

The first trans-continental Networking Academy for African and European Digital Innovation Hubs.

# D2.3 Lessons from existing initiatives and good practices for enforcing DIHs capacities



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Glossary and Abbreviations		
AfriConEU	The first Trans-continental Networking Academy for African and European DIHs	
DIH	Digital Innovation Hub	



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## **EXECUTIVE SUMMARY**

We have conducted interviews with 182 organizations, of this 122 DIHs in the first research, 20 DIH helpers in the second and 40 DIHs from Africa in roundtables. Their answers are needed for future work in the project and to identify how DIH are trained on different topics and which topics need additional support. Important questions for the development of capacity building are about utilized methods and their preferability. Knowledge sharing gives insight into how to reach DIHs. In the field of acquiring and measuring outcomes and achievement, it is important to identify appropriate methodology. Identified obstacles, contextual and cultural factors, are important for better alignment with DIHs needs and preference for AfriConEU Academy.

DIHs need additional knowledge on several topics. African DIHs need the most additional knowledge on DIH strategy & business development. DIH helpers programmes covered all topics. Two-thirds of programmes are cross-sectoral.

DIHs prefer mentoring/coaching, face-to-face short courses, online courses and online webinars. The African DIHs also stated that the most effective method is face to face workshops. DIHs would like to have more practicability in programmes.

DIH helpers mainly use specific and targeted campaigns, websites, and social networks to disseminate their activities. Although only half of DIHs received support from DIH helpers, a few are very active, as one-fifth of DIH helpers supported more than 100 DIHs. DIHs mainly search for information about capacity building programmes and other support at conferences and events and on the DIH helpers websites. They think that the biggest obstacle for participation in more capacity building programmes is a lack of time and information about the availability of the training. Also, DIH helpers assess that lack of time is the biggest obstacle for DIH to participate more.



Half of the DIH helpers monitor participants' satisfaction, half of them with a post-assessment questionnaire. For better alignment with DIHs, needs and preference evaluation methods are extremely important.

Our study provides valuable insights and will serve as the foundation for future work in developing the "AfriConEu Networking Academy".

## **PROJECT SUMMARY**

The AfriConEU project aims to strengthen and reinforce the digital innovation ecosystems in Africa by targeting existing Digital Innovation Hubs (DIHs) and supporting them through capacity building and networking activities. African DIHs are playing a central role in the development of digital entrepreneurship. By raising their capacities to tackle the challenges they face, they will be more effective in driving digital innovation forward.

The AfriConEU project will connect DIHs from Nigeria, Uganda, Ghana and Tanzania with DIHs from Europe with the aim to:

- Facilitate knowledge and experience sharing;
- Drive the development of mutually beneficial partnerships;
- Support the creation of collective projects to boost the digital economy, empower youth, and foster innovation and growth.

The project will develop, test, and validate the "AfriConEU Networking Academy," an innovative mechanism for connecting and sharing best practices, experiences, and resources among DIHs in Africa and between DIHs in Africa and EU, in a comprehensive, replicable and self-sustaining way. Through two flagship programmes, the AfriConEU Networking Academy will empower and enable African DIHs to best serve their local industries, boost their start-up ecosystems, and



empower the youth populations in their communities with the necessary skills to thrive in a digitalized world.

The project includes 11 partners from Europe and Africa: ATBN, BUNI HUB, DPIXEL, ECA, HAPA, INOVA+, ITC, OUTBOX, PBS, STIMMULI, and YMH.

Project duration: 01.02.2021-01.02.2024

Topic: ICT-58-2020: International partnership building between European and

African innovation hubs



## INTRODUCTION

Digital Innovation Hubs (DIH) are support organizations that make businesses more competitive by speeding up the development and uptake of digital innovations. DIHs are one-stop shops that help companies become more competitive concerning their business and production processes, products, or services using digital technologies. DIHs provide access to technical expertise and experimentation so that companies can "test before invest." They also offer innovation services, such as financing advice, training, and skills development needed for a successful digital transformation.

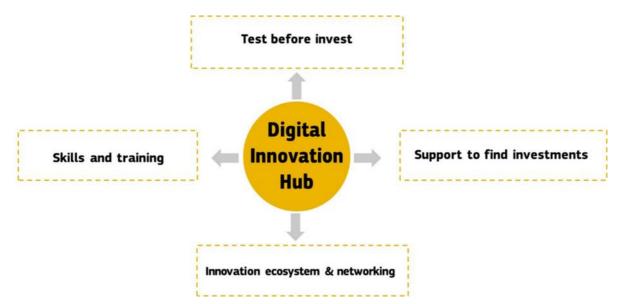


Figure 1: Task of DIHS as defined by the European Commission

The DIH model is entirely in line with the multi-actor approach.

Organizations, which help DIHs (below DIH helpers) can be organizations, networks, initiatives, projects, and more. These organizations help DIHs with:



- Guidelines or programmes for developing DIHs focused on key nontechnological issues: ecosystem assessment, business models for DIHs, innovation brokerages, use cases, access to finance;
- Enhancing the collaboration between different stakeholders in the DIH Community with a range of services, information, and tools that help DIHs communicate, align, collaborate and synchronize activities;
- Creating the communities to foster interaction among DIHs, information exchange, and peer-learning.

The research was conducted for three different groups, for DIH, DIH helpers, and participants in round tables in task WP2.1. Research on DIH gathered information from DIHs, as they are the target audience for capacity building programmes in the AfriConEU project. Research on DIH helpers gathered information about DIH helpers, as they are primarily providers of capacity building programmes for DIHs. And third was for DIHs that already participated in capacity building programmes and participated in round tables in task WP2.1, which analyzed the state of play in African DIHs.

#### This research aims to identify:

- How DIHs are trained through DIH establishment, strategy, and business development; service portfolio and development; expansion & networking; sector-specific topic; skills & knowledge creation; communication & awareness:
- What training methods are utilized;
- How knowledge sharing is facilitated;
- What outcomes are achieved;
- How is the measurement of achievement being performed;
- If and which contextual and cultural factors affect DIH's professional development.



#### APPROACH AND METHODOLOGY

The research was based on the extensive preparatory study, which resulted in the preparation of the questionnaire and all relevant tools, allowing efficient and repeatable execution of the interviews, gathering and documenting answers, and interpreting results. As the most appropriate methods online survey was chosen.

For the execution of the survey on DIH and DIH helpers, the WEB-based tool <u>Jotform</u> was prepared and used. Three different surveys were conducted:

- For DIH helpers (information about organizations for providing services for DIH are in Deliverable 2.2) or trainers of existing capacity building programmes targeted to DIHs from Africa and Europe;
- For DIHs themselves, which already participate in capacity building programmes;
- For DIHs that were part of the research of local innovation ecosystems in Nigeria, Ghana, Uganda and Tanzania.

The questionnaire has been escorted with the Invitation, providing additional information about the project, aim of the research and practical information about the questionnaire.

## Research questions

The first step in the survey planning was determining research questions based on which the survey was developed. For further work in the project, it is highly important to answer these questions as objectively as possible, making further planning of activities in the project and extracting findings and data for further assessment and representation more straightforward and goal-oriented.

This research aims to identify:

- How DIHs are trained through DIH establishment, strategy, and business development; service portfolio and development; expansion & networking;



sector-specific topic; skills & knowledge creation; communication & awareness;

- What training methods are utilized;
- How knowledge sharing is facilitated;
- What outcomes are achieved;
- How is the measurement of achievement being performed;
- If and which contextual and cultural factors affect DIH's professional development.

Once the data has been collected and inserted in the Jotform tool, the analyses are required to answer research questions posed for the evaluation. It allowed drawing conclusions, which enabled project partners, target groups and stakeholders to get valuable feedback.

In the next subchapters, research questions for all three different research are presented.

#### Research questions for DIHs

#### KEY QUESTION 1 (Q1): General information about DIH

General information about DIHs providing basic data such as the country in which they are located, the geographical area they cover, their maturity level (if they are a mature DIH or a DIH being established), their target sector (if they are sector-specific or cross-sectoral) and the services they provide.

#### KEY QUESTION 2 (Q2): Capacity building programmes' topics

The main topics of capacity building programmes are the main services DIHs provide, such as establishment, strategy & business development, service portfolio & development, expansion & networking, skills & knowledge creation, communication & awareness creation, and sector-specific topics. The most important question for



developing the project and future capacity building programmes is about accessing what are the DIHs' needs.

#### KEY QUESTION 3 (Q3): Methods in programmes

Answers about methods give insights about which methods have DIHs already used. The desirability of methods is important for the future development of capacity building programmes and if DIHs take free or payable modules.

#### KEY QUESTION 4 (Q4): Knowledge sharing

As we also interviewed DIH helpers, we asked DIHs if they received any support from them. The answer gives insight if knowledge sharing of DIH helpers is reaching their target audience. The answer where they find information is important for future work, as we have information where DIHs look for additional knowledge, and we could offer it to them in those places.

#### KEY QUESTION 5 (Q5): Quantity, satisfaction and obstacles

The quantity of their participation in different capacity-building programmes answers how much DIHs participate in various programmes. They were asked to assess their satisfaction with various aspects, from duration, content, practicability, organization, methods, and benefits of establishing valuable contacts.

We asked DIH helpers what they think about why DHIs do not accept more modules and support. The same question was asked to the DIHs to assess how well the DIH helpers know their target group and to have insight for future work.

## The research questions for DIH helpers

#### KEY QUESTION 1 (Q1): General information about DIH helpers

General information about DIHs helpers provides basic data about the organization and what geographical area they covered.



#### KEY QUESTION 2 (Q2): Capacity building programmes topics

The topics represent the main services that DIHs provide, such as establishment, strategy & business development, service portfolio & development, expansion & networking, skills & knowledge creation, communication & awareness creation, and sector-specific topics. DIH helpers were also asked about their opinion on which topics DIHs have the most interest. It is an interesting question when linked with DIHs answers about which topics they seek primarily. We were also interested if they have sector-specific programmes and which industries they covered because some DIH helpers are sector-specific.

#### KEY QUESTION 3 (Q3): Methods in programmes

Answers about methods give insights about which methods they use. For the future development of capacity-building programmes, the desirability of the methods for the participants is important. It was also asked if they provide free or payable programmes or a combination of both.

#### KEY QUESTION 4 (Q4): Knowledge sharing

The question where they disseminate information about their activities is interesting compared with DIHs answer where they search for information.

#### KEY QUESTION 5 (Q5): Quantity, satisfaction, monitoring, and obstacles

Quantity of participation in different capacity building programmes answers how much DIHs participate in various programmes and how DIHs helpers successfully target their target audience. The important question is also about monitoring participants satisfaction and how. We also asked them to assess gender, management, EU participation and impact of covid-19.

The DIH helpers were also asked what they think about why DIHs don't take more programmes and support. DIHs were asked the same question.

The DIH helpers were also asked what challenges they face in providing support to DIHs are.



#### The research question for DIHs in roundtables (WP2.1)

#### KEY QUESTION 1 (Q1): General information about DIH

General information about DIHs provide basic information about DIHs, in which country they are located, if they are mature DIH or DIH in the establishment.

#### KEY QUESTION 2 (Q2): Capacity building programmes topics

The main topics represent the main services that DIHs provide, such as establishment, strategy & business development, service portfolio & development, expansion & networking, skills & knowledge creation, communication & awareness creation, and sector-specific topics. The important question for the future work in the project and development of capacity-building programmes is DIHs needs.

#### KEY QUESTION 3 (Q3): Methods in programmes

Answers about methods give insights about which methods have already been used and, more importantly, for future development of capacity building programmes, are methods preferability.



## THE RESEARCH RESULTS

## Research results for DIHs

## KEY QUESTION 1 (Q1): General information about DIH

In the survey, 112 DIH participated.

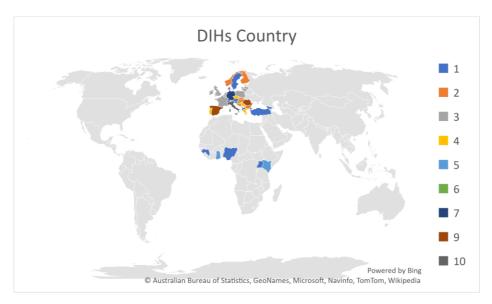


Figure 2: What is the location (country) of your DIH?

DIHs that participate in the survey come from Europe and Africa. From Europe, the majority comes from Croatia, Germany, Slovenia, Romania, Spain and Italy. From Africa, DIHs come from Ghana, Kenya, Nigeria, Uganda and Gambia.



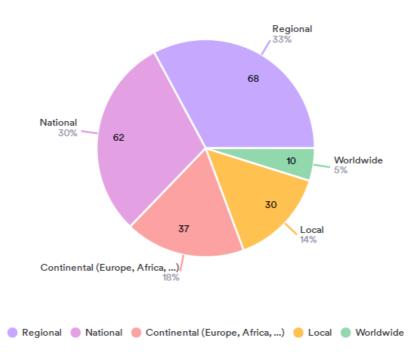


Figure 3: What is the geographical reach of your DIH?

The majority of DIHs have regional reach (33 %), then national (30 %), and then continental (18 %).



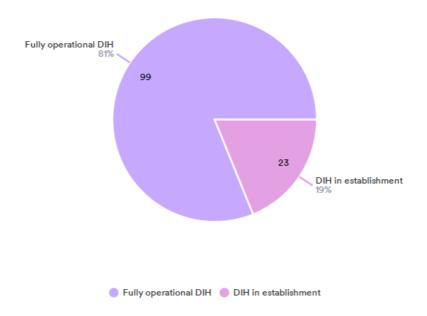


Figure 4: What is your DIH's level of maturity?

Almost all (81%) DIHs are fully operational DIH. The reason for this is that fully operational DIH are more likely to participate in capacity building programmes.



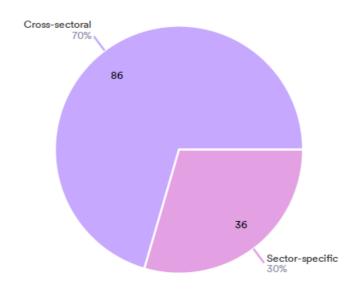


Figure 5: Is your DIH sector-specific or cross-sectoral?

The majority of DIHs are cross-sectoral (76 %).



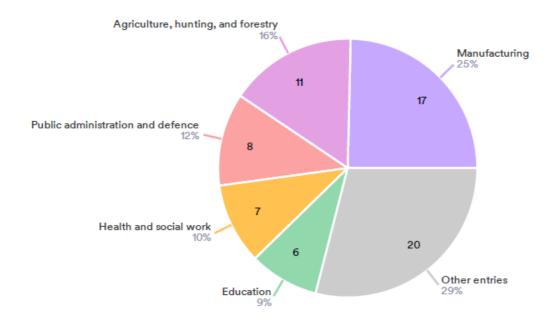


Figure 6: Which industries (based on NACE codes) do you target as sector-specific DIH?

Sector-specific is mainly focused on manufacturing (25 %), agriculture, hunting and forestry (16 %), public administration and defence (12 %), health and social work (10 %) and education (9 %). Some DIHs have selected several industries.



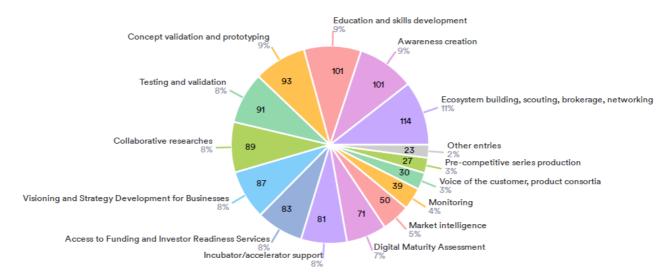


Figure 7: Which services your DIH is currently providing or is planning to provide?

The European Commission catalogue identifies 15 services that DIHs are expected to deliver. Almost all DIHs provide ecosystem building, scouting, brokerage, networking, awareness creation, education and skills development; concept validation and prototyping; testing and validation, and collaborative research. The least they provide pre-competitive series production, the voice of customers and monitoring.

#### **KEY MESSAGE:**

112 DIHs participated in the survey, most of them from Europe, others from Africa. The majority of DIHs have a regional reach (33 %). Almost all (81 %) are mature DIH. The majority of DIHs are cross-sectoral (76 %). Almost all DIHs provide ecosystem building, scouting, brokerage, networking, awareness creation, education and skills development, concept validation and prototyping, testing and validation, and collaborative research.



## KEY QUESTION 2 (Q2): Capacity building programmes topics

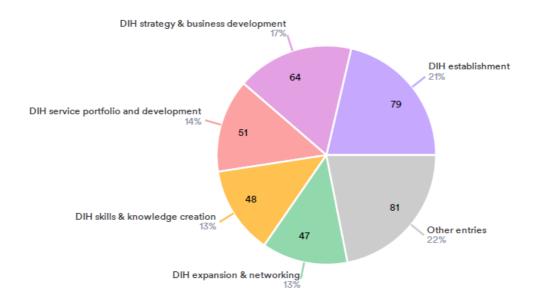


Figure 8: For which topics have you already had training?

One-fifth of all DIH have training on the topic of DIH establishment. More than 10 % DIHs has participated in a capacity-building programme for DIH strategy & business development, DIH service and portfolio and development, DIH expansion & networking, DIH skills & knowledge creation. Below 10 % were communication & awareness creation and sector-specific topics. The sector-specific topics have the least entries because only 30 % of DIHs are sector-specific, and they are the ones that are experts in their own field.





Figure 9: For which topics would you need further support in the future?

As most DIHs are fully established DIH, they no longer need basic knowledge about DIH establishment. But they need additional knowledge on DIH expansion & networking (17%), DIH strategy & business development (16%), DIH service portfolio and development (13%), DIH sector-specific topics (12%), DIH skills and knowledge creation (11%) and DIH communication & awareness creation (11%). Some (8%) also need additional support for topics like youth empowerment and women entrepreneurs. On average, each respondent marked four topics.

#### **KEY MESSAGE:**

One-fifth of all DIH have training on the topic of DIH establishment. DIHs need additional knowledge on DIH expansion & networking (17%), DIH strategy & business development (16%), DIH service portfolio and development (13%), DIH sector-specific topics (12%), DIH skills and knowledge creation (11%) and DIH communication & awareness creation (11%),



## KEY QUESTION 3 (Q3): Methods in programmes

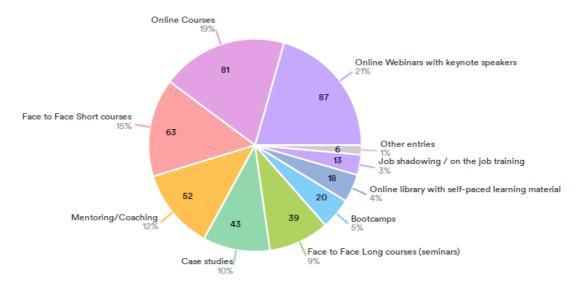


Figure 10: Which training methods have you used already?

On average, DIHs participate in 3.5 different training methods. Mostly they used online webinars with keynote speakers, online courses, face to face short courses, mentoring/coaching. Other methods have less than 10 %. The reason is that online education takes less time and less organizational effort to participate in.



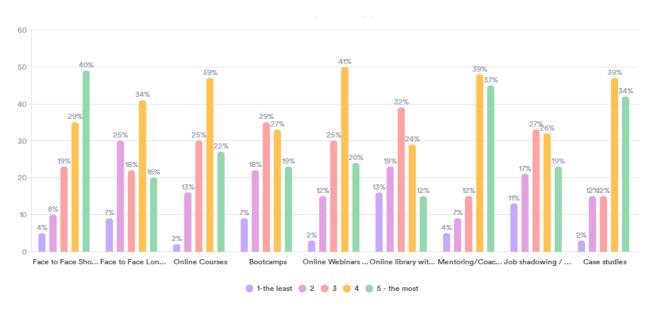


Figure 11: Which training methods do you prefer?

Table 1: Average values for different training methods

Training methods	Average value
Face to face short courses	3.96
Face to face long courses	3.27
Online courses	3.66
Bootcamps	3.34
Online Webinars	3.63
Online library with self-paced learning	3.03
material	
Mentoring/coaching	3.98
Job shadowing	3.25

DIHs prefer mentoring/coaching, face to face short courses, online courses and online webinars. The average value for neither method was below 3.



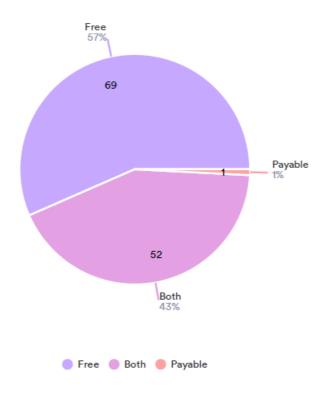


Figure 12: Which type of training modules/programmes do you usually take?

More than half DIHs take free programmes and almost half both, payable and free. Only payable takes only 1 %.

#### **KEY MESSAGE:**

Mostly they used online webinars with keynote speakers, online courses, face to face short courses, mentoring/coaching. DIHs prefer mentoring/coaching, face to face short courses, online courses and online webinars.



## KEY QUESTION 4 (Q4): Knowledge sharing

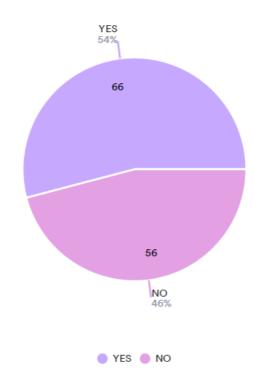


Figure 13: Have you received any support from DIH helpers?

Half of the DIHs received support from DIH helpers.

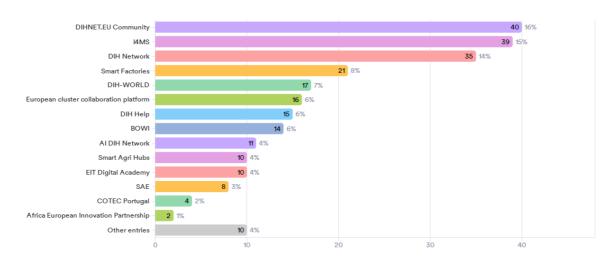


Figure 14: From which DIH helpers you received support?



40 DIH received support from DIHNET, 39 from I4MS, 35 from DIH Network, and 21 from Smart Factories. From other DIH helpers, less than 20 DIH received support.

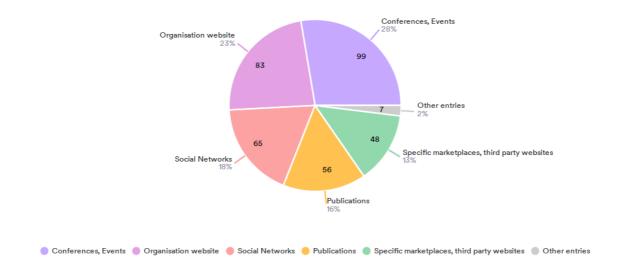


Figure 15: Which are the main mechanisms you use to find appropriate educational material or training?

Around one fifth get information about capacity buildings in conferences and events and on the organization website. Less than 20 % get information from social networks, publications and specific marketplaces, third party websites.

#### **KEY MESSAGE:**

Half of the DIHs received support from DIH helpers. 40 DIH received support from DIHNET, 39 from I4MS and 35 from DIH Network, and 21 from Smart Factories.

Around one fifth get information about capacity buildings in conferences and events and on the organization website.



## KEY QUESTION 5 (Q5): Quantity, satisfaction and obstacles

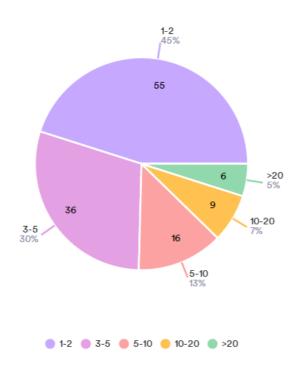


Figure 16: How many programmes did your DIH attend so far?

Almost half DIHs participate in 1 or 2 capacity building programmes, 30 % in 3-5, 13 % in 5-10 and 12 % in more than 10.



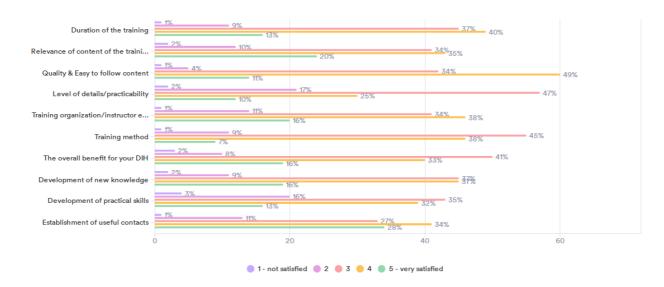


Figure 17: How satisfied were you with the programmes you have participated in?

Table 2: Average values for satisfaction in different categories for programmes

Different categories	Average value
Duration of the training	3.56
Relevance of content of the training to your needs	3.61
Quality&Easy to follow content	3.66
Level of details/practicability	3.24
Training organization/instructor expertise and delivery skills	3.57
Training method	3.42
The overall benefit for your DIH	3.51
Development of new knowledge	3.56
Development of practical skills	3.35
Establishment of useful contacts	3.77

Average satisfaction with all categories was 3.53, except the level of details/practicability, development of practical skills, and training method, which



were below this value. In general, with the capacity building programmes DIHs attended so far, they are more satisfied than not.

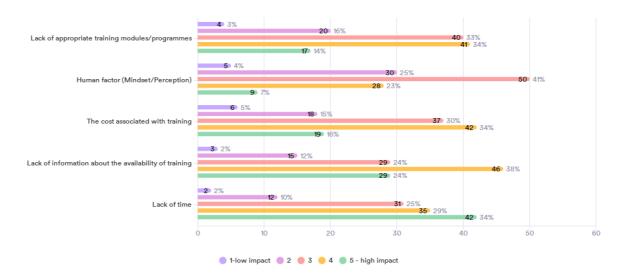


Figure 18: What are the obstacles for DIHs to take more training modules/programmes and support?

Table 3: Average value for impact on different obstacles

Obstacle	Average value
Lack of appropriate training	3.39
modules/programmes	
Human Factor (Mindset/Perception)	3.30
The cost associated with training	3.41
Lack of information about the availability of	3.68
training	
Lack of time	3.84

The average impact from 1 to 5 with all categories was 3.52. The highest value was for the obstacle lack of time (3.84) and lack of information about the availability of the training (3.68). For lack of information, providers of capacity building programmes can publish more information to reach their target audience.



#### **KEY MESSAGE:**

Almost half DIHs participate in 1 or 2 capacity building programmes, 30 % in 3-5. DIHs are unsatisfied with practicability in capacity building programmes. The biggest obstacle for DIHs to participate in more capacity building programmes, in the opinion of DIH helpers, is the lack of time and information about the availability of the training.



## Research results for DIH helpers

KEY QUESTION 1 (Q1): General information about DIH helpers

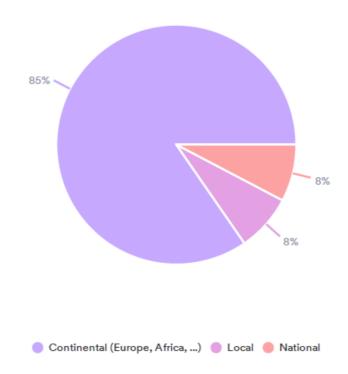


Figure 19: What is your geographical reach for programmes?

Almost all DIH helpers' programmes reach the whole continent, Europe or Africa.

#### **KEY MESSAGE:**

Almost all DIH helpers' programmes reach the whole continent, Europe or Africa.



#### KEY QUESTION 2 (Q2): Capacity building programmes topics

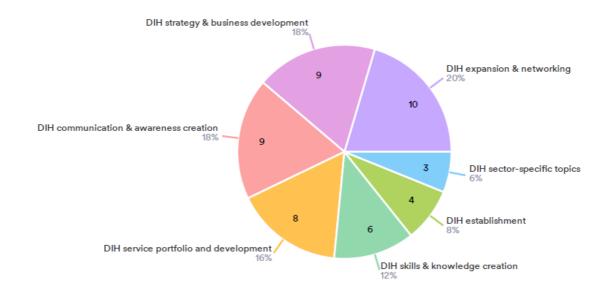


Figure 20: Which topics are covered by your programmes?

Most programmes covered the following topics: DIH expansion & networking, DIH strategy & business development, DIH communication & awareness creation, and DIH service portfolio and development. Less represented are topics: DIH skills & knowledge creation, DIH establishment and DIH sector-specific topics.



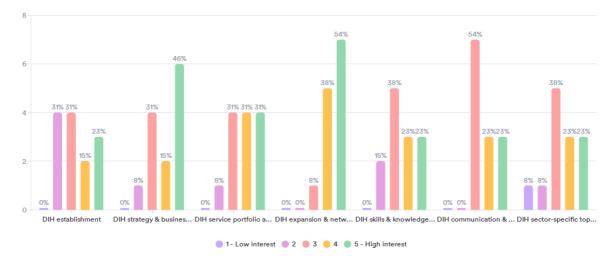


Figure 21: How do you evaluate the interest of DIHs in different topics?

Table 4: Interest in topics, average values

Topics	Average value
DIH establishment	3.31
DIH strategy & business development	3.63
DIH service portfolio & development	3.85
DIH expansion & networking	4.46
DIH skills & knowledge creation	3.54
DIH communication & awareness creation	3.69
DIH sector-specific topics	3.46

The highest interest topic is DIH expansion and networking, service portfolio & development and DIH communication & awareness creation. These are also the topics they covered the most besides DIH strategy & business development.



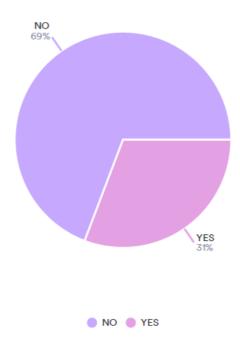


Figure 22: Is the majority of your programmes sector-specific?

Two-thirds of programmes DIHs helpers offer are not sector-specific. It is aligned with the responses from DIH as 70% is cross-sectoral.



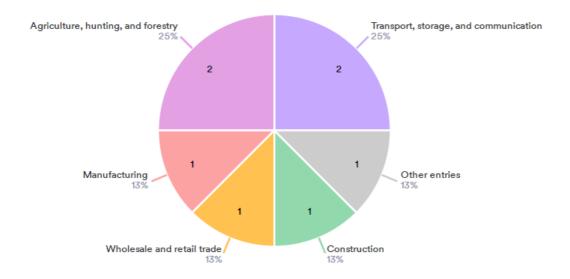


Figure 23: Which industries (based on NACE codes) do you target in your programmes?

They mainly covered Agriculture, hunting and forestry, and Transport, storage, and communication in sector-specific topics.

#### **KEY MESSAGE:**

Most programmes covered the following topics: DIH expansion & networking, DIH strategy & business development, DIH communication & awareness creation, and DIH service portfolio and development. The highest interest is in DIH expansion and networking, service portfolio & development and DIH communication & awareness creation.

Two-thirds of programmes DIHs helpers offer is not sector-specific. They mainly covered Agriculture, hunting and forestry, and Transport, storage, and communication in sector-specific topics.



#### KEY QUESTION 3 (Q3): Methods in programmes

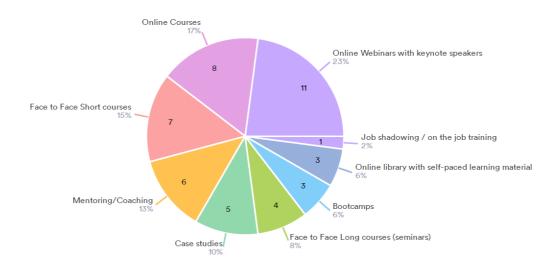


Figure 24: Which methods do you predominantly use?

Online programmes are predominantly used, mainly webinars and courses. Then they use face to face short courses, mentoring/coaching, and case studies.

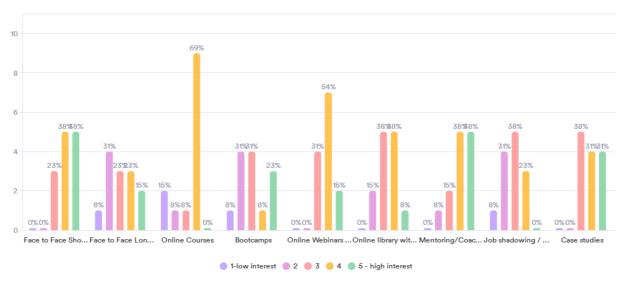


Figure 25: Which methods do you think are most desirable by your participants?



Table 5: Average value for the desirability of the methods for participants

Methods	Average value
Face to Face Short Courses	4.85
Face to Face Long Courses	3.08
Online Courses	3.31
Bootcamps	3.08
Online Webinars	3.85
Online library with self-paced learning	3.38
material	3.30
Mentoring/Coaching	4.08
Job shadowing	2.77
Case studies	3.92

DIH helpers assess that the least preferred method is job shadowing, and the most preferable are face to face short courses and mentoring/coaching. DIH helpers know well their target audience, DIHs, as DIHs also prefer face to face short courses and mentoring/coaching the highest.



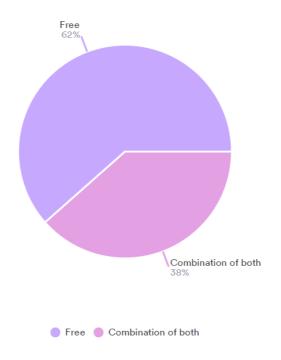


Figure 26: Are your programmes free or payable or a combination of both?

62 % of programmes are free and 38 % are a combination of both. More in-depth programmes are usually payable.

#### **KEY MESSAGES:**

Online programmes are predominantly used, mainly webinars and courses. DIH helpers assess that the least preferred method is job shadowing, and the most preferable are face to face short courses and mentoring/coaching.

62 % of programmes are free.



#### KEY QUESTION 4 (Q4): Knowledge sharing

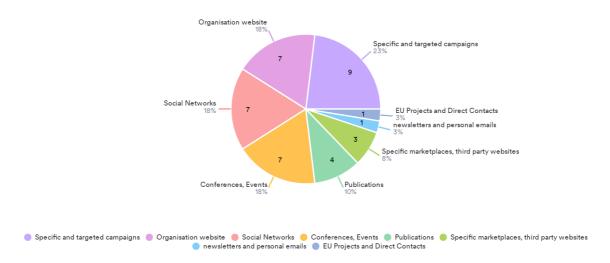


Figure 27: Which are the main mechanisms you use to approach DIHs and disseminate your activities?

23% of DIH helpers use specific and targeted campaigns; 18% use their website and social networks. As DIHs stated, their search for information mainly in conferences, events and on the organization's website, the informational channels DIH helpers are in line.

#### **KEY MESSAGES:**

To disseminate their activities, 23% of DIH helpers use specific and targeted campaigns and 18% of their websites and social networks.



#### KEY QUESTION 5 (Q5): Quantity, satisfaction, monitoring, and obstacles

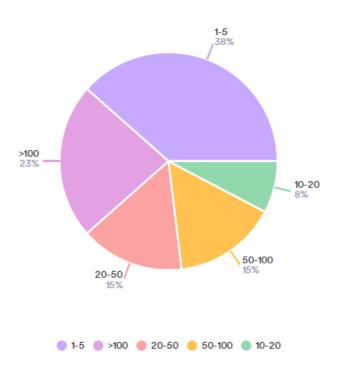


Figure 28: How many DIHs have you supported with programmes so far?

38% of the inquired DIH helpers have supported 1-5 DIHs, and 23% more than 100.



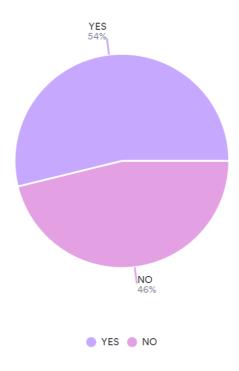


Figure 29: Do you systematically monitor trainees' satisfaction?

Only 54% of DIH helpers monitor participants satisfaction. If they monitor it more, they can better align the new programmes with the needs and expectations of the DIHs.



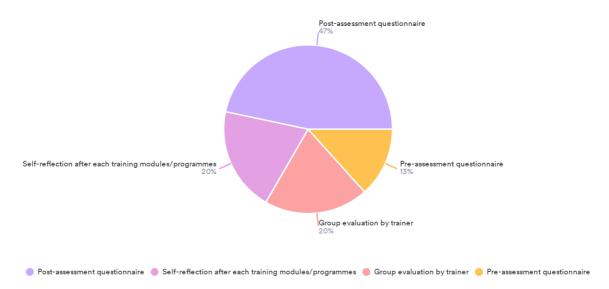


Figure 30: How do you evaluate trainees' feedback?

Almost half (47%) monitor trainees' satisfaction with a post-assessment questionnaire.

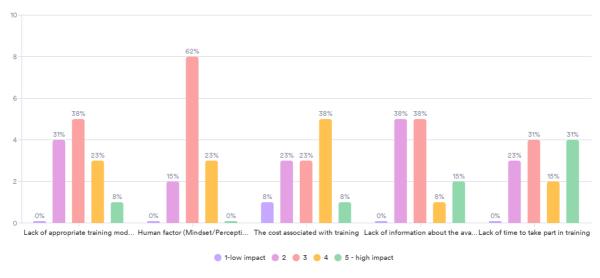


Figure 31: What are the obstacles for DIHs to take more programmes and support?

Table 6: Average values for obstacles for DIHs to take more programmes

Obstacles	Average value
Lack of appropriate programmes	3.08



Human factor (Mindset/Perception)	3.08
The cost associated with training	3.15
Lack of information about the availability of training	3.00
Lack of time to take part in training	3.54

DIH helpers assess that the biggest obstacle for DIHs to take more programmes is lack of time to participate in training. DIHs also assessed time as the most significant obstacle. The second obstacle DIH assess is lack of information about the availability of training, but DIH helpers think that lack of information is the least ranking obstacle.

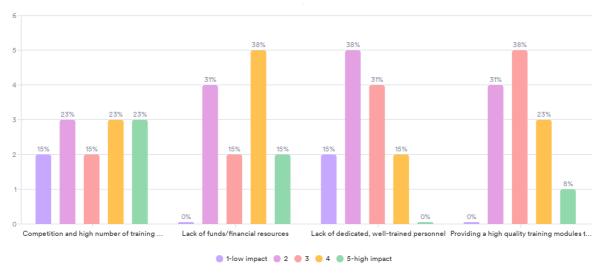


Figure 32: What challenges do you face while providing support to DIHs?

Table 7: Average values for different challenges DIH helpers face

Challenges	Average value	
Competition and a high number of programmes	3.15	
from different helpers	3.13	
Lack of funds/financial resources	3.38	
Lack of dedicated, well-trained personnel	2.46	



Providing a high-quality programme to the	3.08
needs of DIHs	3.00

The biggest challenge for DIH helpers to provide programmes and support for DIHs is the lack of funds/financial resources. Lack of financial resources is because most DIH helpers were funded during the project, and after the project's duration, the funding stops.

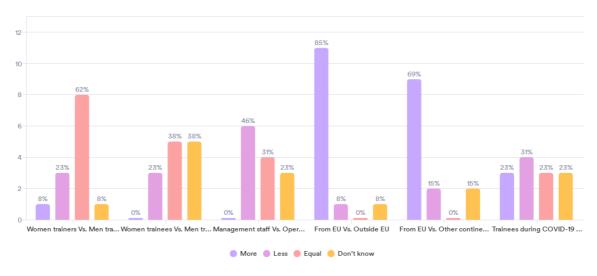


Figure 33: In your programmes, do you have more or less ...

In different programmes, 62% have equal participation on women and men trainers. But in the case of the participants, the participation rates are not equal (38% answered to have more male trainees). Almost all participants (85%) are from the EU compared to whole continents. When comparing the EU to other continents, it is observed that there are more from the EU (69%) than from other continents. In 23% of programmes, there were more participants during the COVID-19 pandemic, 31% reported fewer participants, and 23% do not know or do not reported any difference. Based on the results, we can not draw conclusions about the effect of COVID-19 on participants' motives to take more programmes or seek support.



#### **KEY MESSAGES:**

38% of DIH helpers have supported 1-5 DIHs, and 23% more than 100. Only 54% of DIH helpers monitor participants satisfaction, half of them (47%) with a post-assessment questionnaire.

DIH helpers assess that the biggest obstacle for DIH to take more programmes is lack of time to participate in training.

The biggest challenge for DIH helpers to provide programmes and support for DIHs is the lack of funds/financial resources.

Based on the results, we can not draw conclusions about the effect of COVID-19 on participants' motives to take more programmes or seek support.



# Research results for DIHs in roundtables (WP2.1)

KEY QUESTION 1 (Q1): General information about DIH

30 DIHs participated in the survey.



Figure 34: Participating DIHs countries

In the roundtables, some DIHs from Africa have participated. In the survey, the majority of DIHs come from Nigeria.

#### **KEY MESSAGE:**

The participating DIHs were from Africa, the majority from Nigeria.



#### KEY QUESTION 2 (Q2): Capacity building programmes topics

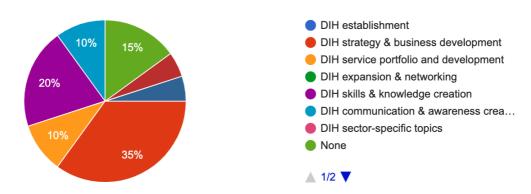


Figure 35: On which topics have you already had training?

One-third of all DIH have training on the topic of DIH strategy & business development. 20% on DIH skills & knowledge creation, 15% on DIH expansion & networking, 10% on DIH service portfolio & development, and 10% on DIH communication & awareness creation.

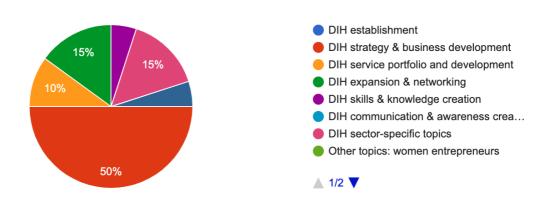


Figure 36: For which topics would you need further support in the future?

Half of the DIHs need further support in DIH strategy & business development. This is unlike the area of research among all DIHs (where the majority was from Europe),



only 16% reported the need for additional support. 15% of the DIHs need support on DIH expansion & networking and DIH sector-specific topics.

#### **KEY MESSAGE:**

One-third of all DIHs already have training on DIH strategy & business development; nonetheless, half of them need further support on this topic.

#### KEY QUESTION 3 (Q3): Methods in programmes

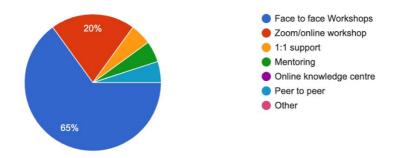


Figure 37: Which training methods did you find most effective?

65% of African DIHs stated that the most effective method in training is face to face workshops. Also, in research, of all DIHs, participants assess face to face short courses as the most preferable besides mentoring/coaching.

#### **KEY MESSAGE:**

65% of participants mean that the most effective method in training is face to face workshops.



#### **CONCLUSION**

We completed interviews with 182 organisations, of these 122 DIHs in the first research, 20 DIH helpers in the second and 40 DIHs from Africa in roundtable discussions. Their answers are needed for future work in the project and to identify how DIHs are trained on different topics and which topics need additional support. Important questions for the development of capacity building are about utilised methods and their preferability. Knowledge sharing gives insight into how to reach DIHs. In the field of acquiring and measure outcomes and achievement is important to identify appropriate methodology. Identified obstacles, contextual and cultural factors, are important for better alignment with DIHs needs and preference for AfriConEU Academy.

DIHs need additional knowledge on DIH expansion & networking, DIH strategy & business development, DIH service portfolio and development, DIH sector-specific topics, DIH skills and knowledge creation and DIH communication & awareness creation. African DIHs needs the most additional knowledge on DIH strategy & business development. DIH helpers programmes covered topics: DIH expansion & networking, DIH strategy & business development, DIH communication & awareness creation, and DIH service portfolio and development. The highest interest is in DIH expansion and networking, service portfolio & development and DIH communication & awareness creation. Two-thirds of programmes are cross-sectoral.

The most used methods for capacity building programmes are online webinars with keynote speakers, online courses, face to face short courses, mentoring/coaching. DIHs prefer mentoring/coaching, face to face short courses, online courses and online webinars. DIH helpers mainly offer online programmes (webinars and courses). They assess (the DIH helpers assess) that DIHs' preferred methods are face to face short courses and mentoring/coaching. The African DIHs also stated that the most effective method is face to face workshops. As one-third of DIHs participated



in 3 to 5 capacity building programmes, they are unsatisfied with the practicability of programmes.

DIH helpers mainly use specific and targeted campaigns, websites, and social networks to disseminate their activities. Although only half of DIHs received support from DIH helpers, a few are very active, as one-fifth of DIH helpers supported more than 100 DIHs. DIHs mainly search for information about capacity building programmes and other support at conferences and events on the DIH helpers' websites. DIHs think that the biggest obstacle for participation in more capacity building programmes is a lack of time and information about the availability of the trainings, while DIH helpers provide the information about trainings, and they assess lack of information as the least problematic area. DIH helpers assess that lack of time as the biggest obstacle for DIH to participate more.

Half of the DIH helpers monitor participants satisfaction, half of them with a postassessment questionnaire. For better alignment with DIHs, needs and preference evaluation methods are extremely important.

Based on the results, we cannot draw conclusions about the effect of COVID-19 on participants' motives to take more programmes or seek support.

Our study provides valuable insights and will serve as the foundation for future work in developing the "AfriConEu Networking Academy".



#### **APPENDIX**

# The survey questions for DIHs

## 1. What is your DIH's level of maturity?

1	DIH in establishment
2	Fully operational DIH

## 2. Is your DIH sector-specific or cross-sectoral?

7	Sector-specific
2	Cross-sectoral

2.1. If your answer is sector-specific, which industries (based on NACE codes) do you target in your training modules/programmes?

<sup>\*</sup>more answers possible

7	Manufacturing
2	Other community, social and personal service activities (media,
	entertainment, etc.)
3	Health and social work
4	Education
5	Public administration and defence
6	Real estate, renting and business activities



7	Financial intermediation
8	Transport, storage and communication
9	Hotels and restaurants
10	Wholesale and retail trade
11	Construction
11	Electricity, gas and water supply
12	Mining and quarrying
13	Fishing
14	Agriculture, hunting and forestry

3. The European Commission catalogue has identified 15 services that DIHs are expected to deliver. Please confirm which services your DIH is currently providing or is planning to provide.

<sup>\*</sup>more answers possible

1	Awareness creation
2	Ecosystem building, scouting, brokerage, networking
3	Visioning and Strategy Development for Businesses
4	Collaborative researches
5	Concept validation and prototyping
6	Testing and validation
7	Pre-competitive series production
8	Commercial infrastructure
9	Digital Maturity Assessment
10	Incubator/accelerator support
11	Voice of the customer, product consortia
12	Market intelligence
13	Access to Funding and Investor Readiness Services



14	Monitoring
15	Education and skills development

4.	What is the	location	(country)	of your	DIH?
----	-------------	----------	-----------	---------	------

1	Drop-down list - country

# 5. What is the geographical reach of your DIH?

7	Local
2	National
3	Regional
4	Continental
5	Worldwide

6. Capacity building programmes are designed for DIHs in the establishment phase or for DIHs in the fully operational phase. On which of these topics you have already had training?

<sup>\*</sup>more answers possible

1	DIH establishment
2	DIH strategy & business development
3	DIH service portfolio and development
4	DIH expansion & networking
5	DIH skills & knowledge creation
6	DIH communication & awareness creation
7	DIH sector-specific topics



7.	Which capacity building for DIHs (training modules/programmes) c	lic
	you attend successfully meet your expectations?	

Title	
Link	
Title	
Link	
Title	
Link	

# 8. For which topics would you need further support in the future?

<sup>\*</sup>more answers possible

1	DIH establishment
2	DIH strategy & business development
3	DIH service portfolio and development
4	DIH expansion & networking
5	DIH skills & knowledge creation
6	DIH communication & awareness creation
7	DIH sector-specific topics
8	Other topics: women entrepreneurs
9	Other topics: youth empowerment

# 9. Which training methods you have used already?

<sup>\*</sup>more answers possible



1	Face to face Short courses
2	Face to face Long courses (seminars)
3	Online Courses
4	Bootcamps
5	Online Webinars with keynote speakers
6	Online library with self-paced learning material
7	Mentoring/Coaching
8	Job shadowing / on the job training
9	Case studies
10	Other (Which)

# 10. Which training methods do you prefer?

<sup>\*</sup>Mark from 1-5, 1-the least, 5-the most

		1-the	2	3	4	5-the
		least				most
7	Face to face Short					
'	courses					
2	Face to face Long					
	courses (seminars)					
3	Online Courses					
4	Bootcamps					
	Online Webinars					
5	with keynote					
	speakers					
	Online library with					
6	self-paced					
	learning material					



7	Mentoring/Coachi			
,	ng			
0	Job shadowing /			
8	on the job training			
9	Case studies			
10	Other (Which)			

11.	Which type of	f training	modules/	programmes	do you	usually take?
-----	---------------	------------	----------	------------	--------	---------------

7	Free
2	Payable
3	Both

12. Have you received any support from the initiatives such as <a href="IAMS">IAMS</a>, <a href="DIHELP">DIHELP</a> and others?

1	Yes
2	No

12.1If your answer is yes, from which one you received support?

<sup>\*</sup>more answers possible

1	DIH Network
2	DIH Help
3	DIHNET.EU Community
4	Smart Agri Hubs
5	AI DIH Network



6	I4MS
7	SAE
8	Smart Factories
9	ITU Innovation platform
10	EIT Digital Academy
11	Afrilabs
12	BOWI
13	DIH-WORLD
14	ODINE-Open Data Incubator Europe
15	DG RTD- EPPN network
16	European cluster collaboration platform
17	Africa European Innovation Partnership
18	Ghana Hubs Network
19	ISN Hubs
20	ASSEK
21	Solar Taxi
22	COTEC Portugal
23	Other (please specify)

# 13. Which are the main mechanisms you use to find appropriate educational material or training?

<sup>\*</sup>more answers possible

7	Organization website
2	Specific marketplaces, third party websites
3	Social Networks
4	Publications
5	Conferences, Events



6	Other

# 14. How many training modules/programmes did your DIH attend so far?

7	1-2
2	3-5
3	5-10
4	10-20
5	>20

15. Generally, how satisfied were you with the training modules/programmes you have participated in?

<sup>\*</sup>Mark from 1-5, 1-not satisfied, 5-very satisfied

		1-not	2	3	4	5-very
		satisfie				satisfie
		d				d
1	Duration of the training					
	Relevance of content of					
2	the training to your					
	needs					
3	Quality & Easy to follow					
3	content					
4	Level of					
	details/practicability					
5	Training					
<u> </u>	organization/instructor					



	expertise and delivery			
	skills			
6	Training method			
7	The overall benefit for			
	your DIH			
8	Development of new			
	knowledge			
9	Development of			
	practical skills			
10	Establishment of useful			
	contacts			

16. What are obstacles for DIHs to take more training modules/programmes and support?

<sup>\*</sup>Mark from 1-5, 1-the least, 5-the most

		1-the	2	3	4	5-the
		least				most
	Lack of appropriate					
1	training					
	modules/programmes					
2	Human factor					
	(Mindset/Perception)					
3	The cost associated with					
)	training					
	Lack of information					
4	about the availability of					
	training					
5	Lack of time					



17. Please provide DIH name/respondent details (providing these details is not mandatory):

DIH name	
Are you a candidate in	Yes/No
the EDIH initiative?	res/NO
Respondent name	

\*EDIH or 'European Digital Innovation Hub' is a single organization or a coordinated group of organizations with complementary expertise, with a not-for-profit objective that supports companies – especially SMEs and mid-caps – and/or the public sector in their digital transformation. EDIHs offer services such as testing before investing, skills and training, finding investments, innovation ecosystem, and networking.

18. Do you consent to contact you with further information about the project results (reports), activities and cooperation possibilities?

7	Yes
2	No

Note: If No, jump to the end of the questionnaire.

19. Please provide your contact details to reach you.

Telephone number:	Please specify
e-mail 1:	Please specify
e-mail 2:	Please specify
e-mail 3:	Please specify
e-mail 4:	Please specify





# The survey questions for DIH helpers

1. Capacity building programmes are designed for both DIHs in the establishment phase or in the fully operational phase. Please confirm which topics are covered by your training modules/programmes.

<sup>\*</sup>more answers possible

1	DIH establishment	
2	OIH strategy & business development	
3	DIH service portfolio and development	
4	DIH expansion & networking	
5	DIH skills & knowledge creation	
6	DIH communication & awareness creation	
7	DIH sector-specific topics	

#### 2. What is your geographical reach for training modules/programmes?

1	Local
2	National
3	Regional
4	Continental (Europe, Africa,)
5	Worldwide

3. How do you evaluate the interest of your trainees in DIH training modules/programmes listed below? Irrespectively of the fact if you are providing this training or not.



\*Mark from 1-5, 1-low interest, 5-high interest

		1-low				5-high
		interest	2	3	4	interest
1	DIH establishment					
	DIH strategy &					
2	business					
	development					
3	DIH service portfolio					
3	and development					
	DIH expansion &					
4	networking					
5	DIH skills &					
5	knowledge creation					
	DIH					
6	communication &					
	awareness creation					
7	DIH sector-specific					
	topics					

4. Which of your capacity building for DIHs (training modules/programmes) is of the most interest from the trainees?

Title	
Link	
Title	
Link	
Title	



Link	

5. Is the majority of your training modules/programmes sector-specific?

1	Yes
2	No

5.1 If your answer is yes, which industries (based on NACE codes) do you target in your training modules/programmes?

\*more answers possible

1	Manufacturing
2	Other community, social and personal service activities (media,
	entertainment, etc.)
3	Health and social work
4	Education
5	Public administration and defence
6	Real estate, renting and business activities
7	Financial intermediation
8	Transport, storage and communication
9	Hotels and restaurants
10	Wholesale and retail trade
11	Construction
11	Electricity, gas and water supply
12	Mining and quarrying
13	Fishing
14	Agriculture, hunting and forestry



#### 6. Which training methods do you predominantly use?

<sup>\*</sup>more answers possible

1	Face to face Short courses
2	Face to face Long courses (seminars)
3	Online Courses
4	Bootcamps
5	Online Webinars with keynote speakers
6	Online library with self-paced learning material
7	Mentoring/Coaching
8	Job shadowing / on the job training
9	Case studies
10	Other (Which)

# 7. Which training methods do you think are most desirable for your trainees?

<sup>\*</sup>Mark from 1-5, 1-low interest, 5-high interest

		1-low	2	3	4	5-high
		interest	2	3		interest
1	Face to face Short					
'	courses					
	Face to face Long					
2	courses (seminars)					
3	Online Courses					
4	Bootcamps					



	Online Webinars			
5	with keynote			
	speakers			
	Online library with			
6	self-paced learning			
	material			
7	Mentoring/Coaching			
8	Job shadowing / on			
0	the job training			
9	Case studies			

8. Are your training modules/programmes free or payable?

1	Free
2	Payable
3	Combination of both

9. How many DIHs have you supported with training modules/programmes so far?

1	1-5
2	5-10
3	10-20
4	20-50
5	50-100
6	>100



10. Which are the main mechanisms you use to approach DIHs and disseminate your activities and training modules/programmes?

<sup>\*</sup>more answers possible

1	Specific and targeted campaigns
2	Organization website
3	Specific marketplaces, third party websites
4	Social Networks
5	Publications
6	Conferences, Events
7	Other (please specify)

77		1.1			
- 1 1	SVSTAMIC	`allv/mc	n	trainees'	satisfaction?
11.	Systerine	July 111C	/111001	cranices	Jacistaction.

1	Yes
2	No

## 11.1 How do you evaluate trainees' feedback?

1	Pre-assessment questionnaire
2	Post assessment questionnaire
3	Self-reflection after each training module/programme
4	Group evaluation by trainer
5	Other (please specify)

12. What are obstacles for DIHs to take more training modules/programmes and support?



\*Mark from 1-5, 1-low impact, 5-high impact

		1-low	2	7	/.	5-high
		impact	2	3	4	impact
	Lack of appropriate					
1	training					
	modules/programmes					
2	Human factor					
	(Mindset/Perception)					
3	The cost associated					
3	with training					
	Lack of information					
4	about the availability of					
	training					
5	Lack of time					

13. What challenges do you (DIH supporters) face while providing support to DIHs?

<sup>\*</sup>Mark from 1-5, 1-low impact, 5-high impact

			1-low	2	3	/.	5-high
			impact	2	3	4	impact
		Competition and high					
		number of training					
-	1	modules/programmes					
		from different					
		supporters					
_	2	Lack of funds/financial					
		resources					



3	Lack of dedicated, well-			
	trained personnel			
	Providing a high-			
4	quality training module			
	tailored to the needs of			
	DIHs			

14. In your training modules/programmes, do you have more or less:

		More	Less	Equal	Don't know
1	Women trainees Vs. Men trainees				
2	Women trainers Vs. Men trainers				
3	Management staff Vs. Operational staff				
4	From EU Vs. Outside EU				
5	From EU Vs. Other continents				
6	Trainees during COVID-19 pandemic				

15. Please provide organization/respondent details (providing these details is not mandatory):



Organization name	
Respondent name	

16. Do you consent to contact you with further information about the project results (reports), activities and cooperation possibilities?

1	Yes
2	No

Note: If No, jump to the end of the questionnaire.

17. Please provide your contact details to reach you.

Telephone number:	Please specify
e-mail 1:	Please specify
e-mail 2:	Please specify
e-mail 3:	Please specify
e-mail 4:	Please specify



# The survey questions for DIH's participating in a roundtable (ATBN)

1.	What is the	location	(country)	of your	DIH?

1	Drop-down list - country
	-

#### 2. How many years has the DIH been in operation?

1:	0-2 years
2	3-5 years
3	6-10 years
4	10+ years

3. Have you participated in previous training or capacity building programmes at Digital Innovation Hubs/ Entrepreneurship Support Organizations?

1:	0-2 years
2	3-5 years
3	6-10 years
4	10+ years

4. Capacity building programmes are designed for DIHs in the establishment phase or for DIHs in the fully operational phase. On which of these topics have you already had training?



1	DIH establishment
2	DIH strategy & business development
3	DIH service portfolio and development
4	DIH expansion & networking
5	DIH skills & knowledge creation
6	DIH communication & awareness creation
7	DIH sector-specific topics

5.	Which capacity building for DIHs (training modules/programmes) dic
	you attend successfully meet your expectations?

Title	
Link	
Title	
Link	
Title	
Link	

# 6. For which topics would you need further support in the future?

<sup>\*</sup>more answers possible

7	DIH establishment
2	DIH strategy & business development
3	DIH service portfolio and development
4	DIH expansion & networking
5	DIH skills & knowledge creation
6	DIH communication & awareness creation
7	DIH sector-specific topics



8	Other topics: women entrepreneurs
9	Other topics: youth empowerment

# 7. Which training methods did you find most effective for you?

<sup>\*</sup>more answers possible

1	Face to face Short courses
2	Face to face Long courses (seminars)
3	Online Courses
4	Bootcamps
5	Online Webinars with keynote speakers
6	Online library with self-paced learning material
7	Mentoring/Coaching
8	Job shadowing / on the job training
9	Case studies
10	Other (Which)