

WP3 - Deliverable 3.2.2

Report on H2CE Solutions

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H2CE Project Partnership



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1. Introduction

The H2CE project supported public authorities and regional stakeholders in strengthening their capacities to plan and implement the transition towards **hydrogen-ready regions in central Europe**. The project combined strategic planning, practical pilot activities, capacity building and transnational cooperation to address key barriers to regional hydrogen deployment.

Within Activity 3.2, H2CE consolidated project experience into **two practical and transferable solutions**, complemented by the **H2CE Collaboration Platform**. The solutions build on the results of the pilot activities implemented in WP2 and connect them with strategies, methodologies and knowledge developed across the project.

The first solution is the **Handbook for Strategic Decision-Making**, which translates experience from the **GIS-based planning approach**, **Energy Cells Model**, **Strategic Planning Guidelines** and other supporting tools into practical guidance for regional hydrogen planning. It supports public authorities in assessing regional conditions, exploring hydrogen production and demand, infrastructure needs and integrated energy-system development. The Handbook is available as a standalone document and is complemented by relevant tools and resources accessible through the H2CE Collaboration Platform.

The second solution is the **Regional H2 Competence Centre model**, developed to strengthen regional hydrogen capacities by combining **knowledge transfer, training, advisory support, stakeholder cooperation and support for project development**. Rather than prescribing a single institutional structure, the model can be adapted to different regional conditions, existing organizations and levels of hydrogen maturity. Its practical application was demonstrated through complementary approaches in **Zagreb and Styria**.

To support replication beyond the project regions, H2CE developed a dedicated **Guide for Setting up Regional H2 Competence Centres**. The Guide translates project experience into a practical methodology covering the main stages of establishing and operating a competence centre, including regional needs assessment, stakeholder involvement, service design, governance, partnerships, resources, financing, communication, monitoring and long-term sustainability.

The **H2CE Collaboration Platform** provides the common digital environment supporting both solutions. It facilitates access to project tools, regional examples, capacity-

building resources and contacts and supports **visibility, knowledge exchange, cooperation and transfer of H2CE results beyond the project lifetime.**

This report evaluates the two solutions and the Collaboration Platform with particular attention to their **relevance, practical usability, transferability, stakeholder benefits and potential for continued uptake and scale-up.** The assessment draws on project implementation experience, partner and stakeholder feedback, pilot activities and the outputs and resources developed throughout H2CE.

1.1 Purpose of the Report

The purpose of this report is to provide a structured evaluation of two strategic solutions developed within the H2CE project and to assess their implementation potential through the H2CE Collaboration Platform during the project implementation phase.

More specifically, the deliverable aims to:

- evaluate the practical relevance and strategic usefulness of the **Handbook for Strategic Decision-Making** for public authorities, planners and regional stakeholders;
- assess the added value and implementation potential of **Regional H2 Competence Centres** as regional support mechanisms for hydrogen deployment;
- examine how both solutions can be presented, connected and further promoted through the H2CE Collaboration Platform;
- identify concrete benefits of the platform for involved stakeholder groups, including public institutions, SMEs, research organizations and regional development actors;
- analyze opportunities for continuation, replication and scale-up of the platform and related solutions after project closure;

The report also serves an internal strategic function for the project partnership. It consolidates lessons learned from implementation activities and translates individual outputs into a coherent perspective on sustainability. In this sense, the report moves beyond a simple summary of activities and provides an evidence-based assessment of how H2CE results can remain active and useful after the end of funded project activities.

Given that many hydrogen regions in central Europe are at different stages of maturity, the report additionally considers **transferability across territories** with varying governance capacities, industrial structures and energy transition priorities. This is consistent with previous H2CE findings, which highlighted the importance of adaptable support instruments, knowledge exchange and region-specific pathways toward hydrogen readiness.

Ultimately, the Report on H2CE Solutions is intended to demonstrate that the **H2CE Collaboration Platform** is not only a communication tool, but a strategic solution for preserving project knowledge, connecting regional actors and enabling future cooperation in the emerging hydrogen economy of central Europe.

1.2 Evaluated Solutions

The H2CE project developed several practical outputs intended to support regional preparedness for hydrogen deployment, strengthen institutional capacities and improve strategic planning processes. For the purpose of this deliverable, the evaluation focuses on two solutions considered particularly relevant for long-term use beyond the formal project duration. Both solutions combine practical applicability with strong transfer potential for other territories in central Europe and can be further disseminated through the H2CE Collaboration Platform.

The first evaluated solution is the **Handbook for Strategic Decision-Making**. The second evaluated solution, addressed in the following section of this report, is the concept of **Regional H2 Competence Centres**. Together, these two solutions represent complementary instruments: one supports informed strategic planning and decision processes, while the other provides organisational capacity, advisory services and implementation support at regional level.

Solution 1: Handbook for Strategic Decision-Making

The **Handbook for Strategic Decision-Making** was developed within the H2CE framework as a practical support instrument for regional and local decision-makers dealing with hydrogen-related planning, investment preparation and energy transition choices. It responds to a common challenge identified across many regions: public authorities are increasingly expected to take strategic decisions regarding hydrogen infrastructure, land use, mobility systems, industrial transformation and funding priorities, while often lacking specialized tools, structured guidance or sufficient internal expertise.

The handbook therefore translates technical project outputs into a more accessible **decision-support format** that can be used by non-technical stakeholders, planners, development agencies and policy actors. It builds on knowledge generated through pilot actions, strategic modelling activities and regional testing processes implemented during the H2CE project.

A key reference point for the handbook is the testing of H2CE strategic decision-support tools, especially the **GIS-based planning platform** developed in Veneto and Styria, as well as the **Energy Cells Model** tested in Lübben. These tools were designed to help decision-makers evaluate hydrogen production, demand, infrastructure options and broader energy transition scenarios at territorial level.

The **GIS-based tool** demonstrated the potential to support:

- territorial mapping of hydrogen potential;
- identification of suitable locations for hydrogen production, storage and distribution;
- scenario simulation for alternative hydrogen development pathways;
- optimisation of transport, logistics and refuelling infrastructure;
- assessment of environmental and territorial impacts of hydrogen investments.

In parallel, the **Energy Cells Model** provided a system-level approach for analysing renewable energy integration, heating decarbonisation, local energy balances and the potential role of hydrogen production under different regional conditions. The model illustrated how **sector coupling**, local flexibility and integrated energy systems can support climate-neutral regional development pathways.

Beyond these two core analytical tools, the handbook covers a wider portfolio of strategic support instruments developed or consolidated within H2CE. This includes a **structured planning framework for H2-ready regions**, step-by-step guidance for strategy development, the **H2CE Voucher Scheme** as a mechanism for supporting early-stage feasibility work and project preparation, Competence centers implementation and examples of regional action pathways from participating territories. This broader scope significantly increases the practical usefulness of the handbook, as users can combine analytical planning methods with governance, financing and implementation-oriented approaches.

The handbook can therefore be understood as a practical bridge between advanced technical tools and everyday public decision-making. Rather than requiring users to

directly operate complex models from the outset, it offers structured guidance on how to **assess regional needs, define priorities, interpret available evidence and organize practical next steps** toward hydrogen readiness.

From an implementation perspective, the handbook is particularly relevant for:

- **regional administrations** preparing hydrogen strategies or action plans;
- **municipalities** assessing local hydrogen opportunities;
- **development agencies** coordinating investment pipelines;
- **energy agencies** supporting territorial transition planning;
- **clusters and intermediary organisations** facilitating stakeholder dialogue;
- **educational or advisory institutions** supporting capacity building.

Its strategic value lies in helping public institutions move from general hydrogen ambition toward **informed, realistic and territorially adapted planning pathways**. This is fully aligned with broader H2CE objectives to empower public authorities as active drivers of hydrogen transition rather than passive regulatory actors.

Within the **H2CE Collaboration Platform**, the handbook gains an additional and highly important digital dimension. The platform should not be viewed merely as a repository containing the handbook in static form, but as an **online extension of the handbook itself**. Through www.h2ce.eu, users can access expanded information on individual tools and methodologies, download relevant materials, navigate directly to available resources, and connect handbook concepts with related project outputs, regional examples and cooperation opportunities.

In this sense, the platform operationalizes the handbook in a more dynamic format. While the handbook provides structured guidance in document form, the platform can continuously complement it through **updated content, direct access to tools, visibility of regional experiences, stakeholder contacts and future additions** beyond the original publication date. This creates a stronger user pathway from reading guidance to applying solutions in practice.

The combined value of the Handbook and Platform is therefore significantly higher than either element alone. The handbook provides **methodological structure, strategic orientation and marketing approach**, while the platform provides **accessibility, continuity, visibility and practical usability** in an online environment.

For these reasons, the **Handbook for Strategic Decision-Making** is evaluated in this report as one of the core strategic solutions developed under H2CE, with particular attention to its **practical relevance, usability, transferability and long-term contribution to regional hydrogen readiness**. Equally important, its impact potential is strengthened through its complementary integration with the **H2CE Collaboration Platform** as a living digital support environment for regions across central Europe.

Solution 2: Regional H2 Competence Centres

The second evaluated solution is the concept of **Regional H2 Competence Centres**, developed within the H2CE project as an institutional support mechanism for regions preparing for hydrogen deployment and broader energy system transition. While strategic plans and analytical tools are important foundations, many regions also require **permanent organizational structures** that can coordinate stakeholders, provide technical guidance and translate strategy into implementation. The competence centre model addresses this gap.

Across central Europe, regions are progressing at different speeds in relation to hydrogen readiness. Some territories already possess industrial initiatives, research capacities or hydrogen roadmaps, while others remain at an early stage and face **limited institutional capacity, fragmented governance or insufficient access to expertise**. In this context, the H2CE project identified the need for neutral regional structures capable of supporting public authorities, SMEs, investors, training providers and other actors throughout the transition process.

The competence centre concept was tested and reviewed under H2CE pilot activities and received positive feedback. According to the project peer review, competence centres were perceived as **highly valuable institutions** combining technical advisory services, training functions, project development support and public outreach. Their key strength lies in bringing together **knowledge, capacity building and stakeholder coordination** within one accessible regional structure.

The review further highlighted that competence centres help address several recurring ecosystem gaps, including:

- limited availability of technical guidance for municipalities and SMEs;
- absence of a **centralised information and support hub**;
- fragmented governance structures and weak coordination between actors;
- lack of tailored support for early-stage hydrogen project development;
- insufficient links between strategy, training and implementation activities.

This makes the solution particularly relevant for regions where hydrogen opportunities exist but **implementation capacity remains underdeveloped**.

From a functional perspective, **Regional H2 Competence Centres** can provide a broad range of services depending on regional needs and maturity levels. These may include:

- first-line advisory support for municipalities and public authorities;
- information services for SMEs and potential project promoters;
- support in identifying funding opportunities and project pipelines;
- organisation of training programmes and awareness activities;
- stakeholder matchmaking across public, private and research sectors;
- dissemination of good practices and pilot experiences;
- support for regional hydrogen strategies, valleys or innovation ecosystems.

The peer review also noted that the concept is **highly scalable and adaptable** across different territorial contexts. Regional feedback illustrated different implementation pathways. In Croatia, the model was linked to the need for stronger national coordination and ecosystem building. In Germany/Brandenburg, it was seen as aligned with existing hydrogen roadmaps. In Italy, the model was considered compatible with innovation cluster structures and regional industrial development approaches.

These findings indicate that competence centres should not be seen as a rigid institutional template, but rather as a **flexible governance model** that can be embedded in existing agencies, clusters, regional development organisations or dedicated hydrogen structures.

To support practical replication of this model, H2CE developed a dedicated **Guide for Setting up Regional H2 Competence Centres**. The Guide translates the project experience into a **step-by-step methodology for regions wishing to establish or strengthen their own competence centre**. It covers the full development process, including definition of the centre's mission, assessment of the regional hydrogen ecosystem, stakeholder and target-group mapping, service design, required resources, financing, governance and partnerships, physical and digital infrastructure, launch and communication, user support, monitoring and long-term sustainability. Rather than prescribing one organisational structure, the Guide helps regions **adapt the competence centre model to their own institutional capacities, hydrogen maturity and stakeholder needs**, providing a practical basis for transfer and replication beyond the H2CE project regions.

Long-term sustainability was also identified as realistic if competence centres are integrated into broader regional development frameworks. Potential financing sources include **regional public funding, European programmes and fee-based expert services**. Embedding competence centres within hydrogen valley initiatives or regional innovation ecosystems can further strengthen their continuity and strategic relevance.

Within the **H2CE Collaboration Platform**, the competence centre concept gains additional value. The platform can function as a **transnational umbrella environment** connecting regional centres, showcasing services, sharing methodologies, publishing contacts, promoting events and enabling peer learning between regions. In this way, local competence structures can be amplified through a wider central European cooperation network.

For these reasons, **Regional H2 Competence Centres** are evaluated in this report as a core implementation-oriented solution of the H2CE project. Their importance lies not only in supporting current project regions, but in offering a **transferable model for institutional hydrogen readiness across central Europe**.

1.3 Importance of the H2CE Collaboration Platform

The **H2CE Collaboration Platform** available through www.h2ce.eu represents the core horizontal output of the H2CE project. While many project results are delivered through reports, pilot actions and regional activities, the platform provides a common digital environment where these outputs can be consolidated, presented and further utilized beyond the formal project implementation period. In this sense, the platform transforms individual project results into a more accessible, connected and durable cooperation instrument.

Its importance lies not only in its communication function, but in its **capacity to serve as a practical infrastructure for continued hydrogen-related collaboration among regions, institutions and stakeholders in central Europe**. By bringing together tools, methodologies, experiences and contacts developed within H2CE, the platform increases the long-term usability and visibility of project achievements.

Transnational Cooperation Hub

A central role of the platform is to function as a **transnational cooperation hub** for H2-ready regions and hydrogen stakeholders across central Europe. The hydrogen transition requires cross-border exchange of know-how, alignment of strategies, joint learning and

coordinated responses to shared challenges such as infrastructure planning, regulation, skills shortages and investment readiness.

Through a common online space, **the platform can facilitate:**

- visibility of participating regions and partner institutions;
- exchange of experiences between territories at different maturity levels;
- networking among public authorities, agencies, clusters and experts;
- creation of future partnerships beyond the H2CE consortium.

This role is particularly relevant in central Europe, where hydrogen ecosystems are developing unevenly and where smaller regions may benefit significantly from access to transnational knowledge networks.

Repository of Tools and Practical Resources

The platform also serves as a **repository of tools, methods and practical resources** developed during the H2CE project. Several outputs generated within the project have value beyond their original pilot context and can be reused by external stakeholders if made easily accessible in digital form.

These include, among others:

- the **Handbook for Strategic Decision-Making**;
- information on the **GIS-based Hydrogen Planning Tool**;
- the **Energy Cells Model** and related planning approaches;
- strategic planning methodologies for H2-ready regions;
- examples of regional hydrogen strategies and action plans;
- competence centre concepts, guidance and capacity-building materials.

In this role, the platform complements static deliverables by enabling easier access, structured navigation and the possibility of future content expansion.

Hydrogen Ecosystem Builder

Beyond knowledge storage, the platform has the potential to act as a **hydrogen ecosystem builder**. Hydrogen transition is not driven by single institutions, but by cooperation between public authorities, industry, research organisations, training providers, infrastructure actors and investors. Many regions face fragmentation between these actors and lack neutral spaces for coordination.

The H2CE platform can help reduce this gap by:

- connecting demand-side and supply-side actors;
- promoting regional hydrogen initiatives and success stories;
- increasing visibility of competence centres and support organisations;
- supporting matchmaking and project generation;
- encouraging stakeholder engagement through shared information and events.

In this sense, the platform can contribute not only to communication, but also to ecosystem activation and market readiness.

Long-Term Legacy Output

Perhaps most importantly, the platform should be understood as a **long-term legacy output** of the H2CE project. While funded activities conclude at project end, the need for regional hydrogen support, cooperation and knowledge exchange will continue to grow in the coming years.

If properly maintained and further developed, www.h2ce.eu can remain active as:

- a gateway for H2CE project knowledge;
- a reference point for new regions entering the hydrogen field;
- a cooperation channel for former and new stakeholders;
- a dissemination space for follow-up initiatives and future projects;
- a visible demonstration of H2CE's long-term impact.

This long-term function significantly increases the overall value of the project, as it allows H2CE outputs to remain usable rather than becoming static archived deliverables.

2. Evaluation Methodology

The evaluation methodology applied for this **Report on H2CE Solutions** was designed to reflect the actual stage of project implementation and the evidence realistically available within the H2CE project. As the **H2CE Collaboration Platform** had reached its final project implementation version at the time of drafting this report, while still offering clear potential for future development after project closure, the assessment does not claim to represent a long-term impact evaluation based on extended user data or post-project performance monitoring.

Instead, the report applies a **desk-based expert evaluation methodology**, combining structured review of project outputs with qualitative assessment of implementation quality, practical usability and future value. This approach is proportionate to the nature of the deliverable and consistent with many cooperation projects where digital legacy tools, institutional models and strategic outputs are assessed at the conclusion of implementation.

The methodology focuses primarily on the two selected solutions evaluated in this report:

- the **Handbook for Strategic Decision-Making**;
- the concept of **Regional H2 Competence Centres**;

and their relation to the **H2CE Collaboration Platform** as the main digital environment for continued uptake, visibility and dissemination.

Rather than measuring mature market outcomes, the evaluation concentrates on whether these solutions are **relevant, usable, transferable and strategically positioned** to generate value after project completion.

2.1 Applied Method

The applied method is a **desk-based expert evaluation based on project evidence**. This means that conclusions presented in the report were developed through systematic review of materials created during H2CE implementation, supported by informed assessment of their practical application potential.

The method combines three complementary perspectives:

- **Document Review**
A structured review of official H2CE outputs was carried out in order to identify the intended purpose, design quality, implementation logic and expected benefits of the evaluated solutions.
- **Implementation Assessment**
Where relevant, the report considers how selected outputs were tested, presented or operationalised during the project, including pilot activities and the completed project-stage deployment of the **H2CE Collaboration Platform**.
- **Forward-Looking Strategic Assessment**
As several outputs are intended to create significant value beyond the funded implementation period, the methodology also assesses **future usability**,

continuation potential and scale-up opportunities under realistic post-project conditions.

This combined approach allows the report to move beyond descriptive reporting while remaining evidence-based and proportionate to the available data.

2.2 Evidence Sources

The evaluation draws primarily on evidence generated internally within the H2CE project. These sources provide a sufficient basis for assessing implementation quality, current readiness and future potential, even if they do not constitute a full external impact dataset.

- **H2CE Deliverables**

Previously completed deliverables were reviewed to understand the development logic, objectives and practical outputs of the project, including strategies, action plans, tools and cooperation concepts.

- **Pilot Testing Reports**

Reports documenting pilot activities were used to assess whether selected tools and concepts were practically tested and how they performed in real or semi-real application environments.

In particular, the report on testing of the strategic decision-support tool provided relevant evidence regarding the **GIS planning tool**, **Energy Cells Model** and stakeholder reactions during testing activities.

- **Peer Review Report**

The peer review of pilot results was an important source for identifying perceived strengths, challenges, transferability potential and practical relevance of the developed solutions, especially in relation to competence centres, training functions and support mechanisms.

- **Handbook for Strategic Decision-Making**

The handbook itself was reviewed as a core evaluated output, including its structure, scope, practical orientation and relationship to other project tools and methodologies.

- **Competence Centre Outputs**

Conceptual materials and pilot references related to **Regional H2 Competence Centres** were used to assess their functional role, implementation pathways and long-term relevance. For the Regional H2 Competence Centre model, the evaluation also considers the dedicated **Guide for Setting up Regional H2**

Competence Centres, regional implementation experience and its operationalisation through the H2CE Collaboration Platform.

- **Platform Content Review**

A structured review of the final project implementation version of www.h2ce.eu was undertaken to assess the platform's structure, positioning, visibility of outputs and its role as a continuation instrument for project results.

- **Internal Implementation Observations**

Where appropriate, observations arising from project implementation processes were considered, particularly regarding how outputs relate to each other and how they may realistically function after project closure.

2.3 Evaluation Criteria

To ensure consistency, the two evaluated solutions and the platform were reviewed against a common set of qualitative criteria. These criteria focus on **practical usefulness and strategic relevance** rather than purely theoretical design.

Criterion	Meaning
Relevance	Responds to identified regional and stakeholder needs within hydrogen transition processes.
Practicality	Can be realistically applied by target users such as public authorities, agencies or SMEs.
Accessibility	Easy to understand, navigate or use without requiring highly specialised expertise.
Transferability	Can be adapted or replicated in other regions with different maturity levels.
Sustainability	Has potential to remain useful beyond the formal end of the project.
Scale-up Potential	Can be further expanded, improved or adopted by additional regions or users.
Strategic Benefit	Contributes to stronger hydrogen readiness, coordination or transition capacity.

Table 1 Evaluation Criteria List

These criteria do not produce numerical scores. Instead, they provide a structured framework for **balanced qualitative judgement** based on the available evidence.

Methodological Note

Given the available evidence base, findings in this report should be interpreted as a **final implementation-phase evaluation** rather than a post-project long-term impact assessment. Nevertheless, the methodology provides a credible basis for identifying the strengths of H2CE outputs, areas for further improvement and realistic pathways for continued use and future development after project completion.

3. H2CE Collaboration Platform Overview

The **H2CE Collaboration Platform** is the main digital interface through which the project's strategic outputs, practical solutions and cooperation identity are presented in an integrated manner. While previous chapters explained the broader strategic importance of the platform, this chapter focuses more specifically on its **operational role, structure and user-oriented purpose** as implemented within the project.

The platform translates a multi-partner cooperation project into a more accessible online format. Instead of requiring users to navigate numerous deliverables or separate partner sources, the platform creates a clearer entry point to selected H2CE results and relevant project information.

As a digital project environment, the platform supports the visibility of H2CE achievements while also improving practical access to tools, concepts and transferable knowledge developed during implementation.

3.1 Purpose of the Platform

The purpose of the **H2CE Collaboration Platform** is to provide a practical and user-friendly digital environment where project outputs can be accessed, understood and further utilised by relevant stakeholders.

Whereas many Interreg project results are formally delivered through reports and technical outputs, such materials are not always easily discoverable or immediately usable for external audiences. The platform helps bridge this gap by converting selected project knowledge into a more accessible online format.

Structured Presentation of Project Results

One of the main purposes of the platform is to present H2CE outputs in a structured and understandable way. Rather than leaving results dispersed across standalone documents, the platform allows users to identify relevant topics, solutions and materials through a clearer digital interface.

This is particularly important for stakeholders who may not be directly involved in the project but are interested in hydrogen planning, regional transition or transferable support models.

Simplified Access to Practical Solutions

The platform also serves to simplify access to practical H2CE solutions. Users can more easily identify and navigate toward resources such as:

- the **Handbook for Strategic Decision-Making**;
- hydrogen planning tools and methodologies;
- competence centre concepts;
- regional examples and strategic approaches;
- selected downloadable materials.

This function improves usability compared to relying solely on formal deliverable documentation.

Digital Complement to Static Deliverables

Another important purpose is to act as a **digital complement to static project deliverables**. Reports and handbooks provide structured content at a fixed point in time, whereas the platform enables a more flexible presentation layer.

For example:

- the Handbook can be supported through direct links, downloads and related resources;
- tools can be presented more clearly than in PDF format alone;
- project outputs can be grouped thematically;
- users can move more easily between related topics.

This makes the platform a practical extension of existing outputs rather than a separate standalone result.

User Entry Point to the H2CE Project

The platform also functions as a first-entry environment for users discovering the H2CE project for the first time. For many external visitors, the website may be the first contact point with the project and therefore plays an important role in shaping understanding of what H2CE has developed.

A clear and well-structured platform helps communicate:

- project objectives;
- available solutions;
- participating regions and partners;
- practical relevance of project outputs.

Basis for Further Development

Although finalized within the project implementation phase, the platform also creates a basis for future enhancement after project closure. New content, updated references, follow-up initiatives or additional cooperation activities may be incorporated later if maintenance continues. This gives the platform value not only as a final dissemination product, but also as a scalable digital asset.

Overall Purpose

In summary, the purpose of the **H2CE Collaboration Platform** is not simply to host information, but to make project results **more visible, more accessible and more usable** for stakeholders interested in hydrogen readiness and regional transition. It is therefore a practical interface between formal project outputs and real-world future users.

3.2 Review of the H2CE Collaboration Platform

The **H2CE Collaboration Platform** available at www.h2ce.eu represents the main public-facing digital output of the project. It provides a structured online environment through which users can understand the project's objectives, explore selected outputs and access relevant hydrogen-transition resources developed within H2CE.

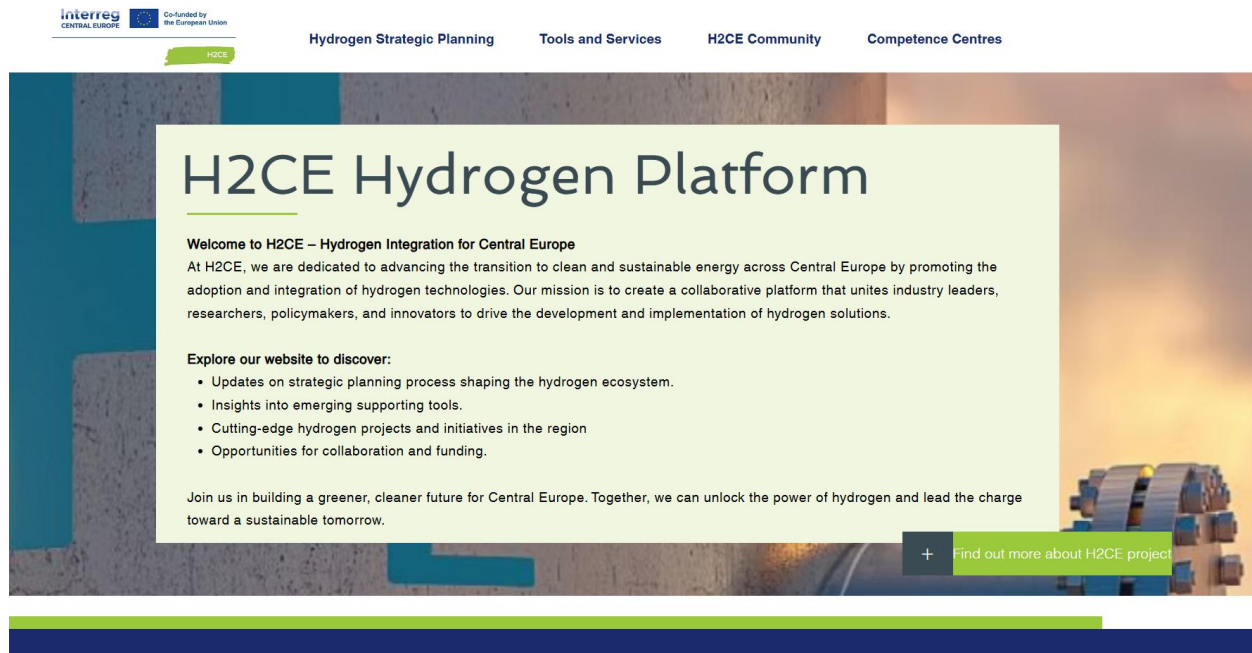


Figure 1: H2CE Collaboration Platform Intro page

From an evaluation perspective, the platform should be assessed primarily as a **functional cooperation and knowledge interface** rather than as a complex technical application. Its main value lies in presenting project results in a more accessible, visible and usable format than standalone deliverables alone could achieve.

The review below focuses on five practical dimensions relevant to this report: **navigation, content logic, user orientation, visual structure and strategic clarity.**

Navigation

The platform offers a generally clear and understandable navigation structure. Main content sections can be identified without excessive complexity, which helps first-time visitors orient themselves quickly.

This is important because H2CE covers **several interconnected themes**, including:

- hydrogen readiness of regions;
- strategic planning approaches;
- practical tools and methods;
- competence-building concepts and guidelines;

- partner cooperation activities.

A platform dealing with such topics requires a simple structure to avoid confusion. In this regard, the current version performs well by **presenting information in a manageable and readable way**.

From a practical user perspective, the platform appears suitable for:

- stakeholders seeking a quick project overview;
- users searching for selected outputs;
- external visitors interested in hydrogen transition cooperation;
- organisations looking to understand what H2CE produced.

Further future improvements could deepen internal linking between related content areas, but the current navigation already provides a solid operational basis.

Content Logic

The platform demonstrates a coherent **content logic**, meaning that information is presented in a way that supports understanding of the overall project narrative.

Rather than functioning as a simple archive of disconnected files, the platform communicates H2CE as a coordinated initiative focused on:

- strengthening regional hydrogen readiness;
- supporting public authorities and regional actors;
- sharing tools and methodologies;
- promoting cooperation across central Europe.

This is an important quality criterion. Many project websites present outputs without explaining how they fit together. The H2CE platform performs better when it links project purpose with practical solutions.

The content logic also supports gradual user engagement: visitors can first understand the project mission and then move toward specific outputs or thematic resources.

User Orientation

The platform shows a positive level of **user orientation**, particularly for visitors who are not directly involved in the H2CE consortium.

External users often do not know internal work package structures, deliverable numbering or project terminology. A useful platform therefore needs to translate internal project outputs into more understandable entry points.

The H2CE platform contributes to this by making information more approachable for:

- regional administrations;
- municipalities;
- development agencies;
- SMEs;
- researchers;
- hydrogen ecosystem stakeholders.

Compared with relying only on formal project reports, the platform lowers access barriers and improves discoverability of relevant content. Over time, additional practical pathways such as “for regions”, “tools”, “resources” or “how to start” could further strengthen this user-oriented approach.

Visual Structure

The platform presents a professional and coherent **visual structure**, which positively supports credibility and user trust.

This includes:

- consistent project identity;
- readable page layout;
- organised content blocks;
- modern presentation style;
- clear digital branding.

For cooperation projects, visual quality is more than aesthetics. A well-structured website increases the likelihood that users perceive the outputs as relevant, current and worth exploring. The current platform therefore performs an important reputational function for the H2CE project and its partnership.

The inclusion of screenshots, diagrams or tool previews in future updates may strengthen this dimension even further.

Strategic Clarity

A particularly relevant criterion is **strategic clarity**—whether users can quickly understand what H2CE is about and why its outputs matter.

The platform successfully communicates H2CE as a project focused on:

- hydrogen as part of regional energy transition;
- practical readiness of central European regions;
- cooperation between stakeholders;
- tools and support mechanisms for implementation.

This clarity is valuable because many external visitors will first encounter the project through the platform rather than through official reports. A platform that clearly communicates mission and relevance creates stronger long-term value than one that merely stores documents.

Overall Assessment

Overall, the platform available at www.h2ce.eu can be positively assessed as a **credible, functional and strategically useful digital project output**.

Its strongest current contributions are:

- clear presentation of project identity;
- accessible entry point to selected results;
- professional visibility of the partnership;
- stronger usability of project outputs;
- basis for continued relevance after project closure.

While future enhancements remain possible, the current version already fulfills the essential role expected from a cooperation platform: transforming project results into a visible and usable public resource.

3.3 Platform Position within H2CE Outputs

Within the overall structure of the H2CE project, the **Collaboration Platform** occupies a horizontal and integrating role. While many project outputs were developed through specific work packages, partner activities or pilot actions, the platform creates a common digital environment where these otherwise separate results can be connected, presented and more easily understood by external users.

Its position within H2CE outputs is therefore not limited to communication. The platform increases the practical value of multiple deliverables by improving their **visibility, accessibility and long-term usability**.

In this sense, the platform should be seen as an enabling output that strengthens the impact potential of several other project results.

Connection to Strategic Outputs

A substantial part of H2CE focused on regional hydrogen readiness, policy support and strategic planning pathways. Several project outputs therefore contain strategies, action plans, governance recommendations and regional transition concepts. Such documents are valuable, but their use can remain limited when stored only as formal deliverables. The platform improves this by offering a more accessible route to strategic content.

Its role in relation to strategic outputs includes:

- increasing visibility of strategic deliverables;
- presenting regional planning approaches in simplified form;
- helping external users identify relevant guidance;
- preserving strategic knowledge after project completion.

This strengthens the reach of H2CE strategic work beyond the project partnership itself.

Connection to the Handbook for Strategic Decision-Making

The platform has a particularly strong functional relationship with the **Handbook for Strategic Decision-Making**. As noted previously, the handbook provides structured guidance in document form, while the platform adds a digital layer that can improve how users interact with its content.

This includes:

- easier access to the handbook;
- clearer presentation of related resources;
- links to tools referenced in the handbook;
- improved discoverability for new users;
- possibility to complement static handbook content over time.

The platform therefore helps transform the handbook from a standalone publication into a more dynamic support resource.

Connection to Tools and Practical Methods

H2CE also generated practical planning-oriented solutions, especially the **GIS-based hydrogen planning tool** and the **Energy Cells Model**. These outputs are highly relevant, but technical tools often require more explanation and clearer user pathways than can be provided through formal reports alone.

The platform is well positioned to support these outputs through:

- simplified presentation of tool purpose and benefits;
- access routes to tools or related resources;
- explanation of use cases;
- visibility for stakeholders unfamiliar with technical deliverables;
- stronger continuity after project end.

This is particularly important because practical tools often represent some of the most reusable outputs of cooperation projects.

Connection to Regional H2 Competence Centres

The concept of **Regional H2 Competence Centres** also gains stronger value through the platform. Institutional models, implementation guidelines, advisory structures and governance concepts are more effective when they are visible, understandable and easy to compare across regions. The platform supports this by presenting competence-centre approaches in a clearer digital format. **The model was tested through different implementation approaches in Zagreb and Styria, translated into a detailed establishment Guide and operationalised through the H2CE Collaboration Platform.**

H2CE Platform added value in this area includes:

- visibility of competence centre functions;
- presentation of transferable models;
- support for replication in other regions;
- stronger connection between regional centres and wider cooperation networks.

This makes the platform an important multiplier for this implementation-oriented solution.

Connection to Pilot Results and Tested Activities

Pilot actions are often among the most valuable outputs of territorial cooperation projects because they demonstrate tested approaches rather than only theoretical recommendations.

H2CE pilot activities included work related to **planning tools, competence-building models and support mechanisms**. The platform creates an opportunity to communicate these practical experiences in a more accessible way than technical reporting alone.

This supports:

- visibility of tested solutions;
- demonstration of practical project value;
- easier transfer of lessons learned;
- stronger credibility of project outputs.

Users are more likely to engage with solutions that have been tested in practice.

Connection Across Work Packages

The platform also helps bridge the natural fragmentation that can occur in multi-partner projects where outputs are generated under separate work packages. Instead of users needing to understand internal project architecture, the platform can present H2CE outputs through more intuitive thematic pathways.

This is valuable because external users are usually interested in:

- solutions;
- tools;
- examples;
- contacts;
- practical relevance.

The platform therefore converts internal project structure into a more user-oriented external format.

Overall Position within H2CE

Overall, the **H2CE Collaboration Platform** should be understood as a **cross-cutting integrator of project outputs**. Its strategic position within H2CE lies in connecting:

- **strategies;**

- the **Handbook for Strategic Decision-Making**;
- planning tools and methodologies;
- **Regional H2 Competence Centre** concepts;
- pilot experiences and tested solutions.

For this reason, the platform is not a secondary communication add-on. It is a core horizontal output that increases the usefulness and legacy value of many other H2CE results.

4. Evaluation of Solution 1: Handbook for Strategic Decision-Making

The **Handbook for Strategic Decision-Making** is one of the key practical outputs developed within the H2CE project. It translates technical knowledge, regional experiences and strategic approaches into a concise and usable format for decision-makers and stakeholders involved in hydrogen transition processes.

Within many regions, hydrogen is recognised as an important future energy carrier and industrial opportunity. However, public institutions and regional actors often face uncertainty regarding where to start, how to prioritise actions, how to assess local potential and how to connect hydrogen ambitions with broader territorial development goals. The handbook was developed to respond to these practical needs.



Its value lies in transforming complex hydrogen-transition topics into a more understandable guidance tool for real-world planning and implementation contexts. At the same time, the handbook should also be viewed as an important **engagement and outreach instrument**: it introduces users to key H2CE solutions, demonstrates practical possibilities and motivates further exploration of resources available through the **H2CE Collaboration Platform**.



Figure 2: Handbook for Strategic Decision-Making

4.1 Purpose of the Handbook

The primary purpose of the **Handbook for Strategic Decision-Making** is to support regional and local stakeholders in making **better-informed, more structured and more realistic decisions** related to hydrogen readiness and regional energy transition.

Rather than serving as a purely technical manual, the handbook functions as a practical bridge between expert knowledge and public-sector decision-making. It is especially relevant for institutions that need to take strategic choices but do not necessarily possess specialised internal hydrogen expertise.

At the same time, the handbook has a second important purpose: it acts as a **marketing and propagation tool** for H2CE solutions. By presenting selected tools, approaches and

opportunities in a readable and attractive format, it helps create interest among users who may then continue exploring more detailed resources through the Platform.

Supporting Public Decision-Makers

Many hydrogen-related decisions are increasingly relevant for public actors, including:

- infrastructure planning;
- industrial transition support;
- renewable energy integration;
- mobility decarbonisation;
- land-use considerations;
- investment prioritisation;
- funding preparation.

The handbook helps public authorities approach such decisions through a more coherent and evidence-based framework.

This is consistent with the broader H2CE objective of strengthening the role of **public authorities as active enablers** of hydrogen transition.

Providing a Structured Planning Process

A central purpose of the handbook is to offer a **structured planning pathway** for regions that want to progress from general interest in hydrogen toward concrete implementation steps.



Figure 3: Strategic Planning Framework within Handbook

Instead of fragmented one-off actions, the handbook supports a more logical sequence such as:

- understanding territorial starting conditions;
- identifying hydrogen opportunities and constraints;
- analyzing energy system context;
- selecting realistic priorities;
- involving relevant stakeholders;
- preparing action-oriented next steps.

This planning orientation is particularly valuable for regions at an early or intermediate stage of hydrogen maturity.

Presenting Core H2CE Tools in an Accessible Way

The handbook also serves to introduce more advanced project tools in a format understandable for broader user groups.

Within H2CE, technical solutions such as the **GIS-based hydrogen planning tool** and the **Energy Cells Model** provide important analytical capabilities. However, many potential users first need to understand why such tools matter, what problems they solve and how they can support strategic decisions. The handbook therefore plays an important introductory role. It presents these tools in a simplified and user-friendly way, creating interest and helping readers recognise their practical value before accessing further information online.

Connecting Strategy with Implementation

Another important purpose is to connect long-term ambition with practical implementation instruments. The handbook does not focus only on vision-setting. It also addresses actionable support mechanisms such as:

- stakeholder cooperation models;
- governance approaches;
- project development pathways;
- financing support concepts such as the **H2CE Voucher Scheme**;
- examples of regional transition measures.

This makes the handbook more useful than a purely conceptual strategy paper. It supports movement from planning toward execution.

Gateway to the H2CE Collaboration Platform

A particularly important function of the handbook is to act as a **gateway to the H2CE Collaboration Platform**. While the handbook provides concise structured guidance, readers seeking deeper practical information can continue through www.h2ce.eu, where they may access:

- downloadable materials;
- expanded descriptions of tools and methods;
- related project outputs;
- regional examples;
- additional hydrogen-transition resources.

This creates a clear user pathway:

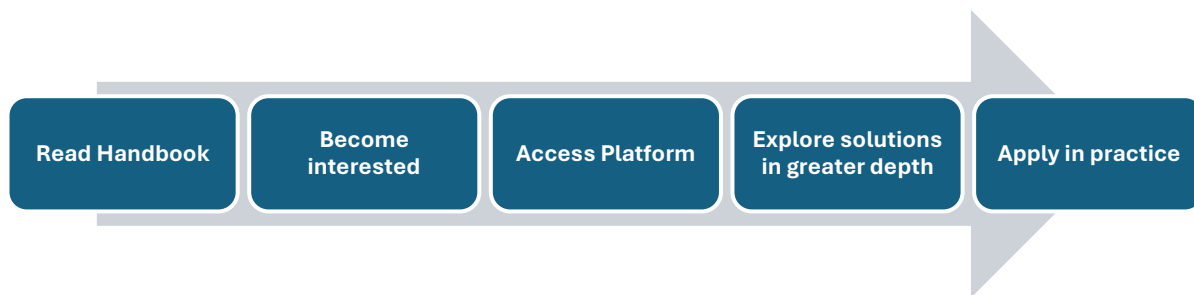


Figure 4: H2CE Collaboration Platform gateway process

In this sense, the handbook and platform should be seen as complementary products rather than separate outputs.

Supporting Diverse User Groups

The handbook is relevant for multiple stakeholder categories, including:

- **regional administrations** preparing hydrogen strategies;
- **municipalities** assessing local opportunities;
- **development agencies** supporting investment pipelines;
- **energy agencies** coordinating transition planning;
- **clusters and business support organisations** facilitating ecosystem growth;
- **research and advisory institutions** supporting capacity building.

Its broad applicability increases its transfer potential beyond the original H2CE partnership.

Enabling Replication Beyond Project Regions

A further purpose of the handbook is to serve as a **replicable methodology resource** for territories outside the project consortium. Many central European regions face similar challenges: limited internal expertise, uncertainty about hydrogen timing, fragmented stakeholder ecosystems and pressure to align transition planning with industrial competitiveness.

The handbook can help such regions accelerate their learning process by using approaches already developed within H2CE. Its replication potential is strengthened by the Platform, where interested users can continue from introductory guidance toward more detailed practical resources.

4.2 Content Assessment

From an evaluation perspective, the **Handbook for Strategic Decision-Making** can be positively assessed as a concise and well-structured publication that translates the main H2CE strategic solutions into a readable and visually accessible format. Based on the reviewed handbook, the document combines planning methodology, practical tools, regional examples and implementation instruments in a way that is suitable for decision-makers and institutional users.

The assessment below focuses on five relevant quality dimensions: **completeness, practical orientation, clarity, usefulness for authorities and strategic logic.**

Completeness

Within its intended format, the handbook demonstrates a strong level of **completeness**. The table of contents shows that it covers the principal H2CE solution areas, including:

- **Strategic Planning Framework for Hydrogen Regions;**
- **GIS-based Hydrogen Planning Tool;**
- **Energy Cells Model;**
- **H2CE Voucher Scheme;**
- **H2CE Competence Centres;**
- **H2CE Capacity Building Programme;**
- concluding guidance under the Handbook section itself.

This is a major strength because the handbook does not focus on only one aspect of hydrogen readiness. It combines governance, planning, tools, financing support and

capacity-building dimensions in one publication. For a concise handbook, this breadth can be considered appropriate and well balanced.

Practical Orientation

The handbook shows a strong **practical orientation**. Rather than discussing hydrogen only in general policy terms, it presents concrete instruments and actionable approaches.

Examples include:

- a **four-phase strategic planning framework** covering preparation, strategy design, measure planning and implementation monitoring;
- **GIS-based mapping** for hydrogen infrastructure and territorial analysis;
- the **Energy Cells Model** for integrated regional energy planning;
- the **Voucher Scheme** supporting expert advisory services;
- **Competence centre structures** for regional support.

This makes the publication relevant for users who need to act, plan or organise implementation rather than only understand theory.

Clarity

The handbook performs positively in terms of **clarity**. The publication uses strong visual layout, thematic chapter separation and concise explanatory text, making technically complex topics easier to understand. Its structure supports readers by moving from broader planning frameworks toward specific tools and implementation instruments.

The use of diagrams, maps, process descriptions and regional examples strengthens comprehension, especially for non-technical audiences. This is particularly useful for municipalities, regional administrations and agencies that may not have dedicated hydrogen specialists.

Usefulness for Authorities

The handbook is highly relevant for **public authorities and regional institutions**, which are among the core target groups of H2CE.

Several sections directly support policy and planning functions, including:

- preparation of hydrogen strategies;
- identification of regional strengths and barriers;

- infrastructure and land-use considerations;
- project pipeline development;
- capacity building;
- implementation sequencing and monitoring.

The four-phase planning model is especially useful because it gives authorities a practical roadmap from early analysis to execution and review. This significantly increases the handbook's usability in real governance contexts.

Strategic Logic

The handbook demonstrates strong **strategic logic** by presenting hydrogen not as a standalone technology topic, but as part of a wider territorial transformation agenda.

Across its chapters, hydrogen is linked with:

- industrial competitiveness;
- renewable energy integration;
- regional decarbonisation;
- mobility systems;
- innovation ecosystems;
- institutional readiness;
- cross-sector cooperation.

This integrated perspective is important because successful hydrogen deployment depends on coordinated economic and governance conditions, not technology alone.

Overall Assessment

Overall, the Handbook can be assessed as a **well-composed strategic communication and guidance document**. Its greatest strength lies in combining several H2CE outputs into one understandable publication that can both inform decision-makers and motivate further exploration of project solutions through the **H2CE Collaboration Platform**.

It is concise enough to remain readable, while broad enough to present the main components of regional hydrogen readiness.

4.3 Value Through Platform Integration

The value of the **Handbook for Strategic Decision-Making** is significantly strengthened through its integration with the **H2CE Collaboration Platform** available at

www.h2ce.eu. While the handbook is a strong standalone publication, its full practical potential is realised when combined with the digital environment of the platform.

The handbook provides a concise and structured introduction to the main H2CE approaches, whereas the platform offers broader navigation, additional thematic resources and direct visibility of related project solutions. In this sense, both outputs are complementary and should be understood as parts of one common user pathway.

The handbook attracts interest, builds understanding and creates orientation. The platform then allows users to continue deeper into specific topics, tools and cooperation opportunities.

Downloadable Planning Guide

Through www.h2ce.eu, the handbook functions as an easily accessible **downloadable planning guide** for external users. This is important because many potential users—such as municipalities, agencies or development actors—will first search online rather than through formal project documentation channels. By making the handbook available via the platform, H2CE significantly improves:

- discoverability of the publication;
- easier public access;
- broader outreach beyond project partners;
- continued usability after project closure.

The platform therefore increases the real-world reach of the handbook.

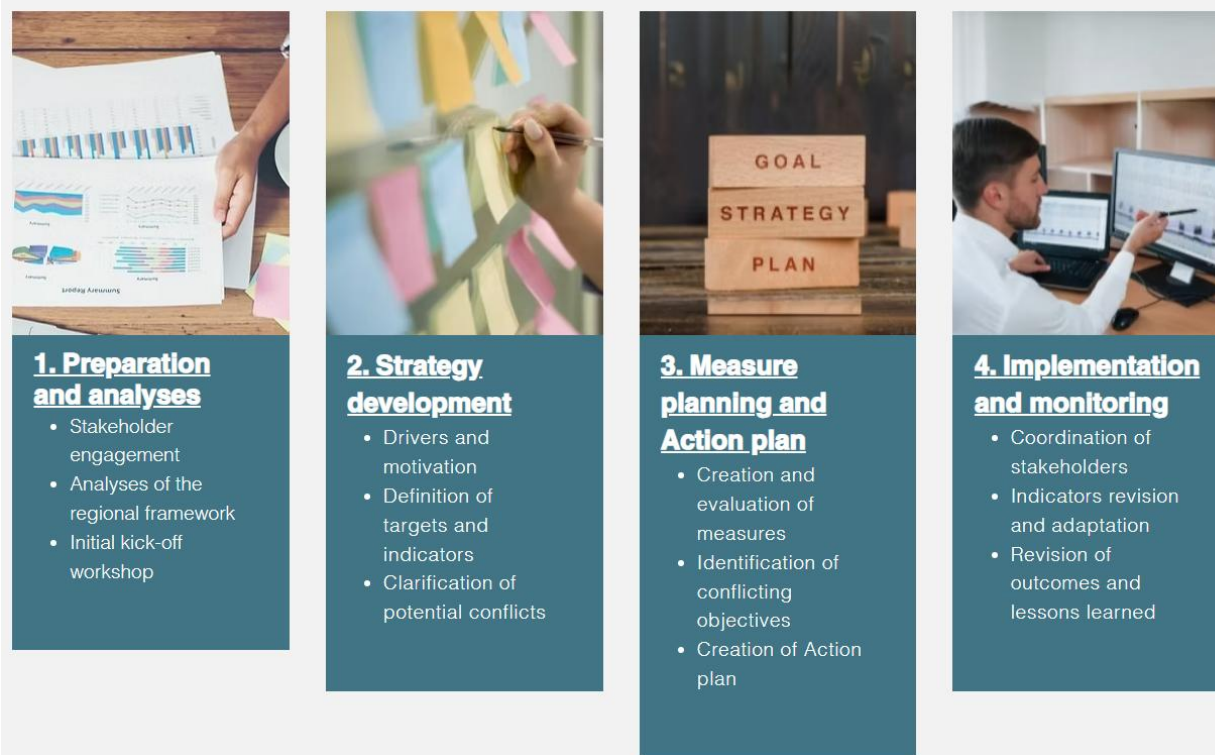


Figure 5: Strategic Planning Process within H2CE Collaboration Platform

Onboarding Tool for New Users

The handbook also functions very effectively as an **onboarding tool** for users who are new to hydrogen planning or unfamiliar with H2CE outputs. Its concise and visually structured format enables readers to quickly understand:

- what **hydrogen readiness** means for regions;
- why public authorities have an active role;
- what planning tools are available;
- what support mechanisms H2CE developed;
- what practical first steps regions may consider.

After this first orientation, users can continue through the platform into more detailed content areas. This creates a clear progression from introductory reading toward deeper practical exploration.

Gateway to Detailed Tools and Services

A major added value of the platform is that it enables the handbook to function as a **gateway to more detailed tools and services**. Within the Handbook, readers are introduced to core H2CE solutions such as the GIS planning tool, Energy Cells Model,

competence centres and voucher mechanisms. Through the platform, these topics can be explored further through dedicated pages and structured explanations.

The platform describes its mission as providing:

- **strategic planning updates;**
- **supporting tools;**
- hydrogen projects and initiatives;
- collaboration and funding opportunities.

This means the platform extends the handbook from summary-level guidance into a broader practical resource environment.

Replication Manual for External Regions

For regions outside the original H2CE consortium, the handbook can also serve as a **replication manual** introducing tested methods and support concepts. When linked with the platform, external users gain not only a document explaining approaches, but also access to related online resources that help interpret and apply them.

This is particularly relevant for territories asking:

- how to begin hydrogen planning;
- what tools can support decisions;
- how competence centres may function;
- what strategic pathways others have tested.

The platform therefore increases the transferability value of the handbook.

Long-Term Access Channel

Another important dimension is continuity. Printed or static PDF materials often lose visibility over time. By embedding the handbook within www.h2ce.eu, the publication gains a more durable access channel.

If the platform remains active after project closure, the Handbook can continue to serve as:

- a first-entry resource for new users;
- a reference publication for hydrogen-ready regions;
- a promotional showcase of H2CE achievements;
- a bridge toward follow-up initiatives and updated resources.

This substantially increases legacy value.

Combined Value

The combined value of both outputs can be summarised as follows:

- **Handbook** = understandable first-step guidance, awareness-building and promotional instrument;
- **Platform** = deeper thematic resource environment, access point to tools and long-term visibility channel.

4.4 Transferability Potential

The **Handbook for Strategic Decision-Making supported by H2CE Collaboration Platform** has strong transferability potential because it addresses common challenges faced by many territories beyond the H2CE partnership.

These include:

- uncertainty about how to begin hydrogen planning;
- lack of structured implementation pathways;
- limited internal expertise;
- fragmented stakeholder ecosystems;
- need to connect energy transition with economic development.

Because these issues are widespread, the handbook is relevant across multiple territorial contexts.

Target Group	Relevance
Municipalities	Useful for cities and towns exploring mobility, heating, public infrastructure or industrial zone opportunities.
Regions	Highly relevant for regional governments preparing hydrogen strategies, action plans or transition priorities.
Agencies	Useful for development agencies, innovation agencies and energy agencies coordinating projects or stakeholder ecosystems.
Clusters	Relevant for industrial clusters and business support organisations seeking to stimulate hydrogen cooperation and market uptake.

Table 2 Target Group Relevance Overview

Overall Transferability

Its transferability is strengthened by the fact that the handbook presents **adaptable frameworks and practical tools**, rather than rigid one-size-fits-all models.

4.5 Improvement Opportunities

Although the handbook performs strongly within its intended scope, several realistic improvement opportunities could further increase its future value.

Interactive Version

A digital interactive version integrated into the platform could improve navigation and direct linking between chapters, tools and external resources.

Templates

Practical templates could support faster user uptake, for example:

- hydrogen readiness self-assessment template;
- regional action plan template;
- stakeholder mapping worksheet;
- project pipeline checklist.

Case Studies

Additional **case studies** from H2CE regions or follow-up users could further strengthen practical credibility and inspiration.

Multilingual Versions

Additional language versions would improve accessibility for municipalities and regional users across central Europe.

Overall Improvement Perspective

These opportunities do not reduce the current value of the handbook. Rather, they represent logical next steps through which a strong project publication could evolve into an even more durable and widely used hydrogen planning resource.

5. Evaluation of Solution 2: Regional H2 Competence Centres

Regional H2 Competence Centres represent the second key practical solution developed within the H2CE project. They translate **hydrogen knowledge, regional expertise and stakeholder cooperation into accessible support structures** for public authorities, businesses and other actors involved in hydrogen transition processes.

Within many regions, hydrogen ambitions are already reflected in strategies and transition plans. However, regional actors often face **limited access to specialised expertise, fragmented support structures, insufficient coordination and uncertainty about how to move from strategic objectives towards concrete projects and implementation**. The competence centre model was developed to respond to these practical needs.

Its value lies in creating an **accessible regional entry point for hydrogen-related knowledge, training, advisory support, stakeholder cooperation and project development**. At the same time, the model is deliberately flexible: it can be implemented as a dedicated physical centre, embedded within an existing regional organisation, or operated through a lighter network-based structure depending on regional needs and capacities.

The solution was tested through different approaches in **Zagreb and Styria** and is complemented by the **H2CE Collaboration Platform**, which extends regional competence-building activities through digital access to knowledge, resources, contacts and cooperation opportunities. In this way, the Regional H2 Competence Centre model provides both a **practical regional support mechanism and a transferable approach that can be adapted and replicated in other territories**.

5.1 Concept Overview

A **Regional H2 Competence Centre** can be understood as a specialised regional support structure designed to help public and private stakeholders navigate the complexity of hydrogen transition.

Its role is not necessarily to own infrastructure or directly invest in projects. Rather, it functions as an enabling institution that helps other actors move more effectively from interest to implementation.

Depending on regional context, such a centre may be established as:

- an independent regional institution;
- a specialised unit within a development agency;
- a function embedded in an innovation cluster;
- part of an energy agency or public support body;
- a partnership-based platform involving multiple organisations.

This flexibility is an important strength of the concept, as regions across central Europe differ significantly in governance systems, institutional traditions and market maturity.

Core Functional Logic

The core logic of a competence centre is to concentrate fragmented expertise and make it more accessible to users who need support. Hydrogen transition often involves multiple fields simultaneously:

- energy systems;
- transport;
- industry;
- regulation;
- funding;
- land-use planning;
- skills development.

Many stakeholders have partial knowledge of one area but limited overview of the whole system. A competence centre can help bridge this fragmentation through coordinated support services.

Typical Functions

Based on the H2CE concept and peer review findings, Regional H2 Competence Centres may provide functions such as:

- first-line advisory support for municipalities and public institutions;
- information services for SMEs and investors;
- support in identifying project opportunities;
- guidance on funding programmes and financing pathways;

- organisation of workshops, training and awareness activities;
- stakeholder matchmaking across sectors;
- dissemination of good practices and regional examples;
- support for strategy implementation and project pipeline development.

This combination makes the concept more comprehensive than a simple information desk or promotional office.

Target Users

The concept is relevant for multiple user groups, including:

- **regional administrations;**
- **municipalities;**
- **industrial companies and SMEs;**
- **project developers;**
- **energy agencies;**
- **research institutions;**
- **clusters and innovation actors;**
- training and education organisations.

This broad relevance increases the potential utilisation of the model.

5.2 Evidence from Project Testing

The concept of Regional H2 Competence Centres was not developed solely as a theoretical proposal. Within H2CE, the model was **tested through two complementary regional approaches in Zagreb and Styria**, supported by training activities, stakeholder exchanges and peer-review processes. These activities generated practical evidence on the relevance, usability and adaptability of the model.

The available evidence is primarily qualitative and does not represent a large-scale quantitative impact assessment. Nevertheless, it provides credible indications regarding **stakeholder needs, practical benefits, implementation options and transferability across different regional contexts**.

Two Complementary Implementation Approaches

An important result of H2CE testing is that a Regional H2 Competence Centre **does not require one fixed institutional format**. Zagreb and Styria demonstrated two different approaches to delivering the core functions of the model.

Zagreb developed a physical One-Stop Shop approach, providing an accessible regional contact point for hydrogen knowledge, consultations, education, networking and project-related support. The competence centre was established within the Zagreb Energy Centre at Maksimirska cesta 51 and connects hydrogen activities with the wider regional energy transition. Its target groups include public authorities, companies and SMEs, research and educational institutions, energy stakeholders and citizens.

Styria tested a lighter, network-based approach, building on existing expertise and cooperation between research, industry and regional institutions. The emphasis was placed on knowledge transfer, training materials, expert involvement and stakeholder capacity building rather than establishment of a new standalone physical institution. The approach demonstrates how competence-centre functions can be embedded into an existing regional hydrogen ecosystem.

Together, these cases demonstrate an important feature: **the functions of the competence centre are transferable, while its organisational form can be adapted to regional conditions, existing institutions and available resources.**

Positive Feedback from Testing and Peer Review

The peer-review process confirmed the relevance of competence centres as regional support structures capable of combining functions that are often fragmented across different organisations. Stakeholders particularly recognised the value of combining:

- advisory and information support;
- training and awareness raising;
- stakeholder coordination;
- access to expertise;
- support for project development.

This responds directly to recurring regional barriers identified during project implementation, including **limited access to specialised hydrogen expertise, fragmented institutional responsibilities, insufficient early-stage project support and the lack of clear entry points for municipalities and SMEs seeking guidance.**

Practical testing also provided feedback on how capacity building should be delivered. Experience from the competence-centre activities highlighted the value of **accessible, practical and stakeholder-oriented training**, rather than highly technical information alone. The competence-centre model therefore combines knowledge provision with interaction between experts and regional users.

The Zagreb testing provides a concrete example. A hybrid webinar, *Hydrogen: A Driver of Sustainable Change*, brought together **45 participants online and in person** and was used to exchange knowledge and obtain stakeholder feedback on hydrogen adoption. The project subsequently connected the Zagreb and Styria competence-centre approaches through the H2CE Collaboration Platform, adding a transnational dimension to the regional activities.

Response to Regional Needs

The testing confirmed that the main value of a competence centre is not simply the concentration of hydrogen information. Its role is to create a **recognisable regional entry point connecting knowledge with action**.

Depending on regional needs, this can help stakeholders:

- understand hydrogen technologies and realistic applications;
- access relevant expertise and training;
- identify potential cooperation partners;
- navigate available support and funding opportunities;
- develop early project ideas;
- connect regional strategies with implementation activities.

This multi-functional approach is particularly relevant for regions where hydrogen ecosystems are still emerging and specialised resources are distributed across several organisations.

Adaptability and Implementation Readiness

The different approaches tested in Zagreb and Styria demonstrate that the competence-centre model can be adapted to **different levels of hydrogen maturity, institutional structures and available resources**.

A region may establish a visible physical One-Stop Shop, embed competence-centre functions within an existing energy or development organisation, or organise them through a network of regional experts and institutions. This reduces the institutional barrier to replication and allows regions to build on structures that already exist.

The project evidence therefore supports a positive assessment of Regional H2 Competence Centres as a **practical and adaptable solution for strengthening regional hydrogen readiness**. Their strongest value lies in combining expertise, capacity building, stakeholder cooperation and implementation support while allowing the delivery model to be tailored to regional circumstances.

5.3 Integration into the Platform

The value and transferability of Regional H2 Competence Centres is strengthened through their integration into the **H2CE Collaboration Platform** (www.h2ce.eu). While competence centres provide support within their regional ecosystems, the Platform adds a **transnational digital layer for visibility, knowledge transfer, access to resources and cooperation**. This reflects the broader H2CE logic of combining **regional capacity with transnational digital connectivity**.

The Platform does not present competence centres as isolated regional examples. It connects them with the wider H2CE ecosystem of **strategic planning resources, GIS and energy modelling tools, the Hydrogen Voucher Mechanism, capacity-building materials, regional strategies and cooperation opportunities**. This allows users to move from learning about the competence-centre model towards exploring practical tools and resources that can support its implementation.

Dedicated Competence Centre Environment

A dedicated **Competence Centres** section presents the common H2CE approach and the two complementary implementation models tested within the project:

- **Zagreb - physical One-Stop Shop model**, providing an accessible hub for education, consultation, stakeholder cooperation and project support;
- **Styria - network-based model**, focused on knowledge transfer, expert training and cooperation between research, industry and regional institutions.

Presenting both approaches demonstrates that **the core functions can be maintained while the organisational model is adapted to regional circumstances and available capacities**.

The individual competence-centre pages provide a practical access point to regional activities. In the case of Zagreb, the Platform structures information around **Overview**,

Services, Events, Resources and Contact, enabling users to understand what the centre provides and how to engage with it.

Knowledge and Capacity-Building Layer

The Platform complements the regional centres with shared H2CE knowledge resources. Its dedicated **Capacity Building** area provides access to the H2CE Training Toolkit and examples of training implementation, while other sections connect users with planning methodologies and support tools developed by the project.

This is particularly important for transferability. A region interested in establishing or strengthening a competence centre does not only see **what Zagreb or Styria implemented**, but can also access resources that support similar activities in its own territory.

The Platform therefore links three levels of information:

- tested regional models
- practical knowledge and training resources
- wider H2CE planning and implementation tools

Visibility, Promotion and Access to Support

Competence centres require visibility to attract users, partners and potential beneficiaries. The Platform provides a permanent digital presence where external stakeholders can identify the centres, understand their focus and access relevant contact points.

This is especially valuable for **municipalities, SMEs, regional authorities and other organisations that may need hydrogen-related support but do not know where relevant expertise is located**. The Zagreb section, for example, presents its target groups, services, regional partners and direct contact functionality.

The Platform also provides a channel for promoting **training activities, workshops, events, resources and future competence-building opportunities**, extending the reach of activities beyond participants physically attending regional events.

Transnational Cooperation and Networking

The digital layer also expands the competence-centre concept beyond individual regions. Hydrogen projects frequently require cooperation between **public authorities, companies, infrastructure operators, researchers, technology providers and**

training organisations. Regional competence centres can facilitate these connections locally, while the H2CE Platform and Community provide a basis for extending exchange across regions.

The H2CE Community specifically invites public authorities, regional policy and spatial-planning actors, private companies and experts to cooperate in preparing, implementing and managing H2-ready regions.

This creates a pathway from **regional support** → **shared knowledge** → **transnational exchange**, allowing competence centres to benefit from experiences and expertise beyond their own territories.

Long-Term Role of the Platform

The Platform is therefore an integral part of Solution 2 rather than only a communication channel. It supports the competence-centre model through:

- **visibility** of regional competence centres and their services;
- **access** to contacts and support structures;
- **knowledge transfer** through training and implementation resources;
- **integration** with other H2CE tools and solutions;
- **promotion** of activities and opportunities;
- **transnational cooperation** between hydrogen stakeholders and regions.

In this way, the H2CE Collaboration Platform provides the **digital infrastructure supporting continued use, promotion and transfer of the Regional H2 Competence Centre model beyond the original pilot regions and beyond the project lifetime.**

5.4 Transferability, Uptake and Scale-Up Potential

A key strength of the **Regional H2 Competence Centre model** is that it was developed as a **transferable functional model rather than a fixed institutional template.** The objective is not for other regions to reproduce the Zagreb or Styria structures exactly, but to establish the functions that are relevant to their own hydrogen ecosystem, institutional environment, stakeholder needs and available resources.

This flexibility was demonstrated within H2CE. **Zagreb represents a physical One-Stop Shop approach**, creating a visible and accessible contact point for information, education, consultations, stakeholder cooperation and project-related support. **Styria represents a lighter, network-based approach**, building on existing expertise and

cooperation structures with a stronger emphasis on training, knowledge transfer and capacity building.

Together, the two approaches demonstrate that **the organisational form can differ while the core competence-centre functions remain transferable**. This is particularly important for replication across central Europe, where regions differ substantially in governance structures, institutional capacities and hydrogen maturity.

From Project Experience to a Practical Replication Guide for Setting up Regional H2 Competence Centres

Importantly, transferability does not rely only on the experience of Zagreb and Styria. H2CE developed a dedicated **Guide for Setting up Regional H2 Competence Centres**, specifically designed to help other regions establish, adapt, operate and sustain their own competence-centre structures. The Guide is accessible via H2CE Platform (www.h2ce.eu).

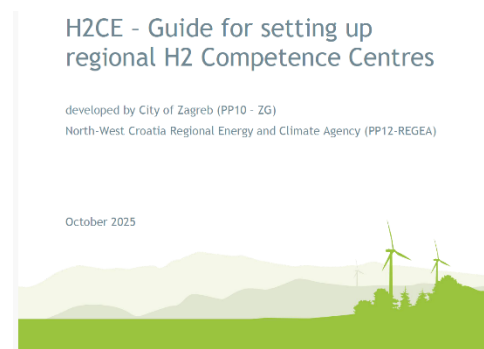


Figure 6 H2CE Guide for setting up regional H2 Competence Centres front page

Guide transforms the H2CE experience into a **detailed step-by-step methodology covering the full development process**, including:

- **definition of purpose and mission;**
- **assessment of the regional hydrogen environment;**
- **identification of target groups and stakeholders;**
- **definition of the service portfolio;**
- **assessment of required human, technical and organisational resources;**
- **development of a suitable financing model;**
- **selection of the governance and organisational structure;**
- **development of strategic partnerships;**
- **selection of appropriate physical and digital infrastructure;**
- **practical establishment and launch of the centre;**
- **communication, promotion and outreach;**
- **organisation of user access and support;**
- **monitoring, feedback and continuous improvement;**

- European cooperation and **peer learning**;
- and **long-term institutional and financial sustainability**.

The Guide therefore goes beyond explaining what a competence centre is. It provides an **implementation methodology** that regions can use to build one according to their own circumstances.

Practical Replication Pathway

Based on the Guide, establishment of a Regional H₂ Competence Centre can follow a structured pathway.

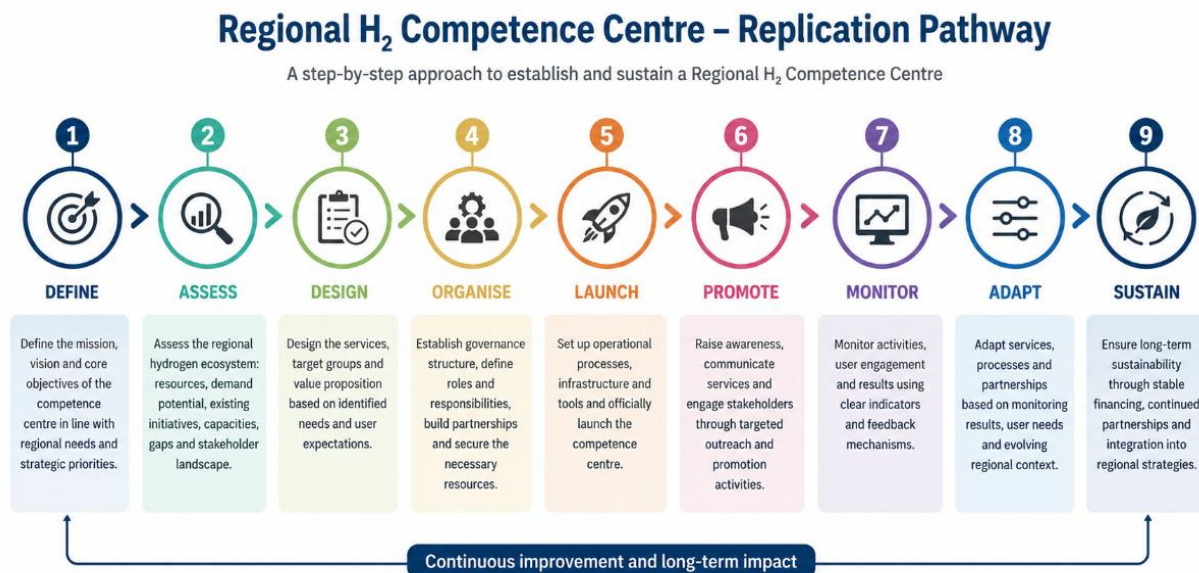


Figure 7: Regional H₂ Competence Centre Replication Pathway

1. Define the regional mission and purpose

The starting point is to identify the regional challenge that the competence centre should address. Regions should determine their hydrogen ambitions, existing capacity gaps and the role the centre should realistically perform.

2. Assess the regional hydrogen ecosystem

Existing expertise, institutions, hydrogen initiatives, infrastructure, strategies and projects should be mapped. This helps identify what already exists and where additional support or coordination is needed.

3. Identify users and their needs

Potential users may include municipalities, regional authorities, SMEs and larger companies, project developers, energy actors, research and educational institutions, clusters and innovation organisations. **Their actual needs should determine the services offered.**

4. Design the service portfolio

Depending on regional demand, services can include **training, first-line advisory support, technical information, project-development assistance, funding guidance, stakeholder matchmaking and awareness raising.**

5. Select the organisational model

Regions can choose the structure that best fits their circumstances: a dedicated physical centre, a competence-centre function embedded within an existing organisation, or a distributed network of experts and institutions.

6. Establish governance, partnerships and financing

Responsibilities, participating organisations, expert capacities and decision-making arrangements need to be defined. A realistic financing model is particularly important for ensuring continuity beyond initial project-based funding.

7. Launch and promote the services

The competence centre needs to become a **recognisable and accessible regional entry point**. Communication, workshops, training, stakeholder events and digital channels therefore form part of the operating model.

8. Monitor, adapt and sustain

User feedback and changing regional needs should be monitored. Services can then evolve as the regional hydrogen ecosystem develops, while institutional and financial arrangements support long-term operation.

The dedicated H2CE Guide provides more detailed guidance for these stages and serves as the **practical implementation resource for regions interested in establishing their own H2 Competence Centre.**

What Is Actually Transferred?

A central lesson from H2CE is that **transferability does not mean copying an institution.**

What is transferred is the functional model:

- accessible hydrogen knowledge and expertise;
- training and capacity building;
- first-line advisory support;
- stakeholder coordination and networking;
- project-development support;
- links to funding and external expertise;
- communication and awareness raising;
- monitoring of stakeholder needs and continuous improvement.

The organisational structure remains adaptable. A region does not necessarily need a new building, organisation or large permanent team. Where suitable structures already exist, these functions can be embedded within an **energy agency, development agency, cluster, research organisation or regional partnership**. This reduces the institutional and financial barriers to replication.

Transfer Supported by the H2CE Collaboration Platform

The **H2CE Collaboration Platform** adds an important digital dimension to the replication process. It allows users to explore the competence-centre approach alongside the wider set of H2CE knowledge and implementation resources.

The Platform connects Regional H2 Competence Centres with **capacity-building resources, strategic planning approaches, regional examples, the GIS Tool, Energy Cells Model and Hydrogen Voucher Mechanism**. Dedicated content for Zagreb and Styria provides concrete examples of how competence-centre functions can be organised under different regional conditions.

The transferable model is therefore supported by **three complementary elements**:

- **Guide for Setting up Regional H2 Competence Centres**- how to establish and operate a competence centre
- **Zagreb and Styria practice**- how the model can be implemented differently in practice
- **H2CE Collaboration Platform**- continued access to examples, knowledge, tools, resources and cooperation opportunities

Together, these elements provide a substantially stronger basis for replication than an individual pilot example or methodological document alone.

Promotion and Uptake

Promotion is an integral part of the competence-centre model. A regional support structure only generates value when **municipalities, companies and other potential users know that it exists, understand what it offers and know how to access it.**

During H2CE implementation, the approach was promoted through **training, workshops, stakeholder exchanges, awareness activities and knowledge sharing**, complemented by the digital presentation of competence-centre activities and resources through the H2CE Collaboration Platform.

The Guide also treats **communication and outreach as part of establishing and operating a competence centre**, rather than simply as project dissemination. This includes building visibility, reaching relevant target groups and maintaining regular interaction with the regional hydrogen ecosystem.

The Platform provides an additional long-term promotion channel by keeping competence-centre information, resources and access points available beyond individual events. It can also support the visibility of **training sessions, workshops, webinars, stakeholder meetings and awareness activities.**

Scale-Up Potential

The main scale-up pathway is **replication of competence-centre functions in additional regions**, rather than expansion of one centralised structure.

Scale-up can include:

- establishment of additional Regional H2 Competence Centres;
- integration of competence-centre functions into existing regional organisations;
- expansion of regional expert and training networks;
- adaptation and reuse of H2CE capacity-building resources;
- cooperation and peer learning between existing and future centres;
- connection of additional centres and resources through the H2CE Collaboration Platform;
- development of joint training, knowledge-transfer or project-development activities.

The model can also **grow progressively with regional demand**. A region may begin with training, awareness raising and networking and later expand towards advisory services, project-development support or a dedicated physical contact point. More mature hydrogen regions may instead integrate the functions directly into established specialist organisations.

This scalability is important because regions differ significantly in **hydrogen maturity, institutional capacity, available expertise, financial resources and market development**.

Long-Term Sustainability

Transferability is closely linked to sustainability. Establishing a competence centre creates lasting value only if the support structure remains relevant and operational beyond its initial establishment phase.

The dedicated Guide therefore addresses **governance, financing, partnerships, monitoring and long-term sustainability** as integral elements of the model. Regions are encouraged to consider continuation conditions from the beginning rather than treating sustainability only as an issue after external funding ends.

Long-term operation can build on **institutional embedding, cooperation between regional actors, integration with existing support services, suitable financing arrangements and continuous adaptation of services to stakeholder demand**.

The H2CE Collaboration Platform provides an additional continuation mechanism by maintaining digital visibility, access to shared resources and opportunities for transnational exchange.

Overall, the **Regional H2 Competence Centre model demonstrates strong transferability and realistic scale-up potential** because it combines a flexible functional approach with concrete implementation experience, a dedicated and detailed replication Guide and continued digital support through the H2CE Collaboration Platform.

Regions are therefore **not expected to copy Zagreb or Styria**. They are provided with the methodology, practical examples and supporting resources needed to establish a competence-centre structure appropriate to their own regional context.

5.5 Improvement Opportunities

The Regional H2 Competence Centre model provides a solid basis for regional capacity building and replication. At the same time, several opportunities could further strengthen its **practical value, uptake and long-term impact** beyond the H2CE project.

Expansion to Additional Regions

The most important next step is to **apply the model in additional territories**. Zagreb and Styria demonstrated two different implementation approaches, but further regional applications would provide additional evidence on how the model performs under different institutional settings, levels of hydrogen maturity and stakeholder needs.

The **Guide for Setting up Regional H2 Competence Centres** provides the methodological basis for this expansion, allowing new regions to develop their own model rather than replicate an existing centre exactly.

Stronger Network between Competence Centres

As additional competence centres or similar regional support structures emerge, there is potential to develop a stronger **transnational network of H2 competence centres**.

Such cooperation could support:

- exchange of experts and practical experience;
- joint training and capacity-building activities;
- sharing of methodologies and training materials;
- referrals between regions where specialised expertise is required;
- development of joint hydrogen initiatives and projects.

The **H2CE Collaboration Platform** provides an existing digital environment that could support this development.

Continued Development of Training and Knowledge Resources

Hydrogen technologies, regulation, funding opportunities and market conditions are evolving rapidly. Capacity-building materials should therefore be **regularly updated and expanded**.

A shared pool of modular resources would allow competence centres to adapt training to different target groups, such as **municipalities, SMEs, public authorities**,

educational institutions and project developers, while avoiding duplication of effort between regions.

Additional Practical Replication Tools

The dedicated Guide already provides a comprehensive methodology covering the establishment, operation and sustainability of Regional H2 Competence Centres. Its practical application could be further supported in the future by complementary tools such as:

- **regional readiness self-assessment;**
- stakeholder-mapping templates;
- service-design checklists;
- governance and partnership templates;
- financing and sustainability examples;
- monitoring and user-feedback tools.

These resources could make the transition from the Guide to actual regional implementation even easier.

Stronger Links to Project Development

Future competence centres could strengthen their role as a bridge between **capacity building and concrete hydrogen project development**.

Training and awareness raising could be increasingly connected with first-line project assessment, expert referrals, funding guidance and other support instruments. Linking competence-centre services with tools such as the **Hydrogen Voucher Mechanism** could help stakeholders progress from: **knowledge → project idea → expert support → project preparation → investment**.

This would further strengthen the practical implementation role of competence centres.

Continued Development of the H2CE Collaboration Platform

The Platform should remain an important instrument for **visibility, transfer and cooperation**. Its competence-centre environment could progressively include additional regional centres, updated activities, training resources, implementation experiences and contact points.

As the network develops, the Platform could increasingly function as a **shared entry point for regional hydrogen expertise and capacity-building resources across central Europe**.

Long-Term Institutional and Financial Sustainability

Finally, continued attention should be given to **institutional ownership and sustainable financing**. The Guide already addresses these aspects as part of the establishment process, but future implementations will provide valuable additional evidence on which organisational and financing models work best in different regional contexts.

Embedding competence-centre functions within existing **energy agencies, development organisations, research institutions, clusters or regional partnerships** can reduce operating costs and improve continuity. Where demand grows, these lighter structures can gradually evolve towards more comprehensive competence centres.

Overall, future development should focus less on creating identical centres and more on **expanding a flexible network of regional hydrogen support structures**, using the H2CE Guide, tested approaches and Collaboration Platform as the common foundation for replication and cooperation.

6. Benefits of the H2CE Platform for Stakeholders

The **H2CE Collaboration Platform** available at www.h2ce.eu creates value not only as a repository of project outputs, but also as a stakeholder-oriented digital resource. Its practical importance depends on how different user groups can benefit from the information, tools and cooperation opportunities presented through the platform.

Because hydrogen transition involves multiple actors with different needs, the platform should be understood as a multi-user environment rather than a single-purpose website. Public authorities may seek planning guidance, companies may search for opportunities or contacts, researchers may look for partnerships, and citizens or learners may seek understandable information about hydrogen developments.

The sections below summarise the main benefits for key stakeholder groups.

6.1 Public Authorities

Public authorities are among the most important target users of the H2CE platform. Municipalities, regions and public agencies are increasingly expected to support decarbonisation, industrial transition and strategic infrastructure planning, while often facing limited internal hydrogen expertise. For these actors, the platform can serve as a practical support resource.

Planning Support

The platform provides access to approaches and tools relevant for territorial planning, including references to the **GIS Tool**, **Energy Cells Model** and strategic planning methodologies developed within H2CE.

This can help authorities better understand:

- hydrogen readiness options;
- infrastructure considerations;
- regional energy opportunities;
- possible implementation pathways.

Strategy Inspiration

Many public actors need examples before launching their own initiatives. The platform offers visibility of H2CE approaches, regional experiences and planning concepts that may inspire similar action elsewhere. This is particularly valuable for territories at an early stage of hydrogen development.

Access to Tools and Resources

The platform also improves access to practical outputs such as the **Handbook for Strategic Decision-Making**, competence centre concepts and other supporting materials. For time-constrained public institutions, having these resources accessible through one platform is a significant advantage.

6.2 SMEs / Industry

Small and medium-sized enterprises, industrial stakeholders and project developers can also benefit from the H2CE platform. Many companies are interested in hydrogen opportunities but may lack clarity regarding technologies, regional support structures or partnership pathways.

Visibility of Opportunities

The platform helps users understand where hydrogen opportunities may emerge in areas such as:

- clean mobility;
- industrial decarbonisation;
- energy systems;
- service provision;
- innovation projects.

It can therefore support early market awareness.

Contacts and Ecosystem Access

The platform provides a gateway to relevant project partners, regions and competence centre structures that may become useful contact points for future cooperation.

This is especially relevant for SMEs that often need easier access to networks.

Advisory Ecosystem

By presenting competence centres, tools and support mechanisms, the platform helps companies understand that hydrogen transition is supported by a wider advisory ecosystem rather than requiring them to navigate the topic alone.

This lowers perceived entry barriers.

6.3 Academia / Research

Universities, applied research institutions and innovation organisations can also derive value from the platform. Hydrogen transition requires continued cooperation between research and implementation actors, and digital visibility of project results supports this connection.

Dissemination of Results

The platform creates a public channel through which methodologies, pilot experiences and project outputs can reach broader audiences beyond the immediate consortium.

This increases the practical reach of knowledge generated through H2CE.

Partnership Development

Researchers and innovation organisations may use the platform to identify regions, institutions or thematic areas relevant for future cooperation. This can support:

- follow-up projects;
- joint proposals;
- applied testing initiatives;
- knowledge transfer activities.

Practice Connection

Because the platform links research-oriented content with regional implementation needs, it can also help academia remain connected to real market and policy challenges.

6.4 Citizens / Learners

Although the platform is primarily professional in orientation, it also creates benefits for wider public audiences, students and learners interested in hydrogen and sustainability topics.

Awareness Raising

The platform helps explain that hydrogen is not only a national or industrial topic, but also relevant for regional development, mobility, climate goals and future competitiveness.

This contributes to broader public understanding.

Education Resources

Students, learners and early-career professionals may use the platform as an introductory resource to explore:

- hydrogen planning concepts;
- regional transition approaches;
- practical tools;
- cooperation models;
- examples from central Europe region.

Accessible Entry Point

Compared with reading formal project reports, the platform offers a more accessible first contact point for non-specialist audiences.

Overall Stakeholder Value

Overall, the **H2CE Collaboration Platform** creates differentiated value across stakeholder groups:

- **Public authorities** gain planning support and strategic guidance.
- **SMEs / industry** gain ecosystem visibility and contact pathways.
- **Academia / research** gain dissemination and partnership opportunities.
- **Citizens / learners** gain awareness and educational access.

This multi-stakeholder relevance significantly strengthens the long-term legacy value of the platform and increases the practical impact potential of H2CE results beyond project closure.

7. Sustainability and Scale-Up Potential of H2CE Platform

The **H2CE Collaboration Platform** available at www.h2ce.eu demonstrates strong potential for sustainability and future scale-up beyond the formal lifetime of the H2CE project. Unlike outputs that remain limited to static reports or short-term pilot actions, the platform was designed as a continuing operational environment able to host knowledge, connect stakeholders and support follow-up cooperation.

Its long-term value lies in the fact that hydrogen transition is not a short project-cycle topic. **Regional hydrogen readiness, infrastructure planning, ecosystem building and public-sector capacity development will continue throughout the coming decade.** For this reason, the platform can remain relevant well after project closure.

The available H2CE continuation deliverables and follow-up initiatives provide concrete evidence that sustainability planning has already been considered during implementation.

7.1 Post-Project Operational Continuity

H2CE deliverables explicitly position the platform as the **central operational backbone** of the post-project collaboration network. **The continuation report (D.3.1.2) states that the platform should remain active for at least the first three years after project end,** supported through defined update obligations, communication functions, stakeholder engagement and technical maintenance arrangements.

This is an important indicator of sustainability because it shows that the platform was not conceived only as a temporary dissemination website, but as an operational cooperation tool. **The continuation concept includes:**

- annual review of regional profiles;
- updates of hydrogen strategies and action plans;
- maintenance of tools and services sections;
- community stakeholder growth;
- annual online network meetings;
- newsletters and digital communication.

Such structured commitments significantly increase the probability of continued activity.

7.2 Institutional Sustainability Through the H2CE Network

The sustainability of the platform is further strengthened by the wider **H2CE Collaboration Network of H2-ready regions**. The **Joint Mission Report** established a governance and cooperation model involving core members, affiliated members and regional contact points. It defines the platform as the primary environment for knowledge exchange, documentation and stakeholder interaction. **This means the platform is anchored not only technically, but institutionally.**

Where platforms fail, the cause is often lack of ownership. In the H2CE case, ownership is distributed across a transnational network of public and institutional actors, which creates stronger continuity prospects.

7.3 Potential Scalability Through Follow-Up Project HyAdvanCE

A particularly strong indicator of scale-up potential is the submitted follow-up project **HyAdvanCE - Advancing Hydrogen Planning in Central Europe**. According to the application, HyAdvanCE directly builds on H2CE outputs and explicitly foresees an **upgraded H2CE Platform** as part of its future results package. The project also aims to refine and expand outputs from H2CE and other hydrogen initiatives through both upstreaming and downstreaming approaches.

This is highly relevant because it demonstrates that the platform is already considered a reusable asset for next-generation cooperation. **HyAdvanCE also proposes:**

- hydrogen planning tools;

- pilot projects;
- strategic documents;
- cross-border cooperation frameworks;
- a sub-network of hydrogen cross-border regions.

These activities would naturally benefit from a strengthened common platform environment. In practical terms, **HyAdvanCE** validates that the H2CE platform has moved beyond project output status and entered the category of **regional cooperation infrastructure**. While the funding decision for the HyAdvanCE proposal is uncertain and still pending, the developed project concept, established partnership structure and identified cooperation priorities already **represent valuable assets that can support future joint initiatives, renewed applications and continued collaboration efforts building on the H2CE network**.

7.4 Cross-Project Expansion Example: HyEfRe

Another clear sign of scalability is the **HyEfRe Platform Integration**, which explicitly proposes integrating HyEfRe project results into the H2CE platform.

The HyEfRe concept identified several outputs suitable for inclusion, including:

- **Hydrogen Potential Model;**
- **Decision Support Tool;**
- **Systems Thinking Model for Hydrogen Ecosystems;**
- reports, manuals and strategic materials.

The document proposes dedicated project sections, direct links to web tools and downloadable resources within the H2CE environment. This is strategically important because it proves that the H2CE platform can function as a **capitalisation hub**, where outputs from different hydrogen projects are aggregated rather than fragmented across disconnected websites. That model significantly increases European added value.

7.5 Content Sustainability

The platform also has strong sustainability potential because its content areas can remain relevant through gradual updates rather than complete redesign. Examples include:

- new regional hydrogen strategies;
- revised action plans;

- upgraded tools and methodologies;
- competence centre profiles;
- best practice examples;
- stakeholder registrations;
- follow-up project results.

This means the platform can evolve incrementally at relatively low cost while preserving accumulated knowledge.

7.6 Stakeholder Growth Potential

If maintained actively, the platform can continue growing its stakeholder base after project closure. The continuation report already recommends **annual stakeholder growth targets through regional contact points and promotion activities**.

This is relevant because platform sustainability is not only technical—it depends on active users.

Potential future user groups include:

- additional regions outside the original consortium;
- municipalities;
- SMEs and industry actors;
- hydrogen valleys and clusters;
- research institutions;
- future Interreg partnerships.

8. Final Conclusions

Report on H2CE Solutions was prepared as an implementation-phase evaluation report focused on two selected H2CE strategic solutions and their relationship with the **H2CE Collaboration Platform** available at www.h2ce.eu. Based on the reviewed project evidence, available outputs and platform assessment, the report confirms that the objectives of the deliverables have been fulfilled.

The evaluation covered:

- **Solution 1: Handbook for Strategic Decision-Making;**
- **Solution 2: Regional H2 Competence Centres;**

- the practical role of the **H2CE Collaboration Platform** as a common digital environment for promotion, continuation and scale-up of project results.

The findings indicate that H2CE has produced outputs with clear relevance beyond the formal duration of the project.

8.1 Key Conclusions

The evaluation confirms that the H2CE solutions provide **practical and transferable support for public authorities and regional stakeholders** preparing for hydrogen deployment and broader energy transition.

The **Handbook for Strategic Decision-Making** provides a structured framework for early-stage regional hydrogen planning. By combining lessons from GIS-based spatial analysis and energy system modelling, it supports regions in understanding hydrogen production and demand, infrastructure needs, sector coupling and potential development pathways.

The **Regional H2 Competence Centre model** complements these strategic and technical tools by strengthening **knowledge, capacity building, advisory support, stakeholder coordination and project development**. Testing in **Zagreb and Styria** demonstrated that the core functions can be implemented through different organisational approaches and adapted to regional needs, existing capacities and hydrogen maturity.

Importantly, the competence centre result extends beyond the two tested regional approaches. The dedicated **Guide for Setting up Regional H2 Competence Centres** translates H2CE experience into a detailed methodology covering the establishment, operation and long-term sustainability of a competence centre. It provides other regions with a **practical pathway for adapting and replicating the model** rather than requiring them to copy the structures established in Zagreb or Styria.

The **H2CE Collaboration Platform** strengthens both solutions by providing a common digital environment for continued access, visibility and transfer. For competence centres, it supports access to **regional models, services, activities, contacts and capacity-building resources**, while connecting them with the wider H2CE knowledge and cooperation environment.

Overall, the evaluation confirms that the H2CE solutions demonstrate **strong relevance, practical usability and transfer potential**. Their combination of tested regional experience, practical methodologies and continued digital access provides a solid basis for **continued uptake, adaptation and scale-up in other central European regions**.

8.2 Sustainability and Future Outlook

The sustainability outlook for the platform and evaluated solutions is positive. This conclusion is supported by continuation planning developed within H2CE, the creation of a wider network of H2-ready regions and follow-up capitalization initiatives such as **HyAdvanCE**. Opportunities to integrate outputs from related initiatives, including **HyEfRe**, further strengthen the platform's long-term relevance.

The H2CE platform is therefore well positioned to continue functioning as a capitalisation and cooperation environment for hydrogen-related territorial development in central Europe. Its content can be gradually expanded through new strategies, updated tools, competence centre profiles, case studies and future project results.

To maximise long-term impact, it is recommended to maintain and periodically update www.h2ce.eu, strengthen networking between competence centres and new regions, expand visibility of practical tools and examples, and use the platform as a basis for future hydrogen cooperation initiatives.

8.3 Final Statement

Overall, Report on H2CE Solutions confirms that the H2CE project has produced **credible, practical and scalable solutions** with relevance beyond the funded implementation period.

The **Handbook for Strategic Decision-Making**, the **Regional H2 Competence Centres**, and the **H2CE Collaboration Platform** together form a connected support ecosystem that can continue strengthening regional hydrogen readiness, institutional cooperation and knowledge transfer across central Europe regions.

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