

**Interreg**



**Co-funded by  
the European Union**

**Meuse – Rhine (NL – BE – DE)**

**Template for**

**Step 1**

**Application form**

Final version of 16 January 2023

**Please note that the application form has to be completed and submitted via the electronic monitoring system of (JEMS) the programme, this offline template is for information purposes only. After submission, JEMS will produce an overview of the application for assessment purposes.**

## Introduction

Interreg Meuse-Rhine uses a two-step system for approving projects. This is the application form for **step 1**, intended to check the potential and the fit of a project idea in the Interreg Meuse-Rhine (NL-BE-DE) cooperation programme for the 2021-2027 period. The step 1 application has to be submitted via the monitoring system JEMS. To get a focus on the initial fit of a project idea, the step 1 application form addresses specific elements of the final step 2 application form. The information entered in the step 1 application form will be transferred to the step 2 form and can be changed. It is advised to write section A.2 of this form after having completed the remaining questions.

After your project has successfully passed this first step, in the sense of having a positive decision from the Steering Committee, you can proceed to step 2. This second step encompasses preparing a full-fledged application form.

## A – Project identification

### A.1 – Project identification

Project ID (automatically generated in JEMS)	-
Name of Lead Partner organisation	Not known yet, tbd.
Project title	H2-CrossBorder Bus connections
Project acronym	H2CBC
Priority	Choose from drop down list
Specific objective	Choose from drop down list
Start date	Tbd
End date	Tbd

### A.2 – Project summary

**Please give a short overview of the project and describe:**

- Which cross-border problem or challenge the project addresses.
- The overall objective of the project.
- Why cross-border cooperation is needed to tackle the problem or challenge.
- What is new in the approach.
- What expected change the project will bring to the current situation (impact).
- What target group benefits from the project.
- What opportunity we are missing if this project is not granted.
- An outline of the main activities, deliverables and, if applicable, investments the project will produce and who will benefit from them.
- Estimated total budget, as well as a specific percentage budget estimate for 1) management and 2) communication.

Max. 3.000 characters (including spaces)

The currently available ranges of battery-electric buses for public transport may not be sufficient to meet the large circulations that are usually necessary in cross-border traffic. Besides that, the availability of green power and the fast-charging infrastructure to charge many cross-border electric busses may also be a big issue. In order to reduce the CO<sub>2e</sub> emissions generated in this area of public transport and bring them to zero, the use of green hydrogen can therefore be a great (additional) solution. In order to enable the ramp-up of public transport hydrogen fleets in the EMRborder regions, access to green H2 must be secured. Since the current plans for an H2 backbone will be implemented from the 30s,

decentralized generation capacities for green hydrogen will be required in the near future. The required capacities, on the other hand, are usually only added if an attractive business case is available.

Cross-border cooperation between fleet operators, administration and Hydrogen producers/suppliers can leverage synergy effects and counter the "chicken-and-egg" problem by pooling generation capacities and sharing the additional necessary infrastructure to increase the utilization of the plants and thus reduce the specific costs of hydrogen mobility. The aim of this project is to enable fleet operators, the energy industry and administration to make the necessary decisions for future-investments on the basis of a strategy to be developed for the ramp-up of the hydrogen economy in the EMR-region. To this end, the regulatory and organisational peculiarities of cross-border cooperation in the area of the H<sub>2</sub> value chain will also be examined in order to be able to provide the administrations of local authorities with a guideline for the approval of hydrogen projects. Furthermore, massive public relations work is intended to arouse the interest of citizens, especially commuters, in public hydrogen mobility.

The budget is estimated at €1.5 million, of which around 10% will be allocated to administration and 30% to communication and public relations.

## B – Project partners

### Partners overview (automatically generated by JEMS after entering B.1, B.2, etc)

Number	Name organisation	Country	Organisation abbreviation	Partner role
1	Tbd			Lead Partner
2	TBd			Partner
...	List of candidate partners below			...

## B.1 – Lead partner

Partner number	1
Partner role	Lead Partner tbd
Name of organisation	
Name of organisation in English	
Organisation abbreviation	
Department / unit / division	
<b>Partner main address</b>	
Country	
NUTS 3	
Street and house number	
Postal code	
City	
Homepage	
<b>Address of department / unit / division (if applicable)</b>	
Country	
NUTS 3	
Street and house number	
Postal code	
City	
<b>Legal information</b>	
Type of partner	E.g. Higher education and research institution (dropdown menu)
Legal status	Public or private (dropdown menu)
<b>Contact information</b>	
Legal representative	
Contact person	
Email contact person	
Telephone number contact person	
<b>Motivation</b>	
Which of the organisation's thematic competences and experiences are relevant to participate in this project?	
Max. 1.000 characters	

## B.2 (etc) – Partner

Partner number	2
Partner role	Partner
Name of organisation	
Name of organisation in English	
Organisation abbreviation	
Country	
City of unit/department performing activities	
<b>Legal information</b>	
Type of partner	E.g. Higher education and research institution (dropdown menu)
Legal status	Public or private (dropdown menu)
<b>Contact information</b>	
Contact person	
Email contact person	
<b>Motivation</b>	
Which of the organisation's thematic competences and experiences are relevant to participate in this project?	
Max. 1.000 characters	

# C – Project description

## C.1 – Project overall objective

**C 1.1 Which cross-border problem or challenge does the project address?**

Max. 1.500 characters (including spaces)

The approval of cross-border hydrogen projects, e.g. in the field of green hydrogen production or in the field of infrastructure projects, is still uncharted territory for public administrations. At the same time, there is often a lack of a business case for the local or regional production of green hydrogen. Although adequate prices for green hydrogen can be achieved in the field of mobility, the infrastructure for distribution can be a limitation. Access to sufficient customers (hydrogen Bus fleet owners) may also not be given under certain circumstances. In addition, it is presumably possible to import cheaper green hydrogen via the future Hydrogen backbone, available from the early to mid 30s. This means that local projects for the production of green hydrogen have to refinance their investments in an unusually short time. Here, higher capacity utilization through cross-border delivery to customers can increase the utilization of the plants and thus reduce the time required for refinancing. To achieve this, however, generation capacities on the one hand and demand on the other, must be ramped up in a coordinated manner. This is a major challenge, especially in a cross-border cooperation.

**C 1.2 What is the project’s overall objective? What do you aim to achieve by the end of the project?**

The objective should:

- Be realistic and achievable by the end of the project, or shortly after,
- Be measurable / define clear project results,
- Specify who will use the project result(s) and in which territory.

Max. 1.500 characters (including spaces).

The aim is to develop a joint cross-border strategy to ramp up hydrogen (bus)mobility. The different planning processes and legal aspects in the EMR region should also be taken into account and lead to planning guidelines for cross-border cooperation.

**C 1.3 To which grand societal challenges as defined in the cooperation programme does the project contribute, and how?**

Grand societal challenge (pre-defined, choose from dropdown list)	Explanation
...	Max. 500 characters (including spaces)

## C.2 – Project relevance and context

**C 2.1 Why is cross-border cooperation needed to address the problem or challenge, and to achieve the project’s objectives and results? If you involve partners outside the**

**programme area or carry out activities outside the programme area, please also explain here.**

Max. 1.500 characters (including spaces)

In order to increase the number of customers for locally produced green hydrogen, cross-border approaches must be used in the border regions. Otherwise, the sales area would be too small to fully utilize the first production facilities. Furthermore, there is ambition on all sides of the EMR borders to have good, (better or more) zero carbon public transportation. To achieve this, It's obvious that it needs close cross-border cooperation, insight in local law and regulations and maybe adaptations, therefore cooperation between authorities, H2-suppliers, Public transportation companies, fleet-owners and Refueling station owners.

**C 2.2 Which target group(s) will benefit from the project outputs and results?**

Target group (pre-defined, choose from dropdown list)	Specification
Local public authority	Max. 250 characters (including spaces) Local public authority learn what the approval paths for local green hydrogen projects look like.
Regional public authority	Same for the regional public authority
National public authority	
Sectoral agency	
Infrastructure and (public) service provider	Can ramp up their H2-fleet without having to worry about the supply of green H2
SME	Can be active in the local H2 value chain, especially in the area of supply, storage, transport, Hydrogen Refueling stations (HRS) and special equipment design and manufacturing.
Higher education	By ramping up the supply chain for hydrogen plants, highly qualified personnel are also needed or trained. Simultaneously, new education programs and Valorisation of knowledge needs to be developed.
Interest groups including NGOs	The citizens' desire to reduce CO2 emissions is being met
...	

**C 2.3 What is the expected impact of the project, in terms of the change it will bring to the current situation? What risks, conditions or restrictions do you see, which might reduce the impact of the project? How do you cope with that?**

Max. 1.500 characters (including spaces)

The project will accelerate the transformation to climate-neutral mobility in the EMR region. It paves the way for the development and implementation of initial business cases. This circumvents the current "chicken-and-egg" problem.



Risks might be: That the distances, say between Aachen, Liege and Maastricht, may be covered with cheaper and more efficient full electric busses and that the perceived shortage of green power and power infrastructure appears capable of the quadrupled power demand. One of the outcomes of this project therefore will be a sufficient insight in the local and necessary capability of the existing power-grid and the cost involved to upgrade it to cope with future power demand, when we would go for full electrification. From this we should get a good picture if the assumption that we need both: Hydrogen and full- electric vehicles is correct in the EMR region.

Another Risk may be that the area is too small, total of routes between just Aachen Liege and Maastricht may be too short. From the conversations during the matchmakings we understood that you need a minimum of 20 busses per station for a viable business case ( to be checked) so we may need to widen up the area to say; the complete EMR region.

### C.3 – Project work plan tbd

<b>Please give an overview of the expected basic structure of the project's work plan</b>					
Number	Work Package title	Explanation	Partners involved	Deliverable(s)	Budget estimate
1	Laws and regulations	Mapping of existing regulations and laws concerning Public transportation ( also on H2 fuels, taxes, and transport)...Max. 500 characters (including spaces)	....	Max. 250 characters (including spaces)	
2	Stakeholder analyses	Mapping of current and lacking stakeholders including fleetowners, bus-companies, local authorities, H2-suppliers and what needs to be developed ....	....		
3	Business cases	Sensitivity analysis of tube-trailer refuelling against new pipeline construction or conversion	....		

Possible Project Partners of which some also gave input during the matchmakings and events:

- Arriva
- RD4
- Lórtye
- ASEAG
- Total Energies
- Liege Airport
- Zellie project ( 5 MW production 50% for busses)
- IHK
- Stadt Aachen
- LIOF
- Flixx Bus
- De Lijn
- Veolia
- Airlíquide
- Municipalities
- Provinces