Entrepreneurship/ Business development training program with focus on inspiration, education and incubation

Deliverable 3.2, September 2023

<table>
<tr><td colspan="2" align="center">OUTPUT SUMMARY
PROJECT INFORMATION</td></tr>
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Project Title	European Partnership Water4All – Water security for the planet
Project Acronym	Water4All
Call Identifier	Horizon-CL6-2021-Climate-01-02
Contract Number	101060874
Starting Date	1 June 2022
End Date	31 May 2029
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Deliverable Title	Entrepreneurship / Business development training program with focus on inspiration, education and incubation
Deliverable Number	D3.2
Work Package	WP3 – Pillar C: Science - Policy - End-users Interface
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Date of Delivery	29/09/2023

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Date	25/09/2023

Acknowledgements

CONTENTS

LIST OF ACRONYMS

ACRONYM	FULL TITLE
BDC	Business Development Course
BIG	Business Idea Generator
BLT	Business Lunch Talk
CAPEX	Capital investment
FUN	Fvck Up Night
IP	Intellectual Property
LG	Launch Game
SDGs	Sustainable Development Goals
SMEs	Small and Medium-sized Enterprises
SSOs	Start-up Support Organisations
TRL	Technology Readiness Level
Water4All	European Partnership on Water Security for the Planet

ABSTRACT

This report presents the role of a common and integrated training program for entrepreneurship and business development across Europe. The aim of the report is to set-up an entrepreneurship/ business development training program with focus on inspiration, education and incubation. But before setting up such an inspiration, education and incubation program, it is crucial to know if and in what field start-ups need support and which support is already available. Because start-ups and Small and Medium-sized Enterprises (SMEs) are crucial for the successful uptake of innovative approaches.

The work has been carried out as part of the European partnership Water4All – water security for the planet, in the framework of Pillar C activities on Science - Policy - End-users Interface. The main goal of this Pillar is to support knowledge transfer and the uptake of research outcomes and innovative approaches in the water sector. To achieve this ambitious goal, the activities aim at acceleration of the dialogue between science and policy communities, in order to ensure that research and innovation actions are responding to policy needs, but also to reinforce the connections with the economic sectors for a more effective implementation of innovative solutions at local and regional scales.

Within the activities implemented in the frame of Water4All Pillar C, the Task C2 on "Accelerating the uptake of Research and Innovation (R&I) results by the economic sectors" focuses both on the creation (subtask C2.1) and incubation (subtask C2.2) of start-ups. So, the work in subtasks C2.1 and C2.2 is very much related regarding the sustainable development of start-ups and SMEs. This document links subtasks C2.1 "Supporting the creation of start-ups" and C2.2 "Co-developing the strategy of a European water incubator".

During the first year of Water4All, five main activities were distinguished to support the acceleration of the uptake of R&I results by the economic sectors:

- building a business-friendly environment for the creation of start-ups;
- supporting the start-ups in the identification of financial program and to access to seed financing;
- de-risking business by creating interdisciplinary company innovation processes;
- create connection with the market in all stages of start-up development;
- get an international overview and connect available water technology facilities (laboratories, demo sites, testing grounds, etc.) so that entrepreneurs always have access to the right facilities.

Therefore, a concept note as well as online surveys were developed within this task to get input from all Water4All partners, and to a larger extend, answers to the public consultations were collected from start-ups and supporters of start-ups. The consultations targeted to start-ups and Start-ups Support Organisations (SSOs) were published online in April-May 2023. The collected answers will help to identify what the needs of SSO and start-ups (e.g., support, education, knowledge gaps) are, what positive and negative experiences they have had and how they have been able to secure funding/funds. The first chapter "start-up support" gives a more general introduction to start-up support. The second chapter "survey outcomes" gives insight in the outcomes of the questionnaires addressed to start-ups and supporters of start-ups. The set-up of an entrepreneurship/ business development training program is discussed in the last chapter "Entrepreneurship/ business development training program".

1. START-UP SUPPORT

Funding a start-up means understanding the market. The development process covers a whole ecosystem: from the idea to the use of the product. Each phase requires a good preparation, analysis, fundraising, team selection and much more. Further, each phase has its challenges and risks. The length of each stage will vary greatly depending on the business, the sector and the fundraising possibilities. It is therefore important to understand why start-ups fail, what experiences they have gained and what they have been able to build on. The stages of a start-up are as follows:
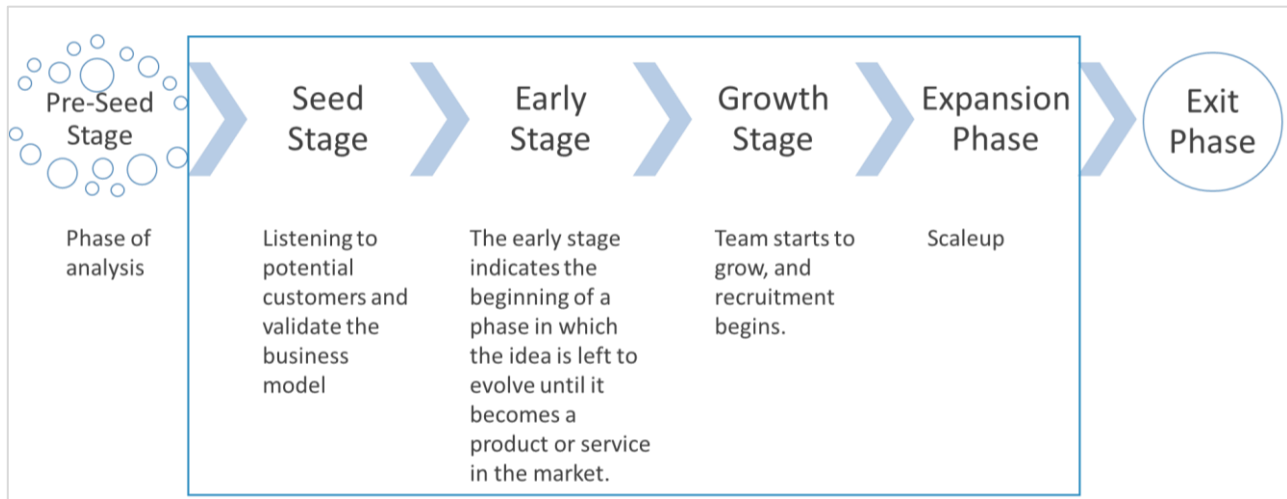
Each stage of the start-up process has its own risks, which can lead to the failure of the start-up. Especially early-stage and growth stage start-ups bear the highest risk. The early stage indicates the beginning of a phase in which the idea is left to develop until it becomes a product or service on the market. The product is more a model that does not have all functions. It is a first version where results and information are collected. Depending on the results, this can lead to failure, e.g. due to a lack of market or financial problems. The growth stage is also characterised by a high potential for failure, because costs (including personnel costs, premises) are rising. These increased financial needs can lead to complications. New organisational structures can also be complicated because the team has to find a way of coming together. However, these are just a few examples and it is also relevant to have knowledge about Start-up Supporting Organisations (SSOs). These are institutions that provide funding. In order to develop a program as a comprehensive package it is also important to understand how SSOs operate and what they offer. Therefore, the focus must also be placed on them in order to better identify the possible offers and questions. A promising program can only be developed on the basis of a comprehensive view.

1.1.   Why start-ups fail

Researchers and start-ups spend years on developing a technology. In many cases these inventions never become innovations that conquer the world. There are many different reasons why start-ups fail. Figure 1 shows the top 12 reasons identified by the company CB Insights.

The research of CB Insights is not specifically focused on water technology start-ups. However, while there are specific circumstances in the water sector, most of the reasons why start-ups fail will be the same. In addition, a key difference between water technology start-ups and other sectors is the time-to-market. Research of Paul O'Callaghan (2020)[1] shows that the process of development and acceptance of water technology on average takes about a decade. This timeframe is longer then in many other sectors. Many launching customers (e.g., waterboards, drinking water companies) are risk averse and CAPEX (Capital investment) in water technology is relatively high and long term. This makes it even more challenging for start-ups in water technology to be successful.

1.2.   SSO: reducing time to market

There are dozens of SSOs across Europe. The aim of SSOs is to help start-ups successfully develop their organisation and bring their technology to market. Basically, the main goal is to reduce the time-to-market. The sooner a start-up achieves commercial success, the better the chance of survival. Some of these SSOs focus specifically on supporting water technology start-ups others have a more general support program.

Figure 1 - Top 12 reasons why start-ups fail

Although not all start-up support organisations offer support in all fields, start-up support can be divided into five different areas. SSOs give start-ups access to:

1. Talent;
2. Market;
3. Finance;
4. Knowledge;
5. Facilities.

The next paragraphs give more insight in these five areas of support.

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[1] Dynamics of water innovation: insights into the rate of adoption, diffusion and success of emerging water technologies globally, Paul O'Callaghan, Wageningen University, 2020

1.3. Access to talent

Years of work are often invested in the development of a technology, that never makes it to market. This is partly because the team that works on the innovation lacks the necessary competencies. Setting-up a business is all about tackling non-technical challenges. Teams working on an innovation encounter non-technical questions such as: is the chosen business model correct? How do I protect my knowledge? How can I scale my product? How do I ensure a healthy financial foundation for my company? Who is my customer and how do I reach them?

An invention only becomes a successful innovation if all these aspects are taken into account. The majority of the start-up teams in water technology have a technical background. That is why SSOs offer a wide variety of entrepreneurship programs, to develop the necessary competences within the start-up teams. Developing entrepreneurial skills takes place in five stages:

1. Inspiration: stimulating entrepreneurship;
2. Education: training and educating potential entrepreneurs to prepare for the launch of their innovation;
3. Incubation: supporting entrepreneurs in the market validation towards a product-market fit;
4. Acceleration: upscaling and bringing the technology to market;
5. Growth: the (substantial) growth of the company.

1.4. Access to market

An invention can only be successful if it provides a solution to market demand. But what is this market demand? Where do start-ups find their customers, and how do they bridge the gap between an interested prospect and a paying customer? Moreover, customers are only one side of the business. Where do start-ups find partners who can help them produce their product or who can add their product in their sales portfolio?

To help start-ups get connected to the market, SSOs offer a wide variety of market support, including:

- Get insight into the market potential and market demand for their innovation;
- Connect start-ups with (launching) customers;
- Making connections for start-ups with possible partners;
- Support start-ups to present their innovation to a wide audience.

1.5. Access to finance

Financing is essential to build a business or launch an innovation. Most start-ups and SMEs do not have the financial resources to make these investments themselves. As a result: business growth is limited. The team faces the challenge of finding a reliable investor who will add real value to the business.

SSOs support start-ups in this field in two ways:

- Financing is made available through financing instruments that are closely related to or managed by the SSO;
- Financing is made available by connecting companies to a network of financers and financial experts of the SSO.

1.6.   Access to knowledge

When bringing innovations to the market, start-ups are confronted with many questions. Questions about technology, but also questions about public relations and marketing, finance, production, business and organisational development, legal affairs, business cases, etc. For start-ups, which usually have small teams, it is impossible to have all the necessary knowledge available in their organisation. SSOs connect start-ups with experts in their network.

1.7.   Access to facilities

Start-ups and innovative SMEs need to have access to facilities to test their ideas, scale-up and bring their technology to market. It is also important for them to meet customers and partners in a professional environment, even better if these meetings can take place in an environment where there can be a symbiosis between different organisations. SSOs offer start-ups access to facilities such as:

- Office space;
- Lab and test facilities; and
- Demosites.

2. SURVEY OUTCOMES

In order to gain insight into the support provided by SSOs and the experiences and needs of start-ups, an online survey was developed and launched in Spring 2023. The input collected from Water4All partners and external stakeholders (start-ups and supporters of start-ups) is crucial for the activities to be developed and implement as part of Water4All Pillar C and the Task C2 in the coming years. The results of the questionnaires disseminated to start-ups and SSOs in Spring 2023 are presented in this chapter. Again, we distinguish between the five different support areas: **talent**, **market**, **finance**, **knowledge** and **facilities**. Please refer to Appendix 1 (questionnaire for SSOs) and Appendix 2 (questionnaire for start-ups) for all responses.

2.1.   Characteristics of the organisations

Start-ups

Some characteristics about the 24 start-ups that participated:

Total	24 participants: 3 SMEs, 17 Start-ups) (an independent, organisation, younger than five years and aimed at creating, improving and expanding a scalable, innovative, technology-enabled product with high and rapid growth); 3 Scale-up (a company having an average annualized return of at least 20% in the past 3 years, and had at least 10 employees at the start of the 3-year period), 1 Pre-Start-up
Country of origin	Spain (9), Netherlands (7), Greece (2), Latvia (1), Germany (1), Estonia (1), Austria (1), Poland (1) and Switzerland (1)
Background	• 50% is a spin-off from scientific research • 25% is a spin-off from another company
Number of employees	• 29% has less than 3 employees • 29% between 3 and 5 • 29% between 6 and 10 • 13% between 11 and 50
Technology Readiness Level	TRL-level is evenly divided over the start-ups
Year of foundation	• 25% started before 2018 • 33% in 2021

Start-ups Support Organisations (SSOs)

Some characteristics about the 13 SSOs that participated:

Total	13 participants
Country of origin	Netherlands (4), Spain (3), Austria (2), Belgium (1), France (1), Greece (1) and United Kingdom (1)
Selection criteria	• TRL (85%) • Technological feasibility (77%) • Innovativeness (77%) and Scalability (77%) • Diversity and quality of the team (62%) • strength of the business model (54%)

- Market expectations (54%)
- Availability of financial resources (46%)
- awareness of the team about missing competences (38%)
- feasibility in the field of regulation (31%)

Technology is quite important for SSOs in selecting start-ups.

Skills of the team	SSOs in most cases checked by an intake/ interview/ pitch
Technology Readiness Level	SSOs main focus is on start-ups in TRL 5 and 6
Background	SSOs main funding organisations are the regional, national and European governments
Funding	In 50% of the cases, the services offered by SSOs are free of charge

The number of responses on the surveys (resp. 24 and 13) are less than the C2-partners aimed for. Still the partners consider the survey as representative because the respondents accurately reflect the population about which the partners wanted to get insights. Several of the C2-partners are working for a SSO and supporting watertech start-ups on a daily basis. It is important that these organisations are continuously checking with start-ups if the support they receive is in line with their needs.

2.2. Access to talent

The first pillar for supporting start-ups are the entrepreneurship programs. The aim of the programs is to support the development of entrepreneurial skills and add competences to the team.

Looking to the start-ups:

- 83% of the start-ups participated in entrepreneurship program of which 75% in more than 1 program.
- Most of them participated in the start-up phase (70%). 20% participated in the pre-start-up phase and 10% in the scale-up phase.
- Biggest added value of the programs according to the start-ups: non-technical aspects (knowledge) and experience; support with customer/ market validation; network behind the program; support in focus; mentorship; financial support and visibility.
- Possibilities to improve the programs: get the customer closer to the program; better access to investors; more workshop (less lectures).
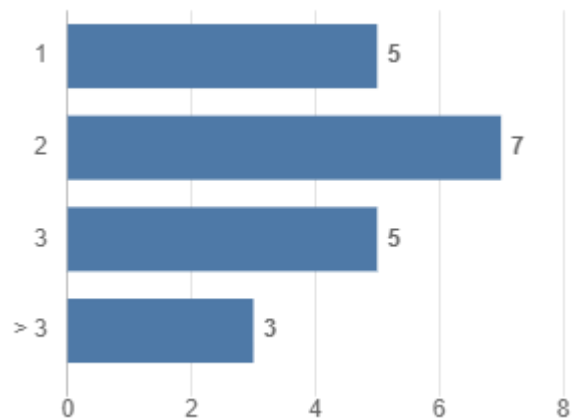
Figure 2 - Number of entrepreneurship programs start-ups participated in

Looking to the SSOs:

- 85% of the SSOs offer an entrepreneurship program, of which 91% offer an acceleration program, 63% offer an incubation program; 63% offer an education program; and 45% offer an inspiration program.

	Answers	Ratio
...an inspiration program to inspire students/researchers to start their own company	5	38.46 %
...an education program to educate potential entrepreneurs	7	53.85 %
...an incubation program to support (pre-)starters in the development of their startup	7	53.85 %
...an acceleration program to support startups and scale-ups to reach the acceleration phase with their company	10	76.92 %

Figure 3 - Entrepreneurship programs offered by SSOs

- Strongest part in the eyes of the SSOs: sector specific, experienced trainers; mentoring and custom made.
- Improvements: Access to market (same as start-ups); connection with investors (same as start-ups).

Conclusions about the entrepreneurship programs:

- Both the start-ups and SSOs see that the programs can be improved by (1) bringing the customers closer to the programs and (2) improving the connection with investors;
- The SSOs that responded to this questionnaire pay less attention to the inspiration activities (prior to the start-up creation). These activities are crucial to stimulate (young) researchers to start their own company (subtask C2.1 – creation of start-ups).

2.3.   Access to market

The second pillar of start-up support is focused on connecting start-ups with potential end-users and partners.

Looking to the start-ups:

- 87,5% of the start-ups perform market research of which 62% claims that they did not get any support;
- 75% of the start-ups are doing research to consumer insights. Only 54% are performing a competitive analysis (which is an important fail factor (see Figure 1));
- 60% of the start-ups claim that they did not get support in finding a launching customer.
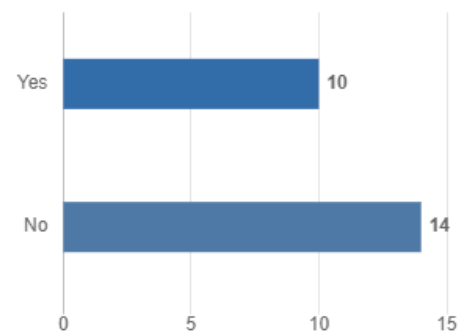
Figure 4 - Responses on the question if start-ups received support in market research

Looking to the SSOs:

- 85% of the SSOs claim that they support start-ups in their connection to the market;
- 55% of the SSOs that support start-ups in their connection to the market have a network of launching customers.
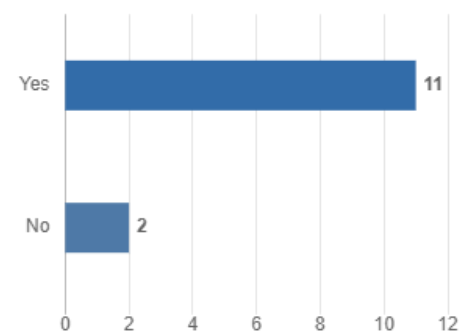
Figure 5 - Number of SSOs that support start-ups in their connection to the market

Conclusions about the market support:

- There is a discrepancy between the experience of start-ups in the way they are connected to the market (their main experience is limited support) and the perception of SSOs about the support they offer in this field. This is an important conclusion because several fail factors (see Figure 1) for start-ups are connected to the market (no market need (#2); get outcompeted (#3) pricing / cost issues (#6)).

2.4. Access to finance

The third pillar of start-up support is about giving start-ups access to finance.

Looking to the start-ups:

- 54% experience the valley of death, where funding and cash flow are the biggest challenges for the start-ups;
- 62,5% received a subsidy; 29% of the start-ups never received any form of financing; 25% received a pre-seed investment; and 12,5% a seed investment. It is important to realise that a part of the respondents is still in a (very) early stage (not ready for funding yet).

	Answers	Ratio
Subsidy	15	62.50 %
Pre-seed investment	6	25.00 %
Seed investment	3	12.50 %
Early stage equity (series A/B)	2	8.33 %
Late stage equity (series C/D)	0	0.00 %
Other	2	8.33 %
We did not receive any investments/subsidies	7	29.17 %

Figure 6 - Type of finance start-ups received

- The start-ups see the following possibilities to improve the access to finance: network of investors; support in acquiring subsidies; access to pre-seed funding via SSOs; educating the investors via the SSOs to understand the start-ups.

Looking to the SSOs:

- 69% connect start-ups with finance. The majority of the SSOs is facilitating this via demo-days/ network events;
- 31% of the SSOs have possibilities to invest in start-ups. Only one of the SSOs that responded to the survey has a pre-seed investment fund. The other SSOs offer more project based financial support.
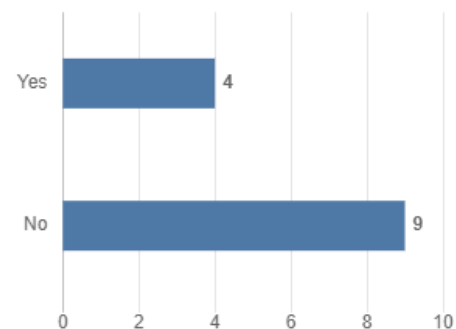
Figure 7 - Number of SSOs that manage their own fund

Conclusions about the access to finance:

- Finance is crucial to start-ups and in many cases complex. Although the SSOs claim that they are supporting start-ups in this field, start-ups see several possibilities to improve this support.

2.5.   Access to knowledge

The fourth pillar of start-up support is about access to knowledge.

Looking to the start-ups:

- 50% of the start-ups have the feeling that they are missing specific knowledge in their organisation to go into the next phase of development;
- According to the start-ups the knowledge gap to go to the next phase is related to:
  - 75% lack of knowledge to scale-up their product;
  - 67% have a lack of knowledge in the field of legal aspects and intellectual property (IP);

Looking to the SSOs:

- 92% offer start-ups access to knowledge;
- According to the SSOs, the knowledge gap of start-ups is mainly in the field of:
  - 50% finance
  - 50% human capital
  - 42% legal aspects

Conclusions about the access to knowledge:

- Both start-ups and SSOs see that start-ups lack knowledge around legal aspects and IP. There is a discrepancy between the fact that start-ups see a knowledge gap around scaling-up their technology while SSOs see a knowledge gap around finance and human capital. The SSOs experienced knowledge gap around finance is supported by the answers of the start-ups around this pillar.

2.6.   Access to facilities

The fifth pillar of start-up support is about the facilities SSOs offer.

Looking to the start-ups:

- 33% of the start-ups used office space, 33% lab facilities and 30% used a demosite;
- 30% of the start-ups never used any facilities of SSOs;
- On the question if they are missing facilities, start-ups came up with high-performance computers for simulation and factory facilities.

Figure 8 Facilities used by start-ups

Looking to the SSOs:

- 69% are offering lab facilities, 62% office space and 38,5 % demosites;
- 23% of the SSOs do not offer any facilities;

In 50% of the cases there are special rules for using the facilities (e.g. only for start-ups affiliated to the own research institute).
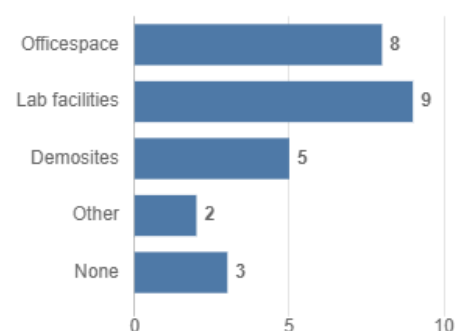
Figure 9 Facilities offered to start-ups

2.7.   Other input from the questionnaire

Besides the questions about the five pillar areas of support, some additional questions were asked to the start-ups and SSO's. The outcome of these questions:

- When asked what kind of support start-ups are currently looking for, they responded: funding (25%), scale-up engineering (12,5%) and mentoring as well as network with Industry, human capital, test sides (each 8,3 %).
- When SSOs were asked to identify the most important support they provide, the responses were evenly spread across the five areas of support;
- When asked about the monitoring of start-ups, 85% claim to monitor start-ups. However, the monitoring is not very structured.

2.8.   Overall conclusions/ remarks

- All five areas of support are important for start-ups;
- The selection of start-ups is focused on technology;
- Entrepreneurship training is focused on acceleration;
- Start-ups experience the support they get in access to market and finance as insufficient;
- SSOs think start-ups need knowledge about legal aspects, human capital and finance; Scale-ups think they are missing knowledge in the field of legal aspects and scaling-up of the technology.

3. ENTREPRENEURSHIP/ BUSINESS DEVELOPMENT TRAINING PROGRAM

Within Water4All Pillar C activities, the Task C2 on "Accelerating the uptake of R&I results by the economic sectors" focuses on improving the uptake of research outcomes and thus creating impact via the sustainable development of start-ups and SMEs. The results of the survey (chapter 2) show that there is potentially a strong support program that only needs to be improved in some aspects. However, there is no integrated program across Europe. Start-ups in region A are very well supported in the field X, while start-ups in region B do not have this support, but are very well supported in field Y. Bringing together the strong parts of the different programs across Europe would be beneficial for watertech start-ups. The focus of Task C2 will be to bring together the strong parts of different start-up support programs and to add the missing parts to the program.

3.1. Step 1: inspiration and education program

The SSOs that responded to the questionnaire pay less attention to inspiration and education activities. This is the phase before start-ups are created. The inspiration activities are important to stimulate (young) researchers to start their own company and therefore a crucial first step in the uptake of research outcomes (creation of start-ups).

WaterCampus Leeuwarden has a strong incubation and education program. This program can be an inspiration for other ecosystems across Europe to make students and (young) researchers aware of the possibility of starting their own company in a strong ecosystem. Below is a description of the program.

Inspiration program

Starting a business rather than joining another organisation is often not the first option that comes to the mind of students and researchers. Therefore, it is important that this group of potential entrepreneurs are stimulated around entrepreneurship before new companies are founded. WaterCampus distinguishes an inspiration and education part of this program.

The inspiration program guides the talents through their entrepreneurial journey from the very beginning to the point where they are actually thinking about their own start-up. In this journey, they experience first-hand what it is like to become an entrepreneur. At the same time, they meet all the right partners to ensure that the first step towards their own start-up is closer than ever. The program consists of:

- Business Lunch Talks (BLT): during the BLT top entrepreneurs share their entrepreneurial insights, while students enjoy a delicious lunch and get inspired by the possibilities of starting a company;
- Fvck-up nights (FUN): are all about fun and failure. During an evening program, 3 entrepreneurs share their biggest failures and what they learned from them. Of course, they also share their successes and become an inspiration for the students/ researchers;
- Business Idea Generator (BIG): during the BIG participants will work on creating an innovative and sustainable start-up idea to solve challenges brought in by companies and related to the Sustainable Development Goals (SDGs);
- Launch Game: give participants the possibility to experience what the first two years of running a start-up feels like.

See Appendix 3 for more details on how to set-up and organise the activities.

Education program

Students and researchers who are inspired to start their own business need support in translating their research results into solutions that can be valorised. This is the key element of the education program.

This program consists of the Business Development Course (BDC). During the BDC watertech researchers and students work together with students in the field of entrepreneurship. In this way, teams are created that have complementary knowledge and experience. Entrepreneurship students know all about knowledge valorisation and setting up (circular) business models while the watertech students and researchers know all about creating breakthrough water technologies.

See Appendix 4 for the set-up of the BDC.

The best practices of the incubation and acceleration programs will be part of a report on Incubator Strategy development (Deliverable D3.9) expected by mid-2024.

3.2. Connection with end-users and access to finance

Both the start-ups and SSOs see that the programs can be improved by:

1. Bringing the customers closer to the programs; and
2. Improving the connection with investors.

Ad 1. The survey showed that there is a discrepancy between the experience of start-ups in the way they are connected to the market (their experience is limited support) and SSOs' perception of the support they offer in this field. This is an important finding as several failure factors (see Figure 1) for start-ups are related to the market (no market need (#2); being outcompeted (#3); price/cost issues (#6)). Water4All will work on this challenge in the coming period and report on it as part of Pillar C activities (Task C2) with the development of an end-user platform expected to be launched in 2024. The aim of this end-user platform is to connect (pre-)start-ups with end-users of the technology that these start-ups are developing. This early connection gives the end-user insight in the technologies that are developed and the (pre-)start-up the possibility to get feedback from potential customers. Feedback on the technology that they are developing but also on the non-technical issues such as the business case.

Ad 2. Financing is crucial for start-ups and in many cases complex. Although the SSOs claim that they are supporting start-ups in this field, the survey showed that start-ups see several possibilities to improve this support. Water4All will work on this challenge in the coming period and report about it as part of a mapping of financial programs and investor readiness program (Deliverable D3.8) to be carried out in the framework of Pillar C activities (Task C2) and expected to be published mid-2024.

APPENDIX 1: Survey results for SSOs

This document gives insight in the results of the survey for Start-ups Support Organisations (SSOs). In total we had 13 respondents.

Characteristics of respondents

What type of organisation do you work for?

Kind of organisation	#
Regional incubator	1
Water accelerator	1
Foundation	1

What kind of organisation do you work for?

Which of the following job titles describes your role in the organisation the best?

Job title	#
Director of consultancy	1
Open innovation manager	1
President	1

How would you describe your job title?

Is your organisation supporting start-ups in the field of water technology?

Is your organisation supporting start-ups in other sectors/fields as well?

➔ Industry
➔ Retail

Answers about other sectors

Please select the sectors in which you support start-ups

Country	#
Netherlands	4
Spain	3
Austria	2
Belgium	1
France	1
Greece	1
United Kingdom	1

Where is your organisation based?

		Answers	Ratio
Diversity and quality of the team		8	61.54 %
Awareness of the team about missing competences		5	38.46 %
Technological feasibility		10	76.92 %
Feasibility in the field of laws and regultations		4	30.77 %
Availability of financial resources		6	46.15 %
Technological Readiness Level (TRL)		11	84.62 %
Market expectations		7	53.85 %
Innovativiness		10	76.92 %
Scalability		10	76.92 %
Strenght of the business model		7	53.85 %
Other		2	15.38 %

What selection criteria do you use to support (or not) a start-up?

TRL	Count
TRL 1 (bas...	3
TRL 2 (tec...	4
TRL 3 (exp...	7
TRL 4 (tec...	7
TRL 5 (tec...	9
TRL 6 (tec...	9
TRL 7 (sys...	6
TRL 8 (sys...	4
TRL 9 (act...	4

What stages of development (TRL) are normally using your support?

➔ *Regional*
➔ *Spin-off from own organisation*

What other selection criteria does your organisation use?

Funding source	Count
Companies	6
Regional G...	6
National G...	6
European C...	6
Investors	1
Research I...	1
Other	2

How is your organisation funded?

➔ *Own funds*
➔ *Project based financing*

What other types of finance do you receive?

	Count
Yes	7
No	6

Is the service you offer free of charge?

In what way do startups pay for the service	#
Commitmend fee for program	3
Success fee based on revenue	1
Consultancy service	1
Royalties over the realised sales (IP)	1

Can you describe in what way the start-ups pay for the service you provide? (Analyses by Ronald Wielinga – based on 6 answers)

How do you check skills of the team	#
Interview with founders	4
Intake, coaching and development conversations	3
Panel of experts	2
Platform (predictive index)	1
No evaluation of the skills	1
Due Diligence	1

How do you check if the start-ups team has the skills to execute the idea? (Analyses by Ronald Wielinga – based on 13 answers)

Access to entrepreneurship support programs

Do you offer entrepreneurship training / education?

		Answers	Ratio
...an inspiration program to inspire students/researchers to start their own company		5	38.46 %
...an education program to educate potential entrepreneurs		7	53.85 %
...an incubation program to support (pre-)starters in the development of their startup		7	53.85 %
...an acceleration program to support startups and scale-ups to reach the acceleration phase with their company		10	76.92 %

Which of the following statements applies to your organisation? We offer…

Strongest part of entrpreneurship program	#
Sector specific	4
Experience/ quality of trainers	3
Mentoring / sharing experience	2
Custom made (personal)	1

What is in your opinion the strongest part of the entrepreneurship training program you offer? (Analyses by Ronald Wielinga – based on 11 answers)

What would you like to add / improve	#
Access to market	1
International acceleration program	1
Incubation part	1
Partners (end-users) for trails and pilots	1
Scholarship for promising starting entrepreneurs	1
Commitment of startups	1
Connection with investors	1
Portfolio tracking and support afterwards	1
Intervision	1

What would you like to add and/or improve in the program you offer? (Analyses by Ronald Wielinga – based on 9 answers)

Are you making use of former entrepreneurs to support start-ups (mentoring)?

Access to the market

Do you offer start-ups support in connecting with the market?

Do you have a network of launching customers?

Connecting startups with the market	#
Via partners of our program	2
End-user experience	2

Can you explain in what way you connect these launching customers to the start-ups? (Analyses by Ronald Wielinga – based on 5 answers)

Do you (financially) support start-ups with market research?

Support with market research	#
Introduction to potential customers	2
Focus Groups, Surveys and Interviews	1
Data via official business channels	1

Can you describe in what way you support the start-ups with their market research? (Analyses by Ronald Wielinga – based on 5 answers)

Access to finance

Do you connect start-ups with investors?

Connecting startups with investors	#
Demo-days / networking events	5
Via consultancy service	1
Tailor made process for entrepreneurs	1
Co-funding angels investment	1

Can you describe the process in how you connect start-ups with investors?

Is your organisation managing own funds?

What type of funding do you provide?

➔ *Project based funding for pilot projects*
➔ *Trail Reservoir*
➔ *Non-refundable working capital*

What other funding is your organisation providing to start-ups?

NOBODY HAD AN ANSWER

Can you give an estimation of the money lost vs. total investment due to start-ups failure?

Access to knowledge

What do you think about the knowledge and experience of start-ups in the following areas?

Kind and field of expertise is offered	#
Mentoring	2
Legal and Intellectual Property	2
Any kind via a network of experts	2
Finance	1
Human Capital	1
Technical	1

What kind and what field of expertise do you offer support?

Do you offer start-ups access to knowledge that is missing in their organisation?

Access to facilities

 What facilities do you offer to start-ups?	➔ Use of communication network *Can you give an overview of other facilities you offer to start-ups?*
➔ *5 respondents indicate that there are special rules (e.g. for start-ups affiliated to own research institutes)* *Are the facilities open to everyone or are there specific rules?*	

Other

	Answers	Ratio
Entrepreneurship training	2	15.38 %
Connection with the market	2	15.38 %
Access to finance	3	23.08 %
Facilities	2	15.38 %
Other	4	30.77 %

What would you say is the most important support that you offer start-ups?

➔ *Almost no answers on this question*

What is the most important support you offer to start-ups?

Are you open to support start-ups from other countries / regions?

Do you monitor the start-ups that make use of your support?

Monitoring of startups	#
Regular contact	4
Periodic reporting	3
Alumni program	2
Teamleap monitoring	1

How do you monitor the start-ups? (Analyses by Ronald Wielinga – based on 10 answers)

Do you experience competition from other start-up support organisations?

Do you cooperate with other start-up support organisations?

How is the cooperation structured	#
Ad hoc / informal	7
Joint projects	2
MOU	1

How is the cooperation structured? (Analyses by Ronald Wielinga – based on 10 answers)

APPENDIX 2: Survey results for start-ups

This document gives insight in the results of the start-up survey. In total we had **24** respondents.

Characteristics of respondents
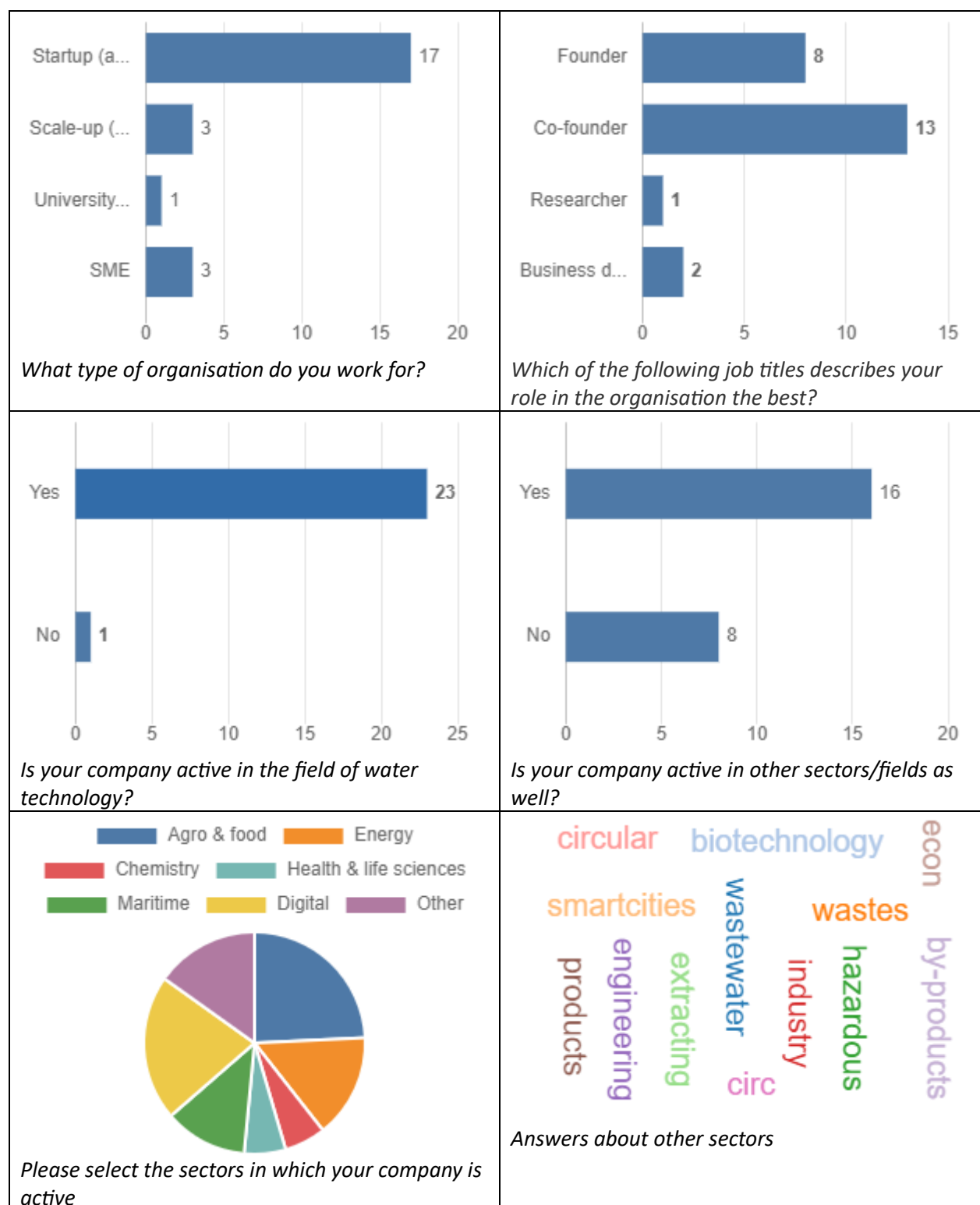
What type of organisation do you work for?

Which of the following job titles describes your role in the organisation the best?

Is your company active in the field of water technology?

Is your company active in other sectors/fields as well?

Please select the sectors in which your company is active

Answers about other sectors

Location	#
Location	**#**
Spain	9
Netherlands	7
Greece	2
Latvia	1
Germany	1
Estonia	1
Austria	1
Poland	1
Switzerland	1

Where is your company based?

	Answers	Ratio
TRL 1 (basic principles observed)	2	8.33 %
TRL 2 (technology concept formulated)	3	12.50 %
TRL 3 (experimental proof of concept)	3	12.50 %
TRL 4 (technology validated in lab)	4	16.67 %
TRL 5 (technology validated in relevant environment)	4	16.67 %
TRL 6 (technology demonstrated in relevant environment)	5	20.83 %
TRL 7 (system prototype demonstration in operational environment)	8	33.33 %
TRL 8 (system complete and qualified)	3	12.50 %
TRL 9 (actual system proven in operational environment)	9	37.50 %

What stages of development is your technology currently in?
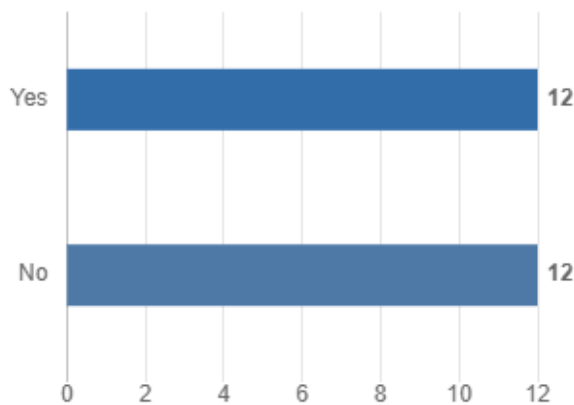
Is your company a spin-off from scientific research?
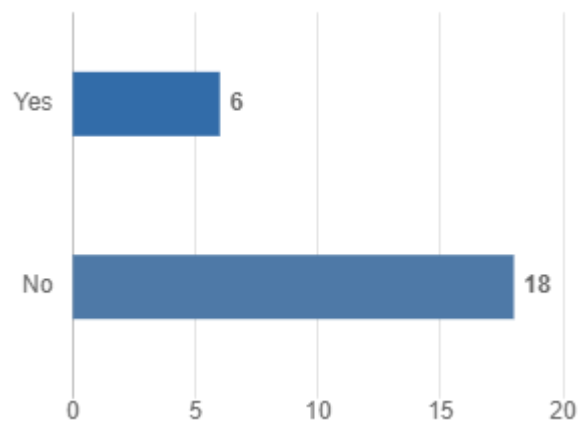
Is your company a spin-out from a company?
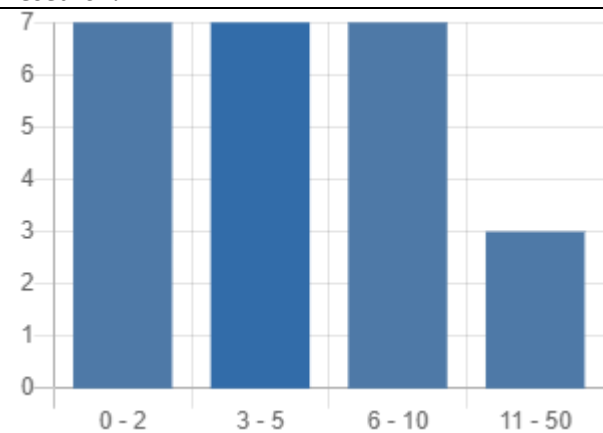
How many employees are currently working in your company?

In what year was your company registered?

Access to entrepreneurship support programs

Did you participate in an entrepreneurship development program?

In how may entrepreneurship programs did you participate?

What stage of development was your company when you followed the program?

Added value	#
Non-technical aspects (knowledge) and expertise	8
Customer / market validation	6
Network	6
Focus	4
Mentor	4
Financial support (pre-seed)	3
Visibility	2

What was the biggest added value of the program? (Analysis by Ronald Wielinga – based on 21 answers)

Posibilities to improve entrepreneurship program	#
Get the customer closer to the program	4
Access to investors	3
Set-up the program with startups	2
Focus on quality management	1
Toolbox with simple tools to help	1
More workshops, less lectures	1

Where do you see possibilities to improve the entrepreneurship program? What did you miss? (Analyses by Ronald Wielinga – based on 12 answers)

Are you making use of former entrepreneurs to support you (mentoring)?

All respondents where unanimous: senior, proven track record, strong network in industry

What are you looking for in a mentor? (Analyses by Ronald Wielinga – based on 9 answers)

Respondents where quite unanimous: sparring partner, networ0k and knowledge

What is the added value of the mentor for your organisation? (Analyses by Ronald Wielinga – based on 11 answers)

Access to the market

Do you perform market research?

Did you get external support in the market analysis?

		Answers	Ratio
Competitive analysis (examine the competitive strengths and weaknesses of your company in the market)		13	54.17 %
Consumer insights (getting insight in clients of your product)		18	75.00 %
Customer Segmentation (dividing huge markets into smaller groups to target clients with comparable challenges)		13	54.17 %
Product Development (gather client information to create and promote products, services, or apps)		11	45.83 %
Usability Testing (helps to understand how clients use your product)		9	37.50 %
Customer Satisfaction (assesses whether products and services meet, exceed, or fall short of your clients expectations)		5	20.83 %
No Answer		3	12.50 %

What type of market research do you perform?

Did or do you get support with finding your (launching) customer?

All 8 respondents where unanimous: connections through the network of others (through mentors, programs, other participants, etc)

What is in your opinion the most important support you got in connecting with the market / (launching) customers?

Posibilities to improve market access	#
Help the startups with connecting to end-users	9
Subsidies for pilots	5
Subsidies for hiring expertise	4
Publicity	2
Evaluating market outside resident country	1
Support by regulator	1

Where do you see possibilities to improve the support for start-ups in getting access to the market? (Analyses by Ronald Wielinga – based on 23 answers)

Access to finance

Did your company face the valley of death?

Biggest challenge you faced	#
Funding and cashflow	8
Time to market is long	4
Stay focused	1
Covid	1
Keep the speed	1

What was the biggest challenge? (Analyses by Ronald Wielinga – based on 13 answers)

		Answers	Ratio
Subsidy		15	62.50 %
Pre-seed investment		6	25.00 %
Seed investment		3	12.50 %
Early stage equity (series A/B)		2	8.33 %
Late stage equity (series C/D)		0	0.00 %
Other		2	8.33 %
We did not receive any investments/subsidies		7	29.17 %

Did your company receive one or more investment / subsidies?

What kind of subsidy did you receive?

		Answers	Ratio
Private investment through a loan		0	0.00 %
Private investment through equity		6	25.00 %
Public investment through a loan		5	20.83 %
Public investment through equity		1	4.17 %
No Answer		16	66.67 %

What kind of financing did you receive?
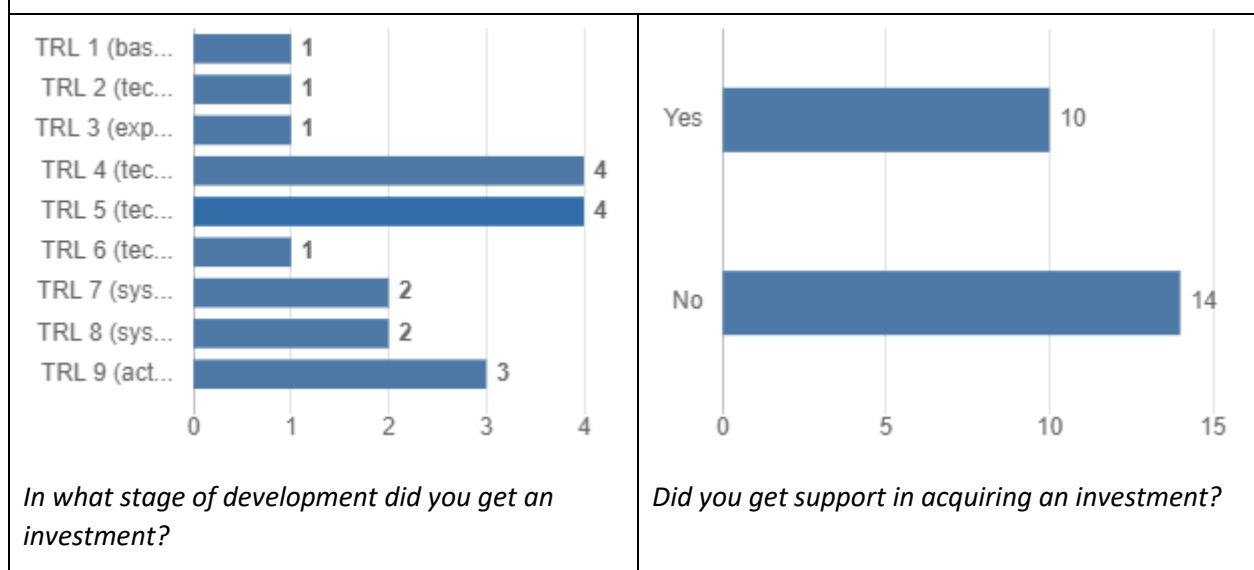
In what stage of development did you get an investment?

Did you get support in acquiring an investment?

Support in getting access to finance	#
Investor readiness program	3
Support in applying for a subsidy	2
Support in preparation of a pitch	2

What kind of support did you receive? (Analyses by Ronald Wielinga – based on 7 answers)
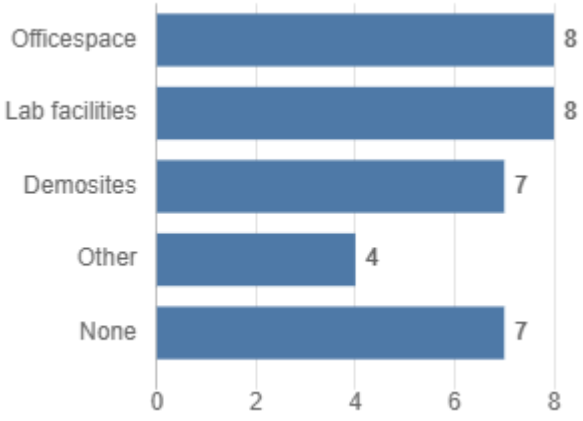
Possibilities to improve access to finance	#
Network to investors	5
Support in acquiring subsidies/ investment	4
Pre-seed funding	3
Educating the financial sector (bad conditions for startups)	3
Eye for liquidity in subsidy schemes	1
Support salary payments of startups	1

Where do you see possibilities to improve the support for start-ups in getting access to finance?

(Analyses of Ronald Wielinga – based on 13 answers)

Access to facilities

Which external facilities did you use?	We got 2 valuable answers to this question. - High-performance computers for mathematical simulation - Factory facilities *Can you give an overview of other facilities you use?*
There was not a lot of answers to this question. Basically, there was 3 different types of answers: 1. Expensive (1/3) 2. We are demonstrating at a client (1/3) 3. We are using facilities of the university (1/3) *Can you give your opinion on the conditions (pricing, period of use, etc) of the different facilities you used?*	

Other

Most important support	#
Funding	7
Mentoring / outside expertise	6
Connection with customers	3
Facilities	1
Network	1
Visibility	1

What would you say is the most important support that you got as a start-up? (Analyses by Ronald Wielinga – based on 15 answers)

- Funding
- More insight in finance options
- Mentoring
- Contacts to improve synergies
- Critical assessment of the business case

What do you think are the white spots in the support you got? (Analyses by Ronald Wielinga – based on 5 answers)

Support you are looking for	#
Funding	6
Scaling-up engineering	3
Mentoring	2
Network with industry	2
Human capital	2
Test sites / piloting partners	2

What kind of support are you currently looking for? (Analyses by Ronald Wielinga based on 17 answers)

APPENDIX 3: Inspiration program

Challenge	**Make students and researchers aware of the possibility to start their own company in a strong ecosystem**

Objective and key resilience dimension	Within this program you can distinguish 4 different activities:
	
	    ○ Business Lunch Talk (BLT): during the BLT top entrepreneurs share their intel into entrepreneurial life, while the students enjoy a delicious lunch;
	    ○ Fvck-up nights (FUN): are all about fun and failure. Three entrepreneurs tell their biggest failures and what they learned from them;
	    ○ Launch game (LG): gives participants the possibility to experience the first 2 years of running a start-up feels like;
	    ○ Business Idea Generator (BIG): during the BIG participant will work on their own innovative and sustainable start-up idea.
	
	Activities can best be organized in a series of activities but can also be stand-alone.

Methodological approach	**Business Lunch Talk & Fvck-up night**: normally you organize both a BLT and FUN twice per year (one activity per quarter). Organizing the events require:
	
	Prior to the BLT/FUN
	  • Network of entrepreneurs that are willing to share their experience;
	  • Host for the event;
	  • Location with all facilities (e.g. beamer) for the event;
	  • Gift for the presenters;
	  • Registration module (or an E-Mail address);
	  • Communication:
	      ○ First announcement 6-weeks before the event;
	      ○ Reminder and more details around the program / 4 weeks before the event;
	      ○ Reminder 2-weeks before the event;
	      ○ Final reminder 1-week before the event;
	      ○ Details about the program (location, time, etc) to the participants 2-days before the event.
	  • Preparation session with the speaker;
	  • Buffet lunch (BLT) or pizza's (FUN) for the participants;
	  • Photographer and someone to write an (short) article about the event for a newsletter / website / etc.
	
	During the BLT/FUN
	  • Normally a BLT/FUN is 45 minutes (BLT) to 1,5 hours (FUN);
	  • All participants take lunch/dinner from the buffet;
	  • Host introduces the event and gives some background about the program and other possibilities around entrepreneurship;
	  • Entrepreneur(s) give their presentation(s);
	  • Q&A guided by the host;
	  • Closure, announcement of other events and present for the speaker(s);
	  • Photographer takes pictures during the event.

After the BLT/FUN
- Article in newsletter / on website / etc.
- Evaluation form to participants.

Launch Game: a launch game can be organized once per year (but more is also possible, depending on the number of people that want to join).

Prior to the Launch Game
- One or more innovative products that can be used by the participants during the Launch Game. Normally you can use the product of a start-up;
- Network of experts: employee Chamber of Commerce; advisor intellectual property; incubator manager; expert in the field of loans and subsidies; company set-up; networker(s); launching customer(s); investor(s); etc.
- Jury (3 members)
- Host for the event;
- Location with all facilities (e.g. beamer) for the event;
- Gift for the presenters;
- Registration module (or an E-Mail address);
- Communication:
  - First announcement 6 to 8-weeks before the event;
  - Reminder and more details around the program / 4 weeks before the event;
  - Reminder 2-weeks before the event;
  - Final reminder 1-week before the event;
  - Details about the program (location, time, etc) to the participants 2-days before the event.
- Dinner for the participants;
- Photographer and someone to write an (short) article about the event for a newsletter / website / etc.

During the Launch Game
- The whole sessions take around 4,5 hours
- Set-up space for meeting (every expert an own table);
- Agenda for experts on the table (timeslots);
- Dinner for participants and forming teams (3 – 4 people);
- Briefing the experts; going through script together; + dinner experts;
- The program:
  - Welcome by host (5min)
  - Explanation of the Launch Game (5 min)
  - Explanation of the start-up products (10 min)
  - Choice of product and company name by teams; fill-in start form; planning meetings with experts (15 min)
  - Round 1 (4 x 8 min): each round has 4 slots in which the teams have the possibility to schedule a meeting with an expert or work together on their company; each round represents 6 months in the development of a start-up; the whole program consists of 16 timeslots. The jury is walking around. Also the photographer is taking pictures along the way.
  - Break + planning meetings with experts (8 min)
  - Round 2 (4 x 6 min)
  - Break + planning meetings with experts (16 min)
  - Round 3 (4 x 4 min)

- o Break + planning meetings with experts (8 min)
- o Round 4 (4 x 4 min)
- o Jury meeting + break participants (15 min)
- o Award ceremony + closure

After the Launch Game
- Article in newsletter / on website / etc.
- Evaluation form to participants.

Business Idea Generator: a BIG can be organized once per year (but more is also possible, depending on the number of people that want to join).

Prior to the BIG
- Identify a (societal) challenge for which the participants will come-up with a business idea and a speaker to introduce the challenge;
- Network around this challenge with entrepreneurs, investors, researchers, experts (e.g. IP, finance, etc) that are willing to support;
- Location for the event;
- Present Gift for the presenters/experts;
- Registration module (or an E-Mail address);
- Communication:
    - o First announcement 6 to 8-weeks before the event;
    - o Reminder and more details around the program / 4 weeks before the event;
    - o Reminder 2-weeks before the event;
    - o Final reminder 1-week before the event;
    - o Details about the program (location, time, etc) to the participants 2-days before the event.
- Material for building prototype (e.g. Lego, paper, cardboard, scissors, pencils, markers, tape, glue, etc)

During the BIG
- The whole session takes about 4 hours;
- Start with an inspiring speaker (e.g. start-up) (15 min);
- Introduction of the theme/ challenge by an expert (15 min);
- Setting up the teams (3 – 4 people / team);
- Phase 1: Emphasize conversations with experts (2 x 10 min);
- Phase 2: Define capture findings & define problem statement (10 min)
- Phase 3: ideate (1) sketching (5 drawings) per person (7 min)
- Phase 3: ideate (3) reflect & generate a new solution (1 drawing per person) (6 min)
- Break: teams will choose the solution for their business case (15 min);
- Phase 4: prototype draw the solution (10 min)
- Phase 5: test share your solution and get feedback from the expert (10 min)
- Phase 4: prototype re-draw / upgrade your solution (10 min)
- Phase 5: test your solution with an expert (8 min)
- Phase 6: build reflect and build your final solution
- Pitching in front of jury
- Jury meeting + break for participants
- Award ceremony + closure

	All students are welcome to participate (open access) and everybody is equal (completely inclusive); Investment is mainly time, some out-of-pocket costs like dinners (not needed), space and materials. Preparation time for BLT and FUN max 12 hours; preparation time for LG and BIG max 30 hours.
Results	In the last years there are more start-ups in the North of the Netherlands and economic growth. It is difficult to determine if this is a direct consequence of the activities.
Impact	• In general participants are extremely enthusiastic about the organised event. The events are extracurricular but still we have a lot of students and researchers participating. The number grows every year and the main reason for that seems word to mouth advertisement. • There are no broad monitoring and evaluation studies, although we evaluate after each event with the participants.
Success factors	There are no specific conditions for successful implementation of the program.
Constraints	You need sufficient cases and a broad network with external experts that are willing to support.
More information	More information about the activities (such as role description for the Launch Game, can be downloaded freely via https://toolbox.appgebakken.nl/.
Contact details	Ronald Wielinga: r.wielinga@watercampus.nl

APPENDIX 4: Set-up of Business Development Course

Below the overview of the Business Development Course (BDC). This is the most basic version of the course, divided over a period of 4 weeks. It can also be a course of 2,5 days.

Day 1	Acquaintance & Business Cases
16:00 – 16:10	Kick-off day 1
16:10 – 17:00	2-minute pitching and raffling the teams
	Each participant will give a 2-minute pitch about his/her background, what you want to learn from the other participants and what you can bring the group. Next step is forming the teams.
17:00 – 18:00	Workshop: business case – part 1
	Together with your team mate you will be working on setting up a business case via the business model canvas. Starting point is the research project of one of the team members. The other team member, who has a business focused background, will be guiding the process. All teams will be working in separate (online) rooms and be supported by the coaches. We regularly meet plenary to discuss the progress.
18:00 – 18:45	Food & inspiration
	Time to have a break and be inspired by an experienced entrepreneur.
18:45 – 19:30	Workshop: business case – part 2
	Continuation of part 1
19:30 – 20:00	Heads-up by each team & challenge for coming week
	Each team will give an overview of the focus of their business case, the challenges they are facing and the joint activities for the coming week. Each team will get feedback from the group.

Day 2	Communication and interview techniques
16:00 – 16:10	Kick-off day 2
16:10 – 17:00	How to talk to (potential) customers?
	In order to make a good business case, thorough research is of enormous importance. And to really get to know your research subjects! Potential customers, technology partners, competing companies and experts. Today you will learn how to get as much information from them as possible. Collecting data is the key!
17:00 – 18:00	Workshop: interview preparation
	On day 3 you will have the opportunity to talk to potential partners, customers and other experts about your business idea. All to fill-in the blanks that are still there and to validate your case. Together with your teammate you will be preparing your interviews.
18:00 – 18:45	Food & inspiration
	Time to have a break and be inspired by an experienced entrepreneur.
18:45 – 19:30	Introduce how you support start-ups!
	Give the participants insight what you can offer them with your support program for entrepreneurs.
19:30 – 20:00	Heads-up by each team & challenge for coming week
	Each team will give an overview of the input they are looking for, for their business case. Each team will get feedback from the group.

Day 3	Valorization
16:00 – 16:10	Kick-off day 3
	Today you will have the opportunity to validate your business idea with real customers, technology partners and financers and collect the information you need to complete your business case. In total you will have 4 interviews.
16:10 – 16:40	Interview round 1
16:40 – 17:10	Interview round 2
17:10 – 17:30	Interview round 3
17:30 – 18:00	Interview round 4
18:00 – 18:45	Food & inspiration
	Time to have a break and be inspired by an experienced entrepreneur.
18:45 – 19:30	Workshop business case
	You collected a lot of valuable information in the interviews. Time to integrate all that you learned in your business case.
19:30 – 20:00	Heads-up by each team & challenge for coming week
	Each team will give an overview of the input they got and the consequences for their business case. Each team will work on the pitch in the coming week.

Day 4	Pitching
16:00 – 16:10	Kick-off day 4
16:10 – 18:30	Pitch training
	Together with an experienced pitch trainer you will be finalizing the pitch of your business case. Around 18:00 there will be diner!
18:30 – 20:15	Pitch session
	All teams will pitch (5 min) their business case for a jury of experts. Afterwards the jury gets some time to ask questions (10 min). Although there is no doubt that you all will deliver a great pitch, there will only be one winning team. Their prize: € 2,500, - to bring their business case to the next level.
20:15 – 20:30	Final conclusion and announcing the winner
	After a short break for the jury deliberation, we will announce the Winner of the Business Development Course. With some last words and feedback, we will end this inspiring course.

If you want to set-up a BDC please contact Ronald Wielinga (r.wielinga@watercampus.nl).

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Grant Agreement n° 101060874

**Co-funded by
the European Union**