

Report

Deliverable 2.3.1: *Sustainability and continuity of the data collection beyond the Programme Support Action*

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| Project Acronym | IDACS |
| Project Full Name | ID and Data Collection for Sustainable Fuels in Europe |
| Grant Agreement number | MOVE/B4/SUB/2018-498/CEF/PSA/SI2.792684 |
| Activity | 2.3 Sustainability and continuity of the data collection beyond the Programme Support Action |
| Deliverable Status | Final |
| Dissemination Level | Public |
| Version / date | V.2.0 (final, external) /30-06-2022 |
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Table of Contents

| | |
|--|----|
| List of abbreviations | 3 |
| 1. Introduction | 4 |
| 2. Purpose of this document | 4 |
| 3. Methodology | 4 |
| 4. Resource requirements NAP and data collection | 5 |
| 4.1 Legal form and governance structure | 5 |
| 4.2 Resources, roles, responsibilities and competence/skills | 6 |
| 4.3 Funding and financing | 6 |
| 5. Data collection beyond the Programme Support Action | 7 |
| 5.1 Future data collection | 7 |
| 6. Conclusion | 11 |
| Annex 1 | 13 |

List of abbreviations

| | |
|------|--|
| AC | Alternating Current |
| AFID | Alternative Fuel Infrastructure Directive |
| AFIR | Alternative Fuel Infrastructure Regulation |
| CPO | Charge Point Operators |
| DC | Direct Current |
| EC | European Commission |
| EAFI | European Alternative Fuel Observatory |
| FTE | Full-time equivalent |
| ITS | Intelligent Transport Systems |
| MSP | Mobility Service Providers |
| NAP | National Access Point |
| OEM | Original Equipment Manufacturer |

1. Introduction

The main objective of *Activity 2.3* of the IDACS project is to secure the sustainability and continuity of the data collection beyond the PSA project.

First, the Consortium will provide information on resource requirements for data collection and, in addition, options for institutional and funding structures in which the data collection can be sustained.

2. Purpose of this document

This document will present the final results of the deliverable 2.3.1 of activity 2.3, which constitute a report with proposals on how to keep collected data on alternative fuels infrastructure up to date – beyond the period of this PSA including funding mechanisms. An overview of resource requirements to sustain the data collection when the project has finished will give insight into the required roles, organization and funding possibilities. These resource requirements are then used to formulate options for institutional and funding structures in which the data collection can be sustained, beyond the project. The Consortium will elaborate on the added value of the data collection for different stakeholders and different options for future funding of the data collection will be explored. According to the Grant Agreement, this could range from a fee-based approach to a situation where downloads are free, but live feeds are provided via a subscription mechanism, or otherwise. Moreover, this also includes the exploration of the possibility of having the data collection activities carried out by an existing organisation. And ultimately, this deliverable will reflect on a possible legislative approach for collecting data, including at national level.

3. Methodology

The methodology used to secure the continuity of the data collection beyond IDACS follows the approach that was described in the Grant Agreement. This approach includes the following steps, which were taken by the Consortium members:

1. Provide information on resource requirements Data collection

The Consortium maps the resource requirements to sustain the data collection after the project has finished, based on:

- Required roles, responsibilities and competences/skills
- Organisation: required legal form and governance structure
- Funding: possible financial funding mechanisms

To gain insight into this, the set-up and management of the NAPs and the data collection of all Member States were examined.

2. Develop a blue-print for an institutional structure and support beyond the PSA

Based on these resource requirements the Consortium formulates options for institutional and funding structures in which the data collection can be sustained.

In order to start the discussion and to gather input a questionnaire has been sent to all participating Member States. This questionnaire can be found in the Annex. A follow-up call was arranged to elaborate on the received answers. The memo that was drafted for activity 2.2 was also used as input and context for this document.

4. Resource requirements NAP and data collection

The requirements of the National Access Points are defined in the Directive 2010/40/EU on Intelligent Transport Systems (ITS directive). This directive allows: *various set-ups of the NAPs, such as a database, data warehouse, data marketplace, repository, register, web portal or similar*. Since the directive was issued in 2010, many Member States already have some established kind of NAP to comply with the directive. This has resulted in many different starting points for all participating Member States. Due to the national approach and the flexibility allowed in the NAP set up, according to the Directive, many different in set-up occur in the IDACS project. The data collection of the IDACS project finds its origin in the Alternative Fuel Directive (AFID), which describes what data categories should be accessible in an open and non-discriminatory way to all users. In order to gain a better insight into the resource requirements required in the future, the requirements of the current NAPs and data collection have been examined. In line with the Grant Agreement, the following topics have been researched:

- Legal form and governance structure
- Roles and responsibilities
- Funding and financing

4.1 Legal form and governance structure

Legal form

The countries have the European ITS and AFID legislation as the legal base for data provision at the NAP. In many countries this is subject to national legislation. The principle that data must be provided via the NAP is therefore supported by legislation in actually all member states. However, it often does not support the sharing of all data categories for all fuel tracks as requested in IDACS. As a result, additional legislation has been drawn up or is still being drawn up in approximately half of the countries.

Governance

As mentioned earlier, there are many differences in the set-up of the NAP between the member states. Regarding the architecture of the NAP, more than 50% of the member states have a data register, three have a data warehouse, two have a database and one has a market place. In the case of a register, most cases refer to a public database (71%)

and only a few to a private database (29%).

Furthermore, it appears that 6 countries have chosen to combine their NAP with the IDRO, or are planning to do so. The reasons for doing this are efficiency, simplicity, to have all information in one place or to have the possibility to link information together.

All NAPs are managed by government organizations. In a majority, the actual data collection is not done by the NAPs themselves, but by other organisation(s). In a large majority these are other government parties, and in 5 member states these are private parties or in 1 case a mix of both.

4.2 Resources, roles, responsibilities and competence/skills

Most NAPs have two or three persons partially available. It is difficult to estimate for the member states how many FTEs this is on a yearly base in total. But it is clear that the deployment of personnel with regard to the NAP is very limited.

Most of the effort is done by operational staff, supported by IT specialists for the automation of processes and maintenance of the website and system(s). Once a NAP has been set-up, the actual effort of registration and maintenance is quite limited.

As for the data collection itself, it's a different story. For the countries that have insight into this, it differs from 2 to 7 persons who are involved. Some of the countries leave the data collection to a private party, which makes it difficult to estimate the actual man-hours. Occasionally, the set-up of the NAP is also combined with the set-up of an IDRO, which makes a specific indication of the costs more complex. However, it can be concluded that most of the resources are on the side of the actual data collection.

The quality of the data is not automatically the responsibility of the organization that runs the NAP or is responsible for data collection. Actually, the majority of the countries have made the operators themselves responsible for good quality data. In other countries, the organization that does the data collection is responsible for good quality.

4.3 Funding and financing

Based on the results obtained as part of the project, Member States have invested investment costs ranging from 15,000 to 800,000 euro on the IT system for data collection. These costs vary considerably. In one case, there may already be an existing system that just needs to be continued or modified. While in other cases everything from setting up a NAP to a public database has been developed. It is also possible that the costs for 'data collection' include multiple functions (the costs for combining the NAP and IDRO, the costs for setting up a public database, costs for the organization that will do the data collection, the maintenance for several years, etc.).

There are also countries where the costs are unknown because the data provision is left to private parties: private data aggregators or operators supply the data. In those cases, the costs of data collection are not clear. As a result, the necessary investments from the government for data collection are considerably limited, compared to the countries that have to build a public system for data collection and provision via the NAP.

Cost covering fees

Around two-thirds of the Member States participating in IDACS charge no fee for the access of the data through the NAP. The five Member States that have apply fees have different approaches. Different tariffs depending on offered services (e.g. higher tariff for higher frequency) or depending on the type of data (static or dynamic data), as in the Netherlands, Belgium, France and Germany. But a recurring tariff (time-based fee/subscription) is also possible. There may be differences in how the fee is determined. This is not always laid down by the government because in the countries mentioned above this is (partly) left to the data owners. In some countries this is left to the data owners. While others have fixed prices or an intermediate option. For example, that a limited number of downloads per hour is free, but real-time data is paid.

A cost covering fee is allowed by the EU, however, national regulations can enforce that no cost shall apply for this kind of activities. In these situations the cost are covered via federal/state budget.

5. Data collection beyond the Programme Support Action

In this chapter the Consortium formulates options for institutional and funding structures in which the data collection can be sustained.


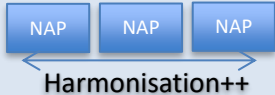

Before this is discussed, it will first be clarified what is meant by 'the data collection'. In activity 2.3, the Grant Agreement talks about "to secure the continuity of the data collection system developed in this project" and about "the central data collection". As has already been shown in other deliverables, no central data collection system has been set up within IDACS on European level. This is due to the considerable differences in national situations and also due to the lack of appropriate (European) legislation. Finally, this is not a formal assignment within the IDACS project.

5.1 Future data collection

The Grant Agreement states that this deliverable must describe how the data collection can be sustained after IDACS: a 'blue print for future data collection'. However, the data collection as set up in IDACS is designed in a way that can continue after the end of the project. There is therefore little added value if only the continuation of the IDACS way of data collection is considered.

The blue print for future data collection is therefore divided into three scenarios: the first is about continuing the data collection as set up within IDACS. The second scenario focuses on more harmonization of data collection in Europe. And the third option discusses the future data collection by a central European access point. The latter option is elaborated in more detail in the IDACS Memo '*Memo on a common form of NAPs and data provision at EU level*', including the consortium's views on this data provision at EU level.

In line with the Grant Agreement, the focus will be on legislation, governance, possible funding and added value for stakeholders.

| | 1.IDACS data collection | 2.More harmonisation data collection | 3.EU data collection |
|------------------------------|---|--|---|
| CONCEPT |  |  |  |
| GOVERNANCE | NAPs | NAPs | EU access point |
| SET UP | National | National | EU level - independent EU NAP |
| RESOURCE REQUIREMENTS | - | +/- | + |
| LEGISLATIVE CHANGE? | National or European | National or European | European |
| FUNDING REQUIRED? | -/+ | + | ++ |

1. IDACS Data collection

The data collection as set up within IDACS takes place via the NAPs: they provide direct access to data, or lead to the underlying databases of organizations that do the actual data collection. Although many agreements have been made in the project to harmonize things between countries, the implementation is often national. The various member states have set up a way of data collection and data provision at the NAP in their country that complies with IDACS.

Looking at institutional and funding structures, this approach can in principle be continued without any problems in the future. However, there are a few points that could be changed that would improve the future continuation of data collection. Mainly for countries that have not participated in IDACS.

Legal

At the moment of developing the PSA IDACS legislation on alternative fuels was not qualifying the data types that Member States shall made accessible. As a result, Member States had to introduce national legislation. This has been proven to not be a successful approach, since charging operators were exposed to completely different criteria depending on the Member State in which they had to operate.

At the moment of the finalisation of IDACS, the revised AFID (Alternative Fuels Infrastructure Regulation) was published bringing clarity on the data approach for alternative fuels. Concretely, Article 18 of the AFIR proposal specifies a set of static and dynamic data types that operators of recharging and refuelling infrastructure shall made available to Member States NAPs at no cost. In addition, AFIR proposal empowers the Commission to adopt secondary legislation that could further specify the conditions for the sharing of data, including the frequency, quality and other the possible introduction of new data types.

Governance

In terms of governance, not much needs to change. The current parties that are a NAP can remain that way and the parties that do the data collection can also continue to do so. Depending on national needs, this can be changed and - for example via tenders - another organisation can be engaged.

Funding

Funding for the continuation of data collection will mainly come from national funding. There are significant differences here: countries that have set up a database by a public organization will spend more on this than countries that have left the data collection to private parties and allow a fee for the data. As discussed above, there may be differences in how the fee is determined. It would be good for uniformity and harmonization if agreements were made at European level about the possible costs of data for third party users.

Stakeholders

For stakeholders, this does not necessarily seem the most user-friendly option. Data is made available on different platforms and/or NAPs and sometimes on different terms and conditions (free data vs. fee for data). Third party users who want to have the data from all the member states, must first connect to those countries' databases. And/or consult the data from a data aggregator. However, this is a step forward given the starting situation in which countries did not yet have a NAP or no form of data collection.

From the perspective of stakeholders, it is important for data owners that the national obligations and requirements regarding data sharing are as similar as possible. And from the users' point of view, they want access to good quality data as easily as possible at the lowest cost.

Within IDACS harmonization has been sought within a number of matters (data categories, data quality, update frequency, etc.) and for stakeholders this has been a step forward. There is, however, still room for improvement in a number of areas.

2. Harmonising data collection

Between the current IDACS practice and a future central data collection at European level, there seems to be room for another scenario. That is the scenario in which further steps are taken between all the European countries to harmonize the aspects of data collection. The data collection in Europe will improve if all countries in Europe have the same conditions concerning: data quality, update frequency, data access, data categories, protocols and formats.

In this way, both the input of data (from data owners) and the output to third party users can be harmonized. The NAPs do not necessarily need to have the same architecture for this scenario. As long as all conditions are the same between all countries, the data collection between countries can improve.

Legal

This will have to be legislated. Agreements must be reached with Member States from the EU on the above points. Member States can incorporate this into national legislation. But this can also be arranged through European legislation and directives, such as the AFIR and ITS. A majority of the IDACS member states want more specific requirements in European regulations regarding data categories and conditions regarding access to data.

Governance and funding

In principle, not much needs to change in this scenario with regard to governance and funding. New requirements can be set to improve data collection and all countries will have to comply with them. This may lead to changes, but at the same time many countries will be able to deploy the same organization and structures. However, higher requirements for data may lead to higher costs. Where this funding should come from is partly dependent on the decision whether a fee may be charged or whether data should always be free of charge. For the countries that have participated in IDACS, however, no major changes will have to take place in terms of funding and governance. For countries that have not arranged sufficient data collection, this will involve the necessary changes. This could be obtained from national or European budgets but this has not been discussed further within IDACS.

Stakeholders

This scenario could be of added value for stakeholders. If all countries in Europe use the same requirements and conditions for data collection, this can be a significant improvement of the current situation for both the data owners and the data users. It simplifies data exchange and makes it easier for parties to aggregate the data in (European) databases.

3. Central European data collection

The last scenario for future data collection is to have central data collection at a European level. This can be done in different ways, ranging from a register to a database. In the case of a database, it can be a database with static data or a database with all real-time data. These options and the views of the consortium on this are discussed in the IDACS Memo '*Memo on a common form of NAPs and data provision at EU level*'. Below is a more objective overview of what is required for such a scenario.

Legal

If there is a need for a central location for data collection, this must be sufficiently anchored in European legislation. It should be clear that countries all make the same categories available at the same quality and conditions. This legislation may also require that the data be delivered to a European access point, but this is not necessary. The organization that would manage the European access point will collect the data per country (or will leave this task to a data aggregator) and will make it available on a central EU access point.

Funding

An appropriate budget is needed to set up a central data collection at European level. This organization must manage a database with real-time data that must be of good quality.

Depending on whether a fee may be charged for the data, the need for public funding can increase.

This can be financed from the EC or European funds. Or it is partly financed by the EC and partly by countries, whereby the contribution of a country then depends on the number of cars or infrastructure (= the amount of data). If the data users have to pay a fee, that can also be a possible source of financing.

Governance

Whatever form of database is chosen, there will have to be an organization that will perform this task. Within the consortium there is a majority who think that this can be performed by one (existing) organization (eg, EAFO or the future Mobility Data Space). However, it is pointed out that this will mainly be a matter of funding. The organization that has to do this will need the right budget for this and the right legislation must be in place. Otherwise there is the risk of incorrect data, as is sometimes the case with existing initiatives.

Stakeholders

Setting up an overarching European database could have many potential benefits for stakeholders. A few examples of added value:

- Possibly easy access to data at European level (especially for smaller businesses)
- Centralization of data: Single entry point
- Uniform quality
- Harmonized data format

6. Conclusion

It seems that not 1 blue print can be given for the future data collection. It appears that gradual steps need to be taken to achieve a good data provision in the EU.

With regard to a future central data collection via an EU wide database, there are many potential advantages. However, these all stand or fall with harmonizing some critical conditions for data collection. If NAPs in Europe have different quality data available under different conditions, it makes less sense to place this in an EU wide database. Setting up an EU wide database should therefore not be the goal in itself, but only a means to get better data provision in Europe.



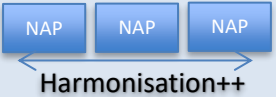

The IDACS project has taken good steps towards this with its deliverables. But has also shown that sufficient European legislation was lacking and that there are still differences between countries in terms of data quality and data accessibility. The next step is to further harmonize the data collection in Europe concerning at least the following topics:

- data quality,
- update frequency,
- data access,
- data categories,
- protocols and formats.

In conclusion, the consortium realizes that further harmonization of the above points is indispensable for European data collection. It is essential that the correct (European)

legislation is available, because otherwise good data collection is not possible. Finally, it is clear that data collection with good quality data costs money. Once again, the right legislation and/or funding is indispensable.

The future blue print will therefore first have to be a situation of NAPs and national data collection that is increasingly uniform and harmonized. It is important that the right supporting legislation is put in place. The IDACS deliverables have brought a step forward for the participating member states. But to get this across Europe, this needs to be further built on by, among others, the Sustainable Transport Forum Group of DG MOVE, the PSA NAPCORE, but also in upcoming European legislation such as the AFIR.

| TIMELINE: | | | |
|------------------------------|--|--|---|
| |  | | |
| | 1.IDACS data collection | 2.More harmonisation data collection | 3.EU data collection |
| CONCEPT |  |  |  |
| GOVERNANCE | NAPs | NAPs | EU access point |
| SET UP | National | National | EU level - independent EU NAP |
| RESOURCE REQUIREMENTS | - | +/- | + |
| LEGILATIVE CHANGE? | National or European | National or European | European |
| FUNDING REQUIRED? | -/+ | + | ++ |

Annex 1

Questionnaire – Deliverable 2.3.1

1. Which Member State do you represent?:
2. What kind of architecture does your NAP have:
 - Database ;
 - data warehouse ;
 - data market place ;
 - data register ;
 - other, please indicate: ... ;
 - If data register: does your data register have a hyperlink(s) to:
 - to organization(s)/platform(s) with a public database
 - to organization(s)/platform(s) with a private database
3. Do you have a separate NAP for data on alternative fuels infrastructure or is it integrated in the NAP on traffic information (ITS)?
 - Included in the NAP on traffic information (ITS Directive 2010/40/EU)
 - Separate NAP for data on alternative
4. Have you set-up or are you setting-up a NAP combined with the IDRO?
 - Yes,
Please indicate the reasons why you have chosen for this option
 - No

Before filling in the questions below, please consider the difference between 'data collection' and 'data provision at the NAP'.

- Data collection: refers to the actual collection and processing of data gathered in the system until it is made publicly accessible via the NAP, including aggregation, formatting or quality activities. This can be done by a private or public organization, which can be done separately from the NAP.
- Data provision at the NAP: refers to the process of making the data (sources) publicly accessible via the NAP.

It is possible that both the data collection and the data provision via the NAP are carried out by the same organization. But it could also be the case that organization A (and possibly B, C & D) does the data collection, and that the NAP organization is only responsible for the data provision on the NAP.

Governance and roles

5. Does the NAP doing the actual data collection or is this another organization? *Please specify.*
6. Is the NAP outsourced or is it managed by the Government / Authorities?
7. Is the data collection outsourced or is it managed by the Government / Authorities?
8. What organization / what party is responsible for the quality of the data?

Recourses and costs

9. How many persons are involved in data provision at the NAP regarding data related to recharging/refuelling points for alternative fuels? *If information is not present; give an estimation or indicate 'unknown'.*

10. How many persons are involved in the data collection related to recharging/refueling points for alternative fuels? *If information is not present; give an estimation or indicate 'unknown'.*

11. How many hours do they spend on an annual base on data collection activities? *If information is not present; give an estimation or indicate 'unknown'.*

12. Please indicate the investment costs of data collection for the IT system (including developing database, algorithm, setting up APIs, developing other services such as a webportal, etc.) in Euro. *If information is not present; give an estimation or indicate 'unknown'.*

13. Please indicate the yearly maintenance costs of data collection (in Euro) for the IT system. *If information is not present; give an estimation or indicate 'unknown'.*

14. Are the maintenance costs of data collection for alternative fuels in your Member State shared with other IT system concerning the overall NAP data under the Directive 2010/40/EU on Intelligent Transport Systems (in Euro)

If information is not present; give an estimation or indicate 'unknown'.

Funding

15. How is the funding of the NAP for alternative fuels arranged? Please indicate if it differs from the overall NAP data.

16. How is the funding arranged for the organization(s) that carries out the data collection?

17. Is it charged any fee in order to have access to the data via the NAP?

- No
- one time tariff
- recurring tariff; timebased fee / subscription
- different tariffs depending on static or dynamic data
- different tariffs depending on offered services (e.g. higher tariff for higher frequency)
- Other:

18. In case when a fee is charged; is this done by a governmental organisation or by one or more market parties?

- governmental organization
- market party or market parties

Legislation

19. What is the legal base for the alternative fuels data collection and provision at your NAP? Please state if you have relevant national legislation / regulation in place.

20. Please state your reflection on European legislation and the new proposal for a Regulation on Alternative Fuels Infrastructure.

- *According to Art 18.2, operators of publicly accessible recharging and refuelling points or, in accordance with the arrangement between them, the owners of those points, shall ensure the availability of static and dynamic data concerning alternative fuels infrastructure operated by them and allow accessibility of that data through the National Access Points at no cost (see in the article the data types included). Do you think this provision will facilitate data collection and reduce costs?*

- According to Art.18.4, the Commission shall be empowered to adopt delegated acts in accordance with Article 17 to: (a) add additional data types to the ones specified in paragraph 2; (b) specify elements related to the data format, frequency and quality in which these data shall be made available;). Do you think this provision will help support IDACS contributions and further expand its outcomes?

Central data collection

21. Do you think it would be useful to facilitate the accessibility of data on alternative fuels by centralizing its discoverability and access to stakeholders (eg. OEMs, navigation tool providers and third party developers) in Europe? Please state your reflection on the added value of a central point for routing data accessibility from the different NAPs on alternative fuels for the different stakeholders in Europe).

22. Do you think your Member State and NAP on alternative fuels would be willing to join an European central data platform aiming to facilitate discoverability and accessibility on alternative fuel infrastructure?

- Yes
- No
- Not sure

23. Do you think the data provision activities on a European level can be carried out by an existing organization (eg, EAFO or the future Mobility Data Space)? *Please indicate why/why not.*

24. Should European legislation be extended to include obligations for central data accessibility and collection (e.g., aggregation, quality, etc.)at an European level?

- Yes
- No

25. How do you think the funding for this centralised central data accessibility set-up should take place?