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## O4.2 Report on recruitment activities

Project Baltic Blue Biotechnology Alliance



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## Abbreviation list

AMD-age-related macular degeneration  
B2B-business to business  
B2C-business to consumer  
CIIMAR – Interdisciplinary Centre of Marine and Environmental Research  
CRM-Costal Research Management  
DoS-Department of Seaweed  
DTI-Danish Technological Institute  
GAGs-glycosaminoglycans  
GoA-group of activity  
KSTP-Klaipeda Science and Technology Park  
MBF-Movable Biogas Factory  
MOIN-CC-Molecular Imaging North Competence Center  
PBR-photobioreactor  
PP-project partner  
RTU-Riga Technical University  
QS-quorum sensing  
SAMS- Scottish Association for Marine Science  
SubNet-Submariner Network for Blue Growth EEIG  
SYKE-Finnish Environmental Institute  
TPB-Tartu Biotechnology Park  
TRL-technology readiness level  
UKSH-University Hospital Schleswig-Holstein  
WP-Work package



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## 1. Recruitment methods

### 1.1 Channels of recruitment

The ALLIANCE project gathers 25 project partners (status February 2019), of which 15 are institutional partners and 11 case partners. The case partners are counted among the ALLIANCE case owners, who participate in the mentoring programme that the ALLIANCE offers during its project lifetime. The difference between case partners compared to case owners (without partner status) is that the case partners have obtained funding from the ALLIANCE project. The recruitment of cases to the ALLIANCE mentoring programme was primarily the task of the 15 institutional ALLIANCE partners, however the 10 case partners were also encouraged to take part in the recruitment actions. The case recruitment process encompassed four structured “Calls for Ideas”, to which potential case candidates could apply. The ALLIANCE recruitment encompassed in total 4 call for ideas within the project lifetime.

Applicants who passed the first level of the recruitment process (=call for ideas), were invited to the second level of the recruitment process (=pitching event). During the ALLIANCE three pitching events (back-to-back to project partner meetings) took place:

- Pitching event in Helsinki/October 2016 which included the applicants to the 1<sup>st</sup> call for ideas
- Pitching event in Gothenburg/April 2017 which included the applicants to the 2<sup>nd</sup> call for ideas
- Pitching event in Copenhagen/April 2018 which included the applicants to the 4<sup>th</sup> call for ideas.

There was no pitching session to the 3<sup>rd</sup> call for ideas due to the lower number of applicants.

Prior to a pitching event the submitted applications to calls for ideas were evaluated by a panel of chosen experts. The evaluation criteria used by the panelists when making a verdict about the applications were: relevance for the Baltic Sea Region, sustainability, feasibility, market potential, balance/diversity and fitting of applicants’ needs to the competences of ALLIANCE project partners. Seven evaluators were judging the applications to the first call for ideas (GEOMAR, SAMS, CRM, SYKE, University of Gdansk, Submariner Network and Klaipeda Science and Technology Park). Five evaluators formed the expert panel to assess the ideas coming from the 2<sup>nd</sup> call, they were KTH, TBP, CIIMAR, Kalundborg Utility and DTI. Also, five evaluators did the assessment of the 3<sup>rd</sup> call for ideas: SYKE, KSTP, CIIMAR, KosterAlg and GEOMAR. The fourth call’s applications were evaluated by representatives of TPB, CRM and SubNet. The number of evaluators for the call was related to the number of received applications per call. The created expert panel that formed a jury during the pitching events counted 2 panels, 5 people each during the 1<sup>st</sup> call (connected to the highest number of applications), 5 people in the 2<sup>nd</sup> call, 5 people in the 3<sup>rd</sup> call and 6 people in the 4<sup>th</sup> call.

The call material was prepared by PP2-Submariner Network (SubNet) and shared with all project partners (PPs) for their distribution, as well as it was published on the ALLIANCE website ([www.balticbluebioalliance.eu](http://www.balticbluebioalliance.eu)). The recruitment actions required were described by the work package 4 (WP) leader (PP2-SubNet) before the call material was published and distributed. The call material consisted of a web banner, a multipage description and an interactive PDF application form.

During the first 3 calls (1<sup>st</sup> call – September 2016, 2<sup>nd</sup> call – March 2017, 3<sup>rd</sup> call – September 2017), the main channels of recruitment used by PPs were:

- Organization’s newsletters/network newsletters



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- Sharing with stakeholders (associated organizations)
- Announcement on the ALLIANCE website
- Personal contacts (e-mail & phone)
- Approaching of associations
- Reaching out to innovation offices/clusters
- Twitter

The last call (4<sup>th</sup> call – March 2018) was served by additional channels to increase the number of applications. The added channels were:

- Promotion of the call in events/fairs
- Approaching of R&D departments of universities
- Forwarding of the call to investor networks
- Social media: LinkedIn group, Facebook
- Integrated slide about the ALLIANCE call into presentations of PPs
- National magazines and professional magazines going to industry.

## 1.2 Examples of channels used per project partner (national recruitment strategies)

As the recruitment strategy was structured nationally, each project partner made the efforts to look for potential cases at a national level. The national recruitment strategies differed from each other. This chapter describes the recruitment efforts per PP. The German recruitment concentrated mainly on online media by advertising the calls on own websites, newsletters and among own networks. The Finnish recruitment strategy was represented by one PP (SYKE) only and was directed towards more selected stakeholders than the mass approach of the German strategy. The Danish PP (DTI) went for the strategy of approaching several channels reaching out to own networks and local authorities. The Estonian recruitment had a more targeted character, combined with an organization of blue biotechnology events that were attended by potential cases (the suitable candidates were attracted by the events and they came to the Estonian PP, Tartu Biotechnology Park (TBP), instead of TBP approaching the candidates, which differentiated this PP from all others). The Polish PP (University of Gdansk) disseminated the calls for ideas via the available channels to own stakeholders and relied on approaching the candidates among own employees at the university. The Lithuanian strategy was less proactive and concentrated on the contacts of an association of the biotechnological industry. The Swedish recruitments were restricted to placing the calls on thematically suitable websites and the new channel here was the placement of the calls on a matching website (the only PP who used this channel for outreach). The Latvian PP (CleanTech Latvia) had the least diversified recruitment strategy with the publication of calls on own website.

Summarizing the different actions of recruitment, it can be concluded that the national recruitment strategies of countries like Germany, Finland, Denmark, Estonia and Poland were more promising and brought better results. While the strategies of Lithuania, Latvia and Sweden with less intensive actions brought accordingly less results and less cases to the ALLIANCE. It can be also said that direct contacts (face to face) preferred and practiced by the Finnish and Estonian recruitment strategy, were more successful than the less personal calls practiced by the German, Danish and Polish recruitment



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strategy. Considering these experiences, we would recommend that the partners from Sweden, Latvia and Lithuania should take example from the other recruitment strategies and involve more channels into their recruitment actions and efforts. Below the national recruitment strategies are explained in more detailed way:

The German national recruitment strategy was led by PP1-GEOMAR, PP2-SubNet and PP3-BioCon Valley. The channels used by PP1-GEOMAR in Germany were:

- Institution website & social media: GEOMAR-Biotech, GEOMAR website, LinkedIn groups natural products, marine biotechnology, Nordverbund Marine Biotechnologie, internal e-mail lists of GEOMAR
- Direct contact: speaking to potential case owners
- Clusters: Nordverbund, LSN, Maritimes Cluster
- European-wide networks with national/regional branches: ERA-Net, ESMB, EuroMarine, EEN, ESMB, ERA-net Jülich
- Universities: University Kiel, Bremen, Hamburg (via personal contacts), EMB
- Innovation/Technology transfer offices (e.g. at universities): Future Ocean, Helmholtz
- Student groups
- Industry-specific info points: KNAQ
- Capital investment agencies/ Chambers of commerce: WTSH, IHK Kiel, Ministries SH
- Industry associations
- Local authorities/ public institutions (e.g. museums)
- Events: CIESM conference

PP2-SubNet published each ALLIANCE call for ideas on the ALLIANCE website ([www.balticbluebioalliance.eu](http://www.balticbluebioalliance.eu)), apart from that the other channels were:

- Sending of the call material to own stakeholder lists
- Announcement in the Submariner Newsletter
- LinkedIn, Twitter announcements
- Promotion of the call among the blue biotechnology events the Submariner employees have attended during the duration of a call

In supplements to the channels above, PP3-BioCon Valley used the following channels:

- Personal contacts, the offices of BioCon Valley are located in two life science specific technology centers ("Bioincubators") reaching most of young SMEs
- Newsletter "BioLOG Nachrichten", bimonthly
- BioCon Valley Website
- Press release to idw-Informationdienst Wissenschaft: <https://idw-online.de/de/pressreleases756>; coverage approximately 5.500 scientific journalists and more than 25.000 subscribers in German speaking area

The channels used above have resulted in 6 German cases which have been accepted to the ALLIANCE (in total 10 German case applications were submitted).



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While German partners decided to use numerous channels to reach out to potential case candidates, the Finnish recruitment strategy was designed with more personal touch and approach. Apart from putting the call material on own website, PP6-SYKE integrated the information about the call into all kind of presentations held during the time a call was open and approached the potential case candidates among own stakeholders. This more direct and personal target orientated approach resulted in the 100% successful recruitment of 4 cases to the ALLIANCE project out of the 4 submitted applications from Finland.

The Danish recruitment strategy was similar to the German recruitment strategy; PP10-DTI approached the masses using numerous channels:

- Institution website & social media: DTI website – DK/UK & LinkedIn
- Direct contact: speaking to potential case owners from own network: DTI - AgroTech, DTI - Biorefinery & Biomass colleagues, BioMar, Aqua Pri, AkvaGroup
- Clusters: CLEAN (Kalundborg Utility), Kalundborg Symbiose, INBIOM, VÆKSTHUS
- European-wide networks with national/ regional branches: BioBusNet partners, Region Zealand / EU office, Baltic Development Forum (BDF), Baltic Sea Action Group (BSAG)
- Universities: Aarhus, Aalborg, DTU, RUC, SDU, KU
- Innovation/ Technology transfer offices: Innovationsfonden, DTI Innovation
- Capital investment agencies/ Chambers of commerce: CAPNOVA
- Industry associations: EUROFISH, DI
- Local authorities/ public institutions: Municipalities – regions with “blue” – e.g. Region Midtjylland, Municipal business councils (Business LF, Næstved Erhvervsråd), Region Zealand and Guldborgsund Municipality
- Events: Seaweed Symposium, Nordic Algae Network

The result of the Danish approach almost equals the result of Germany, meaning 4 successful applicants to the ALLIANCE mentoring programme out of a total of 6 applications (although Denmark counts 16 time less inhabitants, but has more connection to the sea overall). One of the Danish case partners was however already selected during the project application (#5 Kalundborg Utility), one case partner was selected for funding at the first pitching event (#8 Guldborgsund Municipality – BIOFISK) and 2 more case owners were selected during the following calls (without funding).

The Estonian recruitment strategy was very well-thought-out and this partner has next to the PP2-SubNet a leading role in developing the strategy per country around the Baltic Sea. PP13-TBP put focus on the first place into face to face interaction, then phone calls and finally on e-mails. Moreover, PP13 took advantage of the snowball effect; new contacts were established during the meetings (face to face meetings, events participation, site visits etc.) and by asking further about relevant contacts from people PP13-TBP had already talked to. The Estonian partner organized its own events if no specific blue biotechnology events were taking place during open calls in Estonia.

From the channels used in Estonia to find new case owners, the following ones were dominant:



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#### Institution website & social media

- Actions: publishing of information about ALLIANCE project, announcement of calls for new ideas, advertisement of events, promotion of success stories
- Channels: Tartu Biotechnology Park website: <http://biopark.ee/>, Tartu Biotechnology Park Facebook Page: [www.facebook.com/tartubiotehnoloogiapark](http://www.facebook.com/tartubiotehnoloogiapark)
- Mariann Nõlvak (PP13-TPB) on LinkedIn: <https://ee.linkedin.com/in/mariann-nõlvak-256aa034>
- Direct contacts with SMEs: speaking to potential case owners: face to face meetings, phone calls and e-mails to introduce the ALLIANCE, demonstrate involved cases and highlight the benefits they are received from the ALLIANCE, identify their interests and needs for ALLIANCE services
- Present opportunities for which kind of support can be obtained from the ALLIANCE
- Contacts: Mr. Maido Lipp and Mr. Priit Kaimer, Baltic Seaweed Solutions OÜ, Sector and field of activity: Development of building projects, Mrs. Berit Joosep and Mr. Janno Joosep, Furcella OÜ, Sector and field of activity: Manufacture of perfumes and toilet preparations, Ms. Liina Joller, Power Algae OÜ, Sector and field of activity: Research and experimental development on biotechnology.

→ Two of the listed people and organizations became ALLIANCE cases (Furcella OÜ and Power Algae OÜ).

- Clusters and Networks: information about the ALLIANCE project, calls for new ideas, events and success stories was sent for dissemination. E-mails and phone calls. ScanBalt® fmba. Contact: Mr. Peter Frank, General Secretary
- News portals and science journalists: information about the ALLIANCE project, calls for new ideas, events and success stories were sent for dissemination. E-mails and phone calls.
- Novaator. Web platform. Estonian Public Broadcasting (in Estonian Eesti Rahvusringhääling, abbreviated as ERR) in cooperation with University of Tartu. In Estonian. Contact: Mrs. Aili Sarapik, Editor
- Bioneer. Environmental education newsletter on web. In Estonian. Contact: Mrs. Katrin Jõgisaar

The clear and structured recruitment strategy of Estonia brought 4 cases to the ALLIANCE mentoring programme. In total 5 Estonian candidates applied for the ALLIANCE mentoring of which 1 case owner applied twice being rejected the first time (September 2017, 3<sup>rd</sup> call), but was then accepted in the 4<sup>th</sup> call (April 2018).

The Polish recruitment strategy was led by PP7-University of Gdansk and the used channels were:

- Institution website & social media: websites: UG, IFB, IO&G, IFB Facebook, IFB LinkedIn, UG Newsletter, UG Press Officer
- Direct contact: using direct contacts through Technology Transfer Office of UG, TechTransBalt, UG authorities, IFB and IO&G Deans, Deans of Faculty of Chemistry and Biology
- Clusters and Science Parks in Pomorskie
- Dissemination through the contacts of Pomorskie Innovation Agent





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- News portals and science journalists (dedicated press release: [biotechnologia.pl](http://biotechnologia.pl), [laborant.pl](http://laborant.pl), radio), article in UG academic news
- Capital investment agencies/Chambers of commerce (Regional Chamber of Commerce in Pomorskie, Agency for Development of Pomorskie Region, offices of international chambers of commerce)
- Local authorities/ public institutions (contacts at Pomorskie Marshall Office, City of Gdańsk, Pomorskie Regional Smart Specialization Companies)

The actions brought 3 case owners from Poland to the ALLIANCE; 2 applicants applied and 1 was accepted during the application phase of the project.

The Lithuanian recruitment strategy was based on the dissemination to the Lithuanian Biotechnology Association, consolidating all biotechnological industry of Lithuania and relevant research institutions. The Swedish recruitment strategy was based on spreading of the ALLIANCE call via the following main organisations: homepage of the Maritime Cluster of West Sweden (<http://maritimaklustret.se/english/>), homepage of Centre for Sea and Society, The Swedish Mariculture Research Centre, and The Aquaculture Centre West, all belonging to the University of Gothenburg, homepage of The Swedish Centre for Aquaculture (<http://www.nkfv.se>) and Chalmers Venture (<http://chalmersventures.com>).

The Latvian recruitment strategy was more passive and remained within the Latvian PP12-CTL: Clean-Tech Latvia webpage, CleanTech Latvia Facebook page. The Lithuanian strategy recruited successfully 2 cases to the ALLIANCE, of which one has applied and one was accepted through direct contacts. The Swedish and Latvian recruitment strategy ended up with 1 case from each of these countries (and also one case from these countries applied to the calls).

## 2. Overview of all applicants applying for ALLIANCE mentoring

### 2.1 Cases who entered the project from the beginning (case partners)

Five cases entered the ALLIANCE project at the very beginning as so-called case partners (it means cases with partner status). Each of these five cases received funding. The 5 cases are: Costal Research Management (CRM) as case #1, Biovento as case #2, Geoterma as case #3, Baltic Probiotics #4 and Kalundborg Utility case #5. To show shortly the ideas that came to the ALLIANCE at the very beginning, these 5 cases are described below:

CRM is a German company based in Kiel, which was founded by economics and marine ecology experts in 1994. The company's aim is to achieve the sustainable use of living marine resources through modern environmental management of the coastal zone and through research on marine natural products. CRM is specialized in developing sustainable mariculture systems and investigating marine natural substances. These include various different seaweed extracts as antiviral and antitumoral agents as well as collagen from marine invertebrates as bioscaffold material. It has established the first certified organic mussel and macroalgae farm in the Baltic Sea, following the principles of Integrated Multitrophic



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Aquaculture (IMTA). CRM's sister company oceanBASIS, founded in 2001, processes the marine natural resources into extracts which find application in different areas, e.g. as active ingredients for cosmetics and food. As well as selling the natural algae extracts to cosmetics companies as an active ingredient, CRM also has its own line of finished cosmetics products called Oceanwell. CRM has two main products: high-quality and locally sourced product (Oceanwell) based on own and local seaweed production and extracts on a larger scale from seaweed sourced elsewhere for larger and more industrial clients. Both products are for cosmetics and food supplements. CRM has been developing a new extract from brown seaweed (Baltic Sea) containing polyphenols showing antioxidative, anti-inflammatory and anti-cancer activities, tested and partly identified by different methods (gene expression experiments, cell assays, UV absorption, HPLC, NMR). CRM wants to develop within the ALLIANCE a marketable active ingredient from this extract, which can be used in skin care products as an effective natural radical scavenging agent.

Biovento is a Polish biotechnology start-up based in Gdańsk. Founded in 2014 by scientist and entrepreneur Natalia Kujawska, the company provides biotechnological research as a service to other companies. Its versatile profile has brought it into contact with sectors as diverse as the cosmetics, pharmaceutical and maritime industries. The company's mission is the development and implementation of innovative technologies. Biovento's Research & Development department continually deepens its knowledge of biology, biotechnology and technological processes. This has a crucial impact on improving its evolving capabilities and results. Not only the final result, but also the production process itself is a focal point of this innovative approach. Sustainability is one of Biovento's key values and its experts create systems that minimise the impact of production on the environment by reducing waste and promoting the most efficient use of resources.

Biovento has a collection of heterogeneous samples sourced from the Baltic Sea. Collected from aboard ships in the Baltic, the samples contain microalgae along with other organisms such as fungi and bacteria. Biovento's research interest is to study the substances that inhibit the growth of microalgae. This topic is of particular relevance to various actors in the maritime sector, where anti-fouling agents such as microalgae inhibitors have many industrial applications. The next step in the process is to complete a full taxonomy of the samples – to determine their exact make-up and the properties of each species contained in a sample and thereby identifying those substances that can inhibit the growth of microalgae. To take its idea for product development to the next stage, Biovento therefore needs a partner with expertise in natural product chemistry and bioactivity testing.

The case Geoterma is a Lithuanian Joint Stock Company set up for the purpose of investigating geothermal energy resources, improving its extraction technology and its utilisation for economic activity. JSC Geoterma has built a geothermal heat demonstration plant in Klaipeda on the Lithuanian Baltic Sea coast. This plant supplies heat to the city of Klaipeda's district heating network from December to April each year. The geothermal water, which has a very high mineral content, is drawn from wells more than 1100m deep. The temperature ranges from +38 degrees to +80 degrees. In practical terms, the geothermal heat supplied by this deep geothermal water is used for heating buildings and in the preparation of hot water. So far, the geothermal water supply in Klaipeda has been operational only



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during the cold months of the year (December to April). To make the operation of the geothermal water facility more sustainable and profitable, Geoterma is exploring potential new activities and uses for the summer and autumn/spring months, when no heating services are needed in Klaipeda. Ideas to valorise the geothermal water and energy range from aquaculture – fish or shrimp cultivation – to health applications such as a thermic spa resort. For these purposes, the geothermal water has been thoroughly analysed. In 2015 it was certified by the National Institute of Public Health-National Institute of Hygiene in Poland to be suitable for use as therapeutic water and as water for swimming pools. Several other institutes have also carried out further testing which has e.g. excluded the presence of harmful microorganisms and determined the level of radiation to be normal.

The next case is the Latvian company Baltic Probiotics, which has a successful track record of developing probiotics-based products to improve animal health. Since its foundation in 2013, the Rucava-based company has so far developed products for a number of applications in this field – uses range from veterinary medicine for domestic pets to animal husbandry such as cattle rearing. These all-natural products contain a powerful blend of beneficial microorganisms (up to 11 per product), enzymes and antioxidants, cane molasses, sea salt and plant extracts. The products promote animal health by improving digestion and boosting the immune system. With several successful products already on the market, Baltic Probiotics has now set its sights on the blue economy.

Within the ALLIANCE project Baltic Probiotics Ltd. created two new recipes of probiotic-based products: liquid supplement for recirculating aquaculture that improve and regenerate water quality and complementary feed supplement for aquaculture fish, which could improve feed value, enzymatic contribution to digestion, inhibition of pathogenic microorganisms etc. These direct effects may help to overpass severe survival bottlenecks, improve growth and feed utilization what are of crucial importance to support commercial viability of fish farming.

The last of the five case partners who joined the ALLIANCE from the beginning is the Danish company Kalundborg Utility A/S that administers a full-scale microalga testing and production facility within its walls, close to Kalundborg harbour. The town of Kalundborg is situated in north-western Zealand, Denmark and is home of the internationally renowned “Kalundborg Symbiosis”. Its location gives Kalundborg Utility access to different types of waters (such as industrial and medical side-streams, municipal wastewater, fresh water and sea water) as well as easy access to the EU-wide transport network. This case partner would like to ensure the continued operation of the microalgae facility by making it a test and research facility for product development for various actors from around the Baltic Sea. The facility’s access to a variety of water types offers potential users great flexibility in the range of tests that can be undertaken here – e.g. cultivation tests in various environmental conditions.

The first 5 accepted cases are all SME (small and medium size enterprises), who come from five different countries around the Baltic Sea. The remaining cases who have been in touch with the ALLIANCE applied to the programme based on a call for ideas that was organized four times within the ALLIANCE project.



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## 2.2 Cases who applied successfully to the ALLIANCE calls for ideas

All together 34 cases candidates applied to four calls for ideas, which gives on average 8.5 case candidates per call. The 1<sup>st</sup> call for ideas was the most successful one in terms of the number of applicants (20 candidates submitted their application to the call), this high number of applicants could be explained with the fact that there was still funding available for “reserved partners” in the ALLIANCE project. The 2<sup>nd</sup> call counted 6 applicants, the 3<sup>rd</sup> call 3 applicants and the last 4<sup>th</sup> call 5 applicants. From 34 applications, 21 were accepted to the ALLIANCE and 13 were rejected. From the 21 accepted cases, which came to the project via calls, 6 could enter the project as case partners (and received funding) and the remaining 15 entered the project as cases without partner status. The cases who entered the ALLIANCE as case partners belong to the 2<sup>nd</sup> generation cases and they are: case #6 Biome, #7 Furcella, case #8 BIOFISK, case #9 KosterAlg, case #10 SFTec and case #11 UKSH (University Hospital Schleswig-Holstein).

Biome is a Lithuanian start-up whose aims to apply Baltic Sea natural resources, namely mollusk shells, for biomedical uses, precisely for bone regeneration. Mollusk shells are composed of calcium minerals and organic macromolecules. Natural calcium minerals from shells have many advantages due to their biocompatibility and the traces of other valuable inorganic elements, such as magnesium, potassium, iron, strontium, sodium, zinc, bromine etc. Therefore, Baltic Sea mollusk shells are considered as an attractive resource for biomedical industry. The purpose of this work is to apply ground mollusk shells for the preparation of 3D polymeric scaffolds for bone tissue engineering in odontology and orthopedics.

Furcella is an Estonian company whose idea is to use from red algae isolated furcellaran and astaxanthin as components for natural cosmetics products. For product development Furcella cooperates with Tallinn University and according to their research results furcellaran has high antioxidant level - the ability to capture free radicals (73-76%) is even higher compared to Hyaluronic acid (widely used in cosmetics). Packaging material should also be as natural as possible. In this way the start-up differs from competitors and remains innovative.

BIOFISK is a project of the Danish municipality Guldborgsund. The aim of project "BIOFISK" is to develop new biomass-based products from residual biomass, including beach cast. The motivation behind is to create local jobs by developing the whole value chain of fish feed and innovative aquaculture/sustainable fish farming in a local perspective and with the island of Falster as a showcase. The project will focus primarily on the potential of beach-biomass (eel-grass) as part of a cultivation media for insect larvae, based on local biomasses which will then in turn be used for feed.



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KosterAlg is a Swedish company whose business idea is to cultivate algae biomass (sugar kelp) for a variety of uses (food, feed, high-value compounds) on the Swedish West coast. The cultivation is taking place in the sea, thus having positive effects on the environment. The company evolved as a start-up from the research project Seafarm. The main markets are seen in food, feed ingredients and bio-based materials.

SFTec is a Finnish company that offers an innovative solution, ModHeat (Modular Heating) technology. The patented technology ensures optimal dryness of all materials and advanced usability enabled by the easy to use construction. The automated, energy-efficient, remote controlled system with a modular structure and scalability enables a solution for every need with the lowest investments. The dryer is also available as a movable container version so it can be taken directly to where the material is produced for example at the seaweed production site.

UKSH (University Hospital Schleswig-Holstein) is a German research organization. The idea is to produce dietary supplements for patients at risk of developing advanced forms of age-related macular degeneration (AMD), the main cause for severe visual impairment in high-income countries. The product will have a new supplement based on fucoidan derived from Baltic algae.

The 2<sup>nd</sup> generation cases consist of 4 companies, one municipality and one research institution. It can be also seen that the share of companies among the ALLIANCE cases is much higher in the 1<sup>st</sup> and 2<sup>nd</sup> generation cases than in the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> generation cases. The 2<sup>nd</sup> generation includes also 5 cases that did not receive any funding, the cases are: #12 Hoekmine, #13 JAMK, #14 Maresome, #15 Power Algae and #16 Enzymicals.

Hoekmine is a Dutch start-up with the idea of screening Baltic macroalgae for iridescent microorganisms. This should solve the resulting structures and possibly modify underlying genes in order to create new colors, determine the nanostructures, which forms the basis of the color. These structural colors might be valorized in different areas such as fabrics or cosmetics (L'Oréal declared interest) by copying the nanostructures of interest into cellulose. They can also be used as sun blocks (smaller market than cosmetics), banknotes or forgery of products in another area, security (tracking of items by very sophisticated barcodes) and automotive industry (paints for cars).

JAMK is a Finnish research organization. The primary case idea is to develop closed energy and nutrient cycle for microalgae cultivation in the bio-refinery system that comprises an energy-effective photobioreactor (PBR) and biogas plant. PBR produces high-value products for refining and biomass for the biogas plant that in turn produces energy, nutrients and CO<sub>2</sub> for PBR and high-value substrates and fuel for the market. Experiments have been done by tube systems (lab-scale) and by container systems (pilot scale) to isolate the nutrients and solid from the water with filtration materials. The case has seven years' experience in automatic monitoring of water quality and flow rate and strong and long experience of energy efficiency and business models especially in agriculture.



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Maresome is a German research organization that develops new formulations for orthopedic socks, wound dressing or novel ointments which effectively accelerate the wound healing and prevent/reduce infections on the base of microparticles of algae (Maresome®) from the Baltic sea. The idea based on two existing EU-Patents EP1480661 and EP2162121 and was realized for example in a special prophylaxis cream against MRSA.

Power Algae is an Estonian start-up that aims to provide algae farming technology for developing a meta-system of industrial symbioses composed of CO<sub>2</sub> sequestration by microalgae and valorization its produce as a component for nutrients, cosmetics, and biofuel. The first lab-scale photobioreactor prototypes are already in use in the Estonian University of Life Sciences and lab-scale tests have proven initial feasibility.

Enzymicals is German stock exchange company searching for new enzymes for technical application. They see the marine (micro)organisms as a valuable source for new enzymes. The idea is to set up a recombinant production process for these enzymes to guaranty stable quality.

From the 2<sup>nd</sup> generation cases without funding the composition is 3 companies and 2 research institutes. This gives together 11 cases accepted in the 1<sup>st</sup> call for ideas, versus 9 rejected applicants (more information about the refused case candidates will be given in the next chapter). The 2<sup>nd</sup> call for ideas brought together 6 applications, 4 of them were accepted. They are: case #17 Moveable Biogas Factory (MBF), case #18 Organic Seaweed, case #19 Uni Gdansk biomass and #20 EHP.

Movable Biogas Factory (MBF) is a Finnish innovative team (without any legal form yet) that utilizes low-value biomass collected from beaches, sporadic fishing, algae/mussel cultures or renovation of drainage basin. MBF is transferred on-site, biomass is processed into biogas and reject utilized e.g. as fertilizers.

Organic Seaweed is a Danish company that wishes to develop a natural plant-based sunscreen from algae, to replace the chemical and physical filters used in sunscreens today and prevent a number of negative environmental, endocrine and possible cancer-causing side effects. Seaweed, especially the brown algae species which grow close to the surface, contains phlorotannin that protect the plant itself against the harmful sunrays, both UVA and B. It is these active substances that we want to extract and store from the brown algae, for adding into creams.

The case University of Gdansk biomass is a Polish researcher group that evaluates biomass obtained from the selected Baltic microalgae as a feedstock for biogas (biomethane) production through anaerobic fermentation. The idea of recovering energy from biomass has been introduced in many countries, including Poland (600 biogas plants). Still, microalgal biomass as a feedstock is considered to be uneconomical and its performance is not sufficiently tested. Given the rapidly advancing technology of cultivation and possibility of costs reduction using wastewater, reconsideration of microalgae biomass as a biogas substrate is highly recommended. The idea is a part of a PhD.





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EHP is a Finnish company that offers cost efficient real-time monitoring at aquaculture sites, using fit-for-purpose sensors and innovative data. The sensors at the EHP buoy monitor the wished water quality parameters (for example pH, turbidity, oxygen, conductivity, chlorophyll, BOD, COD, temperature, water flow speed & direction, water level).

From the 4 accepted cases in the 3<sup>rd</sup> call, 2 are companies, and 2 research orientated. The 3<sup>rd</sup> call for ideas received the lowest number of applications, only 3, two of them were accepted (case #21 Vetik and case #22 University of Gdansk bloom).

Vetik is an Estonian company whose goal is to develop a sustainable methodology for large scale extraction of R-Phycocerythrin (R-PE) from *Furcellaria lumbricalis*, a red marine alga. The company has access to a unique source of wild red seaweed (*Furcellaria lumbricalis*) located in the sea area of the West Estonian Archipelago, between two of the biggest islands of Estonia - Saaremaa and Hiiumaa.

The Uni Gdansk bloom case is a team of two researchers, whose idea is to bridge two urgent problems of global interest and is of high importance in the semi-enclosed Baltic Sea - plastic pollution and eutrophication. They aim to develop an industrial process to turn cyanobacterial blooms into bioplastics or biomaterials that could replace some of popular non-degradable plastics threatening the existence of earth ecosystems.

The candidate LoodSPA applied to the 3<sup>rd</sup> call and was rejected, but reformulated the idea and tried again in the 4<sup>th</sup> (last) call and was accepted. The 4<sup>th</sup> call ended with 5 applications of which 4 joined the ALLIANCE (case #23-LoondSPA, #24-Phytolinc, #25-Department of Seaweed and #26-DTU/Biotrino).

LoondSPA is an Estonian company which aims to use Väraska lakemud in the cosmetic products. The Väraska lake mud is compared to the world's famous Dead Sea mud, and its medicinal benefits are also well known in Estonia.

Phytolinc is a German company with an offer of a PhytoBoX, a new photobioreactor which is a micro-algae cultivation system that one can directly link to any existing land-based recirculating aquaculture system (RAS).

The Department of Seaweed (DoS) is a trans-disciplinary platform for the exploration of seaweed as a sustainable resource (and works with seaweed as material in art for example).

DTU/Biotrino is a research group of Danish origin that wants to commercialize algae for food with the explanation that they produce 2-3 times as much protein as meat, contains vitamins, minerals, and omega-3/6. Replacing just part of the animal protein with protein from algae will have a tremendously positive impact. The plan is to grow algae in heterotrophic conditions using by-products from food production.

All in all, 21 cases entered the ALLIANCE after providing an application to one of the four ALLIANCE calls. Five cases entered the ALLIANCE in the application phase, which gives 26 cases accepted to the ALLIANCE in total. Eleven of the 26 cases received ALLIANCE funding and 15 cases received non-financial support.



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An overview of all accepted cases can be seen in the below table:

Table 1: ALLIANCE cases

Generation	Case no.	Case name	Funding from the ALLIANCE
1 <sup>st</sup> generation	1	Coastal Research & Management	Yes
1 <sup>st</sup> generation	2	Biovento	Yes
1 <sup>st</sup> generation	3	Geoterma	Yes
1 <sup>st</sup> generation	4	Baltic Probiotics	Yes
1 <sup>st</sup> generation	5	Kalundborg municipality	Yes
2 <sup>nd</sup> generation	6	Biome	Yes
2 <sup>nd</sup> generation	7	Furcella	Yes
2 <sup>nd</sup> generation	8	Biofisk	Yes
2 <sup>nd</sup> generation	9	KosterAlg	Yes
2 <sup>nd</sup> generation	10	SFTec	Yes
2 <sup>nd</sup> generation	11	UKSH	Yes
2 <sup>nd</sup> generation	12	Hoekmine	No
2 <sup>nd</sup> generation	13	JAMK	No
2 <sup>nd</sup> generation	14	Maresome	No
2 <sup>nd</sup> generation	15	PowerAlgae	No
2 <sup>nd</sup> generation	16	Enzymicals	No
3 <sup>rd</sup> generation	17	Moveable Biogas Factory	No
3 <sup>rd</sup> generation	18	Organic Seaweed	No
3 <sup>rd</sup> generation	19	Uni Gdansk - Biogas	No
3 <sup>rd</sup> generation	20	EHP	No
4 <sup>th</sup> generation	21	Vetik	No
4 <sup>th</sup> generation	22	Uni Gdansk - Biomaterials	No
5 <sup>th</sup> generation	23	LoondSPA	No
5 <sup>th</sup> generation	24	Phytolinc	No
5 <sup>th</sup> generation	25	Department of Seaweed	No
5 <sup>th</sup> generation	26	DTU - Biotrino	No

### 2.3 Cases who were not accepted to the ALLIANCE

During the four calls for ideas 11 applicants were not accepted by the ALLIANCE for mentoring. There were few main reasons for their rejection, e.g. referring to their geographical location and belonging to other regions than the Baltic Sea Region and with focus on other geographical areas. Moreover, ideas with requirements for a very high budget to develop the case idea were not financially realistic among the ALLIANCE cases. Finally, a very early development stage (before the research & development level) were not suitable to obtain the support of the ALLIANCE network. The selection criteria used by the ALLIANCE were: relevance for the Baltic Sea Region, sustainability, feasibility, market





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potential, balance/diversity and fitting of applicants' needs to the competences of ALLIANCE project partners.

To sum up the candidates who were rejected by the ALLIANCE, they failed mainly with their ideas due to the following reasons:

- they did not bring much value to the Baltic Sea region,
- they did not define from where exactly the resource will be taken from,
- they needed an unrealistic budget,
- they were at the very early stage (technology readiness level 1 or 2) in their business journey.

In total, 13 cases were rejected by the ALLIANCE, 2 of which applied for the second time and were accepted later to enter the mentoring programme. The two cases with a double application are the Danish case #18 Organic Seaweed and case #23-LoondSPA. The 11 candidates who were not accepted to the ALLIANCE are presented in the table below:

Table 2: Rejected case candidates

Call	No.	Candidate	Type	Country
1 <sup>st</sup> call	1	Christian Birke Coaching	Company	Germany
1 <sup>st</sup> call	2	aquaMarine, innovation & consulting	Company	Germany
1 <sup>st</sup> call	3	Institute of Marine Biotechnology e. V.	Research	Germany
1 <sup>st</sup> call	4	Università Politecnica delle Marche	Research	Italy
1 <sup>st</sup> call	5	Department of Pharmacy - University of Naples Federico II	Research	Italy
1 <sup>st</sup> call	6	Seakult	Company	Germany
1 <sup>st</sup> call	7	IMAR- Marine Institute- University of the Azores. OKEANOS Center-University of the Azores	Company	Portugal
1 <sup>st</sup> call	8	Molecular Imaging North Competence Center (MOIN-CC), Department of Radiology, UK-SH, Campus Kiel	Research	Germany
2 <sup>nd</sup> call	9	Riga Technical University (RTU), Water Research Laboratory	Research	Latvia
2 <sup>nd</sup> call	10	University of Copenhagen	Research	Denmark
4 <sup>th</sup> call	11	Nordic Algae IVS	Company	Denmark

From the overview, it can be seen that most cases were refused in the 1<sup>st</sup> call for idea, which is connected to the high number of received applications. Five of the 11 cases, not accepted to the ALLIANCE, come from Germany, three of them come from countries outside the programme area (Italy and Portugal). Six of the rejected candidates represent research institutes, five are companies.

Christian Birke Coaching offers an authentic maritime cure preventing lifestyle diseases. The concept supposed to be developed by a transdisciplinary team of a hotelier, a marine biologist, and a medical doctor. Marine natural products from the Baltic Sea and the implementation in the region are in the



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focus of this project. The reason for rejection of this candidate was not a very complete proposal, it is linked to products for the well-being market but not clear what or which particularly area of the market is the target here.

AquaMarine, innovation & consulting aimed for cultivation of algae in floating systems based on tear-resistant textile structures with nanosol-based technologies for biological coating. The developed technology can be seen as a component of a complex aquaculture which is imitating the natural food chain. The main reason for not accepting this candidate was the difficulty to assess whether this is an enclosed system or whether it would be seeding with the choice of algae or allowing nature to take its course.

Institute of Marine Biotechnology e. V. works with beta glucans, widespread glucose polymers in mushrooms, yeasts and bacteria, but also in microalgae, have wide applications and high medicinal and economical potential due to their anti-inflammatory and immunomodulating effects. This research institute wanted to establish beta glucan from marine microorganisms for development of innovative nutraceuticals. The idea was evaluated as universal and moreover the case owner comes from Germany and since 3 German cases were accepted to the 1<sup>st</sup> call, a country balance among the cases was needed as well.

Università Politecnica delle Marche's idea focuses in the sustainable exploitation of marine derivatives for the development of natural, biomimetic and bioresponsive devices for regenerative medicine applications. Specifically, they aim at addressing massive jellyfish proliferation in the marine environment towards the production of batches of pure collagen and glycosaminoglycans (GAGs) - natural building block of tissues- for manufacturing biomaterials with the capability to modulate the host immune response. The reason for refusal is mainly the fact that it is unclear if there is enough jellyfish in the Baltic to support this kind of industry.

Department of Pharmacy - University of Naples Federico II, the next Italian candidate whose idea aims to discover antimicrobial lead compounds from marine natural products, which are able to interfere with virulence regulatory mechanisms of pathogens rather than killing them. Differently from bactericidal therapies, this emerging therapeutic approach reduces pressure for the occurrence of antibiotic resistance in pathogens. The proposal was focused on the search of novel inhibitors of bacterial quorum sensing (QS), a cell-cell communication process which controls many virulence factors and antibiotic tolerance. For this purpose, they aimed to explore the extensive QS interactions going on between marine sponges and their symbionts. It was not really clear from the proposal how this links to the Baltic because the applicant could not tell where the material will be sampled from.

Seakult idea was to enhance growth rates of aquaculture relevant (high-value) species, which normally have a prolonged life cycle or a retarded fertility/fecundity. Some economically interesting organisms, e.g. sturgeon/lobster/king crab/others, need several years to reach market size or their reproductive stage. The new and never tested approach in this context is to expose the candidate to an artificially shortened period of less than 24 h. Or, to simplify it, the day has 20h instead of 24h. The idea of the



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project is based on the observation that the circadian rhythm of animals is not fixed but triggered by external stimuli, predominantly by the 24h light-dark cycle. This proposal was questionable what "20h day" means for animal wellbeing and received a refusal therefore.

IMAR- Marine Institute- University of the Azores. OKEANOS Center-University of the Azores proposed to deliver unique products from marine environments not commonly known and available to industry, by discovering, bioprospecting and R&D the "blue" components of the value chain. The main objectives consisted of: establishment and maintenance of a marine bacteria collection from the Azores islands, including hydrothermal vents and subsequent production of extracts for biological screening and its commercialization whether as licensing contracts of defined collection of extracts or as the development of given compounds into cosmetic products formulation for topical application. The whole idea was at a very early stage, estimated at technology readiness level (TRL) 1-2. The resource will be utilized is from the Azores not in the Baltic area, for this reason it was unclear what the Baltic area will get out of this project.

Molecular Imaging North Competence Center (MOIN-CC), Department of Radiology, UKSH, Campus Kiel shown that an HPLC-fractionated hydrophilic extract from the Baltic brown seaweed *Fucus vesiculosus* has anti-cancer properties. The anti-cancer properties reside in the ability to inhibit cell cycle progression in proliferating tumor cells, but low cytotoxic activity was observed against non-malignant resting T cells and erythrocytes. The extract consists of two phenolic like compounds, one with a molecular mass of 1331g/mol and the other with a mass of 1137g/mol. The idea is to advance the development of the extract to the point where an active compound could be purified and tested in vivo for efficacy and toxicity. The main issue is the biomass *Fucus* cultivation, which is not being undertaken currently but can be done. There is no real information given about the actual quantities need or if there is a seasonality linked to the relevant compound produced at its maximum amount by the seaweed.

Riga Technical University (RTU), Water Research Laboratory's idea is to use wastewater as a feed for microalgae cultivation to produce fatty acids (biodiesel) or use the whole biomass in a biorefinery. This approach has been successfully demonstrated in sub and tropic climate zones with the use of photosynthetic or mixotrophic algae. However, the challenge is to apply this concept in temperate climate where the average light intensity is low and average temperature is below 20°C. To overcome these bottlenecks, specific algae and complex cultivation will be linked together with innovative and affordable technologies in a single product. The evaluation panelists of the submitted proposal were unsure if this concept has any chance in the Baltic Sea Region conditions and this was the reason why the candidate was not accepted.

University of Copenhagen saw a significant potential to use fish waste to grow microalgae as feed for freshwater and marine water aquaculture. The objective was to screen the microalgae strains from gene banks or collections for productivity with phenotyping and molecular tools, augmented by available information from the past EU and regional projects, compile synthesized lists for Baltic environments and run the field trials with stakeholders for validation. The candidate was rejected, due to lack



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of focus in his idea, basically the candidate wanted to do all possible with microalgae, the evaluation panel was not convinced about the too broad vision presented during the pitching event in Gothenburg.

Nordic Algae IVS develops a cultivation system as well as a harvesting platform for cultivation of brown algae. The combination of these systems will make it possible to mechanically handle a line with algae growing on it without damaging the crops. The system will include multiple processes from the value chain enabling us to reduce the production cost significantly. The system will be designed so it leaves a bit of algae on the line which will regrow. This allows the farmer to harvest more biomass from the same plant the next season. This gives not only a significant cost saving on the lines and plant material but also saves harvesting time and seeding cost. The idea was rated by ALLIANCE evaluators as good, but the relevance was questionable and the needed budget was irreproachably high.

The two cases which were first rejected and then accepted (Organic Seaweed and LoondSPA), they both have optimized their idea in order to join the ALLIANCE mentoring programme: Organic Seaweed made more precise estimates how much seaweed biomass will be needed in extraction to meet demand for the product to be produced. LoondSPA redefined the timeline and did chemical analysis to support their product idea.

### 3 Clustering of accepted cases

The 26 accepted ALLIANCE cases are very diverse in terms of the type of organization, offered product/services, origin and needs. This chapter will illustrate some of the quantitative and qualitative data about the 26 cases who entered the ALLIANCE mentoring programme.

The first indicator which characterizes the ALLIANCE cases is the diversity of served markets, the products and services of the cases belong to the following sectors: cosmetics, medical products, nutraceuticals, energy, food, waste, maritime technology, aquaculture and biomaterials. Most of the products and services that are developed within the ALLIANCE comes from the sectors cosmetics and energy, followed by biomaterials.

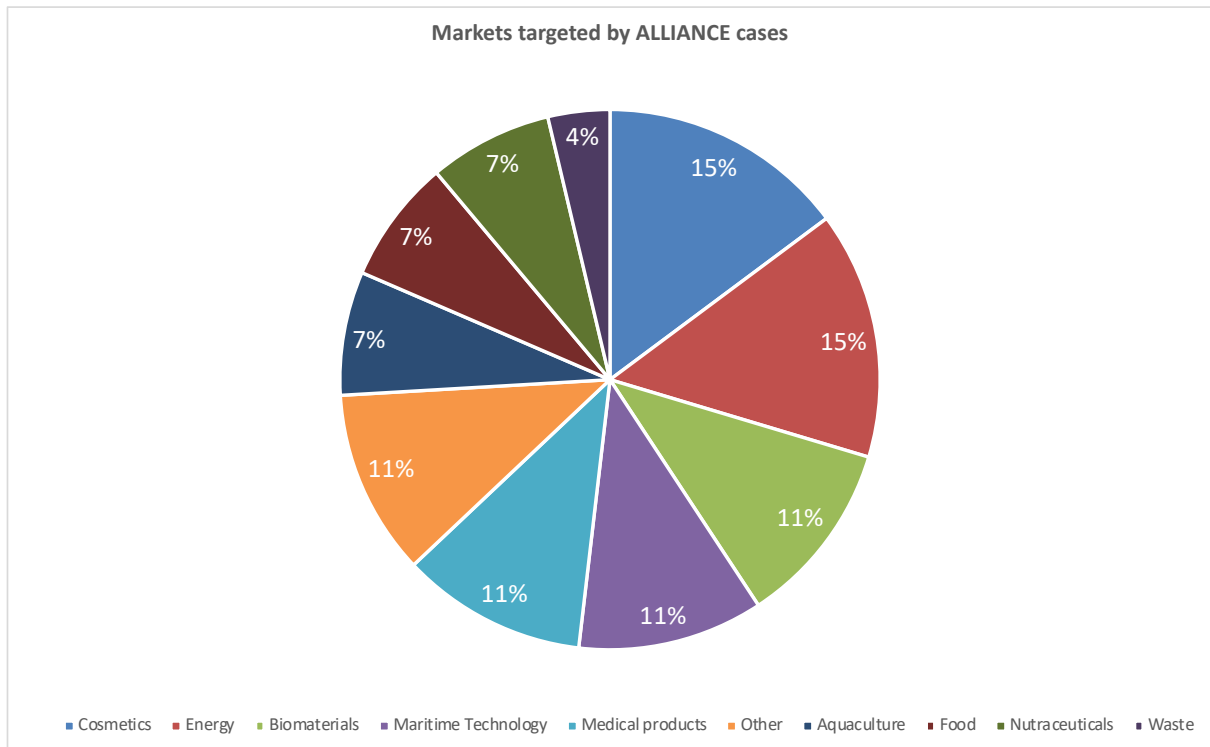


Figure 1: Target markets

The next indicator of the cases shows the raw material used for the development of products. Marine plants are macroalgae that are the most common base for the ALLIANCE products, the next raw material is microalgae. These two bases are the most dominant in the development of Baltic Sea products. Further bases are bacteria, water and marine animals. The category “other” stands for enzymes for example.

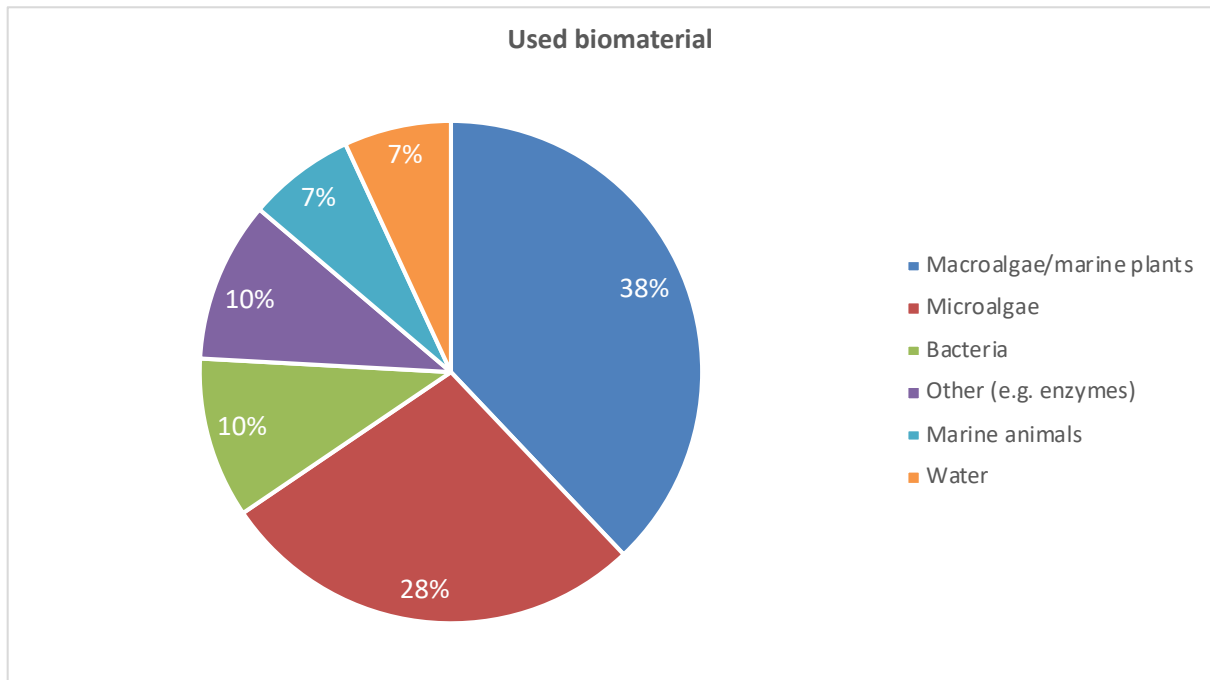


Figure 2: Used biomaterial

When it comes to target customers, the business to business (B2B) sector is clearly the most crucial for the products and services developed by the ALLIANCE cases (56%), followed by the business to consumer (B2C) with 24% and the public sector with 20%.

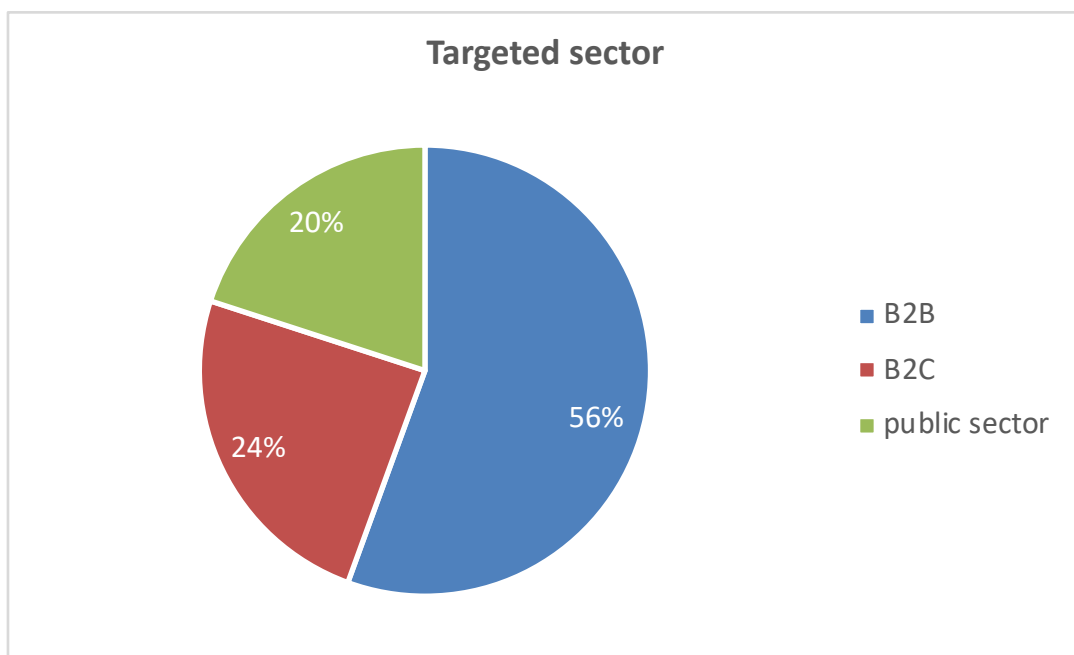


Figure 3: targeted sector

Most of the ALLIANCE cases are companies (17 cases), the remaining are research institutes (5 cases) and other organization types, as municipality, innovation team, platforms.

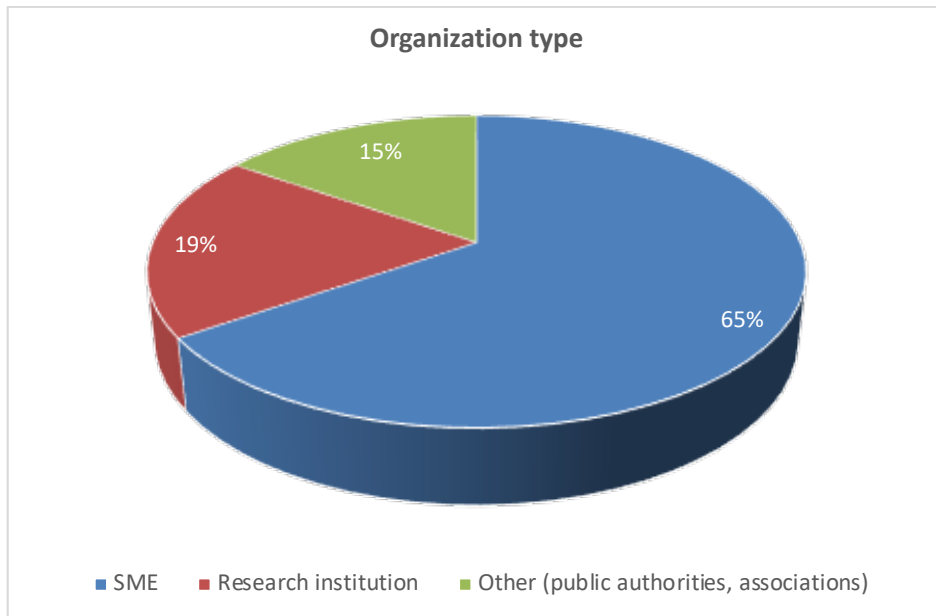


Figure 4: Type of organization

Approximately 80% of the developments within the ALLIANCE deal with products, while 20% are directed to services. Other types are public authorities or associations.

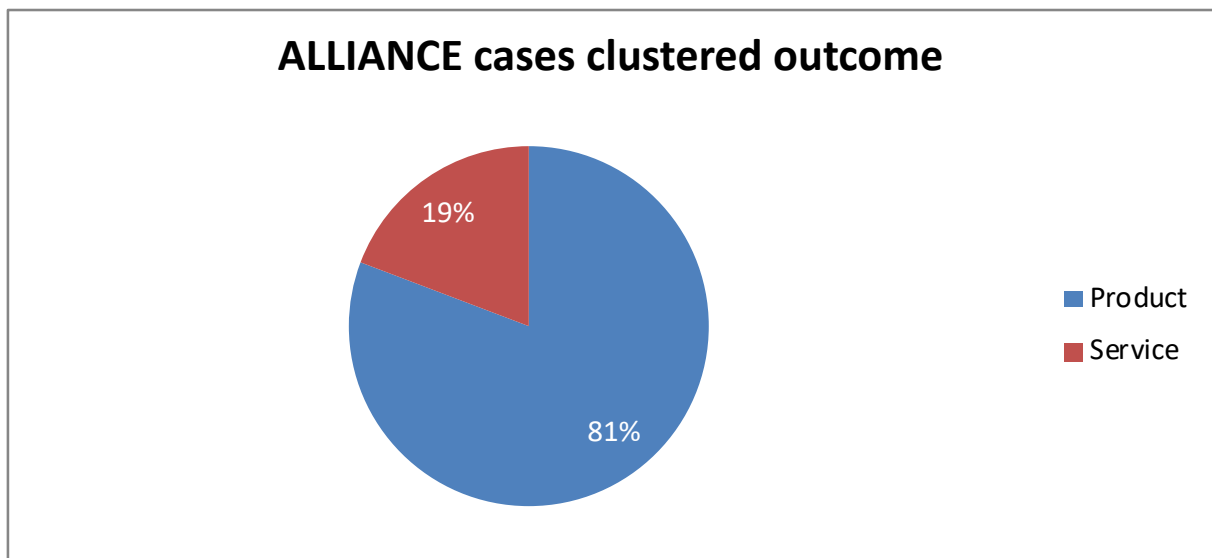


Figure 5: Product versus service



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Most of the recruited cases come from Germany (6), followed by 4 cases from countries as Denmark, Estonia and Finland. The remaining cases come from Poland, Lithuania, Latvia, Sweden and the Netherlands.

*Figure 6: Country origin*

The ALLIANCE cases represent the whole basin of the Baltic Sea Region, they prove transnationality and transdisciplinary character for the development of products from the common sea.

The reached level of collaboration between the cases and the ALLIANCE is very much depending on the TRL-stage of a case, and own ambition while being part of the ALLIANCE. Most of the cases were able to move by one or two stages in the TRL scale and some can proudly present their developed products that had the market launch while belonging to the ALLIANCE. Some examples of the success stories are:

- The case #4 Baltic Probiotics: market launch of a product improving the quality of water in aquariums (closed water basins with fish farming).
- The case #7 Furcella: launched his cosmetics product line Berrichi in October 2017.
- The case #9 KosterAlg: launched the seaweed products in different forms: fresh seaweed, frozen seaweed and dried seaweed.



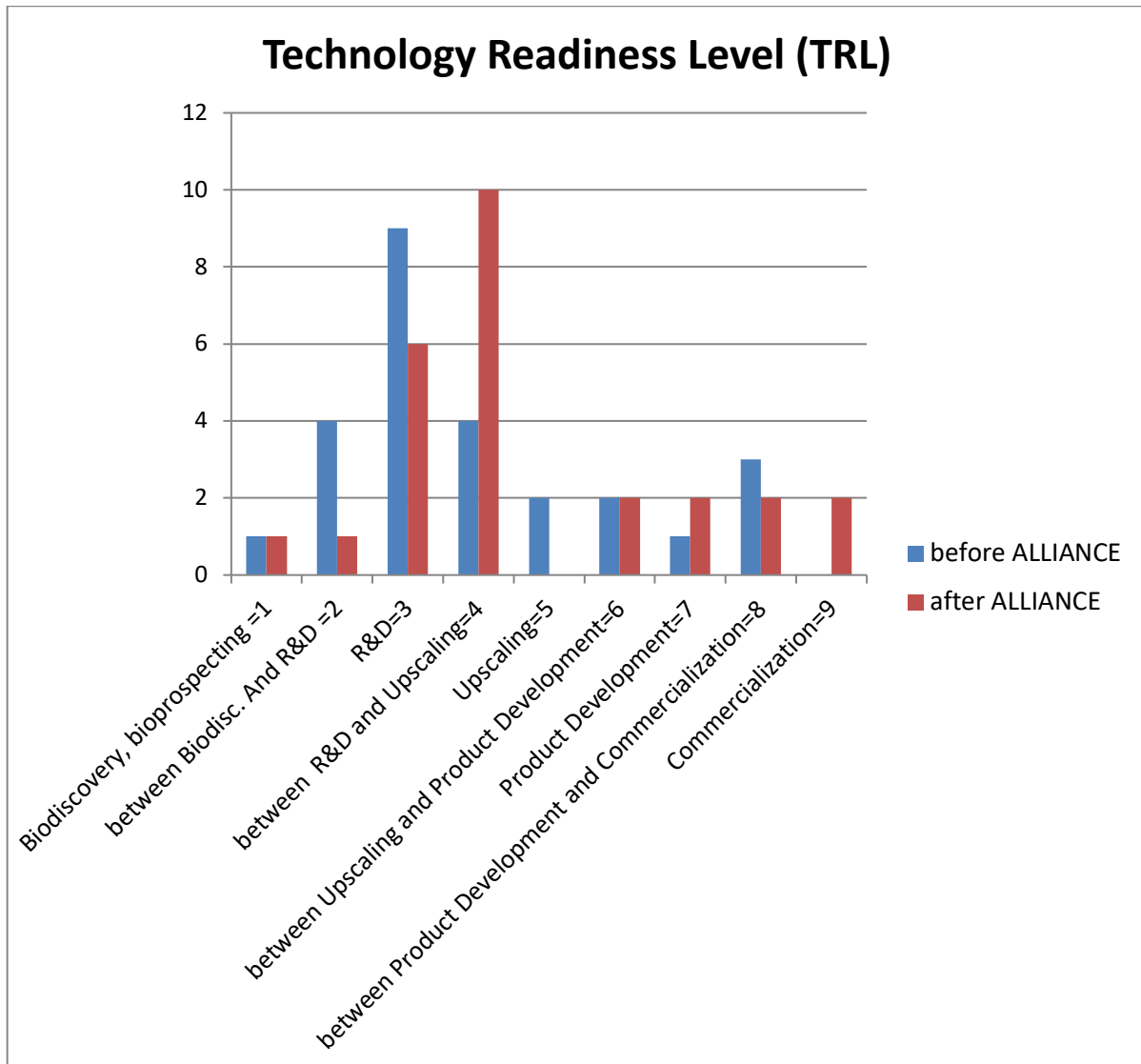


Figure 7: TRL before and after the ALLIANCE

Figure no. 7 (TRL before and after the ALLIANCE) shows the progress of ALLIANCE cases on a lower scale, but still in the right direction: eight cases managed to reach the final stages of TRL (6-9). 16 cases are placed between the levels 3-4 TRL. Only two cases remain at the very early stages 1-2 TRL. Each of the 26 cases received as primary mentor an ALLIANCE partner from their own country, as secondary mentor the ALLIANCE partner who fits most in terms of the expertise. Apart from the primary and secondary mentor, each case had the opportunity to work with any ALLIANCE partner who was ready to offer help. In the later stage of the project also collaboration between cases themselves have developed. Example are the case #1 CRM with the case #18 Organic Seaweed, both with an interest in cosmetics sector. The CRM case owner proved a certain maturity and has developed more and more to a strong mentor for the blue biotechnology topics.



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It can be also observed that the ambition of each case owner and proactiveness in contact with the ALLIANCE partners/mentors show the best results. To name is here the case owner of Furcella, who has already entrepreneurial skills and apart from the Baltic Sea cosmetics is running his own publishing business. This example shows that not only a good idea is essential, the business skills are very important compared to cases who concentrate very much on the research side of their idea.

Table 3: ALLIANCE cases overview

Case no.	Case name	Country	Biomaterial	TRL (before the ALLIANCE)	TRL (after the ALLIANCE)	Product/service
1	Coastal Research & Management	Germany	Macroalgae	4	4	Macroalgae ingredient
2	Biovento	Poland	Microalgae	3	3	Microalgae paints
3	Geoterma	Lithuania	Water	3	3	Heat supply
4	Baltic Probiotics	Latvia	Bacteria	3	4	Aquaculture probiotics
5	Kalundborg municipality	Denmark	Microalgae	4	5	Microalgae facility
6	Biome	Lithuania	Marine animals	3	4	Mollusk shells
7	Furcella	Estonia	Macroalgae	8	9	Algal cosmetics
8	Biofisk	Denmark	Macroalgae	2	3	Biomass based product
9	KosterAlg	Sweden	Macroalgae	5	8	Baltic macroalgae
10	SFTec	Finland	Macroalgae	6	6	Dryer for by-products
11	UKSH	Germany	Macroalgae	3	3	Dietary supplements
12	Hoekmine	The Netherlands	Macroalgae, bacteria	2	3	Structural colors
13	JAMK	Finland	Microalgae	2	4	Photobioreactors
14	Maresome	Germany	Microalgae	2	2	Antibacterial product
15	PowerAlgae	Estonia	Microalgae	4	4	Photobioreactor
16	Enzymicals	Germany	Enzymes	7	7	Marine strains
17	Moveable Biogas Factory	Finland	Macroalgae	1	1	Biogas processing
18	Organic Seaweed	Denmark	Macroalgae	3	4	Sunscreen
19	Uni Gdansk - Biogas	Poland	Microalgae	3	4	Biofuel
20	EHP	Finland	Water	8	8	Sea monitoring
21	Vetik	Estonia	Macroalgae	4	4	Red algae extract
22	Uni Gdansk - Biomaterials	Poland	Bacteria	3	3	Bioplastic
23	LoondSPA	Estonia	Enzymes	3	4	Lake mud cosmetics
24	Phytolinc	Germany	Microalgae	5	6	Photobioreactor
25	Department of Seaweed	Germany	Macroalgae	6	7	Seaweed platform
26	DTU - Biotrino	Denmark	Microalgae	4	4	Food ingredient

## 4 Lessons learned & recommendation for further recruitment under the ALLIANCE+

When it comes to the recruitment methods applied to attract new cases, it can be concluded that the first call for ideas with the offer of funding attracted automatically many more blue biotechnology actors than the later calls without a funding possibility (mentor support only). From the number of



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received applications it can be also said that it is essential to use the right channels to reach the candidates, otherwise a call spread across various channels has proven to be less successful and with a limited number of applicants. The recruitment strategies used on the national level shows that personal approach often brings better results than an approach towards the masses. It is also crucial to appoint an appropriate contact point per country, one who can answer the questions from different candidates and who is able to win the confidence of prospective cases during their initial contact. The experience of pitching events with a panel of evaluators allows the right selection of future clients that can receive support of the ALLIANCE+ network to be made.

In terms of recommendations for ALLIANCE+, the future concept with the developed service offer should attract clients of the ALLIANCE+. The 26 cases of the ALLIANCE project can be described as pilot “clients” with whom the ALLIANCE service offer has been developed and tested. Based on the business model developed within the group of activity (GoA) 3.5 by the external consultant Andrea Bassi, the ALLIANCE+ must encompass 19 members (partners) to cover the running costs of the ALLIANCE+ network (with 1,000 euros annual fee) – this is the simplest business model. First when the ALLIANCE+ increases the number of its members to 50, the recruitment of potential clients comes into operation and in this scenario 5 paying clients should be reached per year, which should be feasible with the developed recruitment strategy.

When considering the ALLIANCE+ and its clients, it is highly important that the service offer is interesting for these future clients, since they must pay for the received services (which is a very different scenario to the ALLIANCE project in which the cases either received funding or indirect support through mentoring and were covered by the de minimis instrument – at no real monetary cost).

The developed and tested recruitment strategy is ready for ALLIANCE+, based on the experiences made so far, and it is concluded that the ALLIANCE+ network could successfully recruit new blue biotechnology clients for receiving support from the ALLIANCE+ team.