence of green H2 ecosystems via financial support measures (such as incentives & PPPs).

O2.1 will be valorised by regional/national PAs (incl. CMT) and logistics businesses (incl. COD, IVECO) seeking to employ green H2 in their operations, as the basis for transalpine H2 routes.

O3.1 will be utilised to build the capacities of stakeholders and PAs on the H2MA approach, enabling them to use project knowledge to plan H2 infrastructure and routes (incl. AustriaTech).

O3.2: Partners and local stakeholders will implement the MoC, jointly adopting/developing green H2 mobility solutions (incl. EMS with Region Grand Est & Hynamics).

C.8.3 Transferability

What will you do to make sure that relevant groups are aware of your outputs/deliverables and are able to use them? Please describe the different measures for the different outputs of your project. For small-scale project “setting the scene”, please precise which dissemination activities you plan to reach relevant /interested target groups in the topic addressed. For small-scale project “roll-out/capitalisation”, please precise how you would ensure that your project outcomes will be recognised and taken on board by relevant/interested target groups.

Further to dissemination, WPs 2&3 prescribe the direct involvement of target groups, secured by: a) partners and observers’ roles as central policy, energy, transport, and business support nodes (being also key members of national & EU networks, and b) the latter’s participation in high profile Alpine initiatives (EUSALP energy conferences, AG4&9 working groups). In addition, per output:

O1.1

-Local Working Groups will be set-up and trained on tool functionalities (A1.5 workshop), and use it to plan routes (WP2)

O1.2 & O2.1

-KSENA will organise an EU-wide policy workshop (Brussels), including EUSALP (AG4&9) and FEDARENE members’ participation; H2MA will be represented in AG4&9 meetings (5 partners and observers are members), sharing these outputs with their peers

O3.1

-Partners will use the transferability toolbox in the capacity building workshop (A3.3) with policy makers

O3.2

-All partners will establish contact points, committing businesses to enter the regional H2 ecosystems