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D3.2: Interim report on the WP3 activities

WP3 – CoE-Industry Interaction

Workpackage:	WP3	CoE-Industry Interaction	
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List of abbreviations

CoE	Centres of Excellence for Computing Applications
CSA	Coordination and Support Action
D	Deliverable
EC	European Commission
EU	European Union
H2020	Horizon 2020 – The EC Research and Innovation Programme in Europe
HPC	High Performance Computing
KPI	Key-Performance Indicator
NCC	National Competence Centres
PCC	Project Coordination Committee
R&D	Research and Development
SME	Small and medium-sized enterprise
WP	Work Package

Executive Summary

This second deliverable of WP3 reports on the initial strategies and results of FocusCoE towards the setup of a framework of support for the European Commission Centres of Excellence (CoEs) in the promotion of their services and interaction with industry.

During the first phase of the FocusCoE project, all WP3 tasks have been active and have taken several actions to develop the interaction between the CoEs and industry.

Task 3.1 involved a mapping of the industrial sectors relevant to the activities of the CoEs and an analysis of the different types of services or products of interest for industry. The results were summarized in the deliverable D3.1 (submitted in May 2019). To monitor and disseminate the success of the CoEs in engaging in industrial collaborations with external companies, three first success stories were produced in the autumn of 2019. In parallel, a first wave of industrial sectorial events covering the period 2019-2020 was analysed and selected and shared with the CoEs, leading to the actions for Task 3.2.

Task 3.2 commenced with BIOFIT2019, a Life sciences trade fair held in Marseille, France, in December 2019, with the participation of three CoEs: CompBioMed, Pop and BioExcel. Three further events are initially planned for 2020 to finalize the first wave of sectorial events. For each event, the WP3 partners coordinate the application and registration of the CoEs involved on their behalf, book the booth and manage the communication material with WP5. For the BIOFIT2019 event, an assessment of the relevance and interest for the participating CoEs was carried out in collaboration with the CoEs. The first wave of events was originally planned to finish in July 2020, however due to the COVID-19 pandemic, the three remaining events were either postponed or modified in nature (from physical to virtual/online). WP3's schedule was accordingly adjusted. Strategy and schedule of the second wave of industrial sectorial events are actively being prepared and due to be finalized in June 2020 (but subject to updates and revisions as the impact of the Corona pandemic on such events develops).

Task 3.3 focuses on the interaction between CoEs and SMEs. After some preliminary interaction with previous projects like SiMSEO, in order to see what the best practices are regarding collaborative interactions with SMEs, a questionnaire and guidelines for direct interviews were prepared. This activity is on-going and concurrent with the first feedback to the CoEs.

To better understand the needs and requests coming from the industry which could be answered by the CoEs, Task 3.4 created an Industry survey[1]. This survey was launched in March 2020 and closed in April 2020 after having been disseminated through websites, social media and all the CoEs' and FocusCoE's WP3 industrial contacts. The answers are currently being analysed and feedback reports to the CoEs are being finalised (they will be sent by mid-July 2020).

This document has been updated in November 2020: Section 4 and Annex 6.5 has been added, Annex 6.2 has been updated. Sections 1-3 and Annex 6.1, 6.3, 6.4 remain unchanged and represent the status of the project as in May 2020 (except for a few minor style corrections).

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[1] https://bsc3.typeform.com/to/SsbFVf

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1 Introduction

The main goal of the activities in WP3 is to support the CoEs in developing their interaction and collaboration with industrial partners, to develop a sectorial approach and to present the potential services and products of all CoEs, related to each sector, to industrial stakeholders.

The present document describes the strategies set up in this activity and outlines the approach and actions that are now put in place in order to achieve the anticipated result. This document is organized as follows: first a short reminder about the methodological approach used in WP3 is given. Section 2.1 presents the strategic planning of the interaction with industry and the first collected success stories (Task 3.1). Section 2.2 describes the selected events and the actions done regarding the industrial sectorial events (Task 3.2). The material prepared and the strategy initiated towards the SMEs are presented in Section 2.3 (Task 3.3). The actions to provide feedback about the needs and requests from the industry to the CoEs are described in Section 2.4 (Task 3.4).

Revision & Update (November 2020): Version 1.0 of Deliverable 3.2 was submitted in project month 18. This revised version 2.0 was submitted in November 2020.

Section 4, Annex 6.2 and Annex 6.5 contain all the updates that were added for version 2.0. The information in Sections 1-3 and in Annex 6.1, 6.3, 6.4 remains the same (except for a few minor style corrections) as in version 1.0

2 Strategies and activities set up to develop the interaction between the CoEs and the industry

This work package aims at promoting CoE's competence and offer toward industry. The strategy to achieve this is based on two directions:

A. Leveraging existing contacts of the WP3 partners with industrial companies;
B. Creating contacts with new companies not yet strongly connected to the HPC ecosystem.

The WP3 partners have been selected based on their expertise and collaboration with industrial HPC users. Through their past activities they have developed industrial contacts with both large companies and SMEs. The CoEs benefit from the WP3 partner's network in particular via the "Direct Contact Approach" (as part of Task 3.1 presented in Section 2.1), allowing the CoEs to benefit – where appropriate – from the industrial contacts of the WP3 partners and via the coordinated effort towards SMEs (Task 3.3 presented in Section 2.3).

The activities in Task 3.2 (presented in Section 2.2) on "Sectorial events" follow the second axis of the strategy. Here, the idea is to select sectorial events where WP3 can develop new contacts interesting for the CoEs. These industrial sectorial events include trade fairs, brokerage events, or local industrial open days. In addition to this, WP3 provides feedback to the CoEs on their offer. This is done via the questionnaires towards industry in Task 3.4 (presented in Section 2.4).

2.1 Action planning and monitoring of success (Task 3.1)

The activities of Task 3.1 have three components:

1) Identify the most relevant actions toward industries that can be beneficial for the promotion of the current set of CoEs;
2) Prepare the plan for these actions;
3) Monitor the execution of the plan and identify successes and best practices.

The first actions of Task 3.1 (performed during M1 to M6 of the FocusCoE project) have been devoted to the setup of a strategic plan to support the Centres of Excellence (CoEs) in the promotion of their offers and interactions with industry. The methodological approach used in the strategic plan consists of the following elements:

- Assessment of the industrial sectors covered by CoEs' offerings;
- Approach of potential industrial clients via sectorial events;
- Direct contact with prospective industrial users;
- Interactions of FocusCoE with CoEs to ensure good up-to-date communication;
- Monitoring and assessment of the process definition and development.

The general approach used is based on the analysis to identify mutual aspects in what the ten CoEs' can offer in terms of services, competences and application domains. To this end, five categories were identified: industrial sectors/application areas, technical domains, computing techniques, application codes, and services. Based on the first analysis' results, an assessment of the common industrial sectors covered by the CoEs' offering has been provided. This analysis allowed the identification of a set of events in which the CoEs' technological offer and, more generally, the HPC approach that can be marketed and promoted. In addition, it enabled the WP3 partners to structure their activities. In order to put in place the strategic plan, structured dialogue between the CoEs and WP3 through different channels has been established. The actions described in the strategic plan are being continuously monitored to correct the course of action and maximize the results.

2.1.1 Ongoing activities and first results

The programme outlined in the previous paragraph has been put in place and all the envisaged actions have been carried out. Overall, the activities are ongoing as planned: The "Direct Approach Process", detailed in Annex 6.1 has been launched, as well as the participation in sectorial events, where the first wave is currently ongoing and the second wave being prepared. For the questionnaire to industry, more than 80 answers were received, and the questionnaire towards the CoEs on their interaction with SMEs has been launched too. The first results of the different activities are detailed in the remainder of this section.

The emergency related to the COVID-19 pandemic has affected the deployment of the WP3 programme and its outcome. In particular, all the events except one in which a presence of FocusCoE was scheduled were postponed or cancelled. There is, of course, no guarantee that the rescheduled events will take place, and/or if other solutions, such as "remote events" will be put in place. The same problems also apply to the second set of events, which is currently under selection, although without guarantee if and how these events will take place.

The activities of WP3 were managed through online meetings, generally held once a month. The meetings were regularly attended by representatives of all organisations participating in the WP. Occasionally, issues that could not be handled internally were reported to the Project Coordination Committee (PCC). No critical specific problems are to be reported about these meetings.

Key Performance Indicators (KPI) to give a quantitative measure of WP3's results were defined to assess the impact concerning the following dimensions:

- Contacts created within WP3 between a CoE and an industrial company;
- Dissemination of information on CoE propositions to industry.

These KPIs are presented in Annex 6.2.

Three success stories were prepared. Each story highlights successful collaborations between a CoE and an industrial partner. The stories were developed jointly with the CoEs CompBioMed, EoCoE, E-CAM and their partners. They were published in the FocusCoE newsletter[2] in March 2020 and are also available online on the FocusCoE website[3]. Other success stories are in planning.

Together with WP5, a website area including CoE's offer to potential industrial clients and the monitoring and dissemination of success stories through appropriate channels (sectorial events, social networks, etc.) has been provided.

2.1.2 Upcoming activities

The criteria, activities, and evaluation mechanisms presented here set the scene to perform an initial set of actions within WP3 in the first part of the project's lifetime. The evaluation of its results will allow us to potentially introduce corrections and changes in the second half of the project.

The COVID-19 pandemic may influence the overall implementation of the activities related to sectorial events, and WP3 works to prevent this and to adapt its strategy to this situation. This should be carried out in the following areas:

- Reassessment of the best way to select and attend the events. It was already decided to adopt a different approach in the selection process, preparing a shortlist from suggestions proposed by the CoEs (see paragraph 2.2.3). Other parameters might now

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[2] https://www.focus-coe.eu/wp-content/uploads/2019/04/Newsletter_focus-coe_maerz_X2.pdf
[3] https://www.focus-coe.eu/index.php/coe-success-stories/

come into play, such as an evaluation of how events activities are modified to be online, and prioritize those that seem more capable of attracting a strong online attendance.

- Particular attention should be given to contacts with external organizations (such as Industrial associations) to evaluate industry-oriented events (such as Open days, brokerage events, etc.) that can actually attract a wide participation and be beneficial for the promotion of CoEs.
- Accordingly, a review of the KPIs will be done with the objective to better represent and measure impacts obtained by this Work package.

There are now four new CoEs integrated into FocusCoE: T-Rex, NOMAD-2, PerMedCoE, and CoEC. The interaction with these four new CoEs will be strengthened during the second part of the FocusCoE project runtime. On another subject, the new project EuroCC will start in September 2020. The interaction with EuroCC is planned through the Coordination and Support Action (CSA) CASTIEL, which will also start in September 2020.

2.2 Sectorial communication activities (Task 3.2)

Task 3.2 is dedicated to the outreach and promotion of CoE competence and service offers towards potential industrial users to help the CoEs to connect with industry. FocusCoE provides support to the CoEs in attending trade fairs and B2B events. The WP3 partners are in charge of liaising with the event organiser to organise opportunities for the CoEs to present their offers (via a pitch, or mini-symposium, or B2B meetings, depending on the event). The WP3 partner also takes care of all logistics related to the booth and the booth decoration. For the event itself, the CoEs just bring in one or two posters, some other communication material if they wish, and ideally one representative of their CoE for interacting directly with the industrial visitors.

Jointly with the CoEs, trade fairs from different industrial sectors and in different countries are selected. Overall, WP3 planned to organise the presence of CoEs at around 8 events. The events are assessed according to 5 main criteria:

A. Match with CoEs activities
B. Relevance of the attendees
C. Effective means to communicate the message
D. Appropriate timing of the event
E. Cost of the event

These criteria are described in more detail in the deliverable D3.1[4]. The events are selected in two rounds: with a first round targeting events taking place between December 2019 and September 2020; and a second round targeting events in the time frame October 2020 till November 2021.

In Section 2.2.1 we report on the first round of sectorial events: we detail the selection process, shortly present the selected events and the current status on this activity. Section 2.2.2 details the plan for the second round of sectorial events

The selection criteria are detailed in D3.1. In particular, it is our concern to cover geographically large parts of Europe and to thematically cover all CoEs.

2.2.1 Ongoing activities and first results

For selecting the events, all WP3 partners contributed to an exhaustive list of possible events, which was then narrowed down by the WP3 partners, according to the selection criteria

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[4] FocusCoE Deliverable D1.3, "Report on the sectorial approach priorities", Project Month 6 (May 2019)

indicated in D3.1. Geographic and thematic diversity have been one of the main criteria. The agreed timeline for the first wave selection is displayed in Table 1.

Action	When?
WP3 partners to select a list of 20-25 potential events	September 2019
Before teleconference call: list distributed to CoEs	September 2019
Short presentation of the events and first discussion	Joint WP3-CoE telco on 16/09 and 19/09
Final feedback from CoEs	Friday, 04/10/2019
Final selection of events (by WP3 partners)	Friday, 11/10/2019
Attend events	Dec. 2019 – Dec. 2020

Table 1 : Agreed timeline to select the sectorial events for the first wave

The selected events for the first round, planned in 2019-2020 are listed in Table 2. Overall, four different industrial sectors are covered, thus encompassing the application domains of seven out of the ten CoEs. The selected events cover Spain, France, Italy and Belgium.

Event	Biofit	Expoquimia	SIMAI Congress	Sustainable Energy Week
BioExcel	Brochures sent & distributed	Commitment		
Cheese			Tech. session	
CompBioMed	Present			
ECAM		Commitment	Tech. session	
EoCoE			Tech. session & Industrial session	Commitment
MAX			Tech. session	Sends documents
POP	Present		Tech. session	
EsiWACE				
EXCELLERAT				
HiDALGO				

Table 2: Sectorial events selected for the 1st round
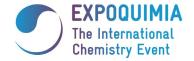
IT2019: This event was held in Marseille, France in 2019 with the on-site participation from CompBioMed and POP (and brochures were sent by BioExcel), coordinated by Teratec. It was a trade fair in Life Sciences. More than 20 discussions with different companies were launched during this fair (contact example in Figure 1), and eight meetings planned for CompBioMed or POP through the one-to-one meetings platform. Three months after the fair, CompBioMed has signed a new cooperation agreement with a new customer met at BIOFIT. Other discussions that may lead to potential business plans solutions are ongoing.

Following this sectorial event, a Guidelines & tips document to be used and updated by all WP3 partners was created by Teratec and is available for the partners of WP3. Also, the communication material gathered or created with WP5 to present the CoEs in HPC for the event was also shared with the WP3 partners and put on the FocusCoE Owncloud.

- EXPOQUIMIA: This event in Barcelona was

Figure 1: HPC CoEs booth at BIOFIT2019 with POP & CompBioMed

planned in June 2020 but had to be postponed to December 2020. The two CoEs eCam and BioExcel had expressed their interest to participate by setting up a booth in the Technology Transfer area where EU projects are invited to exhibit. Initial instructions regarding access conditions of the event, type of booth and expected material to bring was sent out for the CoEs in preparation for the event. New dates may still enable other CoEs to join.

- SIMAI CONGRESS: This event in Parma was planned in June 2020 but had to be postponed to January 2021. Five CoEs had expressed their interest to contribute to a mini symposium during the scientific days: EoCoE, ChEESE, POP, eCAM and MaX. EoCoE will also have a talk during the industrial day.

- SUSTAINABLE ENERGY WEEK: The EU Sustainable Energy Week (EUSEW) in Brussels is the biggest event dedicated to renewables and efficient energy use in Europe and it is part of a month-long series of activities to build a secure energy future. Launched in 2006 by the European Commission, the EUSEW is organised by the Executive Agency for Small and Medium-sized Enterprises (EASME) in close cooperation with Directorate-General for Energy. It brings together public authorities, private companies, NGOs and consumers to promote initiatives to save energy and move towards renewables for clean, secure and efficient power. Its 15th edition is taking place from 22 to 26 June 2020 and comprises the Policy Conference, the Networking Village, the Awards Ceremony, and the Energy Days. Due to the COVID-19 pandemic, EUSEW will take place as a digital event.

Due to the COVID-19 pandemic which started to spread in Europe in March 2020, several events were postponed, or had their formats adapted. At the time of writing, the events targeted by our activity are planned to take place (either in a digital format, or at a later point in time). These events will thus remain as part of WP3's activity as planned, and run in

parallel with the second wave of sectorial events. There should not be major issues to perform these actions.

2.2.2 Upcoming activities

The second wave of sectorial industrial events is planned for September 2020 – October 2021.

For this second wave, a reverse process of selecting events was suggested, relative to the first wave. As it was difficult during the first wave to find events which were attractive for several CoEs, it was decided to proceed differently. The CoEs were asked for a first list of events of interest for them during a joint call between the CoEs representatives and the WP3 partners (March 2020). Then the WP3 partners will consolidate a list and highlight the common events to finally agree on a final list with the CoEs. The agreed timeline for second wave selection is displayed in Table 3.

Actions	Dates
CoEs submit their ideas to WP3 (email: focuscoe-wp3@scapos-tools.de)	By 20 April
FocusCoE WP3 shares the consolidated list with all CoEs	May 2020
Jointly with CoEs during the next joint conf. call, decide on the events for the second phase	June 2020

Table 3: Suggested timeline to select the sectorial events for the second wave

For this second round, the impact of COVID-19 is being monitored and the potential of online events will be evaluated. In order to foster the use of HPC also in the EU13 countries, we also target as part of the second round of events at least one trade-fair in one of the EU13 countries.

In order to identify relevant industrial events in these countries, different approaches were pursued in parallel. A first approach consisted in using the members of the EuroHPC Governing Board as liaison persons. The project coordinator contacted the representatives of the EU13 countries in the EuroHPC Governing Board. Despite an overall low response rate, we received some interesting input, in particular from the Industry and International Economic Relations Center of Bulgaria (Bulgaria) and from CEEIno (Czech Republic) who provided a list of potential relevant sectorial events in their country for this task.

Moreover, we asked the CoE partners from EU13 countries for help. These partners know their national ecosystem well and were able to either help us directly or to redirect us to the right organisation.

Based on this input, we compiled a preliminary list of potential events. It turns out that some of these events however will not be held in English and will not attract many international visitors. Jointly with the partners in WP3, we will select the events with the most international public interest and in applications domains relevant to our CoEs.

2.3 Coordination with HPC SME initiatives (Task 3.3)

Task 3.3 has the goal of helping CoEs with their outreach activities towards industry, specifically regarding SMEs. Disseminating the results and outcomes in the broader industry is vital for most of the CoEs, especially when considering their individual plans in terms of sustainability beyond their initial funding periods. It is, therefore, crucial to involve as many industry partners as possible from an early stage.

It is of the essence that our facilitation of the outreach to SMEs does not add to the existing workload of the CoEs or disrupt their operation in any way; a main advantage of our initiative is that we manage such activities seamlessly. For that to become possible, our approach must be tailored and not generic. It falls within the remit of Task 3.3 to examine channels that are already in place within each CoE, such as associate partnerships, business development and dissemination, and assess their efficacy in SME outreach. Given that different CoEs are currently at different stages of maturity, so are their aforementioned channels. It is also part of Task 3.3 to assess why existing programs like Fortissimo have helped in the past.

To achieve the above objective, a survey has been prepared. The questions, in full detail, along with all possible answers are presented in Annex 0.. This survey has been disseminated to the individuals in each CoE that are mostly involved in industry outreach and business development. Since quite a few of the partners within each CoE already have experience with industry outreach, including previous projects, it makes sense to do this in two steps. The first step is an online survey that covers the activities of each CoE so far. This step gathers quantitative data, to be able to make decisions for the future of this task on the basis of that data. It gives a good overview over what the CoEs have tried so far in terms of industry outreach (if they have already done so), how successful each individual method and channel has been, and what their plans are going to be in the future. The survey also asks the CoEs to analyse their "sales funnel" and to determine "conversion rates" in order to see where the processes could be optimised. It also tries to get a feel for the needs of SMEs in particular, and how those differ from those of larger enterprises. It also asks about the participation in existing programs like Fortissimo or PRACE Shape. This will especially be useful for the second part of the survey, which will be a more qualitative phone interview. Depending on how much industry interaction the partners have already done, that phone interview will go into the lessons learned from past outreach activities, especially highlighting the success stories with SMEs.

The overall objective is to learn from all of the already existing success stories, to create best practices that current and future CoEs can follow so that they do not have to repeat the same mistakes that other CoEs had to go through and therefore to boost the CoE's industry outreach efforts and successes, especially those targeted towards SMEs, and make them more efficient.

2.3.1 Ongoing activities and first results

For gathering information about the development plan of HPC CoEs on existing or upcoming actions, the first part (the online questionnaire) has already been distributed to the CoEs. The process of collecting the responses is still ongoing. So far, six out of the ten CoEs have answered the survey, while the other four were reminded to do so, with answers from some that they will have their answers ready soon.

Beside the questionnaire, the interaction with existing projects is also ongoing. There has already been an intensive amount of communication with participants from the prior Fortissimo 2 and Simseo projects to learn from their experiences to better shape the upcoming steps.

2.3.2 Upcoming activities

In order to support the CoEs to achieve enhanced interaction with their respective industries, and SMEs in particular, the concerted action on business development will continue. After collecting all answers from the CoEs, further analysis will be done and the second part of the survey (the individual interviews) will be conducted in order to gather further details.

Besides the survey, additional actions will be taken to learn from the existing projects e.g. PRACE's SHAPE program, I4MS and other national-based initiatives, and the relevant Digital Innovation Hubs.

After gathering all necessary information from the CoEs and existing projects, our own actions will be taken in order to achieve a wide spread of the messages to be distributed. More particularly, based on the information gathered, dissemination material will be created, which will act as baseline for the interaction. The 'Best Practices' will be designed for outreaching and promoting the CoEs competence and service offerings to SMEs. Those best practices and success stories for industry outreach will be shared via dedicated workshops/seminars among the CoEs.

2.4 Industrial feedback to the CoEs (Task 3.4)

The objective of Task 3.4 is to gather the needs and requests coming from industry that could be answered by the CoEs and feed back this information to the CoEs. With this purpose, we have elaborated a questionnaire targeting industrial users (from both large companies and SMEs). The questionnaire was launched on March 2nd 2020.

The task will also gather HPC challenges proposed by industrial companies, clustered by sectors, and promote them to all the CoEs (and any other research institution) that would like to try to provide a solution. The task will organize the effort on contacting companies, collecting their computing challenges, disseminating them and managing the interaction between companies and solution providers.

2.4.1 Ongoing activities and first results

The main purpose of the questionnaire was to understand the needs from industry in terms of computing (specially, High Performance Computing), to collect information about their main obstacles regarding HPC and raise awareness of the CoEs' services to industry. In the preparation of the questions we have looked for a balance between being short and concise, and collecting meaningful information.

The questionnaire had two parts, a first part with 11 generic questions and a second part with 6 specific questions for each CoE. In the generic part, the respondent had to choose the CoEs of interest for their company and then complete the specific questions related only to those CoEs. The specific questions are basically the same for all CoEs, they are focussed on the specific challenges, obstacles and needs. The possible answers have been co-designed and agreed with the Exploitation managers of each CoE.

For publishing the questionnaire, we have used the Typeform platform due to its user friendliness. It can be consulted in this URL: https://bsc3.typeform.com/to/SsbFVf. During the two months it was open, the questionnaire had 253 starts and 88 submitted answers, this means a completion rate of almost 35%, with an average completion time of 15:28 minutes.

The questionnaire was disseminated through the CoEs, the industrial contacts established by Task 3.1, the industrial contacts of WP3 members and the social networks of FocusCoE, ETP4HPC and EXDCI. In a second-round, the dissemination effort was extended to all FocusCoE partners and their own networks and contacts. In order to ensure a better reach, the contacts list set up by members of the EuroHPC Governing Board was also used. A strong effort has been undertaken to disseminate it also in the EU13 countries. With this purpose in mind, we have contacted several entities to help us in reaching local companies:

- Sofia Tech Park, the Industry and International Economic Relations Center of Bulgaria (Bulgaria),
- Cyprus Digital Innovation Hub (Cyprus),

- Czech Republic National Supercomputing Center, (Czech Republic),
- Digital Innovation Hub Tartu (Estonia),
- Industry 4.0 National Technology Platform (Hungary),
- Latvian IT cluster, Sunrise Valley Science and Technology Park (Lithuania),
- Malta Digital Hub (Malta),
- Poznan Supercomputing and Networking Center, Digital Innovation Hub for Society (Romania),
- Computing Center of the Slovak Academy of Science (Slovakia),
- Arctur (Slovenia).

As mentioned earlier, the survey is still open in order to collect more answers. Thus, the analysis of the survey outcome has started but was not completed yet. Figure 2 to Figure 9 show an overview of the respondents (their position, the size of the organization they work for and their country), and of their main application domains (as of April 30th, 2020). The questions, in full detail, along with all possible answers are presented in Annex 6.4

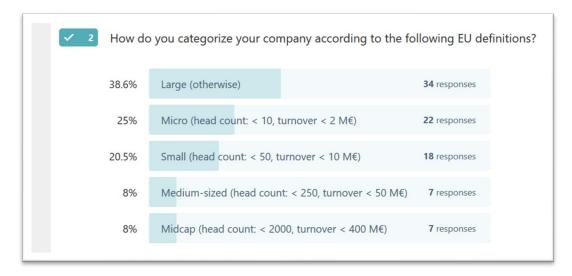**Figure 2: Caption of the questionnaire - Position in organization**

Figure 3: Caption of the questionnaire - Size of company
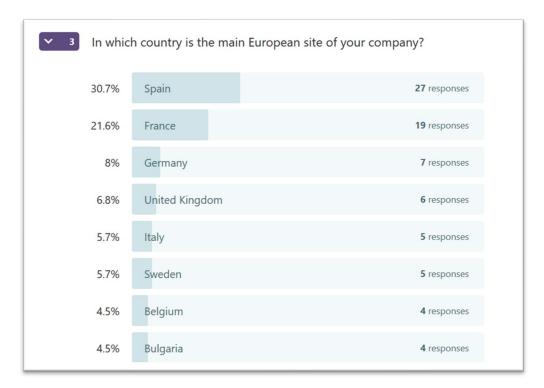

Figure 4: Caption of the questionnaire - Country of the company

Responses from other countries have been also received: Slovenia (3), Austria (1), Greece (1), Hungary (1), Latvia (1), Luxemburg (1), Norway (1), Poland (1), Romania (1).
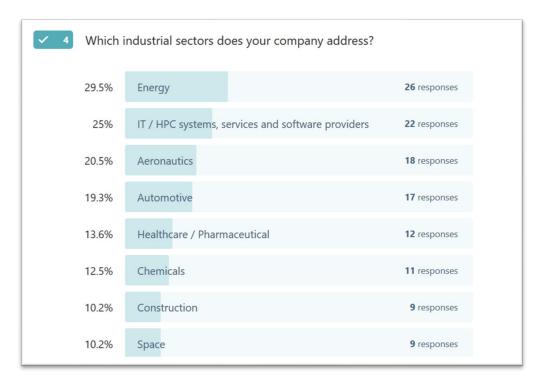
Figure 5: Caption of the questionnaire - Addressed industrial sectors part A
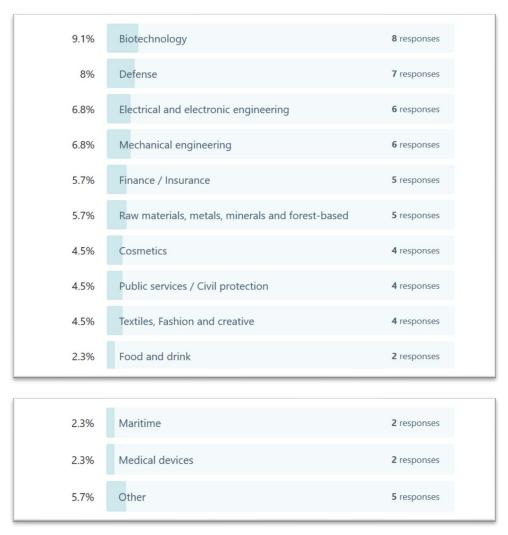

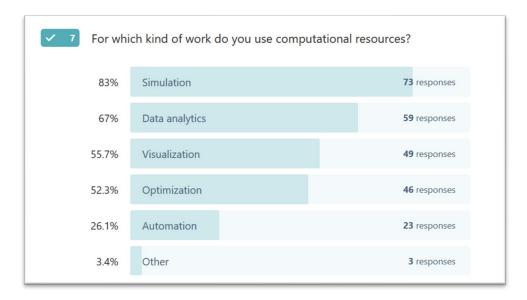**Figure 6: Caption of the questionnaire - Addressed industrial sectors part B**

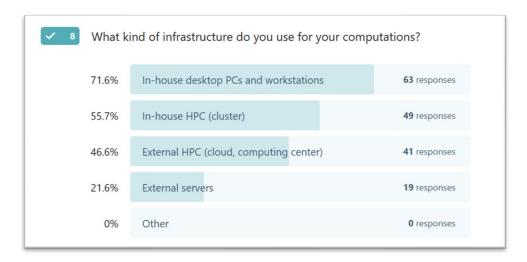**Figure 7: Caption of the questionnaire - Computational resources**

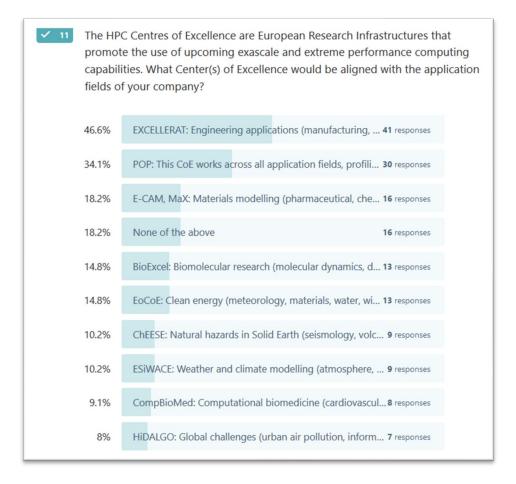**Figure 8: Caption of the questionnaire - Infrastructure**

Figure 9: Caption of the questionnaire - CoEs

2.4.2 Upcoming activities

The next activity in this task is the thorough analysis of the questionnaire. The results will be shared with the CoEs. This will be done CoE by CoE, indicating the generic and specific answers for the corresponding CoE and the industrial contacts that have expressed their interest in being contacted.

Using the results of the Industry questionnaire, the HPC challenges proposed by industrial companies, clustered by sectors will be identified. After additional gathered information - if needed- the results of the questionnaire will be promoted to all the CoEs (and any other research institution) that would like to try to provide a solution.

3 Conclusion

During the first half of the FocusCoE project, all planned activities have been kicked off, and first results are available. Regarding Task 3.1, mutual aspects in what the ten CoEs' can offer in terms of services, competences and application domains were identified. This enabled an assessment of the common industrial sectors covered by the CoEs offering. The results of this analysis were presented in the deliverable D3.1 in May 2019 and enabled the WP3 partners to structure their activities in order to put in place the strategic plan. Successful collaborations between a CoE and an industrial partner were highlighted in three success stories written with WP5 and published in the FocusCoE newsletter of March 2020. For Task 3.2, a first set of sectorial events was selected in agreement with the CoEs, and a first sectorial event in Life Sciences was attended jointly by WP3 and the CoEs in December 2019 with on-site participation of two CoEs (CompBioMed and POP). A survey for the CoEs has been prepared for the Task 3.3 after interacting with former projects like Fortissimo 2 or Simseo and is currently ongoing. Finally, for the Task 3.4 a questionnaire targeting industrial users (both, from large companies and SMEs) was launched on March 2nd 2020 and the results will be presented and analysed in a separate document.

We nevertheless noted some hurdles in the past months. First, there seem to be a recent shift regarding the main priorities of the CoEs. The projects seem very much concerned with delivering applications for exascale, in particular to the scientific community. Topics related to "services for industry" and more generally interaction with industry seem less in the focus of the CoEs efforts today. Second, we need to adapt our activities to the different maturity levels of the CoEs. For example, the Direct Contact Process has not been used much by the CoEs who are in their first funding phase, as their offer to industry is not ready yet. However, in the long term, our tasks dedicated to the Industry interaction will always be beneficial for the ecosystem to prepare for the next steps.

Lastly, an element that is bound to affect WP3 is the COVID-19 pandemic, around which we shall have to adapt our work and interaction with both CoEs and industry. It is fairly certain that this will impact our work package tasks in the future, but we are preparing adapted new solutions and this will encourage new ways to promote the industrial actions and events.

4   Additional information and updates

This section is added in November 2020 and provides updates for some of the sections from Deliverable 3.2 that was originally submitted in May 2020.

A general Strategies and activities update (section 4.1) and a new Annex (6.5) are added to this document to explain how the conclusions and problems previously identified are linked to current or planned targeted actions to overcome them. Moreover, we also indicate in this new Section 4.1 and in this new Annex 6.5 additional elements showing the actual involvement of CoEs in co-developing with industry in very diverse sectors (automotive, petrochemical, energy, biomedical, materials…).

4.1   Strategies and activities update

Since May 2020, there have been updates made to the initial strategies and activities set up to develop the interaction between the CoEs and industry. These additional elements are presented in the following sub-sections.

4.1.1   Action planning and monitoring of success (Update for Task 3.1)

Regarding Action planning:

In agreement with the CoEs, online industrial events will be attended by the CoEs with support from FocusCoE where online events replace the physical ones. The first online event with two participating CoEs -MaX and EXCELLERAT- coordinated by FocusCoE-WP3, is CAE2020 (Nov. 30th to Dec. 4th 2020).

Moreover, WP3 is planning a serie of webinars, starting in Winter 2020/2021, in replacement of some planned sectorial events (which are still unsure until Summer 2021 at least). If this works well, this alternative solution will be further implemented in 2021 to foster the CoEs contacts with new potential users and clients.

Regarding monitoring of success :

To monitor the new interactions with industrial partners and the added value of the WP3 activities: WP3 has created an online dashboard with information about the new industrial interactions launched by the CoEs due to the WP3 activities (events, industry survey, direct approach). This dashboard is regularly updated by asking the CoEs participating to WP3 activities to provide detailed feedback on their new contacts. A detailed description and some public elements are available in Annex 6.5.

Regarding the added value of WP3 following the initial organized event:

After BIOFIT2019, the contributing CoEs (CompBioMed, POP and BioExcel) indicated their total satisfaction regarding the work and global coordination achieved by FocusCoE to support them to get the most from the event. Indeed, the event was the opportunity to meet potential new clients and they were able to save both time and costs for this action. For instance, POP indicated that this event generated several potential new contacts and CompBioMed has signed a new cooperation agreement with a new customer met at BIOFIT2019.

In addition, a best practices guide is under preparation to help and advise the CoEs on how to prepare their participation to sectorial events.

4.1.2   Industrial feedback to the CoEs (Update for Task 3.4)

Regarding the industry survey elaborated in Task 3.4 which was launched on 02 March 2020:

Detailed individual reports were shared with each CoE on 15 July 2020, the reports included the results of the industry survey, an analysis of these results, new industry contacts for each CoE collected thanks to the questionnaire and dedicated advice on how to interact with new

business contacts. The new contacts provided to the CoEs and collected by WP3 with this action were also added in the WP3 online dashboard (cf. 6.5) to update the WP3 KPIs.

In addition, in order for the new CoEs and the NCCs, which have now started, to benefit from this industry survey: on the one hand, individual reports will be specifically adapted for each new CoE and on the other hand, the generic elements (general results and recommendations on how to interact with industry contacts) will be shared with the NCCs.

5 References

[1]   FocusCoE Industry questionnaire, https://bsc3.typeform.com/to/SsbFVf
[2]   FocusCoE   Newsletter   (March   2020),   https://www.focus-coe.eu/wp-content/uploads/2019/04/Newsletter_focus-coe_maerz_X2.pdf
[3]   FocusCoE webpage on the Success stories, https://www.focus-coe.eu/index.php/coe-success-stories/
[4]   FocusCoE Deliverable D1.3, "Report on the sectorial approach priorities", Project Month 6 (May 2019)

6 Annexes

6.1 Direct contact process (Task 3.1)

Step	CoEs	WP3-partners	Company
1		Based on the personal contacts the WP3 participants have with industry, WP3 issues a list of company names that could be of interest to the CoEs For each company (or company division) the email of a WP3 participant is associated. **Full list:** https://scapos-docs.de/index.php/s/IMC49dZfTWTrIvF	
2	From this list, the CoEs select the companies that are potentially of interest to the CoE 1. For each selected contact, the CoE provides a "value proposal" relevant for the company: "I can provide an optimized version of code X"; "I will propose a training in the domain Z". 2. The CoE send an email to the WP3 participant in charge of the company with the value proposal.		
3		The WP3 participant get in touch with her/his company contact point to discuss the value proposal.	
4			The point of contact either: • Expresses no interest at all for the CoE (end of process) • Suggests another name inside the company for the "value proposal" (back to step3) • Suggests another "value proposal" that she/he expects from the CoE • Expresses interest for the "value proposal"
5		WP3 participant feedback the CoE: • If there is a good match the direct contact is established (agreement on the "value proposal" of the CoE or of the company) • If the "value proposal" suggested by the company is not relevant for the CoE but not too far from what the CoE can propose, iteration of step2 with a new CoE "value proposal"	
6	Direct dialog between the CoE and the company		Direct dialog between the CoE and the company

6.2 KPIs (Task 3.1)

WP3 KPIs		
KPIs	Attributes	M18 Target
Number of new industrial contacts for the CoEs	- Company - CoE - Sector of the company - Size of the company (SME or large company) - Level of contact (discussion, cooperation, common project, funding…)	100
Number of industrial individuals having received information about CoEs	- Company - Sector of the company - Size of the company (SME or large company)	5000

The KPIs target numbers were actually defined only a little time before the FocusCoE midterm review. Indeed, some first initial events and first contacts through other channels (personal contacts, industry survey…) were necessary to define realistic targets. Therefore, the targets and first KPIs results were indicated and explained more in detail in the M18 report (July 2020).

6.3 CoEs – SMEs survey (Task 3.3)

1. Survey Introduction

This survey addresses the actions toward Small and Medium Size Enterprises (SMEs)[5] in the Focus CoE project.

Focus CoE's specific objective, among others, is to support the HPC CoEs to achieve enhanced interaction with industry, and SMEs in particular, through concerted outreach and business development actions. For coordinating these actions, targeting the development of HPC use by SMEs and dedicating effort toward SMEs, this survey is designed to:

- Gather information about the development plan of HPC CoEs on existing or upcoming actions;
- Design 'Best Practices' for outreaching and promoting the CoEs competence and service offerings to SMEs;
- Establish follow-up activities;

The survey contains **two parts**: an online questionnaire and an interview to explore the answers of the respondents. The **online questionnaire** contains closed-ended questions as well as open-ended questions and it should not take more than 15 minutes. After the successful completion of the online questionnaire, the **interview** is conducted via telephone to gather more details. The interview may take around 45 Minutes.

The survey is conducted from April 2020 till May 2020.

Any data submitted to this survey will be uploaded and held securely. However, the results are open to the HPC CoEs, so they can benefit from it.

2. The Online Questionnaire

2.1. What is the name of your Centre of Excellence (CoE)?
Click or tap here to enter text.

2.2. Respondent Information:

Name	Job Title	Email Address	Tel. Number
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

2.3. Do you have a dedicated team/person(s)/department/partner organization/spin off that does outreach to SMEs?
☐ **Yes**

---

[5] SMEs are defined by the European Commission as having less than 250 persons employed. They should also have an annual turnover of up to EUR 50 million, or a balance sheet total of no more than EUR 43 million.

☐ **No**

2.4. **Has your CoE been working together with large enterprises?**

☐ Yes

↳ • How long has your CoE been working together with large enterprises? Click or tap here to enter text.

☐ Not yet, but we are planning to do so in the future
↳When are you planning to work together with large enterprises [MM/YY]?
Click or tap here to enter text.

☐ No, and we currently aren't planning to work with them in the future
↳ Could you please clarify the main reason?
Click or tap here to enter text.

2.5. **Has your CoE been working together with SMEs?**

☐ Yes

↳ • How long has your CoE been working together with SMEs? Click or tap here to enter text.

☐ Not yet, but we are planning to do so in the future
↳When are you planning to work together with SMEs [MM/YY]?
Click or tap here to enter text.

☐ No, and we currently aren't planning to work with them in the future
↳ Could you please clarify the main reason?
Click or tap here to enter text.

Please note: *If your answers for the questions 2.4 and 2.5 are the following: "Not yet, but will work in the future" or "No, will not work with", then you do not need to answer questions between 2.6-2.17 ; just skip to 2.18*

2.6. **Have you already defined a customer acquisition process or strategy?**

☐ Yes
☐ No

2.7. **Are you using a CRM system to keep track of potential customers?**

☐ Yes
☐ No, but we built/are building a list of potential companies
☐ No, but we are planning to do something similar in the future
☐ No, this does not make any sense for us

•

2.8. **Are you already offering services/products to potential users?**

☐ Yes
☐ No

2.9. **How many potential customers have you reached out to in total (including customers from large enterprises, SMEs)?**

☐ 0
☐ 1-5
☐ 6-15
☐ 16-30
☐ 31-50
☐ 51-100
☐ 101-200
☐ 201-300
☐ 300-400

☐   401-500
☐   500+

2.9.1. What percentage of them actually became customers?

Click or tap here to enter text.

2.10.   How many users have you worked with in total (in each category)?
•

• large enterprises	• SMEs	• Academia	• Government	• Other
• Click or tap here to enter text.	• Click or tap here to enter text.	• Click or tap here to enter text.	• Click or tap here to enter text.	• Click or tap here to enter text.

2.11.   What percentage of your overall customers were actively acquired by marketing activities of your CoE (e.g. cold calling, trade shows, events, etc.)

Click or tap here to enter text.

2.12.   Which channels have you used to target large enterprises?
☐   Events
☐   Magazines
☐   Newspapers
☐   Your own website
☐   Other websites (e.g. industry news publications)
☐   Your own newsletter
☐   External newsletters
☐   Forums
☐   Social media
☐   Industry associations
☐   Direct (cold) contact
☐   Podcasts
☐   Influencers
☐   (Other) Click or tap here to enter text.
•

2.13.   Which channels have you used to target SMEs?
☐   Events
☐   Magazines
☐   Newspapers
☐   Your own website
☐   Other websites (e.g. industry news publications)
☐   Your own newsletter
☐   External newsletters
☐   Forums
☐   Social media
☐   Industry associations

☐   Direct (cold) contact
☐   Podcasts
☐   Influencers
☐   (Other) Click or tap here to enter text.

2.14. Please rate the channels you have used (question 2.13) from 1-10 on their effectiveness for reaching SMEs? (1 = not very effective; 10 = very effective)

- *(Note: please mark your answer (number) as <u>UNDERLINED</u> and <u>**BOLD**</u>)*

Events	1	2	3	4	5	6	7	8	9	10
Magazines	1	2	3	4	5	6	7	8	9	10
Newspapers	1	2	3	4	5	6	7	8	9	10
Your own website	1	2	3	4	5	6	7	8	9	10
Other websites (e.g. industry news publications)	1	2	3	4	5	6	7	8	9	10
Your own newsletter	1	2	3	4	5	6	7	8	9	10
External newsletters	1	2	3	4	5	6	7	8	9	10
Forums	1	2	3	4	5	6	7	8	9	10
Social media	1	2	3	4	5	6	7	8	9	10
Industry associations	1	2	3	4	5	6	7	8	9	10
Direct (cold) contact	1	2	3	4	5	6	7	8	9	10
Podcasts	1	2	3	4	5	6	7	8	9	10
Influencers	1	2	3	4	5	6	7	8	9	10
(Other) Click or tap here to enter text.	1	2	3	4	5	6	7	8	9	10

2.15. Do any of the below channels work better for SMEs than they do for large enterprises (LE)?

	Works better for SME	Works better for LE	Same
Events	☐	☐	☐
Magazines	☐	☐	☐
Newspapers	☐	☐	☐
Your website	☐	☐	☐
Other websites	☐	☐	☐
Industry associations	☐	☐	☐
(Other) Click or tap here to enter text.	☐	☐	☐

2.16. When talking to SMEs, how important are the following topics to them?
- (1 = not important; 10 = very important)
- *(Note: please mark your answer (number) as <u>UNDERLINED</u> and <u>**BOLD**</u>)*

General Knowledge / Know-How	1	2	3	4	5	6	7	8	9	10
Tutorials / Educational Content	1	2	3	4	5	6	7	8	9	10
Consulting	1	2	3	4	5	6	7	8	9	10
Technical Help / Support	1	2	3	4	5	6	7	8	9	10
Pricing	1	2	3	4	5	6	7	8	9	10
Data Security	1	2	3	4	5	6	7	8	9	10
Privacy	1	2	3	4	5	6	7	8	9	10
Support	1	2	3	4	5	6	7	8	9	10
Local Language	1	2	3	4	5	6	7	8	9	10

Trust	1	2	3	4	5	6	7	8	9	10
HPC expertise	1	2	3	4	5	6	7	8	9	10
(Other) Click or tap here to enter text.	1	2	3	4	5	6	7	8	9	10

2.17. When talking to LARGE enterprises, how important are the following topics to them?

- (1 = not important; 10 = very important)
- *(Note: please mark your answer (number) as <u>UNDERLINED</u> and <u>BOLD</u>)*

General Knowledge / Know-How	1	2	3	4	5	6	7	8	9	10
Tutorials / Educational Content	1	2	3	4	5	6	7	8	9	10
Consulting	1	2	3	4	5	6	7	8	9	10
Technical Help / Support	1	2	3	4	5	6	7	8	9	10
Pricing	1	2	3	4	5	6	7	8	9	10
Data Security	1	2	3	4	5	6	7	8	9	10
Privacy	1	2	3	4	5	6	7	8	9	10
Support	1	2	3	4	5	6	7	8	9	10
Local Language	1	2	3	4	5	6	7	8	9	10
Trust	1	2	3	4	5	6	7	8	9	10
HPC expertise	1	2	3	4	5	6	7	8	9	10
(Other) Click or tap here to enter text.	1	2	3	4	5	6	7	8	9	10

2.18. Which program(s) targeted towards SMEs are you (personally or as part of your organization) participating in or have already participated in?

Fortissimo ☐
PRACE Shape ☐
Simseo ☐
14MS ☐
Digital Innovation Hubs ☐
Sesame Net ☐
(Other)Click or tap here to enter text. ☐
Have not participated in any programs yet ☐

2.19. Please list your direct competitors (Name of companies/institutions and their services):

Click or tap here to enter text.

2.20. Please list the main sector(s) of your current customers (e.g Aerospace, Agriculture, Automotive, Banking, Car Manufacturers, Construction, Defence, Electric Utilities, Health, Medical Tech. Supplies, Manufacturing, Marine Transport, Oil & Gas, Pharmaceutical Manufacturing, Sport Supplies, Publishing & Printing, etc):

Click or tap here to enter text.

•

2.21. Have you developed any strategy/channels to get feedback from your stakeholders?

☐ Yes
☐ No

2.22. Do you have suggestions about actions that could help you to develop relationships with SMEs?

•

Click or tap here to enter text.

2.23. Please provide the contact information of the person(s) best suited to answer follow-up questions in a telephone interview:

Name	Job Title	Email Address	Tel. Number
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

6.4 Industry questionnaire (Task 3.4)

<u>Generic questions</u>

1. Which is your position within your organization? (only one answer possible)
    - Business/technical manager
    - Project manager
    - R&D engineer
    - Product developer
    - Sales
    - Other (please specify): _____

2. How do you categorize your company according to the following EU definitions? (only one answer possible)
    - Micro (head count: < 10, turnover < 2 M€ or balance sheet total < 2 M€)
    - Small (head count: < 50, turnover < 10 M€ or balance sheet total < 10 M€)
    - Medium-sized (head count: < 250, turnover < 50 M€ or balance sheet total < 43 M€)
    - Midcap (head count: < 2000, turnover < 400 M€)
    - Large (otherwise)

3. In which country is the main European site of your company? (only one answer possible)
    [Dropdown list with European countries]

4. Which industrial sectors does you company address? (multiple answers possible)
    - Aeronautics
    - Automotive
    - Biotechnology
    - Chemicals
    - Construction
    - Cosmetics
    - Defense
    - Electrical and electronic engineering
    - Energy
    - Finance / Insurance
    - Food and drink
    - Healthcare / Pharmaceutical
    - IT / HPC systems, services and software providers
    - Maritime
    - Mechanical engineering
    - Medical devices
    - Public services / Civil protection
    - Raw materials, metals, minerals and forest-based
    - Space
    - Textiles, Fashion and creative

5. Does your company have a modelling and/or simulation group? (only one answer possible)
    - Yes
    - No

6. What is the size of the modelling/simulation/analytics group?
    - head count < 5

- head count < 10
- head count < 25
- head count < 100
- head count > 100

7. For which kind of work do you use computational resources? (multiple answers possible)
   - Simulation
   - Visualization
   - Data analytics
   - Optimization
   - Automatization
   - Other (please specify): _____

8. What kind of infrastructure do you use for your computations? (multiple answers possible)
   - In-house desktop PCs and workstations
   - In-house HPC (cluster)
   - External servers
   - External HPC (cloud, computing center)
   - Other (please specify): _____

9. [If no HPC answer has been chosen in Q8] Why do you not use High Performance Computing (HPC)? (multiple answers possible)
   - Our computations are not large enough
   - HPC is too expensive
   - HPC is too complex
   - We have not found the right provider
   - Other (please specify): _____

10. What are the most important issues regarding modelling/simulation/analytics? (multiple answers possible)
    - Find relevant software for my problem
    - Validity of results
    - Access to computing resources
    - Access to expertise
    - Recruitment of staff
    - Other (please specify): _____

11. The HPC Centres of Excellence are European Research Infrastructures that promote the use of upcoming exascale and extreme performance computing capabilities. What Center(s) of Excellence would be aligned with the application fields of your company? (multiple answers possible)
    - ESiWACE: Weather and climate modelling (atmosphere, ocean)
    - ChEESE: Natural hazards in Solid Earth (seismology, volcanology, tsunami)
    - BioExcel: Biomolecular research (molecular dynamics, docking and workflows)
    - CompBioMed: Computational biomedicine (cardiovascular, molecularly-based, neuro-musculoskeletal)
    - E-CAM, MaX: Materials modelling (pharmaceutical, chemical, oil and gas, manufacturing, food, etc)
    - EXCELLERAT: Engineering applications (manufacturing, automotive, energy, aerospace)
    - EoCoE: Clean energy (meteorology, materials, water, wind, fusion for energy)

- HiDALGO: Global challenges (urban air pollution, information spread in social networks, refugee movements)
- POP: This CoE works across all application fields, profiling and providing assistance with optimization of parallel codes. Please select this if parallel code performance is important to your organization.
- None of the above

Specific questions

12. Which subsectors does your company address?
13. What are the most common challenges you face in modelling and simulation?
14. What models or methods do you use?
15. What would justify your use of different models or methods?
16. What services would be of interest for you?
17. Would your organization be willing to pay for these services?

The possible answers for these specific questions have been agreed with the CoEs. As an example, we include here the possible answers for ESiWACE.

12. Which subsectors does your company address?
- Civil protection
- Insurance
- Aviation
- Marine
- Energy
- Hardware vendor
- Basic science

13. What are the most common challenges you face in modelling and simulation?
- Weather forecast at high resolution
- Weather forecast at global scale
- Climate forecasts at high resolution and for long time scales
- Convection-resolving simulations
- Storm-resolving simulations
- Coupled Atmosphere-Ocean Simulations

14. What models or methods do you use?
- ICON
- IFS
- NEMO
- Dynamico
- HIRLAM
- WRF
- MM5
- Satellite imaging
- Data assimilation
- Re-analysis

15. What would justify your use of different models or methods?
- Better performance, like faster prediction at higher resolution
- Higher quality of prediction
- Improved interoperability and standards
- Improved user experience

- Better technical support
- Better tutorials and documentation
- Better training on usage
- Application consulting
- Lower cost (time and money)
- Reduce dependency on one architecture
- Adopting HPC solutions (including GPUs)

16. What services would be of interest for you?
- Support on use of Earth system modelling software
- Support on porting models to HPC
- Support to port software from hardware generation to hardware generation
- Training in use of Earth system modelling software
- Training in software development

17. Would your organization be willing to pay for these services?
- Yes
- No
- Maybe

If you answered No: Please share your reason(s) for not willing to pay such services.
If you answered Maybe: Under what conditions would your organization be willing to pay for such services?

6.5 New Annex : Details from the WP3 online dashboard used to monitor the interaction with industry contacts (tasks 3.1 and 3.2)

DASHBOARD (at Date 01/11/2020)

Number of new industrial contacts

Total number of contacts	123

Company type	
Number of SMEs	36
Number of Large companies	52

Sector	
# companies in Aeronautics industries	4
# companies in Automotive industry	6
# companies in Biotechnology	35
# companies in Chemicals	0
# companies in Construction	5
# companies in Cosmetics	1
# companies in Defence industries	2
# companies in Electrical and electronic engineering industries	1
# companies in Food and drink industry	0
# companies in Healthcare industries	14
# companies in Maritime industries	2
# companies in Mechanical engineering	3
# companies in Medical devices	1
# companies in Raw materials, metals, minerals and forest-based industries	0
# companies in Space	3
# companies in Textiles, Fashion and creative industries	0
# companies in Public services / Civil protection	0
# companies in Bank/insurance	3
# companies in Energy utilities	18
# companies in HPC system, services and software providers	12

How contact was made	
Trade fair	43
Brokerage	0
Industrial conference	0
Personal contact	13
Other	68

CoEs involved	
BioExcel	6
ChEESE	3
CompBioMed	22
ECAM	7
EoCoE	7
Excellerat	24
ESiWACE	3
HiDALGO	4
MaX	10
POP	35

Interaction types	
Emails	17
Telcos	6
Meetings	23
Other	102

These numbers result from the online dashboard filled in by the WP3 partners during the project to monitor the new industrial contacts provided to the CoEs.

- **Details about the WP3 dashboard, from which these KPIs results are issued :**

To monitor the new industrial contacts provided to the CoEs by WP3 through sectorial events or other channels (industry survey, personal contact, other events…), WP3 created a dashboard to directly produce the KPIs details displayed in the previous tables.

The data regarding new industry contacts collected, for instance, due to the industry survey included two main aspects: first, data on the company, the concerned CoE and on the interaction aspects and second personal data of the respondent (the person position and email address). To ensure good relations with the potential new contacts, in each individual report provided to each CoE, it was specified : "*Disclaimer: These contact data can only be used to promote the services of the *[CoE Name]* Center of Excellence. Any other use would violate the General Data Protection Regulation (GDPR)." Therefore, our possibilities to share this data beyond the announced scope for each CoE is limited. Here are some explanations about how the online dashboard is filled in and how this is useful to monitor the added value of WP3 to the CoEs regarding industry interactions.

For each new contact met during a sectorial event or personally through one of the WP3 partners' activities, or collected via the industry survey...etc, WP3 partners collect the following details:

- Information about the new contact : name of the company, type of the company (large company/SME), name of the new contact person, position in the company, sector of the company, how contact was made (trade fair, brokerage, industrial conference, personal contact, Other), details on how contact was made (for instance: industry survey)
- Information about the CoE provided with this new contact: name of the concerned CoE, contact person of the CoE who received the information about the new contact, position of this CoE contact person
- WP3 partner who provided the new contact
- Details about the interaction for a given contact: type of interaction (meeting, email, telco, other), date of the interaction, representative of the CoE who benefited from the interaction, topic of the interaction.
  These elements are filled in for each interaction when there was a follow-up.

- Contact relevance: indication if the contact provided further more in depth interactions and the reasons if yes or no.

The following table displays the headers of the created online dashboard. This extract shows how the previously detailed information is registered.

COMPANY						CoE provided with the contact			FocusCoE		INTERACTION 1				CONTACT RELEVANT?			
Name	Type (see Lists tab)	Contact person	Position	Sector (see Lists tab)	How contact was made	Details on how contact was made	Name (see Lists tab)	Contact person	Position	Partner in contact	Who (person in contact)	Type	When	Who	What	Yes / No	If Yes, why?	If No, why?	Comments

Table 4: Added element : Extract of the online dashboard : the headers

This dashboard highlights the best channels for the CoEs to meet new industrial contacts: for the moment, the two more useful channels were the industry survey and the first sectorial event in Life Sciences BIOFIT2019. The CoEs participating to this event have also indicated to the WP3 that their participation, coordinated by FocusCoE, to this event was valuable for them and allowed them to meet new potential customers (e.g. three months after the fair, CompBioMed has signed a new cooperation agreement with a new customer met at BIOFIT.) This dashboard also allows the WP3 partners to see which CoEs are more in need of new opportunities to meet or get new industry contacts: at beginning of November 2020, it was ChEESE, HiDALGO and ESiWACE that got less opportunities at this stage of the project. However, it must be noted, that there are also the CoEs who are actually targeting potential new academic users rather than industrial contacts (due to their topics and services offerings).