



## D7.2 Annual Report on Community Building, Event Management, and Collaboration

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## List of Acronyms

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Abbreviation / acronym	Description
BSC	Barcelona Supercomputing Center
CoE	Centre of Excellence
DIA	DIALOGIK - gemeinnützige Gesellschaft für Kommunikations- und Kooperationsforschung mbH
DoA	Description of Action
Dx.y	Deliverable number y belonging to WP x

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Abbreviation / acronym	Description
EC	European Commission
EUXDAT	European e-Infrastructure for Extreme Data
HPC	high-performance computing
ICCS	Institute of Communication and Computer Systems
KPI	Key Performance Indicator
MOOCs	Massive Open Online Courses
MSF	Médecins Sans Frontières
NGOs	Non-governmental organization
PLUS	Paris-Lodron-Universität Salzburg
SAROBMED	Search and Rescue Observatory for the Mediterranean
SZE	Széchenyi István University
UNHCR	United Nations High Commissioner of Refugees
WP	Work Package

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# Executive Summary

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One of the main goals of the HiDALGO project is to communicate and disseminate the results to the scientific community as well as to the general public.

In this document, the results achieved in work package 7 within months 1-12 are summarized and outlined. To measure our success, we define a number of KPIs. We have worked on different tasks and objectives. On one side, our work focused on internal community building. On the other side, we used our communication channels to disseminate our results to a wide audience, with a special focus on our main stakeholder groups. Furthermore, we planned and conducted ample event management and collaboration activities.

In the first year, we succeeded in bridging the different communities working in the HiDALGO project by using several targeted internal community building activities. Furthermore, our main external communication channels reached a substantial number of potential users.

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# 1 Introduction

## 1.1 Purpose of the document

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The objective of this document is to explain and summarize the progress in WP7. Our dissemination and communication activities address two different communities. On the one hand we intend to reach communities within the consortium; on the other hand, we address any external communities that might be interested in the project findings.

## 1.2 Relation to other project work

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WP7 deals with dissemination activities and community building. These activities are very important to the whole project and therefore, the present document has connections to all other parts of the project. Within WP7, the project findings, results, and products are communicated internally and externally.

## 1.3 Structure of the document

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This document is structured in two major chapters. **Chapter 3** presents the Community Building, Dissemination and Communication and it is mainly divided into internal and external activities. **Chapter 4** presents the Event Management and Collaboration, which is also divided into internal and external activities. **Chapter 5** contains our conclusions.

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## 2 Community Building, Dissemination and Communication

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Community building within HiDALGO is twofold: first, the community building inside the consortium improves the communication and provides relevant information to the European Commission about bridging gaps between communities. Resulting in clear recommendations in month 36, a generic roadmap for bringing together groups with different interests is established. Second, the external communities shall be addressed to reach collaboration and dissemination. During the execution of the project, a closely coupled dissemination and exploitation channel is provided in order to foster early interaction with HiDALGO.

### 2.1 HiDALGO Community Building Activities

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The HiDALGO community includes the internal and external stakeholders. Internal stakeholders are the different project partners and the project success is linked with them. Therefore, it is essential that all project participants agree on the scope of the project. Furthermore, the expectations of the project partners have to be made explicit and to be matched – following the common aims and vision. When there is agreement on the scope, it is necessary to align the working steps between the different parts of an interdisciplinary project. This means that the work is not separated between the disciplines.

As we already mentioned in Deliverable 7.1 our external stakeholders are the scientific community, the industry (large industry or large industrial associations), the governments, the investors, the general public, non-governmental organizations (NGOs) and the academia. With the HiDALGO community building activities, we intend to reach our external stakeholders.

The aim of WP7 is to bridge the gap between the different working groups, partners and external stakeholders through information and communication. The following figure shows the desired interaction between the internal and external stakeholders.

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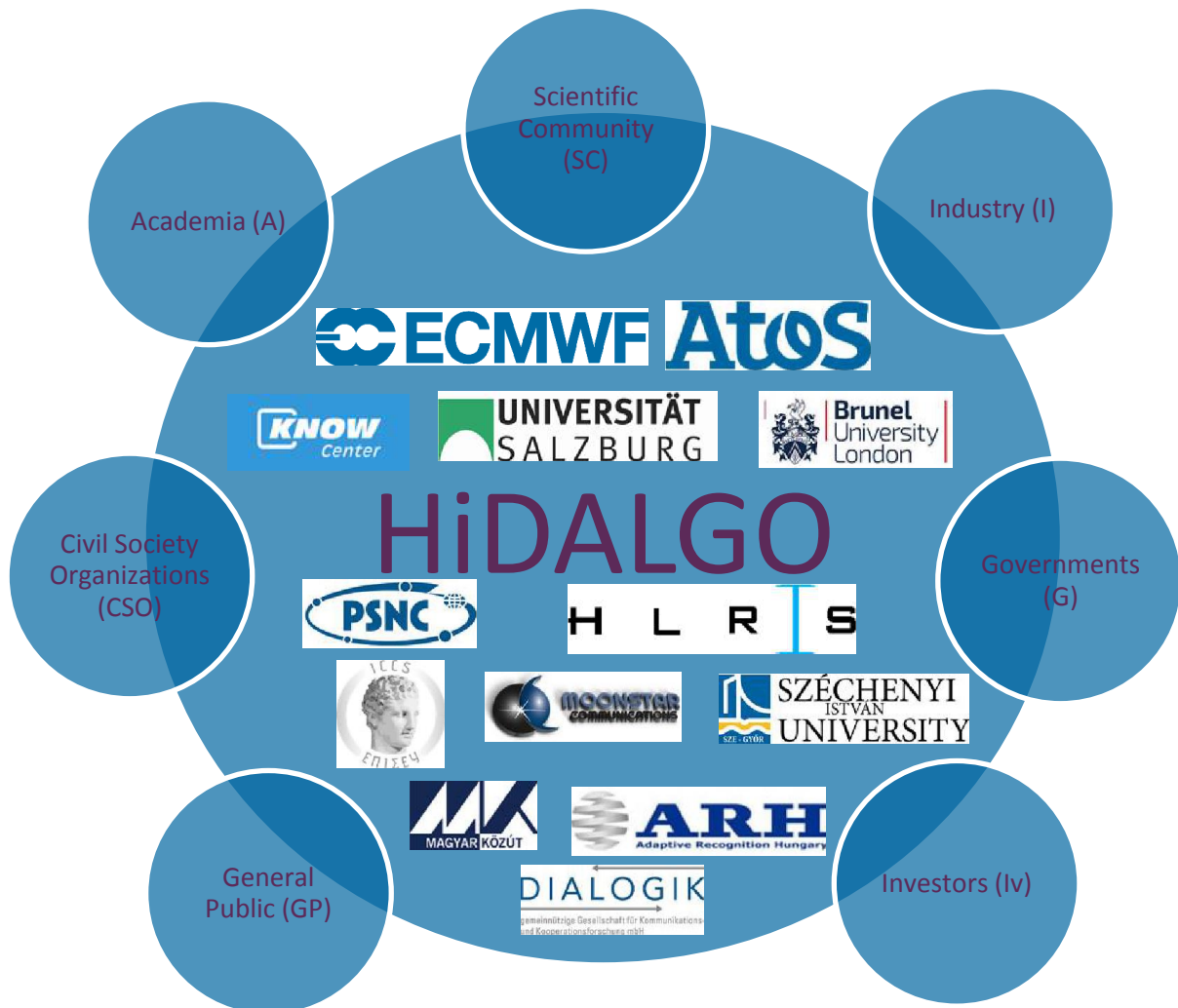


Figure 1: In the main circle the partners working in the project are listed. The circles around represent the different stakeholder groups and external communities interacting with the HiDALGO project.

### 2.1.1 Roadmap

The roadmap for the months 6-12 follows the general goals of the HiDALGO project. It also helps for a proper planning and early identification of issues, which can be then handled quickly and focused. Table 1 is structured in six columns. The first two columns contain the starting and the ending months, respectively. In the third column it is listed to which task the corresponding objective belongs. The next column gives a description of the objective followed by the partner who is responsible for it, and the last column describes the current status of the objective.

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Start	End	WP Task	Description	Responsible Partner	Status
M1	M2	T7.1	HiDALGO brand	PLUS, ALL	done
M1	M6	T7.1	HiDALGO templates (documents, presentations and poster)	PLUS, ATOS, PSNC, ALL	done
M1	M2	T7.1	Creating HiDALGO website	PLUS, ALL	done
M1	M12	T7.1	Updating the website	PLUS, ALL	ongoing
M1	M6	T7.1	Set up social media channels (Twitter, Facebook and ResearchGate)	PLUS, PSNC	done
M1	M12	T7.4	Communication through social media channels (Twitter, Facebook and ResearchGate)	PLUS, ALL	ongoing
M5	M7	T7.4	Creation of communication material (flyer, poster)	PLUS, ALL	done
M8	M10	T7.4	Communication through social media - assigning responsibilities regarding time and topic	PLUS, KNOW, BUL, SZE, PSNC, ALL	ongoing
M8	M10	T7.4	Demo simulation -- migration use case	BUL, PLUS	ongoing
M11	M13	T7.4	Demo simulation -- air pollution use case	SZE, PLUS	planned
M6	M12	T7.4	Newsletter	PLUS, ALL	ongoing, first issue published, another one to be issued at the beginning of M13
M1	M12	T7.4	Articles in newspapers	ALL	ongoing
M1	M12	T7.4	Publications	ALL	ongoing, several papers submitted
M9	M11	T7.4	Create publication landscape	KNOW, PLUS, ALL	ongoing
M1	M12	T7.4	Presentations at conferences, participation in panels	PLUS, ALL	ongoing, several abstracts and posters so far, one panel participation
M9	M12	T7.2	Interviews with use case owners	DIA, ALL	ongoing
M1	M12	T7.2	Collaboration with other projects (FocusCoE, EXCELLERAT, POP-2, Cheese)	ATOS, USTUTT, ALL	ongoing
M6	M12	T7.2	Collaboration with the industry	ALL	needs to be initiated

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M6	M12	T7.2	Collaboration with HPC centres (CINECA, BSC)	ALL	ongoing
M6	M12	T7.2	Collaboration with Networks (GRNET, BDVA, European Network of National Big Data Centres, EU-MATHS-IN network, PIONIER)	ALL	ongoing
M6	M12	T7.2	Collaboration with academic sector	DIA, ALL	ongoing
M6	M12	T7.2	Establish webinars	ALL	ongoing, two webinars so far (SZE, USTUTT)
M6	M12	T7.2	Contacts to different NGOs like MSF, UNHCR, SAROBMED	BUL, ALL	ongoing
M6	M12	T7.3	Training workshops	ALL	ongoing, training workshop in Ethiopia (BUL)

**Table 1: WP7 roadmap**

## 2.1.2 Key Performance Indicators (KPIs)

We define a number of KPIs to measure the success of our activities. The KPIs of WP7 include the following:

KPI Name and Purpose	Year 1
Number of training / workshop activities done	1
Number of participants trained / educated	0
Satisfaction degree of participants	0
Percentage of participants outside the consortium	0
Website/average number of visits per month	361
Website/average number of downloads per month	49
Twitter/average number of tweet impressions per month	3265
Number of submitted peer reviewed publications	2
Number of HiDALGO workshops with more than 50% external participants	0
Number of conference presentations/posters	5

**Table 2: KPIs of WP7**

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## 2.1.3 Internal Community building activities

### 2.1.3.1 Background

When many scientists with different disciplinary backgrounds convene to solve a complex problem in an interdisciplinary way, this is not trivial. This is due to the disciplinary education of experts, which leads to a special view on the world, i.e. each discipline has its own cognitive map. Petrie introduces the concept ‘cognitive map’, meaning “the whole paradigmatic and perceptual apparatus used by any given discipline. This includes, but is not limited to, basic concepts, modes of inquiry, problem definition, observational categories, representation techniques, standards of proof, types of explanation, and general ideals of what constitutes a discipline” [10].

Experiences from the EU fifth framework show that it is vital to frame the problem when an interdisciplinary (big) team works jointly [3]. They found that if disciplinary boundaries (i.e. the specific cognitive map of a discipline) are removed the remaining complexity might cause confusion. The same experiences have been made in the EU project CoeGSS: Due to the different background of the participants, it took some effort to align the perspectives of all partners.

Therefore, we can state that it is essential that all project participants agree on the scope of the project. The scope means on the one hand the joint aims and vision including the definition which aspects are taken into account and which are not and on the other hand the roles of the disciplines to answer the research question [8], [4], [7], [1], [2], [12], [11].

Edelenbos et al. (2017) as well as Podestá et al. (2013) found that different groups within interdisciplinary projects have different foci as well as multiple perspectives of the problem or questions to be addressed [4], [11]. Therefore, it is essential to agree on a shared problem definition. Furthermore, the expectations of the project partners have to be made explicit and to be matched – following the common aims and vision.

When working jointly, it becomes apparent that between disciplines not only the work routines, approaches, methods and general ways of thinking differ, but especially the different use of technical terms might pose an issue [11], [4], [5], [13], [3]. Often, one technical term means different concepts in different disciplines – or the other way around: there are different technical terms for the same concept. Identifying that there is a misunderstanding is the first step for a fruitful communication and for developing a ‘common language’.

At the same time, a mutual understanding of approaches, limitations and possibilities needs to be developed [11], [4], [12], leading to a development of a common plan / framework, meta-methodology, road map or consensus on key project concepts [4], [11], [6]. Such a common ‘meta-approach’ is very helpful for integration [9].

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Another good means for integration are ‘bridging people’ or ‘ambassadors’ [5], [4], [11]. These persons actively promote integration within the project, e.g. by performing an integrating task and by cooperating with experts from other disciplines. They test out new ways of intertwining different aspects, methods or approaches and open up possibilities for others, who are more comfortable within their own discipline.

When there is agreement on the scope, and while there is a common ground being developed, it is necessary to align the working steps between the different parts of an interdisciplinary project. This means that the work is interlocked between the disciplines.

Finally, when analysing CoGSS, we came to the conclusion that the interdisciplinarity of a project is the ‘fabric’ or ‘heart’ of the project, because like a thread it weaves together all parts of the project. As such, it is not only a challenge, but also the opportunity and the key to success for interdisciplinary projects, making use of the rich experiences and knowledge of the involved disciplines.

Therefore, the chances and challenges of the interdisciplinary character of the project should be highlighted to the project participants right from the beginning, i.e. there should be room for self-reflection processes [4], [1], [2], [11], [13]. One possibility is to introduce a task ‘interdisciplinarity’ to the project, like it was done in HiDALGO within Task 7.1 “Community Building, HiDALGO Brand & Website”.

### 2.1.3.2 Scope of task ‘internal community building’ (ICB)

Internal community building in HiDALGO includes:

- ▶ Exploiting the chances offered by interdisciplinarity, esp. fostering integration
- ▶ Supporting the development of an internal community and smoothing the way for a fruitful collaboration within HiDALGO
- ▶ Observing the internal community building (accompanying research) and feeding back the observations to the consortium
- ▶ Providing dedicated sessions at plenary meetings
- ▶ Developing recommendations and a roadmap for bringing together different interest groups (as described in the DoA in T 7.1) by the end of HiDALGO.

### 2.1.3.3 Check the state of the project and the background assumptions

As a start, we need to check the state of the project. This was done within the first three surveys at the kick-off meeting in Madrid on 12 – 13 December 2018, at the technical meeting

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in London on 31 January – 1 February 2019 and within the first detailed survey in month 5 (see section 2.1.3.4 for the methodology).

The task of ‘internal community building’ is based on the assumption that different communities come to HiDALGO and that the individuals of these communities feel rather attached to their own community than to other communities. The internal survey in month 5 showed that this assumption does not fully hold true. On contrast, the consortium is quite interdisciplinary already as will be seen in the next paragraphs.

We have a very good interdisciplinary background within HiDALGO. Nearly 60 % of the respondents agree strongly to have an interdisciplinary background. The rest partly agrees.

Regarding the disciplines and roles in HiDALGO, they are diverse and integrated and many individuals allocate themselves to *several* disciplines and roles. Overall, the respondents perceive the communities as open to new ideas. The median of the rating is 5 for HPC, 6 for HPDA and 5.5 for GC and AI with min = 2 for HPC and 4 for all other categories and max = 7 for all categories (7 = agree completely, 1 = disagree completely).

To summarize, we observed that within HiDALGO the disciplines are much interwoven already. This means that HiDALGO is in a very good position for solving its tasks. We will observe the project during its runtime anyway to investigate the development over time, e.g. the integration is expected to increase over time.

#### 2.1.3.4 Methods

The task ICB uses different means: dedicated session at meetings, observation of meetings, interviews and surveys. The most emphasis lies on the surveys and the dedicated sessions.

##### *Kick-off meeting, December 2018, Madrid*

The aims of the session ‘internal community building / interdisciplinarity’ at the kick-off meeting were: (i) to raise awareness of challenges and opportunities due to interdisciplinarity, (ii) to reflect on the process to align the views on the scope of the project, (iii) to identify potentials, benefits and synergies and (iv) to get to know each other.

##### *Plenary meeting, May 2019, Stuttgart*

The session on interdisciplinarity and internal (and external) community building included the following parts: (i) introduction, presentation of background to internal community building, (ii) presentation of the main results from the first questionnaires (mainly referring to the

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detailed survey in month 5), (iii) small group discussions on (a) ‘collaboration’, (b) ‘current main challenges and integration’ and (c) ‘external community building’.

### Surveys

The strategy is to take measurements at different points in time.

- ▶ The most important items, which are expected to change over time, will be measured at the kick-off meeting and other project meetings (at least plenary and technical meetings) using a short questionnaire.
- ▶ We will have specific measurements gathering more details, i.e. posing more questions, during specific points in time. The first measurement was in month 5 (April 2019).

To reduce the cognitive load, the factors / elements are grouped per topic. The questions use ratings from 1 = completely disagree to 7 = completely agree. At the end of the questionnaires, there is at least one open question for comments. At the main meetings (most plenary meetings), we have a 1-page questionnaire before the meeting and a longer (e.g. 3 pages) questionnaire after the meeting, so be able to compare some factors / elements.

### 2.1.3.5 First results

The results presented here include all the findings until the plenary meeting in month 6 (questionnaires, discussions at meetings). Some of the results have already been used in section 2.1.3.3. Some of the results of discussions at meetings have been included in section 2.1.3.4. Only the main results are presented to give a summary of the analysis.

#### *Development of the best possible understanding of the research question at hand – benefits*

Focusing on the benefits of a project is important, as they are linked to the common vision and aims of the project and lead the way.

The benefits identified by the project partners are:

- ▶ Related to methods: opportunity to work with real big data and the corresponding infrastructure, our ideas relating to AI and HPDA methods could form the HPC future, integration of several dataflows for data analytics (more precise simulations, richer results), enforcing existing use cases by highly efficient processing (HPC / HPDA)
- ▶ Related to content: the results are expected to lead to better life in the EU, the migration use case will help to understand the reasons and dynamics behind refugee movements (there is a high potential in getting migration flows manageable, which is one of the global challenges at the moment)

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► Related to sustainability and community building: enhanced services, synergies with BW-HPCs5 & other projects, there is a great potential in different disciplines working together. When different disciplines with different perspectives and experiences work jointly, it is important to have a shared understanding of the problem definition to be answered. In month 5, the following statement was rated by 23 respondents: “All project partners have the same understanding of the problem definition to be answered by HiDALGO.” 1 = disagree completely, 7 = agree completely. The median was 5 (max = 7, min = 2). This shows that there is a good basis for the work in HiDALGO, but further development is needed and expected. (Please note that this survey was *before* the plenary meeting in month 6.)

### *Expectations*

The expectations of the respondents overlap very well. No frictions have been identified.

### *Maximal plurality of the included knowledge*

Results from the month 5 survey (N = 24) show that over 70 percent of the respondents look for other studies and other institution that could be useful for they work. Nearly 60 percent of the respondents actively seek for other project partners’ opinion when performing their task. The strong agreement indicates that the HiDALGO consortium not only includes a high diversity of knowledge to fulfil their tasks, but also have open minds, which is a core pre-requisite for the success of interdisciplinary projects.

### *Mutual understanding*

Mutual understanding means the understanding of e.g. approaches used by the other partners, from the own and from other disciplines. Furthermore, the cognitive maps of the different disciplines need to be attuned (see section 2.1.3.2).

Results from the month 5 survey (N = 23) indicate that the respondents have a better understanding of the way of thinking of partners of the *own* disciplines (median = 5, min = 2, max = 7) compared to the way of thinking of partners of the *other* disciplines (median = 4, min = 1, max = 7). This was to be expected. Results furthermore show that there is a good basis within HiDALGO, but further development is needed and expected (please note that this survey was *before* the plenary meeting in month 6).

Mutual understanding in complex projects grows over time as the project partners talk to each other more often (via skype, e-mail or in person). Especially face-to-face meetings foster the knowledge exchange. In CoeGSS, face-to-face meetings appeared to be the most important

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means of communication [3] for building a common ground and facilitate mutual understanding<sup>1</sup>.

Further means to foster the mutual understanding were suggested during discussions at the plenary meeting in month 6 (see section 2.1.3.4):

One suggestion was to hold webinars to share knowledge (e.g. demos, introductions to tools or pieces of work). The four webinars (and workshop respectively) listed below were already held. Further webinars will be organised on demand.

- ▶ Urban Air Pilot Demonstration to show the state of this case study, by SZE, 19 June 2019, 13:00 – 14:00 CEST
- ▶ Introductory Webinar on OpenProject, by USTUTT (jointly with EXCELLERAT), 2 August 2019, 10:30-12:00 CEST
- ▶ USTUTT visualisation tool COVISE, workshop and telco, by USTUTT, 24 and 25 October 2019, two-day course at the USTUTT, telco presentation before
- ▶ Introductory Webinar on Git & Jenkins, by USTUTT, 31st Oct 15:00 -16:00 CEST

In addition to the internal webinars, the case study urban air pollution has prepared a preliminary (internal) video. The case study migration is in the process of preparation. The aim is to provide videos which can also be used for external community building and dissemination.

### *Knowledge integration*

Results of the month 5 survey (N = 17-23) show that HiDALGO is on a good track, but the effectiveness and efficiency of integration still need further development. This is to be expected in a complex interdisciplinary project.

In detail, the results show: Having a meta-approach is recognised as important. However, less than twenty percent of the respondents agree that such a meta-approach has been reached yet. Further development is expected over time. A common language still needs to be further developed. The design of working steps is appropriate for aligning them. However, the mutual communication of the working steps might be improved. Having ‘bridging people’ is recognised as important. Nearly forty percent of the respondents agree that we have sufficient ‘bridging people’ in HiDALGO. The rest partly agrees. (Please note that this survey was *before* the plenary meeting in month 6.)

Integration in complex projects grows over time. When project partners collaborate on their tasks, language issues inevitably are discussed and a meta-approach (or several if needed)

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<sup>1</sup> More time is needed for face-to-face meetings in interdisciplinary projects compared to projects based on one discipline, as knowledge transfer and integration, development of a common ground and internal community building including reflexive discussions need to be realised to a greater extent.

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evolves over time when work progresses. However, to be even more efficient, it was discussed at the plenary meeting in month 6 (see section 2.1.3.4) how the integration might be improved.

Dedicated phone calls to specific integration topics were suggested. These already partly happen within the tasks T 6.4 “Components and Data Integration” and T 3.6 “Coupling technologies and support”. Further phone calls will be organised on demand.

Furthermore, the webinars presented under ‘mutual understanding’ foster integration.

Finally, DIALOGIK provided a file to enter definitions as a result of the decisions taken at the plenary meeting in May 2019. WP 2 already had provided definitions in a separate file before.

### *Transparency*

The transparency was high from the very beginning (already at the kick-off meeting). Results from the month 5 survey (N = 22, section 2.1.3.4) show that the median for all questions regarding transparency lies between 5 and 6. The only issue is that a slight increase of the transparency of the roles of partners and disciplines is expected to develop over time. (Please note that this survey was *before* the plenary meeting in month 6.)

### *Implementation of procedures*

Results from the month 5 survey (N = 21) showed that the efficiency and effectiveness of communication is very good within HiDALGO.

The time used for communication within HiDALGO is perceived to be worth it (median = 6, max = 7, min = 4). Furthermore, communication happens not only *within* the WP, but also *between* them. This is a very good sign for fostering the integration within HiDALGO. It is clear to the respondents which communication channels exist and when to use which one(s). All communication channels are used extensively. Phone conferences are perceived to be effective (i.e. to reach their aims).

The amount of face-to-face meetings is perceived as suitable. All analysed face-to-face meetings have been rated as having been worth their time. The kick-off meeting as well as the technical meeting fostered the transparency, e.g. of tasks, responsibilities and technical details.

The session ‘interdisciplinarity’ at the plenary meeting in May 2019 (see section 2.1.3.4) was perceived as helpful for internal community building, e.g. to identify open items to be discussed. Knowing the responses to the April survey was rated as helpful to understand the current status of the project regarding non-technical aspects (median = 6, max = 7, min = 5).

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One suggestion for improvement of future meetings was to organise common workshops involving different WP. This was already implemented with the “coupling workshop” including WP 3 and WP 4 (Reading at ECMWF, 9 and 10 October 2019). The feedback to the workshop was highly positive – as well the topics as the format and the group size were received to be very suitable for the purpose. Other events will follow if suitable.

#### *Respectful treatment of all participants*

The results of the month 5 survey (N = 21 – 22) showed that the social interaction within HiDALGO are very good (median between 5 & 7). This is a very good basis for the joint work.

#### *Collaboration*

The results of the month 5 survey show that the collaboration is effective between the project partners (median = 6, max = 7, min = 4 – “There is an effective collaboration between me and the other project partners who I need to fulfil my tasks”).

## 2.1.4 External dissemination activities

An important aspect of building a brand and community is having metrics to track the usage of the tools used. The HiDALGO Project has two main avenues for a general public outreach and community building: the HiDALGO Project main website, available at <https://hidalgo-project.eu>, and the social media channels, esp. Twitter at [https://twitter.com/eu\\_hidalgo](https://twitter.com/eu_hidalgo). Besides these channels, we regularly publish a newsletter (every six months), foster dedicated collaborations with different entities, and initiate targeted communication with our stakeholders.

### 2.1.4.1 Project website

The HiDALGO project website is the main source of information distribution pertaining to the HiDALGO project, and it has been describe in detail in deliverable 7.1. To better understand its usage, we have two analytic engines. One is Google Analytics, which is one of the most popular free analytics engines hosted by Google. The other is Matomo, a free open source analytics engine that can be self-hosted.

Google analytics was the initial analytics engine used for HiDALGO. However, it became clear that it lacked tracking ability in certain key ways. Though it supports IP anonymization, it

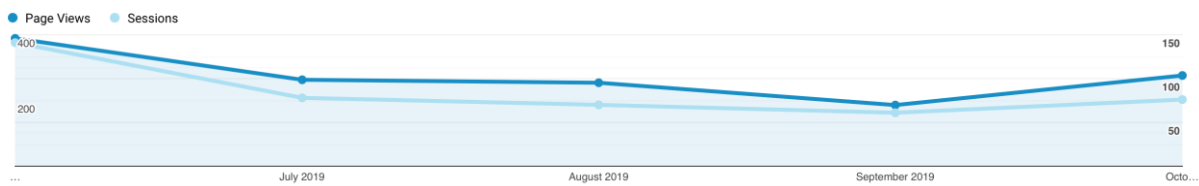
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requires the use of a cookie, and therefore, an associated id, meaning it can never track just the usage of the website without having some sort of personal information collected via the cookie id.

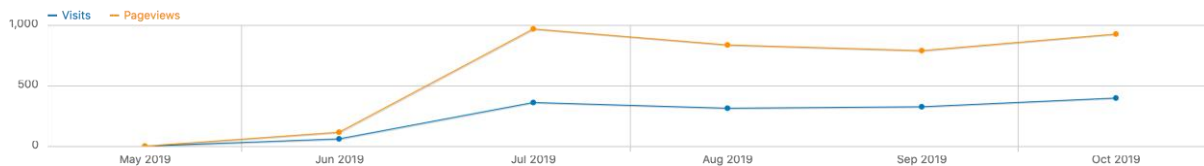
This requires not tracking the website usage unless people opt into the Google Analytics cookie. We have an unobtrusive banner at the bottom of the website that requests this permission and explains why we would like it; but it is of course voluntary. Furthermore, many ad blockers now block Google Analytics by default, even if consent was given via the popup.

This is where Matomo comes in; it is run on our own servers, supports the same IP anonymization, but can also be setup without cookies, which means it is completely anonymous and doesn't require an opt in at all, albeit at the expense of tracking repeat sessions. No data can be traced back to any visitor, and each visit is seen as a new user.

To see a comparison of how much data Google Analytics saw, compared to Matomo, we look at the following graphs.



**Figure 2: Google Analytics 6 months**



**Figure 3: Matomo Analytics 6 Months**

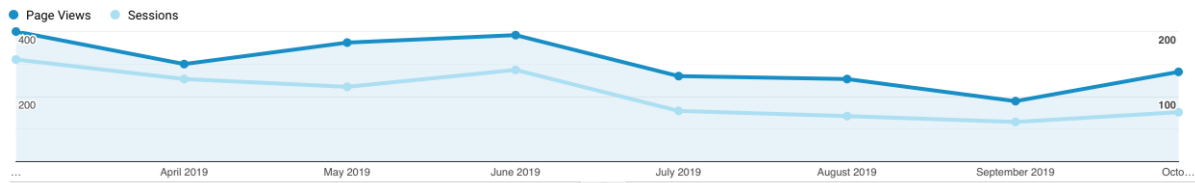
*(note that Matomo was first installed at the end of June, meaning July is the first full month of data. Also note that Figure2 has a second Y-axis on the right for Sessions)*

Google saw around 300 page views in July, whereas, Matomo in the same period saw almost 1000. This shows that Google Analytics missing more than 2/3rds of the page views. Similarly,

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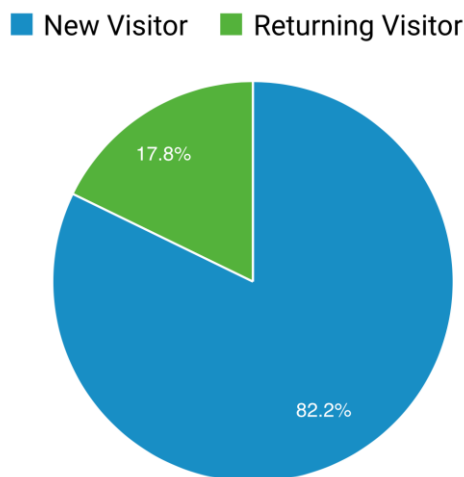
Google has less than 90 sessions for July, while Matomo has almost 400 visits. The rest of the months show a similar disparity.

With this disparity in mind, Google analytics, in graph 3, generally shows that there were more views in March through June, with a dip over the summer. This is expected as there was less information going out over the summer. With October it seems that the traffic is once again increasing.



**Figure 4: Google Analytics Mar-Oct**

One of the aspects that Matomo cannot track due to its cookieless state, is return visits. In Figure 5, we see new versus returning visits from March through October.

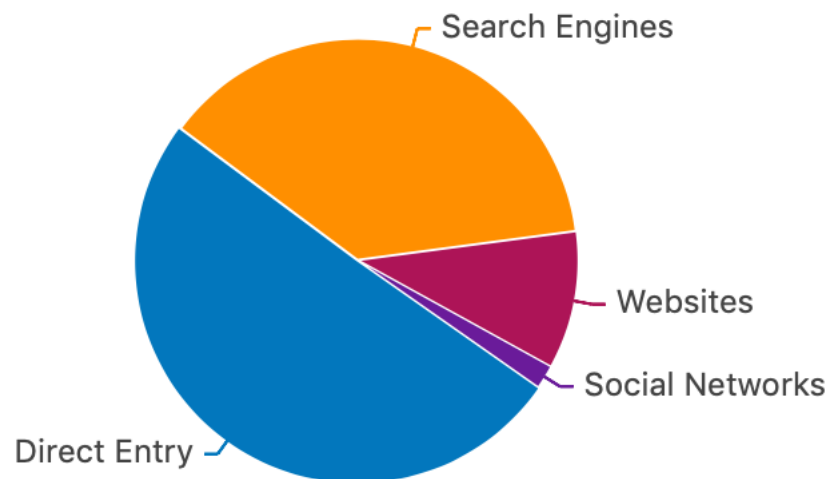


**Figure 5: Google Analytics Mar-Oct**

Matomo shows around 50% of visits are direct traffic, 38% are from search engines, 10% from website links, and just less than 2 percent are from social networks (the vast majority of that is from our twitter account)

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— Visits



**Figure 6: Matomo Channel acquisition, Jul-Oct**

The first table Figure 7 looks at the demographic spread of the users who visited the website. So far, the predominant section of users, at 35%, come from Austria, followed by Germany at 10%, then France, the UK, and Hungary with around 6%.

The bounce rate varies across Google analytics and Matomo, but it is around 35-50% overall depending on the time frame. The total bounce rate for Matomo’s lifetime collection (July through October) is 52%, whereas Google analytics shows just 38% for the same time frame. The discrepancy can be at least partially explained through the fundamental difference between Matomo and Google Analytics, in that Google Analytics does not track any visit unless the user consents to the Google cookie, and the probability of a user who is going to bounce, to consent is probably lower, as the consent banner is not intrusive and does not stop someone from looking at the website. The bounce rate is the percent of users who did not look at more than one page.

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Country	Users	Sessions	Pages/Session	Avg. Session Duration	% New Sessions	Bounce Rate
	476 % of Total: 100.00% (476)	825 % of Total: 100.00% (825)	2.95 Avg for View: 2.95 (0.00%)	00:02:27 Avg for View: 00:02:27 (0.00%)	57.70% Avg for View: 57.70% (0.00%)	43.88% Avg for View: 43.88% (0.00%)
1. Austria	172 (35.25%)	320 (38.79%)	3.06	00:03:10	52.81%	42.81%
2. Germany	52 (10.66%)	110 (13.33%)	3.27	00:02:16	47.27%	39.09%
3. France	31 (6.35%)	31 (3.76%)	1.55	00:00:16	96.77%	51.61%
4. United Kingdom	31 (6.35%)	46 (5.58%)	3.28	00:02:36	65.22%	36.96%
5. Hungary	29 (5.94%)	60 (7.27%)	2.78	00:02:59	48.33%	40.00%
6. Italy	20 (4.10%)	41 (4.97%)	3.07	00:00:46	48.78%	56.10%
7. United States	17 (3.48%)	29 (3.52%)	3.62	00:03:32	55.17%	51.72%
8. Spain	16 (3.28%)	23 (2.79%)	2.48	00:00:56	69.57%	26.09%
9. Greece	14 (2.87%)	22 (2.67%)	2.77	00:02:37	63.64%	50.00%
10. Poland	10 (2.05%)	16 (1.94%)	3.12	00:03:02	62.50%	37.50%

**Figure 7: Google Geographics**

Delving deeper into what is being viewed, Figure 8 displays the top 10 most uniquely viewed pages. The top page is of course the main landing page, followed by About Us, Partners, and the Migration Pilot. Of interest, is that the Use Cases page is lower than two of the individual use cases, meaning that some people are coming directly to these pages.

PAGE TITLE	PAGEVIEWS	UNIQUE PAGEVIEWS	BOUNCE RATE	AVG. TIME ON PAGE	EXIT RATE	AVG. GENERATION TIME
HIDALGO   HIDALGO	1,013	714	47%	00:00:36	59%	0.18s
About Us   HIDALGO	265	197	75%	00:00:31	62%	0.16s
Partners   HIDALGO	142	104	55%	00:00:51	27%	0.15s
Migration Pilot   HIDALGO	124	95	43%	00:00:48	55%	0.19s
Reports   HIDALGO	162	89	0%	00:00:24	8%	0.09s
Motivation & Main Objectives   HIDALGO	107	88	31%	00:01:01	39%	0.18s
ARH   HIDALGO	108	72	61%	00:01:48	79%	0.29s
Urban Air Pollution Pilot   HIDALGO	102	71	47%	00:01:31	62%	0.2s
Use Cases   HIDALGO	98	71	0%	00:00:26	14%	0.11s
Media   HIDALGO	79	60	0%	00:00:39	35%	0.12s

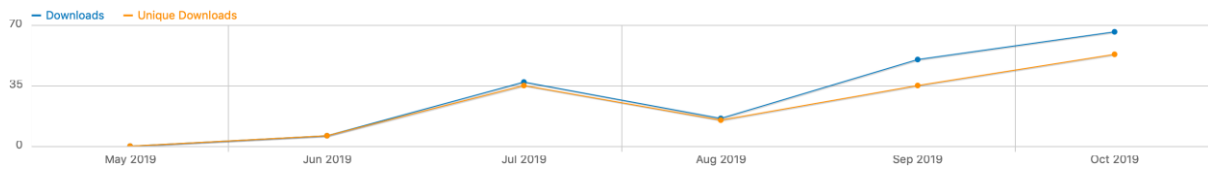
**Figure 8: Matomo Top 10 Pages by 'Unique Pageview'**

In the interest of distributing information, the HiDALGO Project periodically posts documents to the website outside of the articles or pages. Figure 9 shows the number downloads per month (note again that July is the first full month Matomo was installed). Again, it seems that

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downloads dipped somewhat in summer but are increasing. Downloads only count links clicked on from inside the website, including, pdfs, images, etc.



**Figure 9: Matomo Downloads**

Figure 10 shows the number of times the links for these files have been clicked on the website. (Note the link to the file itself referenced from outside the website will not be counted due to the way Matomo, or Google, can count website interaction).

DOWNLOAD URL	UNIQUE DOWNLOADS	DOWNLOADS
hidalgo-project.eu	136	167
/sites/default/files/2019-04/HIDALGO_D4.1 Initial Status of the Pilot Applications_v1.0.pdf	20	21
/sites/default/files/2019-06/Muster_Newsletter_2-2_0.pdf	14	16
/sites/default/files/2019-04/HIDALGO_D3.1 Report on Benchmarking and Optimisation_v1.0.pdf	12	12
/sites/default/files/2019-03/HIDALGO_D7.1 Brand and Website_v1.0.pdf	11	17
/sites/default/files/2019-03/HIDALGO_D5.1 HIDALGO System Environment_v1.0.pdf	1	1
www.hlrs.de	2	2
/fileadmin/sys/public/press/releases/Pressemittellung_Exzellenzzentren_HLRS.pdf	2	2

**Figure 10: Matomo downloaded pdf files**

### 2.1.4.2 Newsletter

Another tool of HiDALGO’s community building activities is our newsletter. The first issue was published in June 2019. It appears every 6 months and its goal is to create high level public awareness. The newsletter includes all the interesting news around HiDALGO such as the latest advancements, collaborations with other activities, releases of new features and demonstrations from pilots. Our latest newsletter was distributed on our website and on Twitter. The first issue included a welcome from the coordinator, a presentation of our pilots, the infrastructure behind HiDALGO, a short overview of all partners and a highlight of the events HiDALGO participated in. The layout was created with the most important project colours and corresponds to our corporate brand design.

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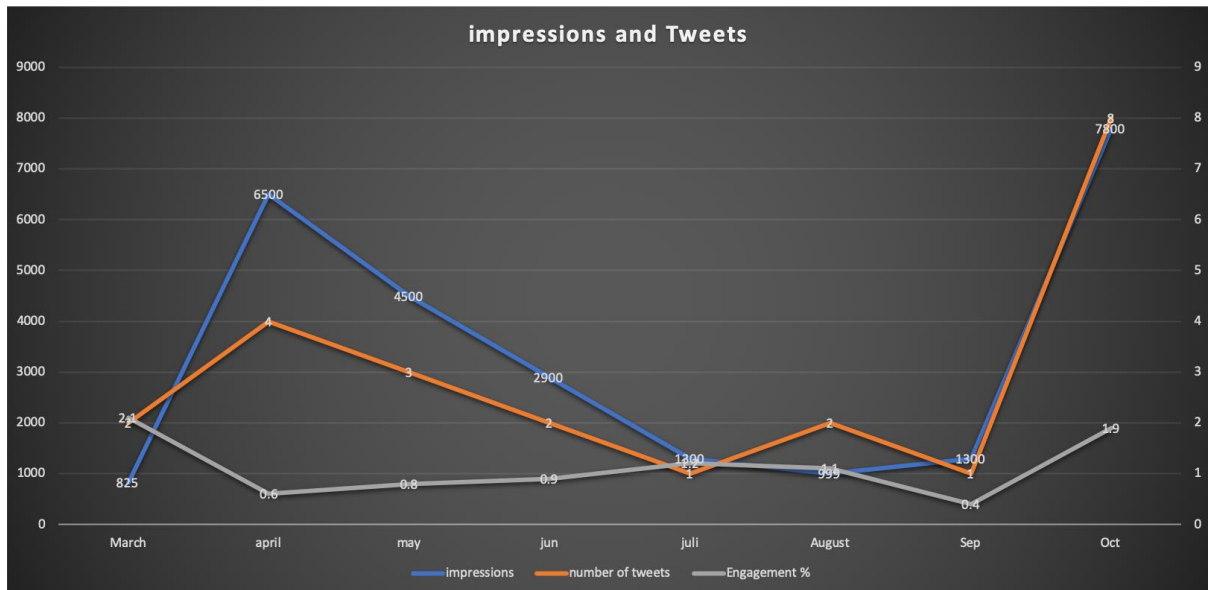


Figure 11: Newsletter Issue No. 1

### 2.1.4.3 Twitter account

In the age of fast flowing information, Twitter can be a powerful tool to spread information. Graph 8 displays the correlation between how often tweets go out and how many impressions we get. Generally, having more tweets leads to a higher number of impressions, which the data seems to corroborate. The link to the engagement rate is somewhat more tenuous, as it varies between 0.5% and 2%, with seemingly less connection to the number of tweets. The engagement rate is a metric that measured several interactions with a tweet, which include: likes, retweets, and clicks on links. Links are not on every tweet and could be the cause of some of this discrepancy.

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**Figure 12: Twitter Impressions (Left X Axis), Tweets, and engagement (Right X Axis)**

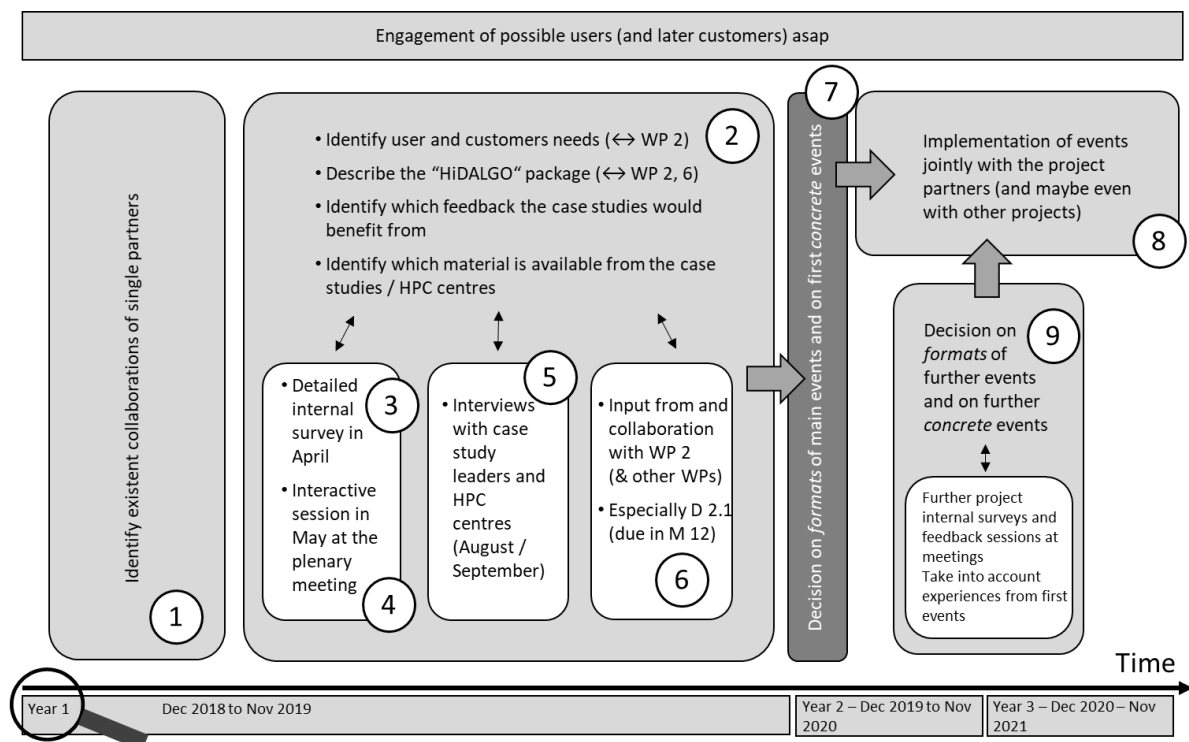
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## 3 Event Management and Collaboration

### 3.1 Concept

The focus of this task is to establish a clear plan of collaboration with other projects that will be financed in the same, but also other initiatives. Doing this, HiDALGO will not only focus on research activities, but also on collaboration with commercial stakeholders (close link between WP 7 and WP 2).

The approach for reaching this aim is depicted in Figure 13, and is being presented according to the timeline.



**Figure 13: Approach of T 7.2 – presented according to timeline**

At the beginning of the first year, the existing collaborations of the single project partners were identified ①. The collaborations were characterised by the following attributes: HiDALGO side: Name of partner communicating, Name of organisation, Name and organisation of first contact; Side of collaborator: Institute / Organisation / Company / project, Name of contact person, Status of communication, When communicated, Kind of collaboration, Functional Area of collaborators, Topic(s) of collaboration, Relation to the project. This file was continuously updated until month 7, when it was decided by the ECM to merge it with the stakeholder matrix generated in WP 2.

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The next needs for proceeding with T 7.2 ② are to

- ▶ identify user and customer needs
- ▶ describe the ‘HiDALGO package’
- ▶ identify which feedback the case studies would benefit from and
- ▶ identify which material is available from the case studies / HPC centres

Fulfilling these tasks is not trivial at all. WP 2 works on the two first questions in detail ⑥ with some first results presented in D 2.1 “Stakeholder Context and initial Exploitation Assets” (month 12) and later refined in D 2.2 “Intermediate Report on Exploitation and Sustainability Strategy” (month 24). Several phone conferences between WP 7 and WP 2 (DIA, ATOS, KNOW) aligned the work between these two work packages. However, as T 7.2 cannot wait for month 12 or even month 24, it also used other means to shed light on the questions.

In month 5 (April 2019) an internal survey was conducted by DIALOGIK ③ (see Section 2.1.3). There was one dedicated section regarding external community building. Example questions asked were:

- ▶ Who are potential users / user groups of HiDALGO?
- ▶ Where should HiDALGO look for user zero?
- ▶ What elements (including services, but not limited to them) does the ‘HiDALGO package’ include, which we want to sell to external users?
- ▶ From your perspective, what do you think are the external stakeholders’ requests to HiDALGO?

The answers were used for the preparation of the interactive session ‘interdisciplinarity and community building’, prepared by DIA, at the plenary meeting in month 6 (May 2019) in Stuttgart (see Section 2.1.3.4) as well as for D 2.1 “Stakeholder Context and initial Exploitation Assets”.

The interactive session ④ at the plenary meeting in month 6, led by DIA, included a part on internal community building and a part on external community building. The part on external community building presented the answers to the survey of month 5 on two posters. In small group discussions, the project partners exchanged their views and added to the answers provided. Two additional questions were:

- ▶ Which kind of joint action would be most impactful?
- ▶ Which concrete (!) joint actions would you like to see implemented?

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In August and September 2019 DIA conducted interviews ⑤ with several key persons of the project: Derek Groen (BUL, case study leader migration), Robert Elsässer (PLUS, case study leader social media networks), Zoltán Horváth (SZE, case study leader air pollution), Marcin Lawenda (PSNC, HPC centre) and Dennis Hoppe (USTUTT, HPC centre). Their answers provided a first impression of the services to be provided by HiDALGO and the results to be expected by the case studies (not only in terms of scientific results, but also in terms of models, simulations, trainings etc.). Building on their answers, the further approach of T 7.2 was shaped, as presented in this present deliverable.

The first task after month 12 will be to evaluate D 2.1 with regard to the users and customers and their needs, and to decide on the formats of the first events ⑦. Possibilities might be sessions or workshops at conferences, booths at events with industry present, webinars etc. The events decided upon will be implemented by establishing ‘organisation committees’ for each event ⑧. In the future, of course, iteratively, options for more events and collaborations will be investigated ⑨ e.g. by further internal surveys or interactive sessions at meetings.

## 3.2 Internal Event Management and Collaboration

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The internal event management and collaboration includes all internal meetings and teleconferences. Successful internal collaboration is strongly linked to information exchange and communication.

### 3.2.1 Internal Meetings

At the moment five internal meetings took place. The first meeting was the kick-off meeting in December 2018, the second and third were plenary meetings in May 2019 and November 2019. Furthermore, there was a technical meeting end of January 2019 and a coupling workshop in October 2019. The aim of these meetings was to foster internal exchange of the achieved results, and developments. To reach the joint aims and visions it is necessary to keep the motivation, shared vision, understanding, transparency and social factors like team spirit within the project members. Internal meetings are a good opportunity to work on these factors.

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### 3.2.2 Internal teleconferences

There are a number of regular teleconferences within HiDALGO. Members working in WP3, WP5, and WP6 are meeting on a regular basis (every 2-3 weeks) to discuss the latest developments and plan further steps. Also, the ECM and TCC members are meeting regularly (once every month) using some teleconferencing system. Also, there have been several teleconferences regarding WP4 and WP7.

## 3.3 External Event Management and Collaboration

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External collaboration includes currently the NGOs, the academic sector, the HPC centres and other CoEs.

### 3.3.1 NGOs

Two of the three case studies established connections to external stakeholders.

The migration case study has contacts to different NGOs like MSF, UNHCR and SAROBMED. They also were invited by the German Federal Foreign Office and International Organisation for Migration to a workshop in October 2019, to which all important stakeholders and policy makers attended. Experiences from the contacts are in general positive. However, the model is not useful for the Mediterranean at the moment because of political interferences. The training workshop in Ethiopia in July 2019 was a great success.

The air pollution case study established contacts to other institutes and modelled the pollution situation in several cities, e.g. Graz in Austria, Milwaukee in Wisconsin in the US (dissemination to GEHC First Global Data Science Symposium), Pécs in Hungary (cooperation with LIFE IP HungAIRy), Stuttgart in Germany and Poznan in Poland. SZE will also show a poster at EU Conference on modelling for policy support in Brussels on 26-27 November 2019. We hope for further possibilities for collaborations resulting from this conference. Contacts to Copernicus were established (Copernicus data for 10x10 km<sup>2</sup> are used to provide the boundary conditions for the 1x1 km<sup>2</sup> grid of the case study). There is an outreach event planned at the Audischule in Győr in 2020.

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### 3.3.1 Academic Sector

Several partners collaborate with other academic organisations on a focused topic, e.g. they exchange ideas or collaborate in other projects with similar topics. These contacts include:

- ▶ Computer Science Department, University of Crete
- ▶ Department of Computer Science, University of Cyprus
- ▶ Graz University of Technology, Austria
- ▶ Technical University of Munich, Germany
- ▶ Institute of Software Technology and Interactive Systems
- ▶ Jagiellonian University, Poland

### 3.3.2 HPC Centres

HiDALGO established first connections to the HPC centres Barcelona Supercomputing Centre (BSC) and the network of HPC centres CINECA. BSC is participating in several projects which are of interest for HiDALGO (as described in the next section) and they are also very relevant in the European processor initiative. On the other hand, we already contacted with CINECA in order to identify topics of common interest in which we can collaborate (such as testing some of the HiDALGO tools at CINECA and to collaborate in use cases related to migration and urban mobility).

It is also important to highlight that both centres have been granted two of the new European pre-exascale systems. Therefore, it is of interest of HiDALGO to enable some collaboration, in such a way we can check out how our applications would work and scale in their systems. The contacts will be followed up in the future, in order to concretize the scope of the collaboration actions and the timing in which these can be carried out.

### 3.3.3 Other Funded Projects

Other projects named for the list of (possible) collaborations are:

- ▶ EXCELLERAT project
- ▶ POP-2 project
- ▶ FET-HPC project EuroEXA
- ▶ CYBELE project
- ▶ HungAIRy
- ▶ Copernicus
- ▶ FocusCoe
- ▶ bwHPC-S5
- ▶ Cheese (BSC)
- ▶ EPEEC
- ▶ EPIGRAM

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Table 2 shows the other CoEs at this moment by T 7.2. The table will be continuously updated in the future.

Acronym	Name	Topic	HiDALGO partners
BioExcel-2	Centre of Excellence for Biomolecular Research	Supports academia and industry with the usage of advanced techniques for high-end computing	No
CompBioMed	Centre of Excellence in Computational Biomedicine	Different topics in biomedicine, e.g. drug modelling, flood flow simulation, virtual humans,...	Bull (ATOS), (BRUNEL)
E-CAM	A path to extreme-scale computing for industry and academia	Case Studies and Pilot Projects, e.g. classical MD, Quantum Dynamics. Services: Software development, training, discussions with industry	No
EoCoE-II	Energy Oriented Center of Excellence	Towards exascale for energy. Offers a network of experts in HPC and Sustainable Energies (Academia, Industry, Public Sector)	No
ESiWACE2	Center of Excellence in Simulation of Weather and Climate in Europe	Substantially improve efficiency and productivity of numerical weather and climate simulation and prepare them for future exascale systems.	ECMWF, Bull (ATOS)
EXCELLERAT	European Centre of Excellence for Engineering Applications	Support key engineering industries in Europe in dealing with complex applications. Research, provide leadership, guidance on good practice, user support mechanisms, training & networking	USTUTT
MaX2	Materials design at the Exascale	Supports developers and end users of advanced applications in the field of materials. Enables exascale transition.	No
POP2	Performance Optimisation and Productivity Centre of Excellence	Provides performance optimisation and productivity services for academic and industrial code(s) in all domains	USTUTT
ChEESE	Centre of Excellence for Exascale in Solid Earth	Domain solid earth, preparation of 10 flagship European codes for (pre-)Exascale computers	USTUTT

**Table 3: Possibilities for collaboration with other CoEs**

In the case of EXCELLERAT, the collaboration activities are focused on the usage of software for CFD simulations which are carried out in the Air Pollution use case. Since the beginning of the project, there was a strong interest in using FEniCS for doing the simulations, and such software is being improved in the context of EXCELLERAT. Therefore, this collaboration aims

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at selecting the most appropriate tool (according to scalability and usability aspects) and integrating it in the HiDALGO air pollution use case, enabling coupling with other tools as necessary.

There have been discussions with EPEEC in order to adopt some of the proposed modifications that are under development in the parallelization libraries. As part of the work to test new technologies, HiDALGO aims at testing the new modifications proposed by projects like EPEEC and EPIGRAM, as a way to improve scalability in our applications. At this stage, since their developments are not yet ready for external testing, we are defining the scope of the collaboration and the timing.

HiDALGO is also collaborating with FocusCoE and the rest of the CoEs in the context of the HPC3 group. Such group was created by FocusCoE in order to have all the CoEs together, collaborating and organizing events together. We have already participated in dissemination actions organized by FocusCoE and, moreover, we participate in the periodic teleconferences with the rest of CoEs (usually, carried out every month). A new working group for business modelling is under preparation and HiDALGO will be participating.

Additionally, there are periodic discussions with other projects. This is the case of EUXDAT, for instance, with which we learn about the usage of solutions for large data management (in this case, using Rucio) and the orchestrator (HiDALGO has adopted Croupier, which is further developed with new features in EUXDAT).

Finally, we foresee collaborations with other projects, especially with EPI (since we want to guarantee that HiDALGO applications will be ready to exploit, at least, part of the power of the new European processor) and with POP2 (as the tools developed in POP2 may help us to identify improvements in the codes used and adapted in HiDALGO).

### 3.4 Event Management and Collaboration activities

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The aims of possible HiDALGO Event Management and Collaboration activities over time are threefold:

- 1) Experience shows that it is vital to get feedback from potential stakeholders regarding the models as soon as possible. Only this way it is ensured that the models will deliver what is needed in the end. Therefore, we aim to receive feedback as soon as possible (the migration case study and the urban air case study already started this).
- 2) When the case studies and the data analysis tasks of HiDALGO are mature, training will be provided regarding the case study models as well as the methods applied. This will be done in T 7.3 “Training”. However, training is also a good basis to establish connections to potential users. Therefore, T 7.2, T 7.3 and WP 2 will closely work

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together. It might be possible in the future that HiDALGO offers trainings together with other CoEs, e.g. on methods. The importance of this aim will increase over time.

- 3) When the case studies and the data analysis tasks of HiDALGO deliver results, and when the Portal and the services are functional, time comes for dissemination. The importance of this aim will increase over time. Dissemination touches T 7.1 “Community Building, HiDALGO Brand & Website” and T 7.4 “Dissemination and Communication” as well as T 7.2, as events can have different formats and aims at the same time.

### 3.4.1 Conferences

Conferences offer the possibility to apply for sessions or workshops, or to submit and present scientific work. The main advantage compared to a stand-alone HiDALGO event is that an impressive audience is already gathered in one venue.

The list of conferences HiDALGO participated in can be found Annex.

Therefore, a session or workshop at a conference would be very impactful. Additionally, it would reduce the costs for such an event (no or smaller reimbursement of travel costs for invited experts). The possible audience mainly consists of scientists, but at some conferences also the industry.

### 3.4.2 Workshops

It is vital to get feedback to the case study models as soon as possible. The migration case study already started this process with the training workshop in Ethiopia in July 2019. The urban air case studies also established contacts to several stakeholders and modelled several cities. As the Social Media Case Study is not as mature yet, a suitable time for feedback would be at the end of year two. DIA already gathers feedback via expert interviews regarding their concept and their experiences for the analysis of Social Media Data. The results can be found in Deliverable 4.2 “Implementation Report of the Pilot Applications Year 1”. The format does not necessarily have to be a workshop, but it needs to leave enough room for discussion. It might also be a webinar. Each case study should at least have one feedback event.

In year three the focus moves from feedback to training and dissemination. Examples would be workshops co-located to a conference like HiPEAC, ICCS, MOOCs, summer schools, Moodle

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etc. The format will be decided later. HiDALGO strives to disseminate its results in collaboration with other CoEs, either regarding the computing or regarding the (case study) topic.

The list of workshops HiDALGO participated in can be found in Annex.

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## 4 Conclusions

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In this document, we summarized and outlined the results achieved in work package 7 within months 1-12. Our main tasks were community building and dissemination activities as well as event management and collaborations. Within all these tasks, the work performed so far can be divided into internal and external activities. Our main goals were to bridge the gap between different communities working in the HiDALGO project and to reach our stakeholder groups. To achieve these goals, we implemented ample internal community building activities, such as common workshops and physical meetings, and disseminated our objectives and preliminary results through our main communication channels, e.g. the website and the social media accounts.

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## Annexes

Conferences, panels and workshops with HiDALGO participation:

Date	Conference/Workshop	Location	Participant
30/10/2018	PRACE-CoEs-FET HPC-EXDCI Workshop	Bruehl, Germany	USTUTT
21/02/2019	FocusCoE Workshop	Frankfurt, Germany	PLUS USTUTT
04/04/2019	Digital4Med Conference Brussel	Brussel, Belgium	BUL
13/05/2019	EuroHPC Summit Poznan	Poznan, Poland	ATOS PSNC
29/5/2019	Symposium: Urban systems, global challenges, digital tools	Stuttgart, Germany	SZE
12/6/2019	TERATEC 2019 Forum Participant	Bruyères-le-Châtel, France	ATOS, USTUTT
16/7/2019	First Flee training workshop	Adama, Ethiopia	BUL
28/8/2019	4th Workshop on Model Reduction of Complex Dynamical Systems - MODRED 2019	Graz, Austria	KNOW
9/9/2019	European Conference for Applied Meteorology and Climatology 2019	Copenhagen, Danmark	ECMWF
16/9/2019	CAMS 4th General Assembly and User Day	Budapest, Hungary	SZE
23/9/2019	GEHC First Global Data Science Symposium	Waukesha, WI, USA	SZE
29/9/2019	FOSS4G	Bucharest, Romania	ECMWF
08/10/2019	European HPC Training Stakeholder Workshop	Brussels, Belgium	USTUTT
9/10/2019	30th Workshop on Sustained Simulation Performance	Stuttgart, Germany	USTUTT
14/10/2019	EBDVF	Helsinki, Finland	ATOS
29/11/2019	Conference on modelling for policy support: experiences, challenges and the way ahead	Brussels, Belgium	SZE

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