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H2CITIES Expression of Interest

Selection of cities to be H2Cities beneficiaries and demonstrators.

EIT Community

EIT Urban Mobility- Mobility for more liveable urban spaces

EIT Climate-KIC - Working to accelerate the transition to a zero-carbon, climate-resilient society

EIT Manufacturing - Bringing European manufacturers together

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Change Records

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1. Overview of EIT Community

The EIT Strategic Innovation Agenda (SIA) 2021-2027 sets the strategic direction, priorities and objectives of the European Institute of Innovation and Technology (EIT) and its Knowledge and Innovation Communities (EIT KICs).

One specific objective in the new EIT SIA 2021-2027 is to establish and foster appropriate synergies and complementarities between EIT activities and other relevant Union, national and regional initiatives, instruments, and programmes. This will help ensure consistency with Union priorities and commitments, including the European Green Deal, the Recovery Plan for Europe, the European Strategy for data, the SME Strategy for a sustainable and digital Europe, and the New Industrial Strategy for Europe.

The H2CITIES project brings together 3 EIT Innovation Communities:

EIT Urban Mobility, EIT Climate-KIC and EIT Manufacturing.

1.1. EIT Urban Mobility

EIT Urban Mobility, acts to accelerate positive change on mobility to make urban spaces more liveable.

EIT Urban Mobility is an initiative of the European Institute of Innovation and Technology (EIT). Since January 2019 we have been working to encourage positive changes in the way people move around cities in order to make them more liveable places. We aim to become the largest European initiative transforming urban mobility

The EIT Urban Mobility S.L delivers breakthrough innovations to the market and breeds entrepreneurial talent for economic growth and improved quality of life in Europe. It does this by mobilizing a pan-European ecosystem of more than 50 top European corporations, SMEs, start-ups, universities, and research institutes constituted into the EIT Urban Mobility Association.

As a Knowledge and Innovation Community (KIC) of the European Institute of Innovation and Technology (EIT), the EIT Urban Mobility S.L is focused on entrepreneurship and is at the forefront of integrating education, research and business by bringing together students, researchers, engineers, business developers and entrepreneurs.

We create systemic solutions that will move more people around the city more efficiently and free up public space. We bring all key players in urban mobility together to avoid fragmentation and achieve more.



1.2. EIT Climate-KIC

EIT Climate-KIC is a Knowledge and Innovation Community (KIC), working to accelerate the transition to a zero-carbon, climate-resilient society. Supported by the European Institute of Innovation and Technology, we identify and support innovation that helps society mitigate and adapt to climate change. We believe that a decarbonised, sustainable economy is not only necessary to prevent catastrophic climate change but presents a wealth of opportunities for business and society.

We bring together partners in the worlds of business, academia, and the public and non-profit sectors to create networks of expertise, through which innovative products, services and systems can be developed, brought to market and scaled-up for impact. Through our convening power, EIT Climate-KIC brings together the most effective groups to create the innovation that can lead to systemic change.

1.3. EIT Manufacturing

EIT Manufacturing was established in 2019 with a vision that global manufacturing will continue to be led by Europe, and contributing to making Europe and its manufacturing sector more competitive and sustainable.

In doing so, EIT Manufacturing brings together a growing network of top-tier industrial partners, leading academic and research institutions from across the region and innovative startups, scaleups and SMEs.

A key way of transforming knowledge into value is by overcoming the fragmented nature of many innovation networks. In order to ensure that innovations reach the market, industry has the right talent and entrepreneurs can thrive; EIT Manufacturing connects and integrates the areas of education, innovation and creation.

Ultimately, EIT Manufacturing strives to accelerate faster innovation with the potential to improve everyday life globally, help meet Europe's ambitious climate goals, and ensure that its workforce is ready for tomorrow's challenges.

2. H2CITIES scope

2.1. General objectives

Hydrogen adoption has been plagued by a circular conundrum: high production cost, low demand, no infrastructure, and cities lacking knowledge, relations, and capacity to adapt to hydrogen. In response, the mission of the H2CITIES project, funded by the EIT, will create



Hydrogen Living Labs in two cities of the Visegrad group¹. To date, the Visegrad group (V4) has been underserved by existing EU and H2 programmes. In a second phase, H2CITIES will expand the geographic area involving all EU RIS countries based on Visegrad's project experience.

Hydrogen adoption has been plagued by a circular conundrum: high production cost, low demand, no infrastructure, and cities lacking knowledge, relations, and capacity to adapt to hydrogen. In response, the mission of H2CITIES project business, funded by the EIT, will create Hydrogen Living Labs prioritise cities within the Visegrad group.

Cities in the Vysegrad Group. often have ageing energy infrastructure and have not benefited equally from European funding to modernise energy supply chains.

H2CITIES focuses on orchestrating hydrogen innovation and uptake in Vysegrad Group cities and on supporting their capitalisation on the rapidly developing hydrogen economy.

We aim to ensure the H2 revolution does not exacerbate existing structural and historic disadvantages in Vysegrad Group countries. The just transitions programme supporting coal regions has set a precedent on how H2CITIES can target a defined region with specific needs.

Mid project H2CITIES will look to expand its geographics remit based on the success of initial pilots.

The final objective of H2CITIES is to become a programme supporting the transition to H2 in cities for clean transport and accessibility of all citizens. This is the first step of a complex and multi-step transition that will culminate when green/clean H2 is used.

The H2CITIES project share the same vision of "The New European Bauhaus initiative": build together a sustainable and inclusive future that is beautiful for our eyes, minds, and souls.

Each H2Cityiesselected will benefit from up to five types of hydrogen vehicles on their streets from among buses, waste trucks, lightweight public services, private cars, and logistics trucks. The H2Cities will also have direct funding to support their engagement and adoption. Innovators will demonstrate new products, build out supply chains, test new components and work with local community and citizens on adapting to a new hydrogen economy. H2CITIES will break the circular conundrum to build a replicable roadmap for other cities to add hydrogen into their existing Net Zero strategies.

The H2CITIES project provides a unique opportunity for cities to place themselves at the forefront of the EU Hydrogen Valley strategy. As stated by the International Energy Forum (June 2022) in *Scaling-up the Hydrogen Market Report*, the initial stage of hydrogen market development requires **local city point-to-point** H2 transactions as an essential component to

¹ Poland, Czech Republic, Slovakia and Hungary

logically build out to large scale Hydrogen Valleys. Nonetheless, cities lack the commercial acumen, technical competence, and partner ecosystem to play their role in the nascent H2 market ecosystem.

The H2CITIES project is an umbrella programme for wider engagement beyond the immediate funding available. This means additional funded projects from EIT, ERDF, Horizon Europe or Resilience and Recovery Funds projects can align to drive deeper and wider cooperation. The H2CITIES project is for all intents and purposes an industrial support structure around which other organisations, companies, SMEs, and funding mechanisms can coalesce. H2CITIES will fund two cities in the immediate workplan. Additionally, it will create a **city reserve list** to be used when additional funding is allocated.

2.2. Outcome

The H2CITIES project will drive **innovation-based growth in cities** building first-hand experience in collaboration with industry innovators advancing the green movement of passengers and goods in and around urban centres. Innovation pathways will be developed in close collaboration with industry actors that bring passenger services vehicles and logistics onto city streets. All project partners will support the selected H2Cities to deliver the following outcomes:

- Create two reference H2CITIES with targeted expansion plans.
- Demonstrate at least five types of mobility, logistics, and cleansing vehicles in-situ from June 2024.
- Train city employees and politicians on H2 role in decarbonisation and technology familiarisation.
- Provide a roadmap for cities to include H2 solutions in their Net Zero planning.
- Set up community and citizen consultations for wider engagement on the race to Net Zero
- Develop a shared infrastructure approach to de-risk investment and provide economies of scale.
- Model an H2 Living Lab for industrial, passenger transport, and logistic providers.

2.3. City Support

H2Cities benefit directly and indirectly from participation in the H2CITIES consortia. Directly, the city benefits from a) financial support, b) consortia membership, and c) strategic positioning.

- Financial support will be up to €170 000 that corresponds to the 69% of the total cost of the project, estimated in c.a. €245 000. As such each city **commits to self-finance project activities to a minimum of €75 000**. Standard EU Cost categories will be used such as staff, subcontracting, travel, costs of goods and services as defined in the annex *Eligibility of Expenditure* document.

- **Consortia membership** ensures H2Cities become **full project partners** with seats on the H2CITIES Management Board. They will engage fully in at least 3 work packages and provide guidance and direction to the overall project and other partners. H2Cities become actors and not solely recipients of project outcomes.
- **Strategic positioning** places H2Cities at the forefront of our communication and exploitation activities on a national and European level.

Indirectly, the city benefits from a) vehicle usage, b) replication, c) non-transport hydrogen, and d) citizen engagement

- **Vehicle usage** will be high visibility in the H2CITIES. City politicians, departments, and employees will engage with five leading H2 vehicle providers to bring innovation to their cities. The five vehicle types cost between €100 000 - €800 000 for their development and use. This represents a major project expense and contributes substantially to the value of the city package.
- **Replication support** will be provided by the H2CITIES project management to support the city expand, commercialise, and exploit its position. The project will set up a “Hydrogen Support Network” Holding Company to drive commercialisation and an exploitation team to execute on the cities’ long-term industrial, energy, and decarbonization strategy.
- **Non-transport hydrogen projects** covering the whole H2 supply chain and the scaling of solutions will be mapped and developed. This may cover issues such as H2 replacement or blending in district heating systems, recovery of waste energy/heat, chemical or nuclear H2 generation processes, and gas, liquid, and solid storage.
- **Citizen engagement** in H2CITIES will build confidence and understanding of H2 technologies, skills, and learning. Citizens and city employees will be provided access to and visibility of H2-powered vehicles. The project will organise community consultations between citizens, unions, employers, and government officials/universities to ensure **an inclusive and just energy transition** process.

2.4. Counterparts between cities and the project

Here is a non-exhaustive list of expected outcomes from the cities and related provisions from the project:

CITY EXPECTED OUTCOMES	PROJECT PROVISION TO CITIES
City Delivery Committee (5 members)	Project coordination
Cooperation with bus company	Technical support for bus company

Cooperation with environment/waste services	Technical support from light-weight truck / large waste truck
Cooperation with Taxi/Police	Technical support from private vehicle Training for drivers/users of H2 vehicles
Relationship with unions/work council	Relationship with EU H2CITIES associated partners and networks
Identifies target citizen groups, schools, universities, etc	Develop learning content for cities
Ensures access to hydrogen fuel/dispensing	Deliver H2 vehicles
Co-develop city H2 strategy	Co-develop city H2 strategy
Engages city funding team with H2CITIES funding	Screen upcoming funding
Promotes H2CITIES nationally and internationally	Promotion of the city and its strategy
Provides 75K euro cofund, in-kind, staff, h2 fuel, etc	170k euro support to offset costs
Hosts site visits from companies/cities/politicians	Make introductions to industry players
Send attendees to conference/trade events	Organise conference/ trade events
Provides access to national funding strategy	Provide support to city on national funding
Introduction to major local industry players	Participation in international event as H2CITIES partner
Access to workshop/engine room for repairs etc.	Access to dedicated workshop and conferences

2.5. Applications

This Expression of Interest invites cities to present a case for their selection as an H2City. Initial funding will cover two medium size cities in the Visegrad region. Additional cities may be funded by national or industry funding, or from additional EIT and Horizon Europe funding as it becomes available.

2.5.1. First Stage Evaluation

Expressions of Interest for H2CITIES will be digitally submitted using the AwardsForce tool platform at <https://eiturban.awardsplatform.com/> and will close on **26th of June 2023 at 17:00 CET**. The Expression of Interest has six sections of which five are compulsory and one is optional. Four sections will be scored. Any submission failing to complete all five compulsory sections will be ineligible.

The Expression of Interest has a two-stage evaluation process. Firstly, a remote qualitative assessment will be made of the completed AwardsForce submissions. This review will be conducted by 3 staff from different H2CITIES partners. Twenty-five points may be allocated per scored section.

Section	Compulsory	Score	Threshold
Application information	Yes	n/a	n/a
City H2 Strategy	Yes	25	15
Environmental Services	Yes	25	15
Passenger Services	Yes	25	15
Citizen Engagement	Yes	25	15
Additional Information	No	n/a	n/a

Reviewers will note down pertinent questions per city applications in preparation for a consensus meeting. An external expert will convene the consensus meeting and facilitate the alignment of the reviewer scores. A common list of questions and issues for clarification will be made. The cities will be ranked according to score.

A minimum score (threshold score) of 15 points per section is required to get ranked.

2.5.1.1. Second Stage Evaluation.

The top five ranked cities will pass to a second stage. The external expert will send to each of the top 5 cities the list of issues and questions to be addressed by the city in preparation for the site visit. Site visits will be conducted over a 4-week window from mid-September to mid-

October. The H2Cities project team including a representative of each of the vehicle providers and EIT Manufacturing and EIT Urban Mobility will visit each city for one day. The visit will include:

- A welcome meeting with bilateral introductions and review of the city application high points.
- The city should present prepared responses to the issues/questions sent by the external expert.
- Site visit to key locations noted in the application – bus depot, H2 charging station, police, etc
- Open discussion with the five members proposed as the City Delivery Committee – translation may be provided.
- A review of wider cooperation opportunities for funding, partnership, and development.

2.6. Award

The top five cities will be assessed on combination of their remote qualitative score from the first stage (n/100) and a site visit scoring (n/50). Total scoring possible will be out of 150 points. All top five finalists will be informed of the outcome by phone and then a written confirmation of award or reserve will be sent by email. All publicity in relation to selection is confidential up to and including formal announcement in November at either *Smart City Expo 2023* in Barcelona or *Hydrogen Week 2023* in Brussels.

The cities selected as beneficiaries will then be invited to adhere to the Grant Agreement and Consortia Agreement to become full partners from 01 January 2024. City demonstrations are not due to start before June 2024.

Data Protection Disclaimer

Your personal data will be processed with utmost care by the EIT KIC URBAN MOBILITY, S.L. or its subsidiaries. The said processing will allow us to manage the H2Cities process and key personnel.

- to enable you to submit your application for specific call,
- to match your staff details with the potential assignments related with the award.
- to retain your details and notify you about future opportunities similar to the specific city role.
- to answer your enquiries.
- You can exercise your data protection rights, writing to procurement@eiturbanmobility.eu.



You may find further information in the full GDPR Compliance privacy note for applicants available here: <https://www.eiturbanmobility.eu/privacy-policy/>