NORTH ADRIATIC CLEAN HYDROGEN INVESTMENT PLATFORM
Open Days

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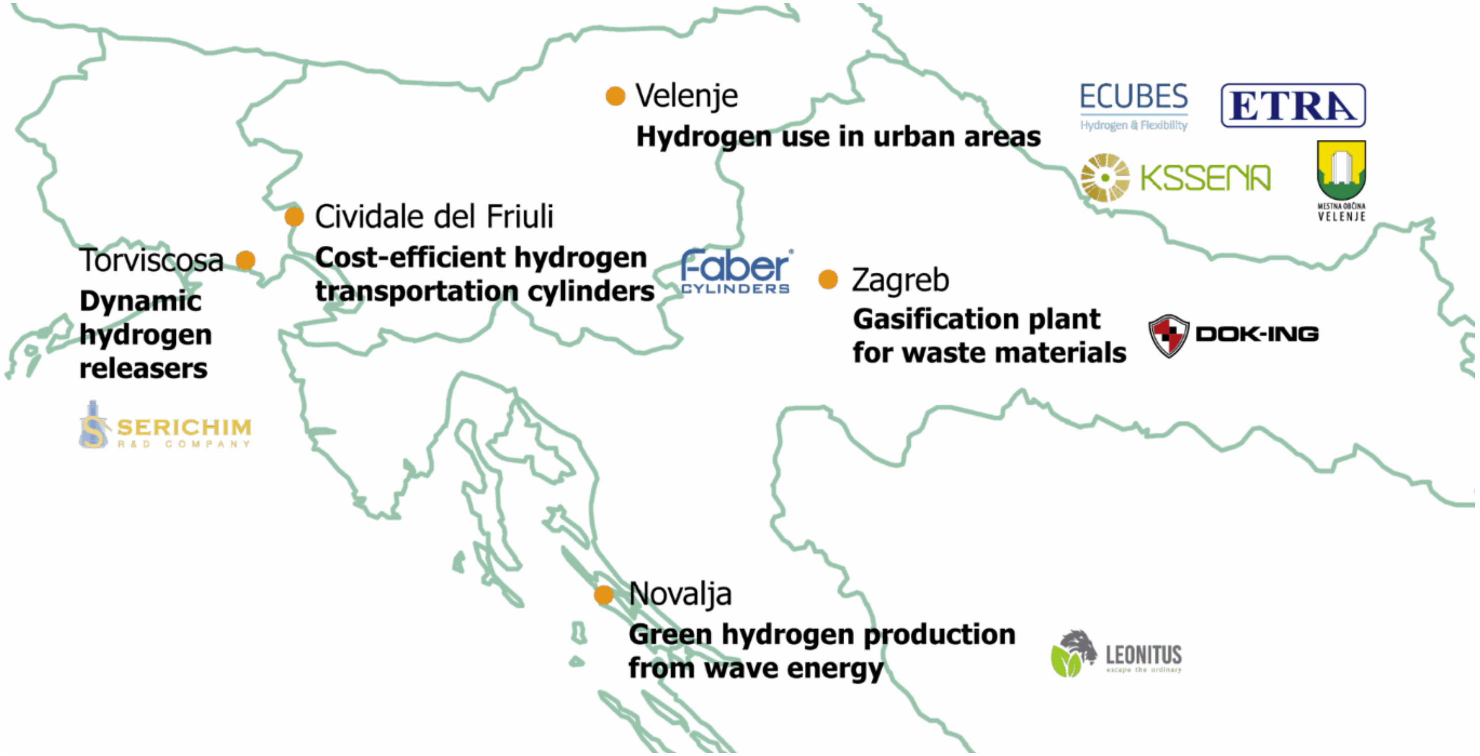
Aim

The North Adriatic Clean (Renewable) Hydrogen Innovation and Investment Platform (NACHIP) aims to accelerate and strengthen transnational innovation activities related to the **North Adriatic Hydrogen Ecosystem**, focusing on:



(1) Validation and demonstration of technologies (from 6-7 to 8-9) related to the exploitation of renewable hydrogen in **three value chains**: hydrogen production, urban areas and mobility;

(2) Pilot solutions for renewable hydrogen production, conversion, transmission, storage and use.

NACHIP Consortium

12 private and public organisations from **three countries** from the cohesion regions of **Slovenia** (Eastern Slovenia, Western Slovenia), **Croatia** (Mediterranean Croatia, Central Croatia) and the **Autonomous Region of Friuli Venezia Giulia** (FVG) - Italy. Together, they enable the cross-border integration of hydrogen production, distribution and consumption and the exchange of clean hydrogen.

Partners:

Institut Jozef Stefan (SRIP PMS), Lead Partner
META Group
META Circularity
UNIZG - FER
Leonitus
Serichim
Faber
ECUBES
KSSENA
ETRA
DOK-ING
Municipality of Velenje

The consortium reinforces the joint long-term initiative of Slovenia, Croatia and FVG (Italy) to establish a cross-border hydrogen ecosystem NAHV, which was approved in 2022 under the Horizon Europe call, and thus contributes to the objectives of the European Green Deal and the European Hydrogen Strategy.

The NACHIP project is based on the Smart Specialisation priorities of Slovenia, Croatia and the Autonomous Region of Friuli Venezia Giulia.

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NACHIP is co-financed by the European Union through the I3 Instrument implemented by EISMEA - European Innovation Council and SMEs Executive Agency.

The Agency implements the European Innovation Council and manages other EU programmes focusing on supporting SMEs, innovation and the Single Market, strengthening innovation through advisory and financial support and steering projects in common areas of smart specialisation towards successful commercialization, growth and upgrade.

Kick-off Meeting in Rijeka

More information can be found here: https://eismea.ec.europa.eu/index_en

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NACHIP is an accelerator…

… for the integration and diffusion of advanced hydrogen-related technologies, building on local hydrogen alliances and strengthening targeted value chains by involving small and medium-sized enterprises (SMEs) through Cascade Funding with a focus on less developed EU regions.

- NACHIP provides financial support for investments in five pilot solutions for renewable hydrogen production, conversion, transfer, storage and use.
- It provides advisory support for capacity and competence building, preparation for additional investments, as well as demonstration activities at five demonstration sites that will be the focal points of emerging interregional value chains between NAHV regions, and
- Cascading funding for an additional **18 SMEs.**

The long-term implementation of NACHIP will be ensured through its integration into the dedicated **North Adriatic Hydrogen Valley NAHV SPV** and through a set of actions to be implemented in the NAHV target areas and in other regional innovation ecosystems across the EU.

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Main objectives of NACHIP

(1) **Implementing and scaling up the hydrogen technology investment portfolio**, initially as pilot projects at TRL 6 level or above, along one of the selected value chains and building dedicated capacity to support the further development of the three value chains;

(2) The development of "**local hydrogen alliances**", based on these pilot projects, which provide an appropriate basis for the further development of targeted value chains;

(3) To create a portfolio of technology solutions ready for investment ("**investor-ready**"), **with a dedicated accelerator programme to** systematically support the maturation process of new hydrogen technologies, their diffusion and further integration into the NAHV ecosystem and beyond.

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Key numbers

Total funding:	**€10.5 million**
Grant (co-financing at 70%):	**€7.6 million**
Estimated investment value of the pilot projects at the start of the project:	**€15.00 million**
Estimated value of additional investments to be generated:	**€42.20 million**
Available cascade funding:	**€1.08 million**
Project duration:	**3 years**
Started:	**September 2024**

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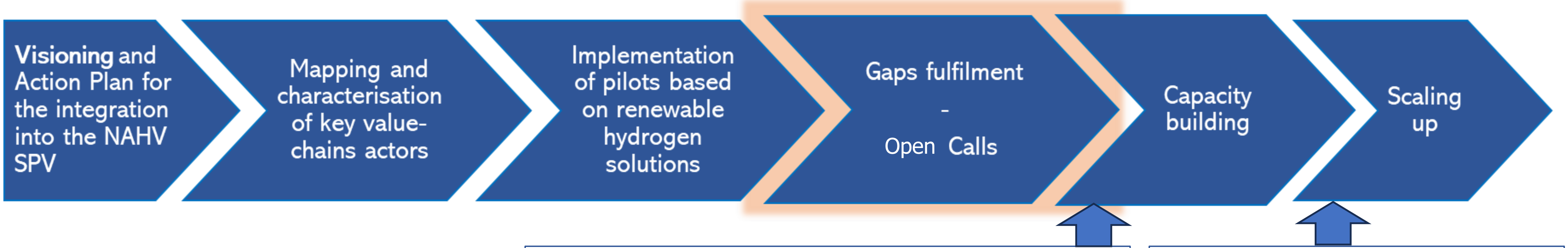
The NACHIP Acceleration Concept

Six steps of the evolution of the continuous process of development of novel, sustainable and economically profitable clean hydrogen technologies according to the **NACHIP Acceleration Concept**.



- ***IP and Technology -****related capacity building*
- ***Business model and market*** *related capacity building*
- ***Environmental sustainability and Circularity*** *capacity building*
- ***Access to funding and investment/investor readiness*** *capacity building*

- *Investment plans preparation for* ***Manufacturing*** *Value Chain*
- *Investment plans preparation for* ***Urban Areas*** *Value Chain*
- *Investment plans preparation for* ***Mobility*** *Value Chain*

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The role of Cascade Financing in the development of investor-ready technology solutions

The development of the technology portfolio is based on **five solutions** (investment proposals) in the form of pilot projects (two from FVG, two in Croatia and one in Eastern Slovenia) that are ready to be developed into mature business cases.

- **Through the Open Calls we aim to identifify and select additional 18 proposals through cascading funding to address bottlenecks and strengthen the development of the three value chains** (mobility, manufacturing, urban areas) in the North Adriartic and in several less developed regions of the EU.
- Moreover, the pilot projects serve as a test beds for **local hydrogen alliances**, starting from the one in **Velenje**, Slovenia. These alliances can gain new members through the Open Calls.

Cascade Financing

- **Objective**: to involve 18 technology-intensive companies (SMEs)
- Two open calls for tenders in 2025-26
- **Target allocation:** At least 4 SMEs for each of the targeted value chains
- **Up to €60,000** available to fund hydrogen ecosystem integration activities **for each of the selected SMEs, apart from the involvement in the two-tier capacity building programme**

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Pilots overview and their current status

Please, consult our web site and LinkedIn for more details on the pilot projects.

www.nachip.eu

North Adriatic
Clean Hydrogen
Investment Platform

About NACHIP | Open Calls | Pilots and Partners | Media | Contacts | Repository

Novel hydrogen technologies accelerator
Co-financed by the European Union through the I3 Instrument implemented by EISMEA

NACHIP Pilot initiatives are gaining shape..! (II)

Progress reported at the Consortium meeting in Nova Gorica   Nova Gorica, 11th November 2025 All five...

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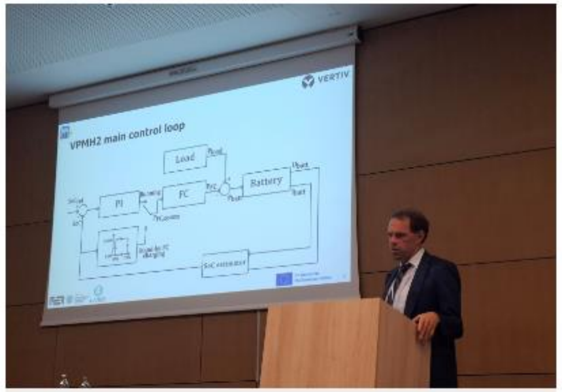
NACHIP Pilot initiatives are gaining shape..!

Progress reported at the Consortium meeting in Nova Gorica (Part I) Nova Gorica, 11th November 2025 Five...

Read More



FER Presents Hydrogen-Based Backup Power Solution at ICPGEEC 2025

At the 1st International Colloquium on Power Generation and Electromechanical Energy Conversion (ICPGEEC...

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First Open Call and its focus

When?

- **Launch** 1st December 2025
- **Deadline** 3rd February 2026
- **Expected starting date of projects** April 2026
- **Duration of projects** Max 6 months

Focus

- **Input:** innovative chemicals/materials for the NACHIP pilot testing
- **Process:** Solutions to optimize hydrogen-related processes used in the NACHIP pilots
- **Output:** Applications of new technologies complementing the NACHIP value chains: mobility, urban, and manufacturing sectors
- **Grant dimension** Max €60.000 per legal entity
- **Lump Sum** rules

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Project proposal responsibility

Applicants are required to prepare and submit their own project proposals.

Each application must include a clearly defined action plan and budget, using the official proposal template provided by NACHIP.

Selected SMEs will lead the implementation of their proposed activities, in cooperation with relevant NACHIP pilots.

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Potential activities to be financed

- Trial and testing activities
- Market analysis linked to the target value chains
- The acquisition and testing of materials
- Integration of the SME solutions with the pilots, demonstration in real and operational environment, small or medium scale
- Exploitation activities in new application sectors (cross-fertilisation)
- Standardisation of deployment (renovation approach, installation process, administrative requirements)
- Establishment of safety mechanisms for different types of applications
- Cost analysis and pricing as part of a go to market offer
- Hiring of additional specialized services that not available within the project consortium
- Prototyping

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Application process in four simple steps..!

I. Register to the platform

II. Fill-in the application form

III. Fill-in and upload technical proposal template

IV. Upload proof of legal entity

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Notes on eligibility

Only **legal entities** can be beneficiaries:

- **SMEs**, including start-ups with legal or operational offices in one of the consortium members' regions or in less developed regions
- **Consortia of SMEs** are also eligible (max 3 entities)
- **SMEs from** partner regions and outermost region or less developed region.
- No **conflict of interest** (no involvement in project activities)

Note:

- Entities within a consortium must be independent
- Applications can be submitted by not established entities (they must be established when signing the contract).

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Selection criteria

- Technical-financial feasibility of the action plan
- Market potential
- Soundness and credibility of the marketing plan
- Credibility of the applicant
- Consistency with the value chains of the industrial partners
- Coherence with **NACHIP's** objectives

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Green Hydrogen Production from Wave Energy – Novalja, Croatia

This pilot, spearheaded by Leonitus, a Zagreb-based SME, explores the production of green hydrogen using wave energy. The initiative is motivated by the company's investment idea to develop and deploy a novel technology that captures wave energy through a system of submerged devices installed beneath the sea surface. These devices deform the regular motion of waves, gradually depleting their energy and converting it into electricity, which is then used to produce green hydrogen.

Leonitus will provide technical expertise and engineering support and conduct feasibility studies to assess the technical and economic viability of this innovative approach. The system, to be implemented at the port of Žigljen on the island of Pag, Croatia, will have a planned capacity of 1 megawatt. The total investment value is estimated at €5.4 million, with €2.7 million sought from the market.

The pilot will also feature the application of multifunctional breakwater technology, being deployed for the first time in Europe. The project's main objectives are to develop and apply a practical system for green hydrogen production from wave energy, reduce reliance on fossil fuels, and contribute to the transition toward cleaner and renewable energy sources.

Learn more about the pilot here: https://www.nachip.eu/leonitus-launches-europes-first-wave-to-hydrogen-project-in-novalja/

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Open Call priorities

1. **Hydrogen production & electrolysis partners**
   SMEs with electrolysers, compression, storage, or hydrogen handling solutions compatible with variable renewable (wave-based) energy input.

2. **Marine engineering & offshore technologies**
   Companies specialised in marine structures, corrosion protection, monitoring, anchoring, or offshore maintenance.

3. **System integration & replication solutions**
   Actors supporting joint sizing, optimisation, and replication of wave–hydrogen systems for other ports and coastal regions.

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Hydrogen Use in Urban Areas – Velenje, Slovenia

Led by ECUBES and supported by key partners including the Municipality of Velenje, KSSENA, ETRA and IJS, this pilot aims to establish a "local hydrogen alliance" in Velenje. The focus is on transforming a public building into a demonstrative case for sustainable energy solutions using hydrogen technologies. The project is a comprehensive initiative to generate and efficiently utilise renewable energy based on hydrogen in urban areas.

ECUBES is a clean energy technology company specialising in hydrogen-based solutions, with deep expertise in cross-sector energy coupling, storage, and infrastructure. As the initiator of the North Adriatic Hydrogen Valley (NAHV) and organiser of the Hydrogen Ecosystem Conference, ECUBES plays a central role in advancing hydrogen innovation in the region. Through its participation in NACHIP, ECUBES aims to support downstream and midstream hydrogen markets, accelerate technology readiness (TRL 6–9), enable infrastructure development, and foster stakeholder engagement. Its goal is to create investable, scalable solutions aligned with the European Green Deal.

ETRA, based in Celje, Slovenia, is a leading provider of intelligent automation solutions, with over 70 employees and a focus on robotics, mechanical engineering, digitisation, and automation. As a certified Siemens Automation Solution Partner and official partner of Fanuc, ABB, Daihen, and Kuka, ETRA brings advanced R&D capabilities to the project. Nearly 50% of its business is dedicated to new product development. Its participation in NACHIP reflects a strategic focus on innovation, Industry 4.0, and clean technologies across the EU and beyond.

Institut
"Jožef Stefan"
Ljubljana, Slovenija

The Municipality of Velenje, Slovenia's sixth largest and youngest city, plays a pivotal role in local development strategies. With a strong commitment to sustainability and carbon neutrality, Velenje is undergoing a coal region transition and is actively seeking clean thermal energy solutions. Its district heating system currently emits around 100,000 tonnes of CO_2 annually. Transforming this system into a coal-free, environmentally sustainable, and economically viable model is a key municipal priority.

To meet these challenges, Velenje is focusing on building renovations and energy efficiency to reduce thermal energy consumption. The city's ambitious climate goals have been recognised at the EU level: it was selected for the **Mission 100 Climate-Neutral and Smart Cities** initiative and awarded the **European Green Leaf 2024**. As an experimental hub, Velenje serves as a model for cities across Europe striving for climate neutrality, benefiting from tailored support, increased visibility, and opportunities to pilot innovative solutions like those developed within NACHIP.

Open Call priorities

1. **Urban hydrogen technologies**
   SMEs offering hydrogen-ready heating systems, storage, conversion technologies, safety solutions, or micro-grids suitable for public buildings and districts.

2. **Skills, safety & maintenance solutions**
   Companies providing hydrogen safety, certification, training, and maintenance services to support long-term, autonomous urban operation.

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Dynamic Hydrogen Releasers – Torviscosa, Italy

Serichim of Torviscosa is leading this pilot to develop and demonstrate Dynamic Hydrogen Releasers (DHR), based on Liquid Organic Hydrogen Carrier (LOHC) technology. This innovation supports the safe and efficient transport, storage, and on-demand release of hydrogen, contributing to Europe's green mobility and industrial decarbonisation strategies.

Since 2006, Serichim has operated as a contract research and manufacturing organisation (CRMO), specialising in the development of (bio)chemical synthesis methods and fine chemicals production. With 14 expert researchers, 800 m² of fully equipped laboratories, and two pilot plants, the company supports its partners from early-stage development to small-scale production.

Hydrogenation and dehydrogenation are among Serichim's core competencies, and through its involvement in the NAHV ecosystem and the NACHIP project, the company is applying its expertise to accelerate the development of the regional hydrogen economy.

Within NACHIP, Serichim is developing a patented prototype of a **Dynamic Dehydrogenation Releaser (DHR)** designed to release hydrogen in real time based on the instantaneous demand of the user system. The LOHC-based system enables hydrogen to be stored and transported using existing logistics infrastructure, significantly reducing investment costs, enhancing safety, and shortening implementation timelines.

Throughout the development phase, Serichim is also engaging with stakeholders across sectors to define the technical requirements and dimensions of the DHR units. Upon completion, the technology will be further scaled and made available for licensing to engine manufacturers that use hydrogen as an energy carrier.

Open Call priorities

1. **Component & prototype suppliers**
   SMEs able to provide catalysts, mechanical workshops, control systems, and safety components for building and testing DHR prototypes at different power scales.

2. **Regulatory, certification & permitting expertise**
   Companies with hydrogen safety, ATEX, transport/storage regulation, and permitting know-how to support market entry across multiple use cases (industry, mobility, marine, rail).

3. **Early adopters & co-development partners**
   Industrial users, engine manufacturers, transport operators, or system integrators interested in testing, validating, and licensing LOHC-based hydrogen release solutions.

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Cost-Efficient Hydrogen Transportation Cylinders – Udine, Italy

Faber Industrie, S. p. a., headquartered in Udine, leads this pilot to develop composite designs for cost-efficient hydrogen transportation cylinders. The focus is on improving vessel designs to enhance the mobility of energy storage, reducing costs while ensuring the safe and efficient transport of compressed hydrogen.

Faber is a globally recognised leader in the production of high-pressure gas cylinders and systems, renowned for safety, reliability, and innovation. With decades of experience in delivering advanced solutions across the energy, automotive, and industrial sectors, the company is deeply committed to supporting the global energy transition.

Motivated by a vision to make hydrogen transport safer, more efficient, and economically viable, Faber joined the NACHIP project to contribute to the advancement of scalable, high-capacity hydrogen cylinders. Through this initiative, Faber aims to lower costs and promote widespread adoption of hydrogen technologies—strengthening the foundation of a sustainable and competitive hydrogen economy.

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Open Call priorities

1. **Advanced materials & manufacturing SMEs**
   Suppliers of glass fibre, hybrid composites, liners, bosses, or novel materials that reduce CAPEX while maintaining safety and performance.

2. **Testing, certification & validation partners**
   SMEs and labs supporting mechanical testing, contamination control, lifetime analysis, and compliance for high-pressure hydrogen vessels.

3. **Early adopters & fleet operators**
   Transport, logistics, or industrial actors willing to pilot and validate large-volume hydrogen cylinders in real transport scenarios.

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Gasification Plant for Waste Materials – Novalja, Croatia

Led by DOK-ING, a Zagreb-based manufacturer of unmanned vehicles, electric vehicles, and robotic systems, this pilot focuses on developing a prototype gasification plant for waste materials. The universal gasification system is designed to process municipal solid waste (MSW) and convert it into valuable products such as synthesis gas (syngas) and charred residue (ash), which can be further utilised. This innovative project positions Novalja as a potential hub for local hydrogen alliances and circular economy initiatives.

DOK-ING is a global leader in the development and manufacture of high-tech robotic and electric vehicles for demanding industrial applications. With a strong commitment to innovation, sustainability, and safety, the company has built a solid track record in sectors such as defence, mining, and environmental protection.

The motivation to participate in the NACHIP project stems from DOK-ING's dedication to driving the global green energy transition. Leveraging its expertise in advanced technologies, the company is contributing to the creation of clean hydrogen ecosystems by implementing a universal gasification plant that aligns with circular economy principles and sustainable energy goals.

Through this pilot, DOK-ING aims to demonstrate the transformative potential of hydrogen technologies in urban and industrial contexts. By collaborating with leading organisations across the North Adriatic region, the company seeks to showcase the feasibility and scalability of hydrogen-based solutions while reinforcing its position as a pioneer in sustainable technological progress.

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Open Call priorities

1. **System optimisation & integration solutions**
   SMEs offering process optimisation, hydrogen upgrading, system control, or integration with urban energy systems.

2. **Downstream hydrogen utilisation partners**
   Companies able to use, store, or convert hydrogen/syngas produced from waste gasification in urban or industrial settings.

3. **Replication & deployment support**
   Engineering, digital, or consulting SMEs supporting scaling, replication, permitting, and business modelling for deployment in other cities or regions.

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Institut "Jožef Stefan" Ljubljana, Slovenija

University of Zagreb Faculty of Electrical Engineering and Computing

The pilot investments in clean hydrogen technologies within NACHIP are supported by a **Decision Support Tool** jointly developed by the **Jožef Stefan Institute** (Slovenia) and the **University of Zagreb Faculty of Electrical Engineering and Computing (UNIZG-FER)** (Croatia). This tool is designed to provide economically optimal guidance on the sizing and operation of hydrogen investment components, helping to derisk future investments and enable the scaling and replication of pilot technologies.

FAQ (1)

1. Who is eligible for the application to the Open Call?

Legal entities with the status of SME, with headquarter or branch offices in the eligible EU regions. SMEs can apply individually or in small consortia (maximum 3 SMEs).

2. What is the SME status?

Small and Medium-sized Enterprises (SMEs) refers to the official definition provide by the EC. https://single-market-economy.ec.europa.eu/smes/sme-definition_en

You also checked your status of SMEs to this link https://shorturl.at/bPh5c.

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Eligible EU regions

Slovenia: Vzhodna Slovenija; Zahodna Slovenija; **Croatia**: Jadranska Hrvatska; Panonska Hrvatska; Sjeverna Hratska; **Italy**: Friuli Venezia Giulia, Lazio; Umbria; Veneto; Sardegna; Sicilia; Calabria; Basilicata; Puglia; Campania; Molise; **Portugal**: Norte; Centro; Oeste e Vale do Tejo; Alentej; Acores; Madeira; **Spain**: Andalucia; Extremadura; Castilla-la Mancha; **Belgium**: Walon; France: Guyane; Mayotte; Réunion; Guadalupe Martinique; **Greece**: Kriti; Peloponnisos; Dytiki Ellada; Ionia Nisia; Sterea Ellada; Thessalia; Ipeiros; Dytiki Makedonia; Kentriki Makedonia; Anatoliki Makedonia Thraki; Voreio Aigaio; **Bulgaria**: Yuzhen tsentralen; Yugoiztochen;Severoiztochen; Severen tsentralen; Severozapaden; **Romania**: Sud-Vest Oltenia; Sud-Muntenia; Sud-Est; Centru; Vest; Nord-Vest; Nord-Est; **Hungary**: Dél-Dunantul; Dél-Alfold; Eszak-Aldold; Eszak-Magyarorszag; Pest; Budapest; Kozep-Dunantul;Nyugat-Dunantul; **Slovakia**: Vychodne Slovensko; Stredné Slovensko; Zapadné Slovensko; **Poland**: Podkarpackie; Malopolskie; Slaskie; Opolskie; Lubelskie; Mazowiecki regionalny; Podlaskie; Warminsko-mazurskie; Kujawsko-pomorskie; Pomorskie; Zachodniopomorskie; Lubuskie; Lodzkie; **Czechia**: Moravskoslezsko; Stredni Morava; Severovychod; Severozapad; **Lithuania**: Vudurio ir vakaru Lietuvos regionas; **Latvia**: **Latvia**;

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FAQ (2)

3. What is the maximum duration of your project?

The maximum project duration is 6 months, with no extensions allowed. Projects exceeding this duration will be considered ineligible.

4. How many projects are going to be funded?

The total budget allocated for the 1st open call is €540.000. The best scoring projects passing the threshold will be funded, until the full consumption of the available budget.

5. What is the maximum grant amount per project?

The maximum grant amount is €60,000 per legal entity. In case of consortia, a project can receive up to €180,000 (in case of 3 entities).

6. What is the funding rate?

Project costs are funded 100% by the FSTP.

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FAQ (3)

7. What are the eligible costs?

There are no specific restrictions on cost categories; however, proposed costs must be reasonable, not excessive, and in line with the project's proposed activities. The grants will be provided on a lump sum basis, therefore applicants will not be required to demonstrate eligibility of costs.

8. How can I submit an application?

Applications must be submitted exclusively through the current webpage (link above) within the specified application period, using the provided template.

9. How many open calls are planned under NACHIP, and when are they scheduled?

2 open calls are planned under NACHIP. In addition to the current one, the second open call is expected to open in the fourth quarter of 2026.

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FAQ (4)

10. What does "Lump sum scheme" mean?

The Lump Sum scheme is method which simplifies administrative management of the funding. It does not foresee monitoring and accounting of costs through the provision of financial reports. It is based on the monitoring of the achieved results and implementation of activities

11. I cannot access the application page due to technical problems. What should I do?

Applicants experiencing technical issues should contact the following email address for assistance: nachip@meta-group.com.

12. What happens to projects that are not funded due to budget limitations?

Projects not funded due to budget constraints will be included in a reserve list and will be contacted at the opening of the 2nd call to confirm availability to participate and update their application if necessary.

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FAQ (5)

13. What are the obligations of the beneficiaries?

Beneficiaries must comply with contractual obligations related to conflict of interest, confidentiality, ethics, visibility, and record-keeping, among others, and submit technical reports detailing progress and compliance with the action plan.

14. What are the reporting requirements for funded projects?

Beneficiaries must submit mid-project and final technical reports detailing their progress, achievements, and any deviations from the initial action plan. Failure to meet expected results or comply with the action plan may affect the final payment.

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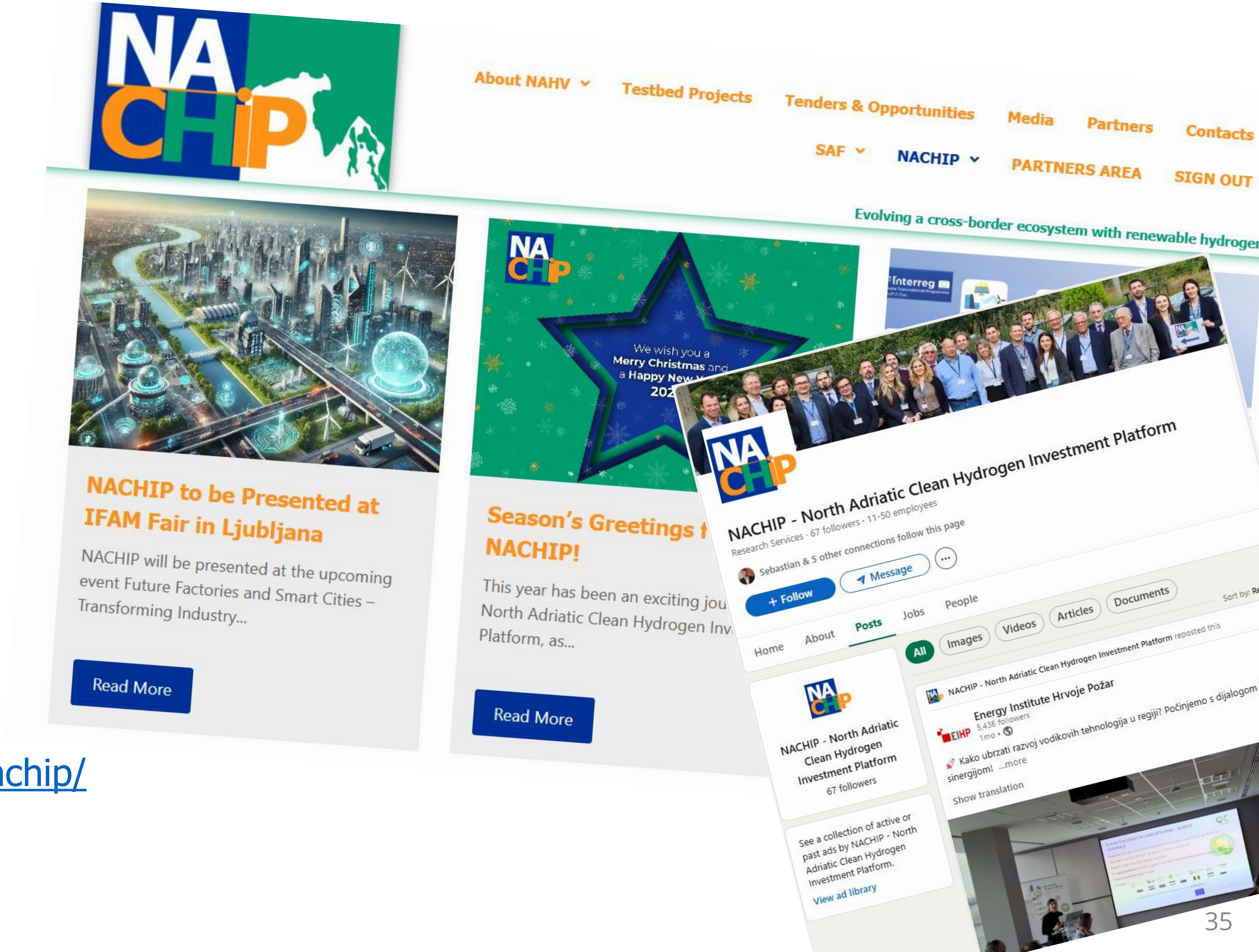
You can send your questions to the address below.

Official Open Call portal:
https://nachip.meta-group.com/

Write us to:
nachip@meta-group.com

NACHIP website:
https://www.nachip.eu/

NACHIP Linkedin:
https://www.linkedin.com/company/nachip/



Thank you.

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