

Deliverable 1B

Mapping of industrial players in the field of green hydrogen

September 2022

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Introduction

All kind of private and public organizations are dealing with hydrogen on local, regional and national level. But most of the time these organizations are missing an overview of the bigger picture. In order to structure the current situation of the hydrogen industry in the Euregio Meuse Rhine region, this document aims to map relevant institutions and their specific hydrogen related competences.

Carrying out the analysis in a pragmatical and objective way, based on the previous collected information on all kind of roadmaps and plans, the mapping result of the industrial players will give us an overview about what could be achieved within the EMR area. This analysis gives a structured map of the EMR industry which will point out the individual as well as subregional strengths and weaknesses. The opportunities for new and other regional players and the threats will be identified. The threats as well as the defined weaknesses have to be treated equally careful like the existing strengths and the opportunities for realization.

The stakeholder mapping exercise was done with the help of a questionnaire, which included a list of characteristics, which were rated as relevant for the classification of the players by the project consortium. The characteristics were defined such that they can be used to identify stakeholders to be invited to the targeted matchmaking sessions for the cases of WP2, while they will simultaneously allow for a better understanding of the needs of our target audience with regards to WP3 and WP4. Based on the results of this overview we will see whether it is possible to create an EMR hydrogen value chain meaning that this is a cross border value chain. The mapping will focus on industrial players, but should also include relevant research institutions and public administrations.

The document in hand is the second part of the deliverable of work package 1 in the Interreg Project *EMR H2 Booster*. It completes the first part of the document, which was published in June and included an analysis of the existing documents about hydrogen in the EMR region. The mapping results give us a first insight in what is happening in the hydrogen field in the region and will feed into the work of the work packages to follow.

In the first part of the document, which was completed in June, existing documents addressing hydrogen topics were summarized. In this second part, the focus is on the regional players and the hydrogen industry in the EMR-region.

Method

To reach as many players in the field of hydrogen as possible, the project consortium sent out a questionnaire, which included a total of 6 questions. The number of questions was reduced as much as possible in order to keep the burden of participation as low as possible- The target group of the questionnaire are institutions which are already active in the field of hydrogen or are at least interested in getting started. The questionnaire was open for all interested players with a focus on industrial players. The addressed companies and institutions were asked to give some information about their position on the hydrogen market. In addition, the respondents were asked if they would want to participate in a group implemented on the Digital Innovation Platform (DIP). By asking this question the project consortium plans to start a networking group, which can be used for communication and networking. The questionnaire was sent out in four languages relevant for the project area: German, French, Dutch (Belgium) and Dutch (Netherlands). This way the consortium tried to reach out to as many players in the region as possible. An English Version of the questionnaire, which was used as basis for the translation in the above-mentioned languages, is included to this document in Annex 1.

The questionnaire was published via social media, the website of the project and the existing mailing lists of the project partners. A summary of the results is presented in the following chapter. The most important result of the questionnaire is a map of all the interested and active players in the field of hydrogen in the EMR region.

Analysis

Hydrogen related industry in the Euregio Rhine Meuse Region

Number of employees (EMR Region)

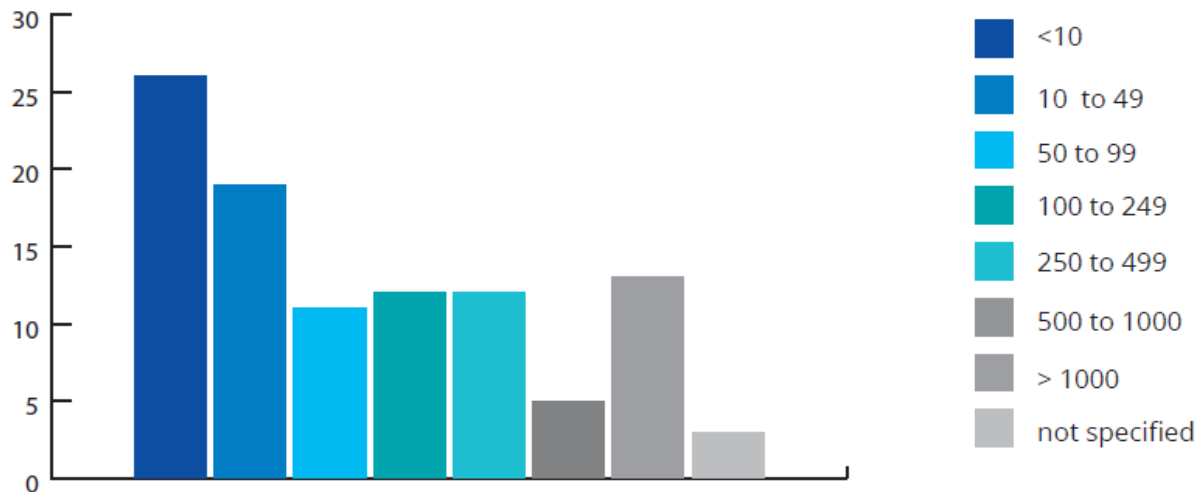


Figure 1: Headcount in the companies in the Euregio Rhine Meuse region, which participated in the questionnaire

After excluding the invalid answers, a total of 99 responses to the questionnaire were collected in the Euregio Rhine-Meuse more than half of the institutions which filled in the questionnaire are small institutions with less than 100 employees. Only 13 of the surveyed players have more than 1000 employees. 48 of the participants note that their institution is a small or medium company according to the EU regulations. Most of the other responses are not qualified as a small or medium company.

SME (EMR Region)

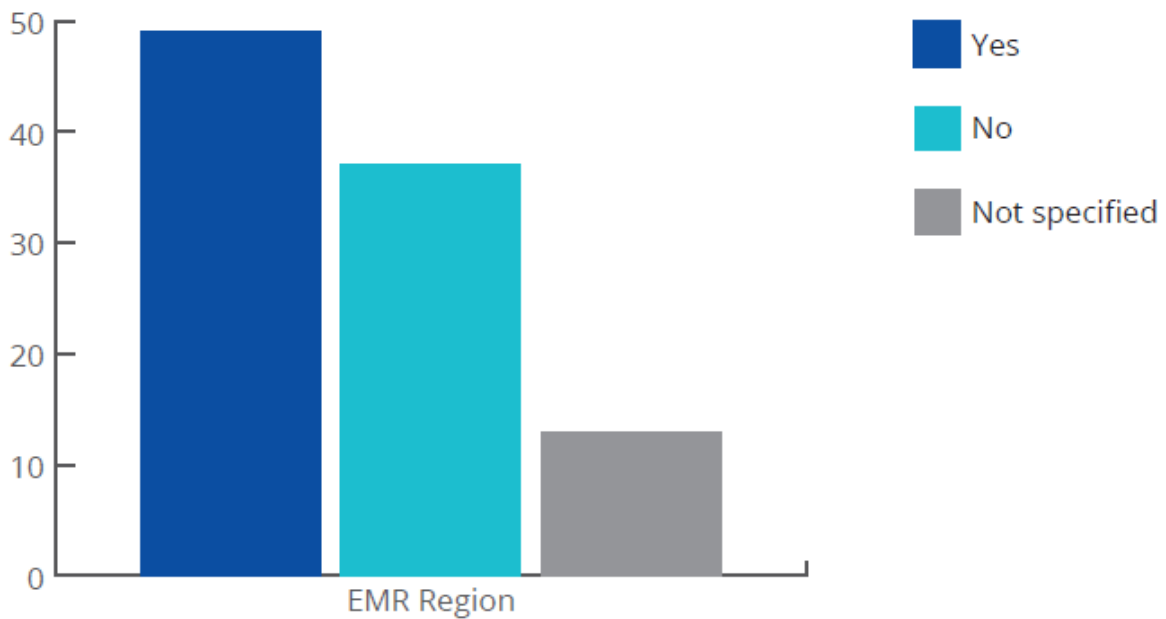


Figure 2: Statement of the participants about the qualification as a small and medium enterprise (SME) according to the EU regulations

Specialised fields (EMR Region)

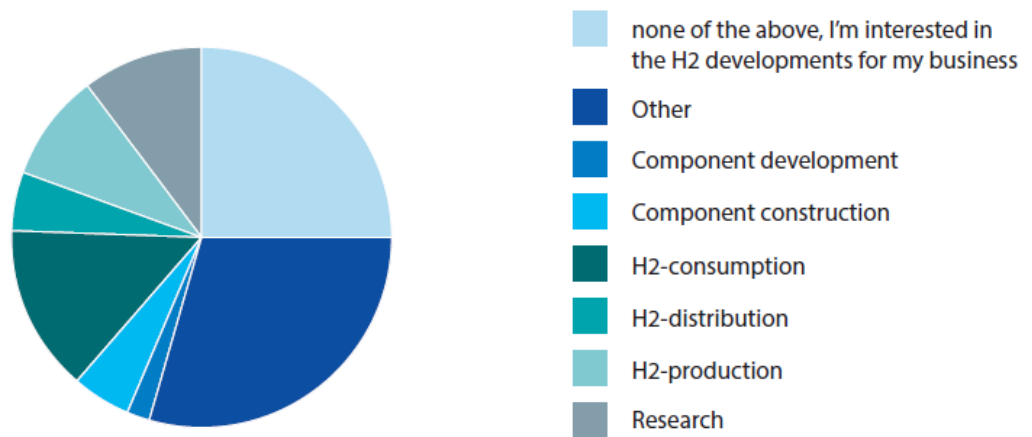


Figure 3: Specialized fields of the participating players in the EMR region

The submitted answers made clear, that a quarter of the respondents are not yet active in the field of hydrogen, but are interested in the current developments for their business. 28 of the questionnaires were submitted with the response "others", which included 6 answers in the field of consulting. Another six participants noted to be active in several fields in the hydrogen supply chain. Other answers included the development of software, financing of hydrogen related projects as well as special fields of research and production. 14 participants plan to consume hydrogen in the future, while 9 produce or plan to produce hydrogen. A total of 10 participants states to be active in research concerning hydrogen.

About half of the interviewed institutions are active in the sectors mobility/ logistics, energy or building. Those were identified of relevant sectors for the use of hydrogen in the first part of this deliverable. The high percentage of institutions which shows the answer “others” shows, that the variety of engaged players is very broad and does not completely focus on the above-mentioned sectors. In the free text answer most of those institutions referred to industry-related activities.

Sectors (EMR Region)

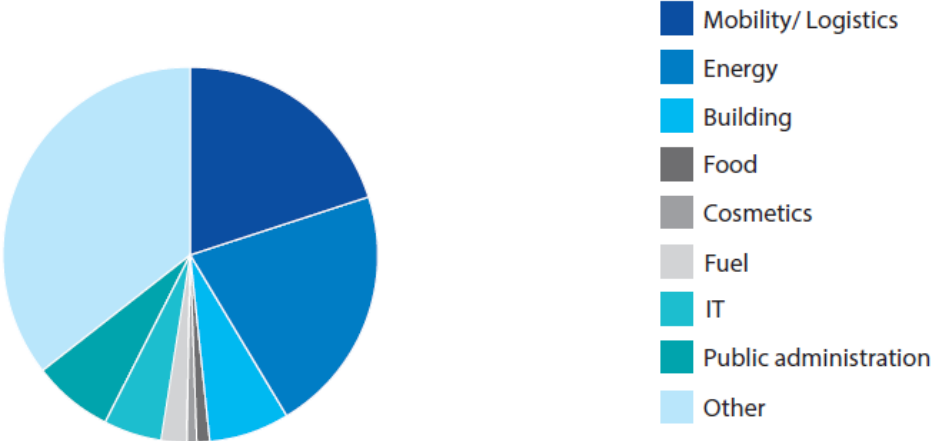


Figure 4: Sectors the participating players are currently active in the EMR region

Additional graphs showing the results of the questionnaires in Germany, the Netherlands and Belgium separately are shown in Annex 2.

Mapping

Hydrogen players in the Euregio Rhine-Meuse region



Figure 5: Map of the interested and active players in the EMR region, color-coded depending on their (potential) role in the hydrogen market

The players which filled in the questionnaire are shown in the map. There seems to be a concentration of interested and already active players in the field of hydrogen in the regions in the center of the Euregio Rhine Meuse Region. A reason for this could be the better developed network of the project partners in the urban regions. On the other hand, there might be players in the rural area, which are not yet aware of their possibility to be part of the hydrogen value chain.

In Annex 3 the map is divided in the three involved regions for the possibility to analyze the structure depending on the country.

Conclusion

The results of the questionnaire show, that there is a very broad range of interested and active players in the field of hydrogen. The activities do not concentrate on a single sector or specialized field, but spread over various different topics. A lot of institutions seem to be interested in the development in the hydrogen value chain and want to be informed about current progresses. The topic of hydrogen is not only relevant to small and medium, but also for bigger companies, research institutions and public administrations. By combining the document in hand with the first part of this deliverable, a complete analysis is realized on the current status of green hydrogen in the Euregio Rhine-Meuse Region.

The broad range of topics handled by various institutions in the EMR region indicates a high potential for a complete regional hydrogen value chain in the future. At the same time, there seems to be a focus in the urban areas in the center of the EMR region. This might be due to the better networking options in the urban areas. A high number of institutions, especially in the rural areas, might not know about their potentials in relation to the hydrogen developments.

To identify additional players, the project consortium aims to realize a study, which identifies those institutions, which might be part of the future hydrogen value chain, but are not aware of this possibility at the moment. For this an external study should be performed and completed in the first quarter of 2023. With the help of the study the project consortium wants to get an even broader picture of the hydrogen potential in the Euregio Rhine-Meuse and include as many institutions as possible in the further developments. This way the impact of the booster will increase even more.

With the help of the developed knowledge about the hydrogen industry in the region, the Digital Innovation Platform (DIP) developed by the City of Aachen in a previous Interreg project will be expanded to the EMR, by providing a platform for further discussion, networking and match making related to the topic of hydrogen. Those institutions, which participated in the questionnaire, will be asked to join the Hydrogen Booster group in the platform to stay updated about current developments and upcoming events.

Annex

Annex 1: Questionnaire (english version)

Dear participants,

Thank you for your willingness to participate in this survey.

With your participation, you will help us to identify structures in the lead market of hydrogen within the Euregio Maas-Rhine. Below you will find an overview of the project.

EMR Hydrogen Booster:

A consortium of nine partners is joining forces to boost the development of clean hydrogen innovation, demonstration and knowledge sharing in the Euregio Meuse-Rhine, as a first step towards the large-scale roll-out of a clean hydrogen economy.

The working area of the EMR H2 Booster consortium consists of Dutch and Flemish Limburg, the Aachen region and Liège.

For more information, please visit the project's website: www.EMRH2booster.eu

Please note that participation in this survey is voluntary. (Privacy Note)

If you have any questions about this survey now or at a later date, please feel free to contact:

Sophia Koch

Mail: Sophia.koch@mail.aachen.de

Tel: 0241 - 432 7624



The project receives funding from the [Interreg Euregio Meuse-Rhine \(EMR\) program](http://www.EMRH2booster.eu). This program receives support from the European Regional Development Fund or ERDF. EMR H2 Booster also receives co-financing from the Dutch province of Limburg, the Dutch province of Noord-Brabant, the Dutch ministry of Economic Affairs and Climate Policy, the Walloon government, and the German state government of North Rhine-Westphalia.

www.EMRH2booster.eu

Within the project, we are working with a digital innovation platform (DIP). By launching an euregional hydrogen network on the platform we offer you the possibility to get in touch with other players of the hydrogen economy. You can find the network here: <https://hyperegio-dip.eu/groups/euregional-hydrogen-network-emr-h2-booster/nAyxZJbxDj>

We offer you the service of creating your company page with the information you give in this questionnaire. All you have to do is register and verify yourself as an employee of your company.

If you do not agree with the creation of the company page, please indicate this here:

- Yes, I would like to use this free service to network and increase my visibility
- I would like to create the company page on my own.
- No, I do not want a company page created on the digital innovation platform (DIP).

Within the subject area of hydrogen: Where would you place yourself currently?

- H2-production
- H2-distribution
- H2-consumption
- Component construction
- Component development
- Research
- Other: _____
- none of the above, I'm interested in the H2 developments for my business

In which sector are you active?

- Mobility / Logistics
- Energy
- Building
- Food
- Cosmetics
- Fuel
- IT
- Public administration
- Other: _____

How many employees does your institution have (in full-time equivalents)?

(please tick)

- < 10 employees
- 10 - 49 employees
- 50 - 99 employees
- 100 - 249 employees
- 250 - 499 employees
- 500 - 1,000 employees
- > 1,000 employees
- Not specified

Does your company qualify as SME according to the EU regulations?

(please tick)

- Yes
- No
- Not specified

In the course of the project, further surveys will be conducted to improve the understanding of the current hydrogen market, to plan information events and workshops, and to network interested stakeholders. May we contact you to conduct further surveys?

- Yes
- No

Please note the corresponding data of your company/institution

Name of the institution _____

Short description _____

Address _____

Contactperson _____

Mail _____

Phone _____

Website _____

Thank you!

Annex 2: Graphs for the results of the questionnaire in Germany, The Netherlands and Belgium

Number of employees

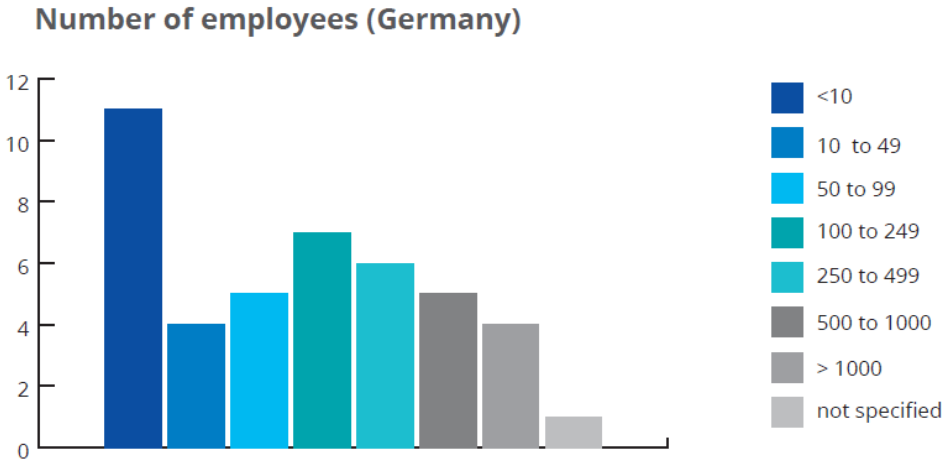


Figure 6: Number of employees in the companies in Germany, which participated in the questionnaire

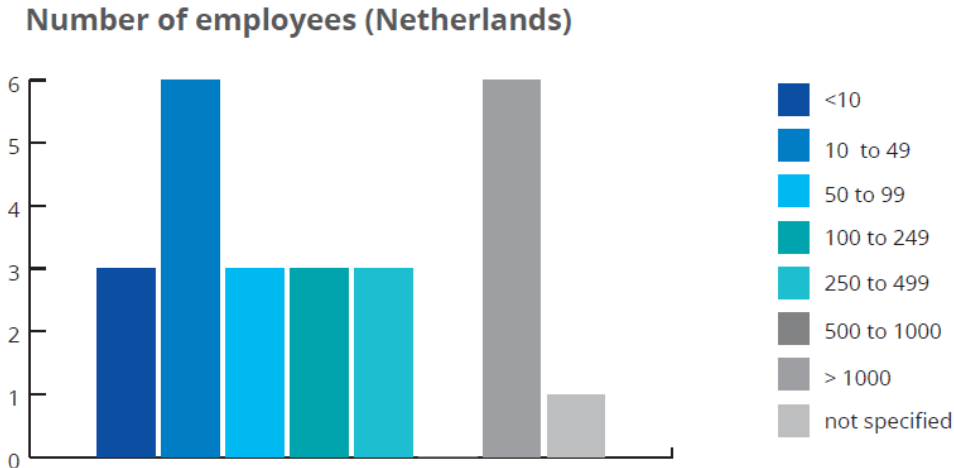


Figure 7: Number of employees in the companies in The Netherlands, which participated in the questionnaire

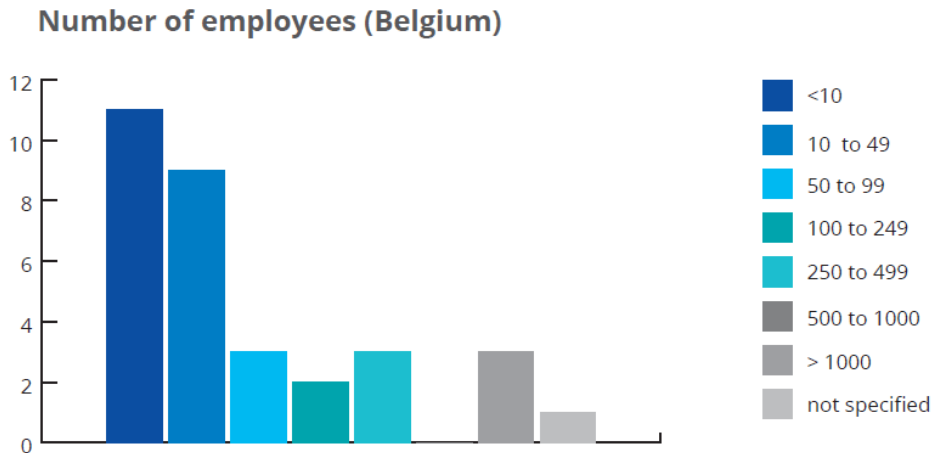


Figure 8: Headcount in the companies in Belgium, which participated in the questionnaire

Small or Medium Enterprise according to the EU regulations

SME (Germany)

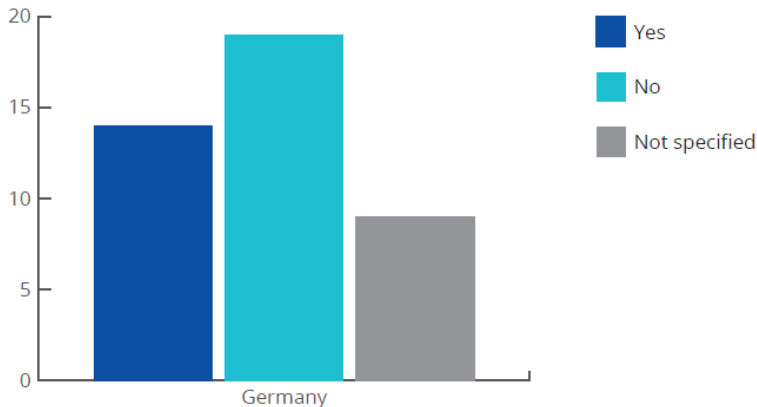


Figure 9: Statement of the participants in Germany about the qualification as a small and medium enterprise (SME) according to the EU regulations

SME (Netherlands)

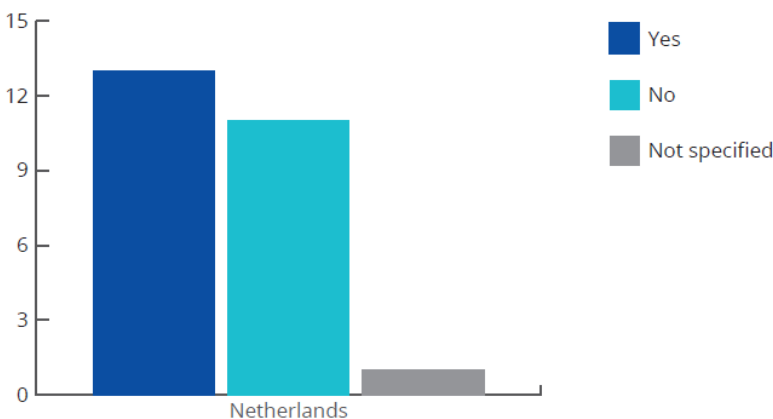


Figure 10: Statement of the participants in The Netherlands about the qualification as a small and medium enterprise (SME) according to the EU regulations

SME (Belgium)

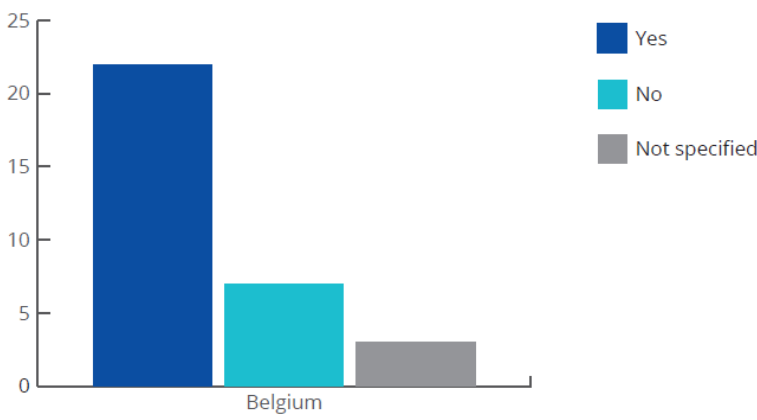


Figure 11: Statement of the participants in Belgium about the qualification as a small and medium enterprise (SME) according to the EU regulations

Specialised fields of the institutions

Specialised fields (Germany)

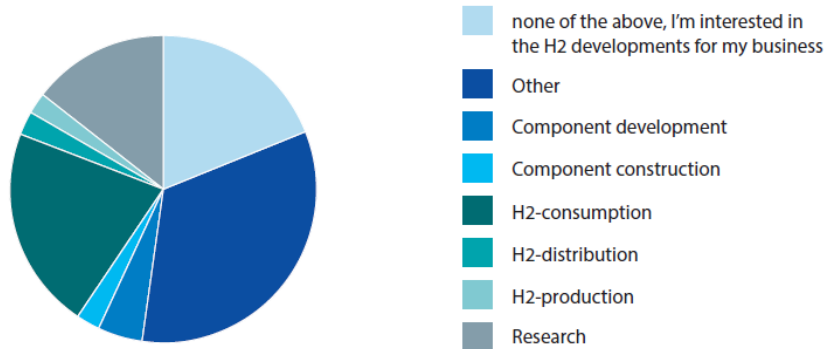


Figure 12: Specialized fields of the participating players in Germany

Specialised fields (Netherlands)

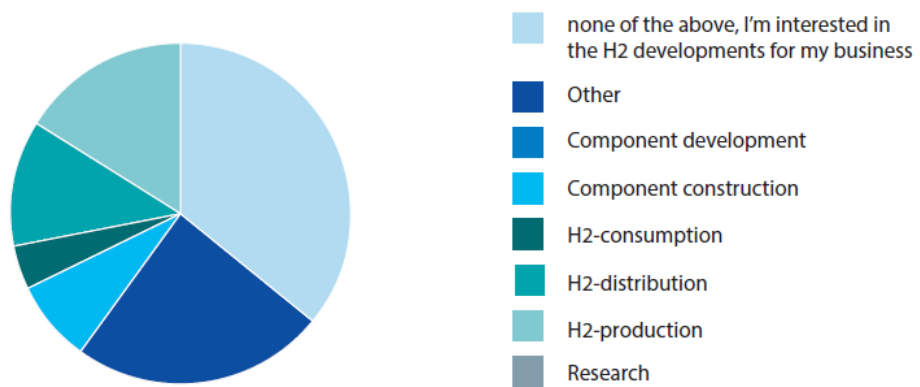


Figure 13: Specialized fields of the participating players in The Netherlands

Specialised fields (Belgium)

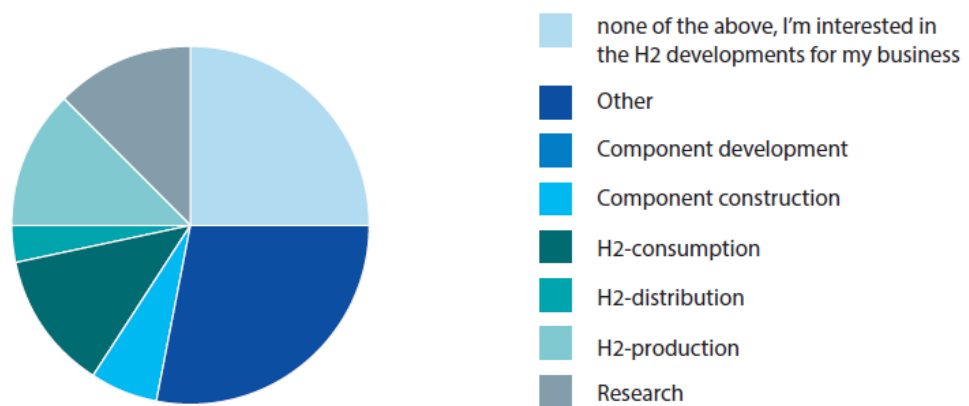


Figure 14: Specialized fields of the participating players in Belgium

Sector of the institutions

Sectors (Germany)

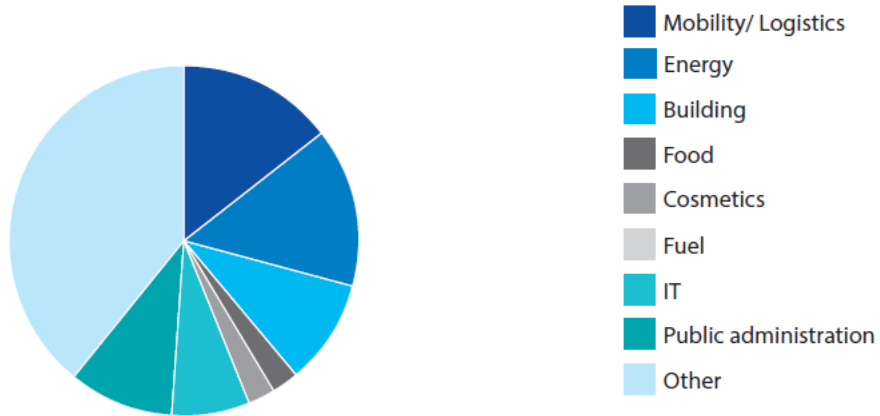


Figure 15: Sectors the participating players are currently active in Germany

Sectors (Netherlands)

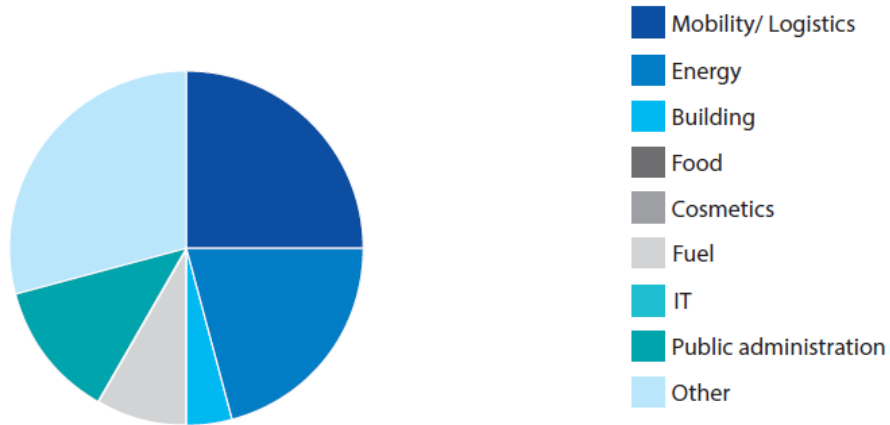


Figure 16: Sectors the participating players are currently active in The Netherlands

Sectors (Belgium)

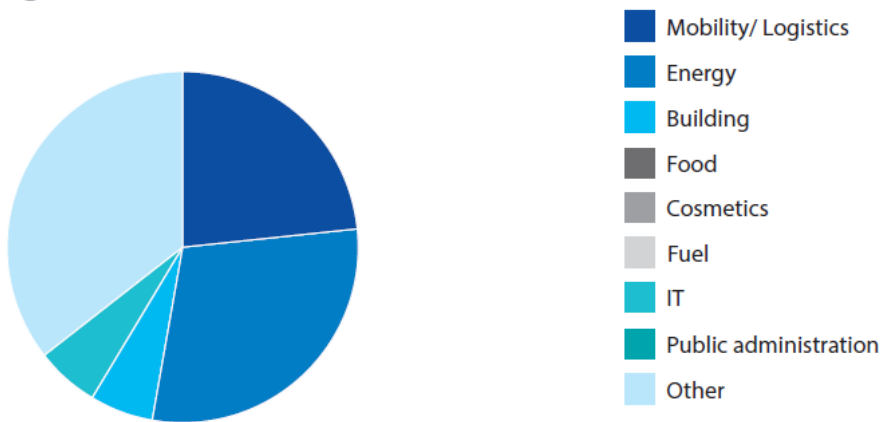


Figure 17: Sectors the participating players are currently active in Belgium

Annex 3: separate maps for Germany, The Netherlands and Belgium

Hydrogen players in Germany

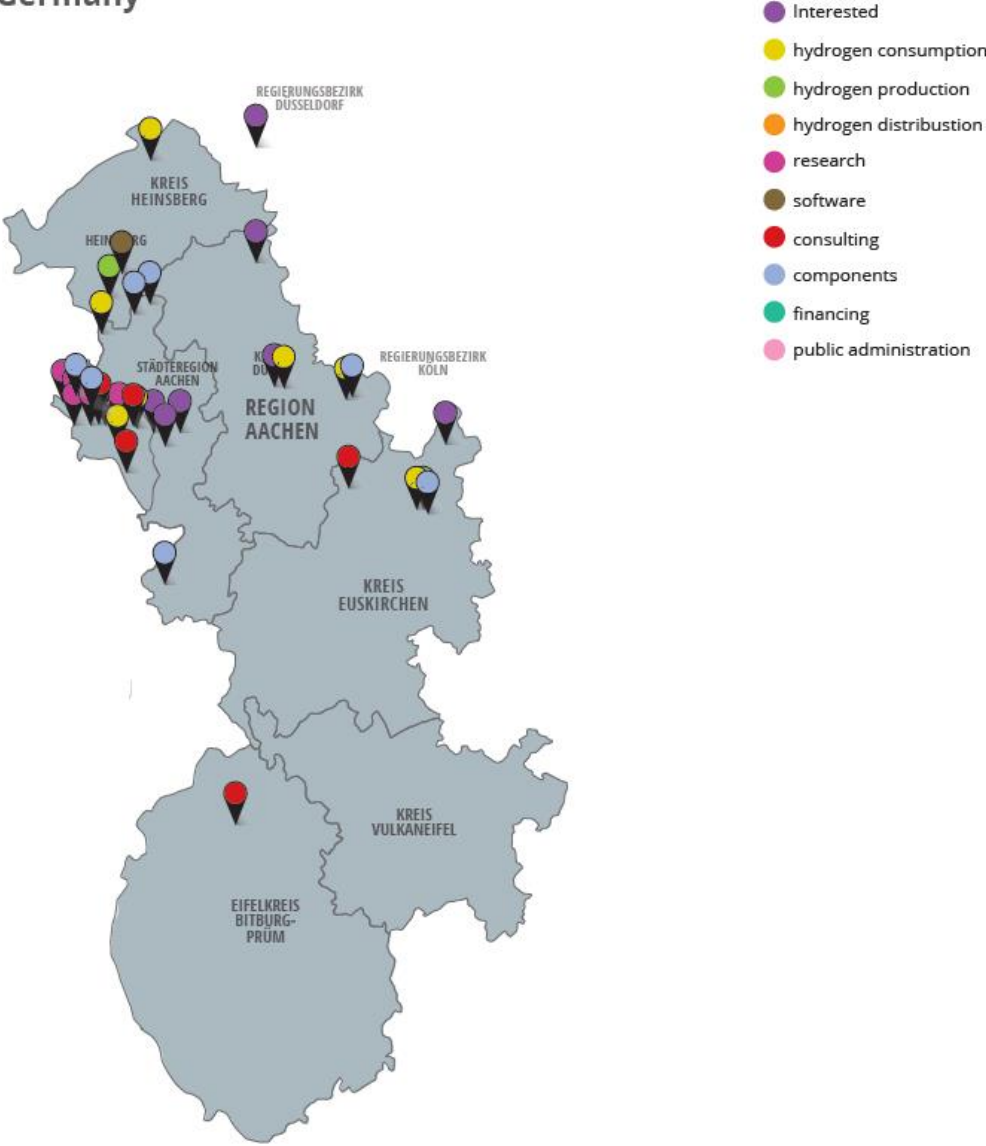


Figure 18: Map of the interested and active players in Germany, color-coded depending on their (potential) role in the hydrogen market

Hydrogen players in the Netherlands

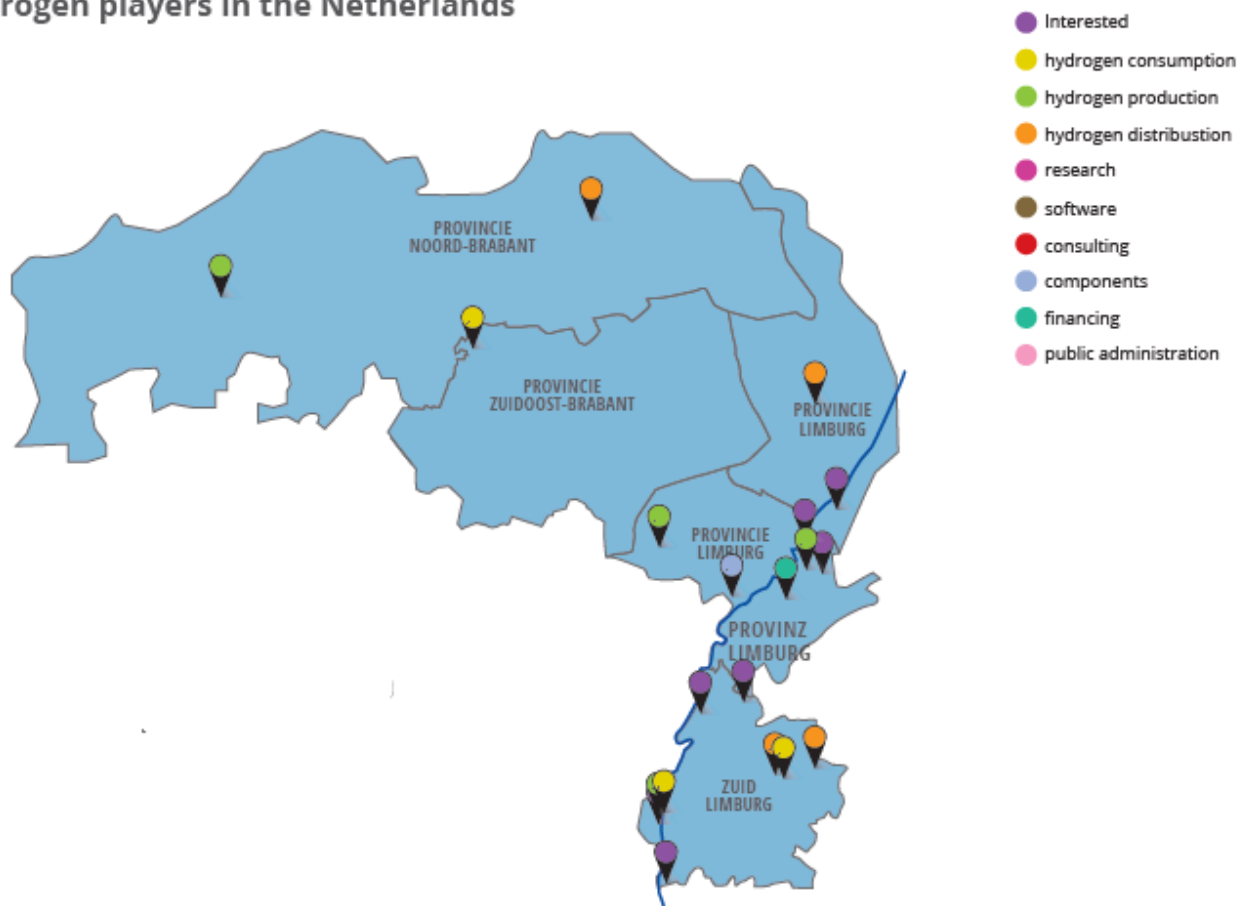


Figure 19: Map of the interested and active players in The Netherlands, color-coded depending on their (potential) role in the hydrogen market

Hydrogen players in Belgium

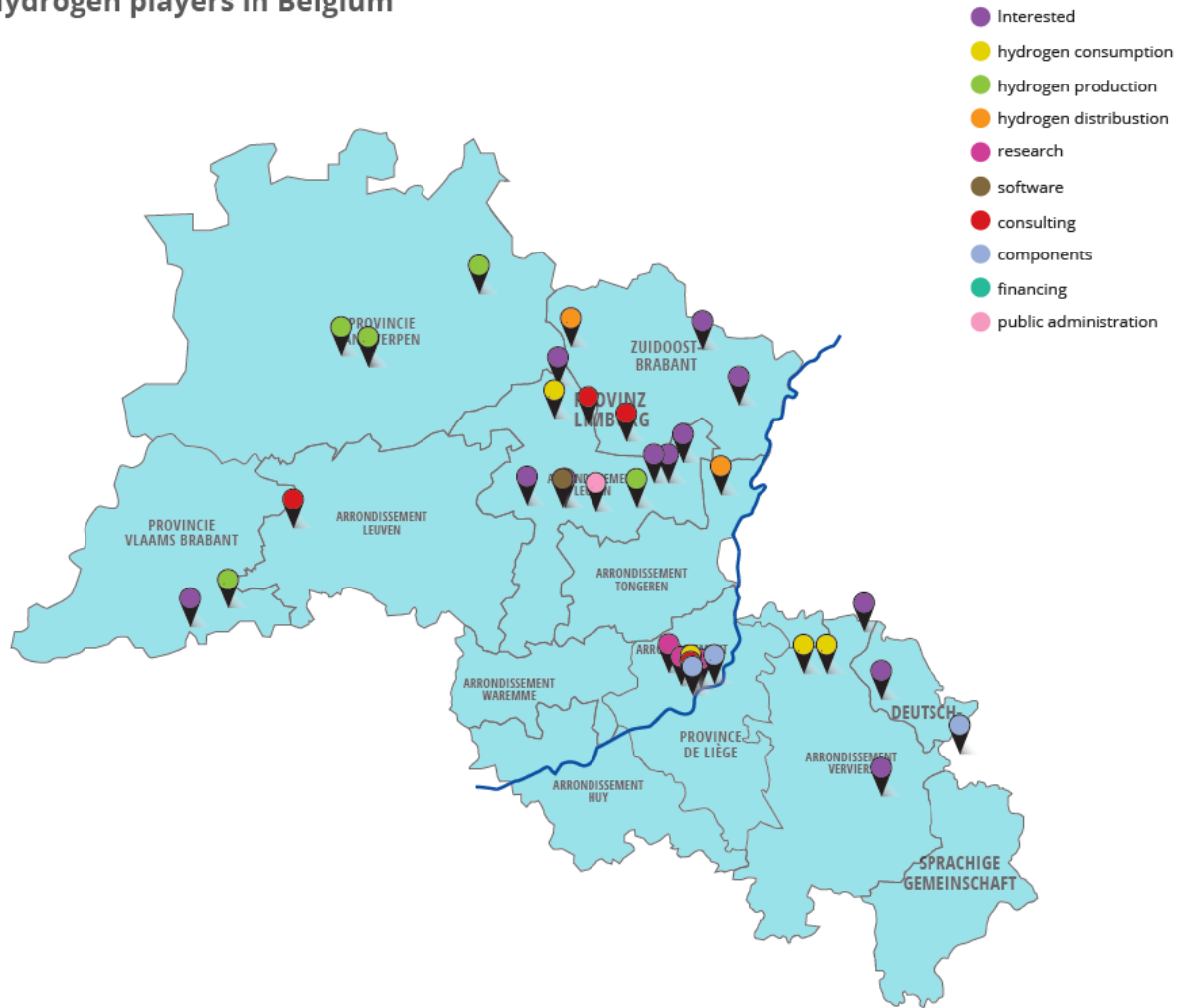


Figure 20: Map of the interested and active players in Belgium, color-coded depending on their (potential) role in the hydrogen market