



CASE STUDY: EIT INNOENERGY THE BATTLE OF GREEN TALENT

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| | |
|--|-----------|
| INTRODUCTION | 3 |
| OBJECTIVES OF THE CASE STUDY | 3 |
| METHODOLOGY | 3 |
| RATIONALE FOR SELECTION OF THE CASE STUDY | 4 |
| CONTACT INFORMATION | 5 |
| INFORMATION ABOUT ACTIVITY | 5 |
| RATIONALE OF THE ACTIVITY: VALUE ADDED AND BENCHMARKING THE ACTIVITY WITH OTHER ACTIVITIES | 5 |
| DESCRIPTION OF ACTIVITY | 7 |
| DATES OF IMPLEMENTATION AND FUNDING ALLOCATED (INCLUDING THE EIT FUNDING) | 9 |
| INFORMATION ABOUT PLANNED KPIS AND OUTPUTS | 10 |
| PRESENTATION OF PARTNERS. KNOWLEDGE TRIANGLE APPROACH | 11 |
| BENEFICIARIES..... | 13 |
| IMPLEMENTATION OF THE ACTIVITY | 13 |
| THE IMPLEMENTATION PROCESS | 13 |
| ACHIEVED OUTPUTS AND KPIS..... | 16 |
| IDENTIFIED VALUE ADDED..... | 17 |
| HOW THE ACTIVITY HAS APPLIED KICS FINANCIAL SUSTAINABILITY PRINCIPLES | 18 |
| QUALITATIVE ASSESSMENT OF THE PROGRAMME AND ITS ACHIEVED IMPACT | 21 |
| QUALITATIVE ASSESSMENT OF THE ACTIVITY | 21 |
| ACHIEVED IMPACT | 23 |
| LESSONS LEARNT AND GOOD PRACTICES | 26 |
| PRESENTATION OF LESSONS LEARNT FROM THE ACTIVITY IMPLEMENTATION | 26 |
| IDENTIFICATION OF GOOD PRACTICES FOR SHARING, INCLUDING KEY IMPLEMENTATION CONSIDERATIONS | 27 |
| PRESENTATION OF POTENTIAL FOR REPLICATION AND SCALING UP (INCLUDING IDENTIFICATION OF RELEVANT TARGET GROUPS AND SCALE OF FUNDING) | 32 |
| CONCLUSIONS | 34 |



INTRODUCTION

OBJECTIVES OF THE CASE STUDY

This case study presents the framework, development, innovative educational approach and impact of **the Battle of Green Talent (BoGT), which is the EIT InnoEnergy's Master School entrepreneurial education programme. It is an innovative practice which boosts the development of potential and entrepreneurship of students.** Lessons learned and good practices of the programme that can be useful for institutions and organisations supporting young talents and future entrepreneurs are identified and presented.

METHODOLOGY

The Battle of Green Talent study consisted of qualitative and quantitative research methods. A wide range of materials was analysed including reports, analyses, internal materials, information available on websites and collected quantitative data. For the evaluation aims, in-depth interviews (IDIs) were conducted with institutional stakeholders, business partners and the programme's beneficiaries; the students and graduates. The study was carried out using **data triangulation**, which enabled to fill the data gaps and increased the validity and reliability of the results.

The study involved conducting eight one-on-one online **in-depth interviews** with:

- Education and Innovation Director, EIT InnoEnergy.
- Manager of the Battle of Green talent Programme.
- Partners of the programme.
- Participants and Alumni of the programme.

Additionally, the documents and reports regarding the implementation of BoGT programme as well as programme's website were analysed, with particular focus put on:

- EIT Labelled Master Programs.
- EIT InnoEnergy, (2022), Battle of Green Talent – Entrepreneurial Competition. Survey. Internal material.
- EIT InnoEnergy (2022), Presentation. Battle of Green talent. Promotion. Internal material and Interview conducted with representatives of EIT InnoEnergy.
- EIT InnoEnergy, (2021), EIT Grant Assessment 2021. Internal material.
- EIT InnoEnergy, (2021), Unicorn Academy Engagement, Deliverable: Report on course production and delivery: Battle of Green Talent (ENG0573DLV001305).



- EIT InnoEnergy, (2021), Roadshow_Students. Internal material.
- EIT InnoEnergy, (2020), Annual Report 2019.
- EIT InnoEnergy (2021), Impact Report 2020.
- EIT (2021), The EIT Label Framework, internal material.
- EIT InnoEnergy, (2021), EIT InnoEnergy STRATEGIC AGENDA 2021-2027.
- OECD (2016), System Innovation in: Science, Technology and Innovation Outlook.
- University Industry Innovation Network, (2022), Good Practice Series 2022. Fostering university-industry engagement, entrepreneurial & innovative universities and collaborative innovation, Gonzalez-Cristiano, A. (2022) EIT InnoEnergy's Battle of Green Talent –A sustainable energy student start-up journey and competition.

RATIONALE FOR SELECTION OF THE CASE STUDY

EIT InnoEnergy was established during the first wave of the EIT KICs in 2010 with two others, EIT Climate-KIC and EIT Digital, with the aim of **building a dynamic, diverse and vibrant community. Fostering entrepreneurship and innovation in sustainable energy is the cornerstone of EIT InnoEnergy activities.**¹ This mission is supported by the steady expansion of its wide range of services and educational offers.

Students and learners may benefit from MA degree programmes² at 16 top technical universities and business schools³ and online and blended courses. The EIT InnoEnergy Master School has attracted so far students from almost 100 countries and has more than 1,600 graduates making an impact in the energy transition globally (77% of them employed in Europe).⁴ More than 120 students are hired by companies from the EIT InnoEnergy ecosystem annually⁵.

The Battle of Green Talent's first edition took place in the academic year 2020-2021 and has finished two editions. The programme results from EIT InnoEnergy's extensive experience in the entrepreneurial educational offer and a good sense of what the market, business, industry, research, and science currently need. It has the following key characteristics:

¹ EIT InnoEnergy (2021), Accelerating sustainable energy innovation, https://www.innoenergy.com/media/5879/corp_brochure_2021_b3.pdf and EIT InnoEnergy <https://bc.innoenergy.com/ecosystem/> (Access on 13.12.2022)

² EIT InnoEnergy Master School offers 7 MA degree programmes: (1) Master's in Renewable Energy; (2) Master's in Sustainable Energy Systems; (3) Master's in Energy for Smart Cities; (4) Master's in Smart Electrical Networks and Systems; (5) Master's in Nuclear Energy; (6) Master's in Energy Technologies; <https://www.innoenergy.com/for-students/master-school/> (Access on 13.12.2022)

³ The list of universities <https://www.innoenergy.com/for-students/master-school/top-universities-and-business-schools/> (Access on 12.12.2022)

⁴ EIT InnoEnergy, <https://www.innoenergy.com/about/about-eit-innoenergy/> (Access on 13.12.2022)

⁵ EIT InnoEnergy, <https://www.innoenergy.com/about/about-eit-innoenergy/> (Access on 13.12.2022)



- The BoGT, a European-wide, overarching entrepreneurship competition as practical entrepreneurial education activity for students, is one of the cornerstones of the Master School's educational offer.⁶ The programme offers students the unique possibility to put the theoretical knowledge gained during MA degree programmes into practice, while creating and developing business ideas and competing with other entrepreneurial teams.
- The BoGT is implemented in collaboration with top European universities and business schools and with partners from business and industry. Each type of partner supports the programme in an individual way, such as through sponsoring or mentoring, coaching, and advising. Thanks to this variety of forms of support, monetary and non-monetary, the programme has diversified revenue sources.⁷
- The programme's idea and framework can be smoothly transferable to other institutions, which stipulates youth and students in innovation and entrepreneurship.

CONTACT INFORMATION

- Programme website: <https://www.battleofgreentalent.com/>
- Programme contact email address: info@battleofgreentalent.com

INFORMATION ABOUT ACTIVITY

RATIONALE OF THE ACTIVITY: VALUE ADDED AND BENCHMARKING THE ACTIVITY WITH OTHER ACTIVITIES

Universities and other entities with educational services offer a wide range of educational programmes and courses, and access to them is becoming increasingly easy. The COVID-19 pandemic boosted online education development, and universities with programmes combining theory with practical skills training programmes are gaining importance. Practical experience is an essential asset in the business world and the labour market, and having it significantly boosts employment opportunities and can be a powerful tool for developing and acquiring new skills.

The Battle of Green Talent is a digital programme to motivate and encourage students to create their own start-ups and help MBA students practice investing in developing students' business ideas. EIT InnoEnergy organises a central excellent learning experience to give a taste of the 'real' world of entrepreneurship and venture capitalism⁸ to students who represent different programmes and disciplines from European universities and business schools. They have an opportunity to build multi-disciplinary teams and develop

⁶ Interview conducted with a representative of EIT InnoEnergy (December 2022).

⁷ Interview conducted with a representative of EIT InnoEnergy (December 2022).

⁸ Interview conducted with a representative of EIT InnoEnergy (December 2022) and EIT InnoEnergy, (2021), Unicorn Academy Engagement, Internal material.



cross-sector innovative business ideas⁹, which will respond to current needs and social problems in the sustainable energy area.

BoGT mimics an entrepreneurial ecosystem, and the EIT InnoEnergy ensures that students from different programmes and disciplines can try to be entrepreneurs and investors.¹⁰ While MA degree programmes are an excellent opportunity to gain knowledge, practical experience, such as designing and developing a start-up, building a business plan or negotiating with investors can give students an accurate idea of what reality will be like capitalising on the opportunities and reach made possible by online learning, BoGT offers a chance to explore soft skills like leadership, team building, teamwork and communication, or problem-solving and provides the opportunity to develop and apply those skills through business training.¹¹

As entrepreneurship can only be learned with hand-on approaches, the organisers aim for students to apply the knowledge they have gained during their studies and to acquire as much practical experience as possible, including making mistakes without incurring real financial consequences or losing an investor or even a company. The practical knowledge acquired in an environment reflecting the world of business, finance and investors, using online tools that also arrange fun and entertainment, helps to attract the students' attention. **The Battle of Green Talent programme is an added value for the students and the EIT InnoEnergy Master School per se and has been developed to provide as broad and practical education as possible to students.**

BoGT is a nice layer on top of The InnoEnergy educational track. Students gain technical knowledge and have their innovation and entrepreneurship journey in their MA degree programmes, and the BoGT allows them to test their skills in a risk-free environment. While participating in BOGT, students can acquire a lot of new competencies, e.g. collaboration skills, interaction skills, how to deal with criticism and feedback, meeting deadlines, showing dedication, learn how to set priorities. The learned skills are very beneficial from an individual point of view and could be used by students in their future professional environment.

The BoGT programme partner

The programme is interdisciplinary and connects MA and MBA students with different backgrounds, experiences and environments¹², making it different to other educational programmes.¹³ The programme also always for collaboration and cross pollination of ideas among the different EIT InnoEnergy MAs. Other institutions offer programmes such as summer and winter schools, workshops, business challenges, hackathons, but most of them are short-time projects or programmes.¹⁴ With BoGT students work together

⁹ University Industry Innovation Network, (2022), GOOD PRACTICE SERIES 2022. Fostering university-industry engagement, entrepreneurial & innovative universities and collaborative innovation, Gonzalez-Cristiano, A. (2022) EIT InnoEnergy's Battle of Green Talent –A sustainable energy student startup journey and competition, <https://www.uiin.org/wp-content/uploads/2022/07/2022-UIIN-Conference-Good-Practice-Series.pdf> (Access on 18.12.2022)

¹⁰ Interview conducted with a partner (December 2022)

¹¹ Interview conducted with a representative of EIT InnoEnergy (December 2022)

¹² Interview conducted with a partner and a representative of EIT InnoEnergy (December 2022)

¹³ Interview conducted with a partner and a representative of EIT InnoEnergy (December 2022)

¹⁴ Interview conducted with a representative of EIT InnoEnergy (December 2022)



for six months receiving expertise and advice from experts and industry professionals outside the MA environment.

A slower pace promotes the validation of lessons learnt and allows for the improvement of mistakes. In addition, it is conducive to watching how other ideas develop and how investors behave and what is valued by them. The flexible online format allows students to work and develop their ideas at their own pace, which enables the conjunction of further students' learning duties with private and work life.

DESCRIPTION OF ACTIVITY

Within the context of the BoGT programme, student teams transform their ideas into promising businesses, try to raise funds in funding rounds and get the help they need from EIT InnoEnergy's ecosystem as they compete to be the best start-up team. MBA students try to make their best investments and compete to be a top investor¹⁵.

The programme has designed different roles for participants, depending on the type of study and work experience. The roles embrace a wide range of competencies and knowledge to be acquired and developed by the participants. As the BoGT updates editions, adapted roles and responsibilities are added to participants as they go along. In the third edition, MA students are given the opportunity to test themselves not only as *Entrepreneurs* or *Talents* but also as *Investors*. The role of MBA students is now the *Power Investors* (previously in the first and the second edition *Investors*). The roles from the third edition are presented in Table 1.

Table 1. The roles and responsibilities. Based on the third edition

| The role | Who can be? | Responsibilities |
|-----------------------------------|--|---|
| Entrepreneurs | EIT InnoEnergy Y2 Master students, PhD students and Alumni | <ul style="list-style-type: none"> Create and start a Venture Recruit Talents for their team Invest virtual money in the most promising venture (NEW)¹⁶ Build and improve the business plan Attract investors for their Venture and achieve a high share price |
| Talents & Investors | All Master Students | <ul style="list-style-type: none"> Scan and examine all Ventures Apply to join a team Invest virtual money in the most promising venture (NEW)¹⁷ Help build the Venture and improve the business plan |
| Power Investors (new role) | MBA and MSc. Management of participating universities and business schools | <ul style="list-style-type: none"> Read and examine all ventures Give their feedback and ask questions to teams Invest virtual money in the most promising ventures (10X more investor power than Talents /Entrepreneurs) Achieve the highest share price portfolio and become the TOP Investor |

¹⁵ Interview conducted with a representative of EIT InnoEnergy (December 2022)

¹⁶ NEW - Scope extended from the third edition of the programme

¹⁷ NEW - Scope extended from the third edition of the programme



| The role | Who can be? | Responsibilities |
|----------|-------------------------|--|
| Advisors | Selected professionals, | <ul style="list-style-type: none"> Read and examine all ventures Give feedback and advice to teams Help the teams to improve the value and quality of the business plan Invest virtual money in the most promising ventures (NEW)¹⁸ |

Source: EIT InnoEnergy.¹⁹

A very important programme feature is that in online competition **participants interact anonymously as avatars** to ensure everyone can behave in a risk-free environment.

The concept of the BoGT is that the InnoEnergy Master School students play the roles of *Entrepreneurs* or *Talents* developing business ideas (start-ups/ventures) and trying to gain investments from the MBA business school students who play the role of *Power Investors*²⁰. The programme dynamics consist of a mechanism where the start-ups in which the *Power Investors* invest deliver better business plans thanks to providing their feedback and coaching. In such a way, the value of the start-up increases, and the investment portfolio of the *Power Investor* is also growing (because its investment in the start-up has a higher value). Students from outside EIT InnoEnergy Master School are encouraged to join the programme as well as Talents allowing for multidisciplinary teams to be formed.

The programme helped me understand that I want to be an entrepreneur. BoGT is an excellent introduction to real business life. It was a demanding programme, there was much work and learning, but it was definitely worth it.

The BoGT programme participant

The finalists from the student side are the 5-6 ventures which have the highest value. The finalists on the investment side is the three investors with the 3 highest-valued investment portfolio.²¹ The programme dynamics are based on the algorithm where the start-ups (in which the *Power Investors* invested) can create increasingly better business plans (by using the coaching of the *Advisors* and the feedback from the *Power Investors*), thus creating additional value for themselves as for the *Power Investors*.²² The structure is modified and adapted to the needs and expectations of participants after each edition.

¹⁸ NEW - Scope extended from the third edition of the programme

¹⁹ Interview conducted with a representative of EIT InnoEnergy (December 2022), EIT InnoEnergy, (2021), Unicorn Academy Engagement, Deliverable: Report on course production and delivery: Battle of Green Talent (ENG0573DLV001305), Internal materials and <https://www.battleofgreentalent.com/> (Accessed on:18.12.2022)

²⁰ EIT InnoEnergy, (2021), Unicorn Academy Engagement, Deliverable: Report on course production and delivery: Battle of Green Talent (ENG0573DLV001305) and <https://www.battleofgreentalent.com/> (Accessed on:18.12.2022)

²¹ EIT InnoEnergy, (2021), Unicorn Academy Engagement, Deliverable: Report on course production and delivery: Battle of Green Talent (ENG0573DLV001305) and <https://www.battleofgreentalent.com/> (Accessed on:18.12.2022)

²² EIT InnoEnergy, (2021), Unicorn Academy Engagement, Deliverable: Report on course production and delivery: Battle of Green Talent (ENG0573DLV001305). Internal material.



The BoGT is organised during the academic year and is implemented in three major phases²³. The first one is the **Registration & communication** phase, followed by the **Entrepreneurship competition**, which consists of three rounds: *Seed*, *Elaborate* and *Refine*. It is designed to mimic the founding rounds entrepreneurs go through as they develop their start-ups. During each round, *Entrepreneurs* and *Talents* receive feedback from *Power Investors* and *Advisors*. They have opportunities for online meetings and consultations with *Advisors* (mentors and experts).

The *Entrepreneurs' team* has a secure platform environment to share prepared documents and analyses, organise meetings, chat and exchange ideas. Players from other teams cannot view them. Each team has the possibility to give rights to review documents to, for example, the *Advisor* of their team.

A Jury selects the Ventures and Investors winners of the Battle of Green Talent. The winning Ventures are selected from a subset of finalists which are the 5-6 ventures with the highest valuation. The winning Investor is chosen by the Jury from a subset of 3 finalists based on the ranking of portfolio value. The third and last phase of the BoGT, is the **Final Event** when the winners are announced.

DATES OF IMPLEMENTATION AND FUNDING ALLOCATED (INCLUDING THE EIT FUNDING)

The design and preparation for the Battle of Green Talent programme's implementation started about a year before the first edition. The first proposal for this project was in cooperation with other KICs as the cross-KIC entrepreneurial education activity but was not accepted²⁴. That is why **the first edition of the BoGT was a pilot** and was implemented from November 2020 to April 2021. The second occurred in the same months of the academic year 2021-2022. The third edition started at the end of the October 2022 and will last until April 2023.

EIT InnoEnergy was established in 2010 and, since that moment, has been supported by the EIT, including financially. The programme budget is prepared yearly, but the assumptions are very general and include only the most important expenses²⁵.

Funding for the programme is based on resources from the EIT, although the level of expenditure under the programme is declining, and there is a slight and steady decrease in the share of funding from the EIT from 82% during the first edition to 73% in the third one. The project budget has been reduced by more than €65,500 over the last three editions. Analysing the programme expenses, the primary and crucial costs include the remuneration for the provider of the online platform (reduced by 56% from the first edition), experts supporting the BoGT team, and prizes for the finalists and winning teams in two categories: the

²³ Currently, the third edition is currently starting, and the description of the programme structure is primarily based on that.

²⁴ Interview conducted with a representative of EIT InnoEnergy (December 2022).

²⁵ Interview conducted with a representative of EIT InnoEnergy (January 2023).



Entrepreneurial teams and the Power Investors. Table 2 presents the project budget for each edition and the breakdown of expenditures.

Table 2. Annual budgets for Battle of Green Talent, including EIT contribution

| | 2020 | 2021 | 2022 |
|---|--|--|---|
| Total budget (EUR) | 195,000 | 177,500 | 129,500 |
| EIT contribution (EUR) | 160,000 | 142,500 | 94,500 |
| Share of EIT in the total budget | 82% | 80% | 73% |
| Breakdown of programme operation costs | | | |
| Platform / IT cost (EUR) | 137,500 | 60,000 | 60,000 |
| Subcontractors (EUR) | 35,000 | 95,000 | 50,000 |
| Trademarks (EUR) | 2,500 | 2,500 | 2,500 |
| Prize money for winners (EUR) | 20,000 | 20,000 | 17,000 |
| Award for the <i>Entrepreneurial teams</i> for developing the most promising ventures | 1 st place Venture - €10,000 | 1 st place Venture - €10,000 | 1 st place Venture - €10,000 2 nd place Venture - €5,000 |
| Award for the <i>Power Investors</i> for the most profitable investment portfolio | 1 st place Investor - €10,000 | 1 st place Investor - €10,000 | 1 st place Investor - €2,000 |
| Total costs | 195,000 | 177,500 | 129,500 |

Source: EIT InnoEnergy

The planned BoGT activities are part of a broader context of planned activities, hence the staff, final event organisation, travel and marketing and communication costs are covered by the different EIT InnoEnergy departments mainly by the EIT InnoEnergy Master School.²⁶

INFORMATION ABOUT PLANNED KPIS AND OUTPUTS

The BoGT team prepared the set of indicators (KPI and outputs) and monitors them mainly through the online platform. Official targets for indicators and outputs are planned after each edition. Measured indicators are mainly qualitative and informative, providing the BoGT team with knowledge for better programme

²⁶ Interview conducted with a representative of EIT InnoEnergy (December 2022).



management. The set of indicators and outputs can be divided into a few groups. General programme parameters and third edition targets are presented in Table 3.

Table 3. Programme targets. Third edition

| The name of the indicator | The third edition |
|------------------------------|-------------------|
| Total Platform Registrations | 250 |
| ROLES | |
| Entrepreneurs | 80 |
| Talents | 83 |
| Investors | 66 |
| START-UPS | |
| Ventures created | 25 |
| SPONSORSHIPS | |
| Sponsorships raised | EUR 10,000 |
| VC Type Sponsors | N/A |
| PARTNERS | |
| Partners | 7 |
| MBA Schools | 4 |

Source: EIT InnoEnergy²⁷

PRESENTATION OF PARTNERS. KNOWLEDGE TRIANGLE APPROACH

One of the key principles of the EIT Label education provision listed in The EIT Label Framework is Knowledge Triangle Integration, which must be embedded in all EIT education and training provisions²⁸. Enhancing co-creation and collaboration between education, business, and research help overcome societal, economic and environmental challenges. A **robust and strong ecosystem is crucial for EIT InnoEnergy**, which collaborates with more than 1,200 partners from 18 different countries (including 15 research institutes and 16 technical and business universities)²⁹ and develops an extensive network of over 460 associates and project partners representing top-rank industries, research centres and universities across Europe, and 23 institutional shareholders³⁰.

²⁷ Interview conducted with a representative of EIT InnoEnergy (December 2022) and EIT InnoEnergy, (2021), Unicorn Academy Engagement, Deliverable: Report on course production and delivery: Battle of Green Talent (ENG0573DLV001305)

²⁸ EIT (2021), The EIT Label Framework, internal material.

²⁹ EIT InnoEnergy, <https://bc.innoenergy.com/ecosystem/> (Access on 13.12.2022)

³⁰ EIT InnoEnergy, <https://www.innoenergy.com/about/about-eit-innoenergy/offices-and-hubs/> (Access on 15.12.2022)



As the Battle of Green Talent is part of the Master School, its development and implementation are strongly supported by the ecosystem built by EIT InnoEnergy. **The programme integrates all elements of the knowledge triangle, building on active collaboration with the diverse partners from the EIT InnoEnergy ecosystem: the alumni, the universities and business schools, and business partners.** The advisors/experts (partners) are contacted both from the internal and external network of contacts, including industry contacts, programme alumni, and the internal innovation business unit of EIT InnoEnergy³¹. As respondents emphasised, the EIT InnoEnergy network is indispensable to have a successful outcome³².

The BoGT team is interested in developing the partner networks and establishing further long-lasting partnerships, as feedback and advice for students on developing and investing in business ideas are essential. That is why they prepared the internal strategy focusing on strengthening the cooperation and partnership with business partners and incubation services in the HEI, with research centres and industries offering multidisciplinary services that could provide technical expertise³³. The number of participants - talents and entrepreneurs - is increasing in each edition, so that is why BoGT needs to enhance and expand the collaboration with more and more partners³⁴. The BoGT team specifically aims to further mobilize Talents from EIT InnoEnergy Master School but also from other programmes at partner and non-partner universities. Talents ensure the right breadth of disciplines are available for the creation of the startups and are critical for BoGT. The list of participating universities and business schools in the third edition is presented in Table 4.

Table 4. Participating universities and business schools (the third edition)

| Entrepreneurs & Talents | Power Investors |
|---|--|
| <ul style="list-style-type: none"> • Aalto University • Grenoble INP - UGA - • Técnico Lisboa • KU Leuven • KTH Royal Institute of Technology • Eindhoven University of Technology (TU/e) • Universitat Politècnica de Catalunya · Barcelona Tech - UPC • ÉCOLE POLYTECHNIQUE | <ul style="list-style-type: none"> • ESADE Business School • Nyenrode Business Universiteit • UnternehmerTUM • University of Cambridge Judge Business School • Imperial College London • London Business School • Oxford University • Saïd Business School • Grenoble École de Management |

Source: Based on the BoGT³⁵

³¹ Interview conducted with a representative of EIT InnoEnergy (December 2022).

³² Interviews conducted with representatives of the programme partner and EIT InnoEnergy (December 2022).

³³ Interview conducted with a representative of EIT InnoEnergy (December 2022).

³⁴ Interview conducted with a representative of EIT InnoEnergy (December 2022).

³⁵ EIT InnoEnergy, <https://www.battleofgreentalent.com/> (Access on 15.12.2022)



Business partners are essential and BoGT has two main types: sponsorship and the online platform provider. [Venture Spirit](#) is both a service provider of the online platform on which the BoGT takes place and a strategic partner that helps develop the programme. The online platform is tailor-made, so their crucial role is to adapt it to the needs of the competition, to animate interaction between participants, to implement engagement tasks, and to systematically monitor the actions taken by the participants³⁶.

The KIC actively looks for sponsors that could give the programme a name and an edge³⁷. So far, the first two editions had sponsors. The Golden sponsor ENGIE subsidized the first one as a sponsor and advisor. The second edition was sponsored by one of EIT InnoEnergy's ecosystem partners, the [GALP](#)³⁸.

"Innovation and entrepreneurship are key in order to achieve the transition towards a sustainable energy system. GALP is proud to mentor the start-ups and contribute to the entrepreneurial mindset of the students. We are looking forward to seeing what ideas come to fruition during this competition!"

Ana Casaca, Global Head of Innovation at GALP³⁹

BENEFICIARIES

The main beneficiaries are **Master degree programmes students of the EIT InnoEnergy Master School**, including the graduates and the previous PhD degree programmes, and **MBA students at universities and business schools (programme partners)**. Moreover, students joining as talents from EIT InnoEnergy's partner and non-partner universities are also beneficiaries of the programme.

IMPLEMENTATION OF THE ACTIVITY

THE IMPLEMENTATION PROCESS

EIT InnoEnergy Master School organises the BoGT so that the participants, universities, and business schools have all it takes to ensure high-quality online and blended learning. The pandemic caused student learning trajectories to be changed, but all BoGT elements were already virtualised beforehand. As the programme lasts around six months, it was clear that **the learning environment needed to be foremost asynchronous and as flexible as possible**. That is why the provided learning platform is tailor-made and interactive.

Implementation of the Battle of Green Talent starts with the **registration & communication phase** in September. This phase primarily involves preparations, marketing, and promotional activities to encourage

³⁶ Interview conducted with a representative of EIT InnoEnergy and partner (December 2022).

³⁷ Interview conducted with a representative of EIT InnoEnergy (December 2022).

³⁸ Interview conducted with a representative of EIT InnoEnergy (December 2022)

³⁹ Battle of Green Talent, <https://www.battleofgreentalent.com/post/proud-sponsor-of-the-battle-of-green-talent-2021-2022-galp> (Access on 15.12.2022)



the broadest possible range of participants. The BoGT team organises extensive communication and promotion campaigns. The online platform is ‘open for registration’, so students can register as *Entrepreneurs*, *Power Investors* or *Talent*⁴⁰. They create an anonymous avatar during the registration process.

The second and the longest phase **Entrepreneurship competition** starts in October and lasts till April in the next year. During the second phase, the competition is played, and it consists of three rounds: **Seed, Elaborate and Refine**. **Ventures proceed through virtual capital rounds in accordance with the process start-ups go through in reality**⁴¹. The rounds are presented in the Table 38.

Table 5. The overview of the virtual capital rounds

| The name of the round | The scope of responsibilities |
|--|---|
| First round: SEED Lasts 6 weeks | <p>The focus in this round is ‘validating the problem’ that the teams are trying to solve.</p> <p>The <i>Entrepreneurs</i> create business ideas. The <i>Talents</i> scout the ideas and try to find the team they can contribute to the most.</p> <p>Guided questions are prepared, which help to start with the business plans.</p> <p>Each team has five weeks to develop and share a plan on the online platform.</p> <p>After that time, <i>Investors</i> and <i>Power Investors</i> will have one week to review the business plan and place their well-calculated investment. During an open capital round, teams cannot make changes in their business plans.</p> |
| Second round: ELABORATE Lasts 6 weeks <i>Experienced Advisors join the competition to guide the teams</i> | <p>The focus for the second round is market research and defining business solutions.</p> <p>After round 1, the team's first share prices will be calculated, based on the number of <i>Power Investors</i> and <i>Investors</i> and the budget they have invested. Each team receives valuable feedback from <i>Power Investors</i>. Teams incorporate feedback and comments into business plans.</p> <p>New guided questions are added and additionally the <i>Advisors</i> join the competition. Teams are supposed to contact them and use the feedback they provide to elaborate their business plans.</p> |
| Third round: REFINE Lasts 5 weeks | <p>This round is crucial as it shows the maturity and validation of the venture and proposed solutions.</p> <p>Teams must adapt and refine the business plan, considering <i>Investors’</i> and <i>Advisors’</i> feedback in rounds 1 and 2. Also in the third round there are new guided questions for the business plans. Teams must finalise them for the final Capital round, which lasts one week.</p> |

Source: EIT InnoEnergy⁴²

⁴⁰ EIT InnoEnergy, (2021), Unicorn Academy Engagement, Deliverable: Report on course production and delivery: Battle of Green Talent (ENG0573DLV001305) and <https://www.battleofgreentalent.com/> (Accessed on:18.12.2022)

⁴¹ EIT InnoEnergy, (2021), Unicorn Academy Engagement, Deliverable: Report on course production and delivery: Battle of Green Talent (ENG0573DLV001305), Interview conducted with representatives of EIT InnoEnergy (December 2022) and <https://www.battleofgreentalent.com/> (Accessed on:18.12.2022)

⁴² EIT InnoEnergy, (2021), Unicorn Academy Engagement, Deliverable: Report on course production and delivery: Battle of Green Talent (ENG0573DLV001305), Presentation. Internal material and Interview conducted with representatives of EIT InnoEnergy (December 2022) and <https://www.battleofgreentalent.com/> (Accessed on:18.12.2022)

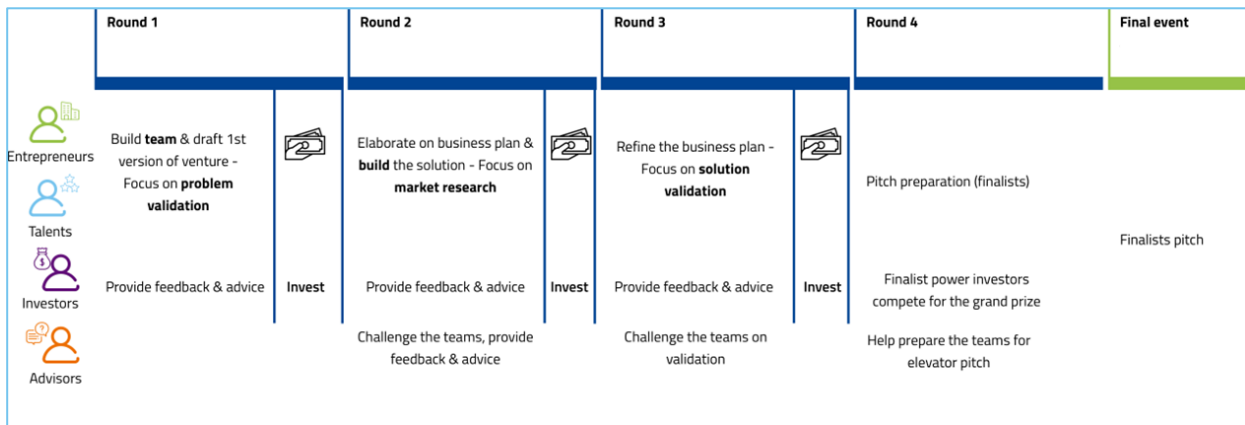


After each round, the Ventures have a share price which will result in a classification based on the venture value. The *Power Investors* will also have a portfolio value, resulting in a classification. These classifications are visible on the platform, so *Entrepreneurs teams* can check how other start-ups are developing their business ideas.

The second phase is closed at the end of April, and the top *Entrepreneurs* and the top *Power Investors* are chosen. The last element of the Entrepreneurship competition phase is **Finish** when the selected Entrepreneurs finalise their Business Plan, which is sent to the Jury. Additionally, the selected *Entrepreneurs* get pitch training to present their Venture in the **Final Event**, which is the third and last phase of the BoGT. During the Final event, **Venture and Investor winners are announced**.⁴³ The final gala of the first edition was held online due to the COVID-19 pandemic; the final event of the BoGT third edition will take place during the EIT InnoEnergy CONNECT event.

The overview of the programme process, including the phases and their aims and the roles of the participants, is shown in Figure 13.

Figure 1. The overview of the programme process, phases, and the participants' roles.



Source: EIT InnoEnergy⁴⁴

Weekly team meetings are important part of the implementation process and are held throughout the programme, involving BoGT managers, communication officers, representatives from the Master School and the programme partner that provides the services on the online platform. During the meetings, progress and activity levels are analysed, key challenges and issues are discussed, and steps are identified to counteract them⁴⁵. As it was emphasised by the respondents, the most critical challenge of the BoGT is to keep

⁴³ EIT InnoEnergy, (2021), Unicorn Academy Engagement, Deliverable: Report on course production and delivery: Battle of Green Talent (ENG0573DLV001305), Interview conducted with representatives of EIT InnoEnergy (December 2022) and <https://www.battleofgreentalent.com/> (Accessed on:18.12.2022)

⁴⁴ EIT InnoEnergy, <https://www.battleofgreentalent.com/the-game> (Access on 1.12.2022)

⁴⁵ Interview conducted with representatives of EIT InnoEnergy (December 2022)



participants engaged. The BoGT team tries to implement various solutions to maintain the engagement high, for example by animating discussions in group and subgroups or by organising online meetings⁴⁶.

Each of the two implemented BoGT editions concluded with workshops during which the team summarises the completed edition and draws conclusions and good practices to be implemented during the next planning edition. After the second edition, a **survey was conducted among the participants**. It aimed to check the satisfaction level and identify the shortcomings and programme areas which should be improved in the participants' opinion.

ACHIEVED OUTPUTS AND KPIS

A range of data is collected for programme monitoring purposes. Table 6 presents the obtained values of the most critical indicators from the two completed editions and the changes in their levels (%).

Table 6. The programme indicators and achieved values

| The name of the indicator | The first edition | The second edition | The change |
|------------------------------|-------------------|--------------------|------------|
| Total Platform Registrations | 250 | 293 | +17.2% |
| ROLES | | | |
| Entrepreneurs | 80 | 74 | -7.5% |
| Active Entrepreneurs | 54 | 54 | 0% |
| Talents | 83 | 130 | +56.6% |
| Active Talents | 52 | 115 | +221.1% |
| Investors | 66 | 61 | -7.5% |
| Active investors | 43 | 44 | +2.3% |
| START-UPS | | | |
| Ventures created | 22 | 21 | -4% |
| PARTNERS | | | |
| Sponsorships | EUR 10,000 | EUR 10,000 | NA |
| Partners | 7 | 8 | +14.2% |
| MBA Schools | 4 | 7 | +75% |
| STUDENTS | | | |
| EIT Students | 69% | NA | NA |
| EIT Alumni | 3% | NA | NA |

⁴⁶ Interview conducted with representative of partner and representatives of EIT InnoEnergy (December 2022)



| The name of the indicator | The first edition | The second edition | The change |
|---------------------------|-------------------|--------------------|------------|
| Non-EIT Students | 28% | NA | NA |
| MESSAGES. ONLINE PLATFORM | | | |
| Private messages | 865 | 747 | -13,6% |
| Public messages | 275 | 122 | -55,6% |

Source: Based on the EIT InnoEnergy⁴⁷

The number of registered participants has increased. However, the number of participants in the individual categories did not change significantly except for *Talents*, where the highest increase was registered. Compared to the first edition, the number of partners also increased. Among the indicators monitored, the largest decrease was recorded in the communication category, the number of public and private messages sent via the portal decreased. The data collected for the two completed editions shows that the programme is gaining importance and recognition among participants and partners. **The measures implemented to increase participant involvement and attract partners translate into BoGT popularity and increased indicator values.**

IDENTIFIED VALUE ADDED

As noted above, **the programme Battle of Green Talent was created as an added value for EIT InnoEnergy Master School students.** Based on the analysis of the data, the collected materials, and the conducted interviews, it was possible to identify several key areas of added value.

BoGT combines the gaming dimension with online interactions while still following a learning path. **Students have the unique opportunity to verify the theoretical knowledge gained during their studies.** Additionally, the Battle of Green Talent offers an **interdisciplinary approach, learning the art of investing on the one hand and building a business on the other, considering all the key stages that entrepreneurs encounter along the way.**

The programme helps students notice various sides of the business, which in some cases results in a **change of professional plans** and a decision to create and develop their start-up to help solve pressing problems affecting society. Most programme participants are engineers, so the possibility of participating in a strongly business-oriented programme significantly develops their skills and deepens their business knowledge.

Additionally, **the programme structure helps to broaden perspective, develop competencies and skills, and build networks** as students have the possibility to collaborate with those from other degree programmes, universities and MBA students, who undoubtedly have different perspectives and backgrounds.

⁴⁷ EIT InnoEnergy, (2021), Unicorn Academy Engagement, Deliverable: Report on course production and delivery: Battle of Green Talent (ENG0573DLV001305), Interview conducted with representatives of EIT InnoEnergy (December 2022)



The Battle of Green Talent was a great adventure. It was an opportunity to build a company from scratch. The BoGT helped me gain new skills and changed my engineering perspective. I learnt how to make the business idea viable, which makes sense to other people and makes it understandable. The programme is an advantageous experience for someone who doesn't have a business background.

The BoGT participant

The **programme's flexible online format synchronises other student responsibilities** so they can develop their business ideas at their pace. As it is held online on an external platform, students can easily and affordably learn about other business ideas and see how *Investors* evaluate them. **Such knowledge provides an attractive opportunity to encounter different perspectives and approaches to the problems and challenges that sustainable energy is currently facing.** The students represent various fields of study, so their business ideas respond to their industry's specific challenges. **The mentoring by *Advisors* is a crucial added value as well, as they are experts in their field with extensive experience and share their knowledge pro bono.**

A significant added value of the programme from the viewpoint of MBA students is **networking and the possibility to expand and foster their network of contacts**, which can contribute to business development or the acquisition of new clients.

One of the prizes for all three Venture finalists is the opportunity to develop a business idea at the Education Programmes, one of the three EIT InnoEnergy business lines. **The finalists receive incubation services from EIT experts who provide business and investment advice for around a year** and prepare students for assessment of their ventures by the EIT InnoEnergy Accelerator. This unit is in the other business line, the Innovation Projects, which focus on producing incremental and disruptive technological innovations⁴⁸.

Support and positive assessment do not mean the venture will receive EIT InnoEnergy Accelerator support and funding. However, **the linking of the BoGT educational programme with the activities of the EIT InnoEnergy Accelerator is exceptionally pertinent and adds value to all parties.** As ideas generated and developed during the BoGT have a chance to appear on the market, students after the BoGT can elaborate, enhance and fine-tune their business ideas under the wings of experienced advisors with the prospect of obtaining financing and further development of the technology or application. Such a possible return on invested funds will provide another BoGT revenue source, contributing to a more robust diversification of revenue and thus translate into higher programme financial sustainability.

HOW THE ACTIVITY HAS APPLIED KICS FINANCIAL SUSTAINABILITY PRINCIPLES

EIT InnoEnergy has a clear and well-defined strategy for achieving financial sustainability. The Battle of Green Talent is dedicated to the EIT InnoEnergy's Master School students and is also within the Master School's

⁴⁸ EIT InnoEnergy, (2021), EIT InnoEnergy STRATEGIC AGENDA 2021-2027, <https://www.innoenergy.com/media/6400/eit-ie-strategic-agenda-2022-2024.pdf>



budget and therefore funded by this entity. However, the BoGT financial sustainability must be assessed from a broader perspective⁴⁹. The increasing maturity of the EIT InnoEnergy and its more and more stable financial situation makes it possible to finance an additional programme that is one of the cornerstones of the entrepreneurial education offer⁵⁰. Overall, The Battle of Green Talent is seen as a value creating activity that reinforces EIT InnoEnergy value proposition for students and applicants. The monetization of this value takes place through students joining EIT InnoEnergy's MA programmes and their payment of the master programme's fees.

BoGT managers try diversifying the financial funds and keeping expenses reasonably and as low as possible, including securing the continuity of programme activities through pro bono work as non-monetary sources⁵¹. The most important revenue sources are presented in Tables 7 and 8.

Table 7. The revenue sources and their values

| | 2020 | 2021 | 2022 | The change 1 st /3 rd edition [%] |
|------------------------|----------------|----------------|----------------|--|
| Tuition fees (EUR) | 25,000 | 25,000 | 25,000 | 0% |
| Sponsorship (EUR) | 10,000 | 10,000 | 10,000 | 0% |
| EIT contribution (EUR) | 160,000 | 142,500 | 94,500 | -41% |
| The BoGT budget | 195,000 | 177,500 | 129,500 | -33.5% |

Source: EIT InnoEnergy

Table 8. Sources of revenue, their value and their contribution to the overall budget

| | The BoGT budget (EUR) | Tuition fees (EUR) | Sponsorship (EUR) | EIT contribution (EUR) |
|--|--------------------------|--------------------|----------------------|---------------------------|
| 2020 | 195,000 | 25,000 | 10,000 | 160,000 |
| Share of the total budget value in 2020 | ---- | 12.8% | 5,2% | 82% |
| 2021 | 177,500 | 25,000 | 10,000 | 142,500 |
| Share of the total budget value in 2021 | ---- | 14.1% | 5.7% | 80.2% |
| 2022 | 129,500 | 25,000 | 10,000 | 94,500 |

⁴⁹ Interview conducted with representatives of EIT InnoEnergy (December 2022).

⁵⁰ Interview conducted with representatives of EIT InnoEnergy (December 2022).

⁵¹ Interview conducted with representatives of EIT InnoEnergy (December 2022).



| | | | |
|-----------------------------------|-------|------|-----|
| Share of the budget value in 2022 | 19.3% | 7.7% | 73% |
|-----------------------------------|-------|------|-----|

Source: EIT InnoEnergy

Tuition fees: students pay fees for Master programmes, so they indirectly fund the programme. However, the EIT InnoEnergy approach is value-based. They believe if the Master School creates value for the students, the students will come and pay for the education offer. So those tuition fees make it possible to design and implement value-added activities for students like BoGT. However, it is worth recalling that the programme is optional, and those paying tuition fees and not planning to participate in the programme, do not have the opportunity to lower their tuition fee.

Sponsorship: Sponsors were obtained for both completed editions. While this revenue source does not cover all the costs, sponsors' support and engagement are beneficial. EIT InnoEnergy tries to match the sponsors' interests, mission, and activities because they also support the BoGT participants in developing their start-up ideas.

EIT: the financial support of the EIT was and is at the heart of the programme's initial launch. However, from edition to edition, its value decreases, which translates into a lower share of EIT funds in the overall programme budget.

The value of the programme budget decreases from edition to edition, as does the level of EIT funding. However, the decline is higher for the latter. Despite the decline in the budget value, tuition fees and sponsorship contributions are kept at the same level, increasing the share of those positions in the planned budget.

- For the BoGT and its financial sustainability, non-financial support is critical. The **non-monetary support** includes mainly: **pro bono work of alumni and external experts from industry, universities, and business schools**. They provide coaching, mentoring, and advising activities without remuneration.
- **EIT InnoEnergy's innovation line staff offers significant support.** That internal collaboration strengthens the programme circle of advisors, experts and professionals with extensive business and technological knowledge⁵².

It is clear that the programme running relies on non-monetary contribution, which is the result of a well-recognised EIT InnoEnergy brand and an active, vibrant and expanding ecosystem. The fact that experts support BoGT without remuneration is critical, as such services of highly qualified professionals are expensive on the market. This contribution would have the highest share in the programme budget if calculated and prepared.

⁵² Interview conducted with representatives of EIT InnoEnergy (December 2022).



The team focuses on discerning future revenue sources that should emerge in the coming years. BoGT supports the creation and development of innovative technological ideas and solutions in the field of sustainable energy, so the start-up projects of the BoGT are in line with the EIT InnoEnergy innovation areas. The BoGT team closely collaborate with and nurtures them, especially the finalists.

When the business ideas are ready, **EIT InnoEnergy may steer them towards the investment side of the EIT InnoEnergy Accelerator.** There is tremendous revenue potential from equity positions in start-ups and revenue sharing/upside sharing agreements in those created in BoGT programme innovation business ideas.⁵³

QUALITATIVE ASSESSMENT OF THE PROGRAMME AND ITS ACHIEVED IMPACT

QUALITATIVE ASSESSMENT OF THE ACTIVITY

Thanks to the EIT's institutional maturity, the developed financial stability, the developing and rich ecosystem and the EIT financial support, it was possible to create and implement The Battle of Green Talent as the added value for EIT InnoEnergy's Master School students.

The programme is an educational initiative that develops and strengthens the entrepreneurial spirit and helps improve student investment skills, including MBAs at other universities and business schools. **The programme is inclusive and participatory.** As an educational offer that connects all Master programmes, it has been planned so that any students, regardless of where they live, can participate, and test their strength in this Innovation and Entrepreneurship Journey. This goal was maintained as students from different Master programmes participate online in the programme.

BoGT is a relatively young programme having two editions behind. Nevertheless, the programme is systematically developed and adapted to the expectations of participants (e.g., the possibility for Master School students to act as Investor, the reward of expert advice from the EIT InnoEnergy Accelerator or even the disclosure of questions for the development of business plans in each of the three rounds) **and market needs, in order to replicate the business environment as closely as possible, including investment rounds from venture funds.** For example, during the third edition the accent will be put to emphasize technological feasibility more strongly as the first two editions did not concentrate enough on prototyping.

The project is geographically broad and involves students from different countries, it is challenging to reach and engage them. It would be nice if BoGT could be widespread even more within the EIT. I believe the BoGT could be copied and transferred with the necessary alterations and tailoring to other universities or institutions.

⁵³ Interview conducted with representatives of EIT InnoEnergy (December 2022).



The BoGT programme partner

BoGT is a learning experience not only for students but also for EIT InnoEnergy alumni. Implemented solutions or changes are tested and adjusted after validation. Such an approach means that the programme is smoothly developed and implemented. **Great attention is paid to monitoring individual activities and participants' behaviour.** Engagement and keeping it at an optimal level is key to implementing the 6-month programme. **The value of the collected indicators is increasing from edition to edition, indicating growing interest from both students and partners.**

Table 9 presents an analysis of BoGT strengths (internal and external), weaknesses, opportunities and threats (SWOTs).

Table 9. SWOT analysis of Battle of Green Talent

| Strengths | Weaknesses |
|---|--|
| <p>External</p> <ul style="list-style-type: none"> ▪ Strong partnership and network based on the EIT InnoEnergy Community ▪ EIT and EIT InnoEnergy labels support international recognition of BoGT ▪ Combination of online platform and on-site meetings ▪ Proven concept based on mimicking the business environment ▪ Participation in the programme is possible from any part of the world ▪ Proven learning methods and tools (e.g online platform) ▪ Opening to MBA students from other universities and business schools <p>Internal</p> <ul style="list-style-type: none"> ▪ Motivated, skilled and experienced EIT InnoEnergy teams ▪ Professional mentoring ▪ Entrepreneurship and education mindset and focus ▪ Programme adapted and in line with all MA EIT InnoEnergy degree studies ▪ Relatively low implementation cost ▪ More and more stable financial situation of the EIT InnoEnergy | <ul style="list-style-type: none"> ▪ On the way to building a sustainable financial model (financial dependence on EIT) ▪ Difficulties in enhancing industry and business partners as advisors ▪ Difficulties in enhancing business, including VC-type sponsors supporting BoGT financially ▪ Need evaluation or impact assessment tools of changes in students' knowledge level (e.g., survey) ▪ No comprehensive database of information about the careers of graduates |
| Opportunities | Threats |
| <ul style="list-style-type: none"> ▪ Building a community of young innovative entrepreneurs and investors | <ul style="list-style-type: none"> ▪ Increased competition from other entities offering mentoring and training programmes for young people who want to develop their companies |



- | | |
|---|--|
| <ul style="list-style-type: none"> ▪ Fostering an entrepreneurship and innovation culture focusing on robust education of MA students by gaining practical knowledge and skills in business development, investment and innovation ▪ Easy replication in other EIT KICs or entities and organisations with different frameworks stipulating the innovative and entrepreneurship spirits among youth and students ▪ Collaborating with external experts advising on voluntary terms to support MA students wishing to develop start-ups, ventures | <ul style="list-style-type: none"> ▪ Competition from other MA and PhD degree programmes to attract student talents ▪ Drop of the students' number resulting from falling fertility rates ▪ Time, effort and long-running process of preparing business ideas for accelerator assessment ▪ Experts need to use their own time and energy for such initiatives without remuneration |
|---|--|

Source: Ecorys.

ACHIEVED IMPACT

The **Battle of Green Talent** aims to develop and enhance entrepreneurship education through fun, gamification and healthy competition between students. It strives to provide the most experienced experts and professionals so that the business ideas developed are well-directed and solve real social and economic problems and responding to market challenges. According to most students participating in the survey and the interviews, **the programme is very well aligned with the Master programme, allowing for an actual translation of knowledge into practice, developing skills and deepening knowledge in the area of investment and entrepreneurship**⁵⁴.

The programme directly **reduces the skills gap and developing human capital**. The skills acquired during the programme are useful at every stage of career development. In addition, the knowledge and skills gained will be applied in all sectors, no matter whether the students decide to work for NGO, public or private sectors. According to the respondents, participation in the programme also translates into an **increased awareness of technological solutions** or ways of solving problems in the modern world⁵⁵. This impact is supported by the fact that students collaborate with colleagues from other fields, disciplines and universities with significantly different backgrounds. As participants in the programme point out, **the multidisciplinary team approach helps to broaden their perspective on the world and contemporary problems**.

A considerable influence addressed by the respondents is the fact that the programme **helps them to shape and develop careers, as it gives the impetus to take bolder steps, such as setting up a start-up**⁵⁶. Changing career track from a paid corporate job to creating and growing your own business is a bold and risky step. Participants emphasised that attendance in the programme was the impetus for this. Participants emphasised that attendance at the programme was the impetus for this⁵⁷.

⁵⁴ EIT InnoEnergy, (2022), Battle of Green Talent – Entrepreneurial Competition. Internal material

⁵⁵ Interview conducted with programme participants and partner (December 2022).

⁵⁶ Interview conducted with programme participants and partner (December 2022).

⁵⁷ Interview conducted with programme participants and partner (December 2022).



Battle of Green Talent was a great experience. I didn't come into this programme planning to start a company. Thanks to the whole entrepreneurial journey, I am developing my own start-up. The BoGT was a life-changing experience. BoGT helped improve my business skills, which are crucial at this stage of my career development.

The BoGT programme participant

Despite this early stage, the Battle for Green Talent has a successful track record. During the two completed editions, **275 Master students gained practical competencies and entrepreneurial skills**, which helped them **develop 43 business ideas**. After the first edition, **at least 4 start-ups were founded** (18.2% of the 22 business ideas developed). The BoGT team attracted **15 partners** (universities and business schools), **strengthening cooperation with advisors** and **attracting sponsors for each edition**. Moreover, the programme drew the attention of **87 external students (mainly MBA)** who acted as investors.

The best examples of impact are the success stories of business ideas developed during the first edition of the BoGT, which alumni continue. At least four start-ups have emerged, and they are starting to succeed in the market as they have developed products and services that are in demand due to social problems and environmental challenges. All the start-ups presented in Table 10. are gaining interest from accelerators and receive investor funding. Participants in the programme emphasise that **the BoGT was a demanding and challenging but fascinating adventure giving them a solid foundation for future competing in the market and fighting to attract and gain the attention of investors**.

One of the most important forms of support for them was the guidance of experts in preparing their pitches (presentation and speech) for the final event. They point out that the **programme enabled them to gain and enhance valuable experience and skills**, which they have successfully applied in other programmes, competitions or meetings with accelerators, funds or investors. **As a result of participating in the BoGT, they had a skills base built up, which they fostered what helped in gaining the interest of investors as well as capital.**⁵⁸

Table 10. Start-ups set up after first edition of the BoGT

| ReLi | Climatize | Plaex | Luma |
|---|--|--|--|
| <p>A start-up focusing on the refurbishment of batteries that won the big round and funding from the German government.</p> <p>The first edition BoGT winner.</p> | <p>Focus on moving a percentage of car payments to sustainable energy. Developing its business on the American market.</p> | <p>Focusing on smart recycling bins based on AI to sort various types of waste. Obtained funding for business developing from big Dutch market players.⁵⁹</p> | <p>An innovative cloud algorithm that leverages the aggregate capacity of Electric Vehicles and Battery Energy Storage Systems. Start-up is developing with success in Sweden.</p> |

⁵⁸ Interview conducted with representatives of EIT InnoEnergy (December 2022).

⁵⁹ Interview conducted with representatives of EIT InnoEnergy (December 2022).



| | | | |
|---|---|---|---|
| | | | Won EIT Jumpstarter |
| https://relienergy.de/ | https://www.climatize.earth/ | https://plaex.net/ | https://lumaev.com/ |

Source: Ecorys

Business ideas from the second edition are also being developed. Of particular note is NaturaWatt, which focuses on generating hydrogen from wastewater using new innovative technology and EIT Jump Starter winner, Solar Container Marine, **focusing on developing solutions of solar panels for cargo ship containers.**

All companies presented in Table 10 were established by the BoGT students and are focused on solving energy-related problems. **They have an important contribution to make in developing innovative solutions that support the basis of a sustainable energy future for Europe.** At present, the professional careers of all BoGT alumni are not tracked, but there are plans to develop a system to do so and to establish a community of BoGT alumni⁶⁰.

The EIT remains the most significant funder at this point, so its impact is important. The cost from the EIT budget per active participant (i.e., one who participated practically until the end of the programme) is very favourable, as shown in Table 11. Given the declining share of EIT funding, it is expected that these figures will also decrease in the following years, so "equipping" students with entrepreneurial knowledge and the know-how needed to develop their start-ups will become increasingly cost-effective while maintaining the level of education and expert support.

Table 11. Impact of EIT finances on the education of active participants in the 1st and 2nd BoGT editions

| | First edition | Second edition |
|---|----------------|----------------|
| Active participants (active Entrepreneurs and active Talents) | 106 | 169 |
| Created and finished business ideas | 22 | 21 |
| The EIT funds (EUR) | 160 000 | 142 000 |
| Funding per active participant (EUR) | 1,509 | 840 |
| Funding per created and finished business ideas (EUR) | 7,273 | 6,762 |
| The BoGT budget (EUR) | 195,000 | 177,500 |
| Funding per active participant (EUR) | 1,840 | 1,050 |
| Funding per created and finished business ideas (EUR) | 8,864 | 8,452 |

⁶⁰ Interview conducted with representatives of EIT InnoEnergy (December 2022).



Source: Ecorys based on EIT InnoEnergy data

LESSONS LEARNT AND GOOD PRACTICES

The programme addresses an educational niche, particularly in the context of engineering students. The thoughtful design of the Battle of Green Talent framework and layout ensures smooth implementation. Essential elements during implementation are the flexibility and systematic monitoring of activities, participants' engagement and results, close cooperation with partners and checking the programme participants' level of engagement and satisfaction.

This proactive approach allows for improving the programme assumptions and testing new solutions. As a result, good practices can be identified from BoGT that can be successfully implemented in other KICs or educational or entrepreneurial institutions for students. Furthermore, several lessons learnt were identified that generally require special attention and could translate into a higher level of achievement of the programme's planned objectives as well as a broader and more substantial impact.

PRESENTATION OF LESSONS LEARNT FROM THE ACTIVITY IMPLEMENTATION

Lessons learnt 1: Engagement of the participants and partners

Participant involvement drives the programme and is a guarantor for the emergence of new innovative start-ups

Keeping the competition active is demanding and requires good strategy and a relevant approach. A vital factor in developing business ideas and then turning them into start-ups/ventures is not only the number of participants and great ideas but also students' level of engagement. The scope of the programme, although involving different actors offering specific roles and mimicking the entrepreneurial ecosystem for start-ups, is extensive. Because of its length and complexity, it is necessary to animate interactions and introduce additional elements such as meetings, online events, materials, or tutorials that will contribute to suggesting solutions to problems and interest in developing start-ups, and thus engagement.

Another aspect is the level of integration of the BoGT framework with the master programmes curricula, as they have strict requirements for supplementary activities, so adding additional activities can be challenging. Moreover, students need to have time for regular studies and flexibility in putting into practice gained knowledge as BoGT participants⁶¹.

The involvement of Power Investors and experienced Advisors makes the programme possible

Students benefit significantly from the *Investors'* and *Advisors'* feedback. This component is essential as it confronts students' ideas with investors' approaches and their way of thinking about business. Establishing the partnership and collaborating with universities, business schools, and business partners is critical to the BoGT

⁶¹ Interview conducted with programme participants (December 2022).



success. The active involvement of investors and advisors in providing feedback and helping develop innovative start-ups is the foundation of the BoGT.

According to the interviews and the student survey, the *Advisors'* involvement and feedback are crucial; however, their level varies. Most of them were very active, but there were cases of very general guidance which, in the participants' opinion, did not contribute much, as well as a lack of response to questions or requests for feedback⁶².

Respondents also emphasised that an important contribution to the growth of start-ups could be longer information from *Power Investors* explaining why they invested in a particular venture and why such an amount of money. Especially this second component is fundamental, as *Entrepreneurs* do not estimate the value of their business idea during the competition. Neither *Power Investors* nor *Entrepreneurs* and their teams have a point of reference. Estimating the value of the business and negotiating its market value is an essential component when talking to investors or business angels.

The *Advisors'* and *Power Investors'* feedback should be particularly monitored and, if necessary, animated, as its level of quality affects the overall perception of the programme, the level of participants' satisfaction, and the willingness to develop a promising start-up.

Lessons learnt 2: Low level of industry involvement, including Battle of Green Talent sponsorship

Building business relationships is a long-term process, as is building credibility in the eyes of businesses to raise capital for educational activities. Although the programme belongs to entrepreneurial education, creating the BoGT stable network of sponsors is yet to come. Challenges in this area arise both from the fact that there is a plethora of different offers on the market to support innovation and entrepreneurship education: summer and winter schools, hackathons, etc., and also from the fact that EIT InnoEnergy is an institution funded to some extent by the EIT, therefore the European Union, so it may not seem to need sponsors as much as, for example, NGOs or other social economy actors, which also offer programmes in the area of entrepreneurship activities.

IDENTIFICATION OF GOOD PRACTICES FOR SHARING, INCLUDING KEY IMPLEMENTATION CONSIDERATIONS

Good practice 1: Building a programme to develop entrepreneurial skills for Master degree engineers

Why: training engineers and Master students in entrepreneurship and business development as soon as possible helps them gain skills while they are still in university and gives them a brighter perspective on creating their own careers.

⁶² Interview conducted with programme participants (December 2022).



Respondents highlighted the fact that there is not much emphasis on economic subjects during engineering studies, let alone on applying the knowledge gained in practice. Looking back, they assessed their knowledge as blurred and vague. They did not know where to start in order to prepare an idea and turn it into a company. Thus, the earlier engineers and students are exposed to the practicalities of entrepreneurship and business development, the easier it will be for them to implement their own business ideas and raise capital for their products or services.

The programme's effectiveness is due to the fact:

- **The programme's foundation is based on the premise of integrity**

The programme is meant to be an added value to all MSc programmes and to be integral and in line with their approved frameworks. The integration approach helps participants translate theoretical knowledge into practice during their journey in building and developing start-ups or in the world of investing in companies. It is necessary to think about such educational activities as a whole idea of the journey that students go through from the moment they start until the moment they graduate. Assigning individual roles makes it possible to test personal abilities at different stages of business creation. Students can participate in the programme several times and generally take advantage of this opportunity. This translates into the strengthening of skills.

- **The programme is not compulsory for students**

It benefits those who are interested and eager and want to see how helpful and fruitful the programme can be for them. Students can withdraw from the programme at any time. Respondents emphasised that this assumption is important and felt that they participate in the programme because they want to, not because someone obliges them, or they must fulfil an education obligation.

Good practices 2: Engagement of the participants and partners

Why: Participant involvement drives the programme and is a guarantor for the emergence of new innovative start-ups. Keeping the competition active is demanding and requires good strategy and a relevant approach. A vital factor in developing business ideas and then turning them into start-ups/ventures is not only the number of participants and great ideas but also the students' level of engagement.

The scope of the programme, although involving different actors offering specific roles and mimicking the entrepreneurial ecosystem for start-ups, is extensive. Because of its length and complexity, it is necessary to animate interactions and introduce additional elements such as meetings, online events, materials, or tutorials that will contribute to suggesting solutions to problems and will raise students' interest in developing start-ups, and thus engagement. Maintaining engagement at the right level requires:

- **Appropriate programme design**, by dividing the programme into parts, rounds so that learning themes are being explored and materials are developed gradually, animating discussions on the online platform. The team monitors student discussions and interactions to see when and in which team participants'



engagement declines. Communication for participants should have several levels: for all participants there should be a general channel for individual teams to share insights and see feedback from investors or advisors and a private channel where a participant can communicate with a selected person.

- **Animating the discussion** can also be done by the programme team. It is good to develop a range of questions which could be asked of a particular team. If a team does not receive much feedback from experts such questions from the programme team may stimulate and thus encourage to improve the business idea. Participants emphasised that the more questions, especially the more difficult ones, the better for the ideas created and developed;
- **Feedback from power investors, experts and advisors is key to keeping students engaged.** The organisation of online meetings with investors and advisors, where participants can ask questions and get the support they need regarding the developed business plan, the information gathered, or the technology developed. Students benefit significantly from the *Investor* and *Advisor* feedback. This component is essential as it confronts students' ideas with investors' approaches and their way of thinking about business. The *Advisor* and *Power Investor* feedback should be particularly monitored by the programme team and, if necessary, animated, as its level of quality affects the overall perception of the programme, the level of participants' satisfaction, and the willingness to develop a promising start-up.

Good practice 3: Engaging the right partners adds value to the programme

Why: Building and developing a business requires specific expertise, knowledge and skills. Only practitioners can highlight shortcomings, missteps, mistakes, areas of risk as well as the strengths of the idea being developed. Involving experts as investors or advisors will help students refine and develop business ideas to understand the logic of the market, investors and consumer needs.

Establishing broad partnerships requires deciding whom we are targeting. Partnerships with entities such as colleges, universities, business schools, companies, start-ups, accelerators, non-governmental organisations or public administration that can provide expert services require preparation, including:

- **Preparation of a strategy to attract partners and preparation of promotional and informational materials** considering the programme assumptions, short-term and long-term programme objectives, indication of competitive advantages with other programmes on the market and added value for students or experts involved. The preparation of materials and the networking should begin several months before the start of the programme. Attracted partners can be an important factor in convincing students or future programme participants.
- **Establishing partnerships with universities, business schools, or company representatives requires reaching the right people.** This involves taking advantage of the network of contacts as well as the ecosystem in which the institution or organisation operates. It is beneficial to use different presentation formats from face-to-face meetings, online meetings, one-to-one meetings or in broader groups. The formation of partnerships is very often based on personal contacts. Attracting partners will be challenging as the market



offer is considerable and each programme will try to attract the best possible universities. Building partnerships and attracting experts is a cyclical task as partnerships change, and it is worth preparing for a turnover in this area.

- **Attracting economics students requires an extensive promotion and information campaign at the university - emails and newsletters.** Materials must show the programme value, clarify the tasks foreseen and clearly formulate the added value for advisors and experts. The organiser should prepare the materials and include a link to the website or contact details. MBA students usually participate in several such competitions per year, so it is needed to find their own edge. However, according to interviews, the **financial award can be an important motivating factor.** Therefore, if the budget allows, it is worthwhile. Another **important motivational factor is the opportunity to network and make new contacts.** Thus, the opportunity to attend conferences or industry meetings relevant to the expert's interest in the field will also be an essential motivator.
- **Feedback on the programme needs to be collected on an ongoing basis, especially from the partner institutions.** Feedback from both partner institutions and participants or advisors is crucial as it will indicate the strengths and weaknesses of the programme and its organisation. Responding to them can help sustain partnerships and the participation of advisors, experts or students.
- It is important to promote the acquired partners in information materials.

Good practice 4: Developing skills and knowledge in business building and entrepreneurship

Why: The educational offer and the multitude of programmes assisting in acquiring competencies for building and developing a business are quite competitive, so the programme must be attractive and affordable for students to gain their interest and willingness to participate. Students divide their attention between different spheres of life, so participation in the programme must be skilfully integrated into everyday life.

The programme is designed so that students can acquire new skills and expand their knowledge at different levels (for example, creative thinking, information search, strategic product analysis, financial analysis of the company, competitive analysis, technical analysis of the product under development, marketing, promotion, or managing people in teams) and in different areas (e.g., business development and scaling it, building a company, investment, renewable and nuclear energy, energy technologies or smart electrical network and systems). These are helped by:

- **The online platform and multidisciplinary teams**

Enabling the broadest possible access to the programme through online learning or communication platforms. This allows students from different parts of the world and from different disciplines to form multidisciplinary teams. This broad collaboration results in participants acquiring knowledge from other fields of science and becoming familiar with new technologies and ways of solving contemporary problems, such as in the area of sustainable energy. Open access to other teams' ideas fosters the exchange of knowledge, as participants can follow the ideas and solutions of other teams. This translates into an increase in knowledge in other fields,



learning about ideas for products and services that can solve the challenges facing modern societies and economies.

- **The involvement of advisors and experienced professionals**

The involvement and contribution of MBA business school students is seen as outstanding practice. They bring a fresh perspective to the programme through their very different educational background and professional experience. They have a more robust business focus than a technology focus and bring added value in presenting the business to non-industry people. This helps engineers gain the ability to present their ideas so that end-users of products and services or investors can understand them.

The involvement of practitioners and experts helps to develop ideas and adapt them to market realities and consumer needs. They help guide business development by sharing their years of experience. Their role is essential both in terms of giving feedback and helping to guide the development of innovative ideas and in terms of investing capital in the start-ups being developed.

- **Learning by doing**

At the programme's core is the idea that it should be as hands-up as possible so participants can feel like *Investors*, *Entrepreneurs* or important members of teams - *Talents*. By mimicking the business, investment and venture environment, as well as assigning specific roles with responsibilities, on the one side, the programme has the necessary multidimensionality and, on the other hand, has a defined framework within participants' organised work. The knowledge students gain during their studies enables them to test it in practice and to acquire new competencies that will be successfully applied in both the private and public sectors. Through practice, training, action, making mistakes, adapting ideas and continuous testing, students can experience what it means to build and run a company or institution.

The main document that students (*Entrepreneurs* and *Talents*) work on is a business plan. Of course, in order to prepare, many analyses are needed, such as market, competition, financial, simulations on demand for a service product, promotion and customer outreach concepts. Prototyping is then required as well. Each of these steps involves knowledge and an understanding of the market and technological needs. **Such learning-by-doing is practical and engaging, and in addition, students prepare a service, a product, which they believe in.**

- **Development of final material e.g.: business plan**

The programme should conclude with preparing a document e.g., a business plan. There are several vital steps that promoters take in this regard:

- Structure the creation of the business plan e.g., based on funding rounds as in BoGT. For each stage, questions and issues should be prepared to guide students in acquiring materials and information.



- Students should collect materials and further education on their own. The amount of educational material (lectures, classes) should be minimised so that students learn to look for the information they need and develop assumptions to build a company.
- Students should receive feedback on the material developed from experienced experts, practitioners or investors. However, these people must have business experience

Good practice 5: Asynchronous education

Why: For extracurricular and especially time- and commitment-intensive programmes, students need to be able to access and learn at any time and from anywhere in the world.

Asynchronous education can be guaranteed through **online learning platforms** and **online communication tools**. These can be dedicated and customised platforms, allowing the tool to be tailored to the needs of the students and participants, but this may come at a cost. It is important that the **tools are available around the clock** so that students can log in on their preferred days and times.

Good practice 6: Awards without a company registration

Why: the non-registration of start-ups favours the fact that young entrepreneurs can use the prize to develop their business idea

According to respondents, educational programmes should not require start-up registration to receive prizes.

Institutions organising start-up programmes very often require new start-ups to be registered, especially when the idea has won a competition. Young entrepreneurs need to do that to be able to receive awards, especially financial ones. The fulfilment of that obligation causes the young company to start paying taxes. Instead of tax liabilities, the won money, as significant support, can help young entrepreneurs to devote themselves entirely to growing their business ideas, entering other competitions or networking with investors to raise funding.

EIT InnoEnergy should highlight the Battle of Green Talent's success stories. Nothing is more encouraging for new students than to see that their slightly older colleagues have succeeded. They have overcome the long way, finished the Battle of Green Talent, and successfully run their business.

The BoGT programme participant

PRESENTATION OF POTENTIAL FOR REPLICATION AND SCALING UP (INCLUDING IDENTIFICATION OF RELEVANT TARGET GROUPS AND SCALE OF FUNDING)

The most important advantage of the BoGT programme's methodology and assumptions is that it has been prepared to imitate the way how start-ups are developed in accelerators or incubators as closely as possible.



These carry out their main activity, which is developing business ideas, both in the virtual world, similarly to BoGT, and in the real world. The economy comprises various economic sectors, each evolving through entrepreneurship, innovation or new technologies, among others.

Thus, **the BoGT formula as a programme to educate future entrepreneurs and investors can be adjusted by institutions working in various economic areas like health, food, industry or IT. The other EIT KICs can successfully implement the programme as well.** Either individually or as a cross-KIC entrepreneurial education activity. Each development option is conducive to scaling the programme.

The programme can be implemented in a few months, or a shorter timeframe can also be envisaged for it, thus adapting the formula as a summer school (a few weeks) or hackathon (a few days). **The flexibility and intense focus on hands-on and usefulness indicate that it can be successfully adapted in any institution that fosters entrepreneurial spirit and innovation by building start-ups or education in this area.** The fundamental challenge is the choice of roles. In the case of institutions with a less developed ecosystem or brand recognition than EIT InnoEnergy, the programme can be developed on a smaller scale - a lower number of business ideas or team members will translate into a lower need for advisers or investors.

The best evidence that the programme's formula is replicable and can be transferred into other entities is that the inspiration for the BoGT was the Battle for Talent, initiated by universities in Flanders a few years ago.

Due to the programme's versatility, **target groups** can include everyone wanting to learn how to build and develop a business or trying their hand at this area. It is worthwhile targeting students of engineering and social sciences. It seems that PhD students may also be a target group, but here it would have to be verified to what extent the framework meets their requirements.

The Table 12 presents **conditions for successful replication and scaling up** to other KICs or institutions.

Table 12. Conditions for successful programme replication and scaling up

| | Replication | Scaling up |
|---|-------------|------------|
| Education | | |
| The ecosystem should be based on wide partnerships and build synergies with existing education programmes. Entrepreneurship education embedded at all levels and types of education | x | |
| The programme must be designed to replicate as closely as possible the business environment, including the conditions for creating and building a company | x | x |
| Find experts and advisors in the field in which the participants will develop the business | x | x |
| Partnership, ecosystem and promotion | | |



| | | |
|---|---|---|
| Attracting as many partners as possible and as a range of experts and professionals and be prepared that their numbers and involvement will fluctuate, never become too reliant on those already attracted as changing politics, priorities and life circumstances may affect the programme | x | x |
| Business, industry or VC engagement as expert support and financial if possible | x | x |
| A network of international contacts, including alumni and programme alumni, experienced business advisors and industry professionals contacts and academic representatives, who can be “activated” if needed | x | x |
| Promote the programme as widely as possible. Former participants are always the best programme advertisement and showcase. Ask for their support - interviews, short presentations of their experiences during the programme promoting or quotes on websites and in promotional materials | x | x |
| Software and finances | | |
| A software online educational platform to manage the activities and monitor participant and advisor engagement | x | |
| A start-up finance to support a critical mass of initiatives that can lead by example (as EIT supports BoGT) | x | |
| If possible, provide financial and non-financial rewards (participation in training courses, professional conferences); they are an important motivation | x | x |
| Team and evaluation | | |
| A team of people combining business knowledge, education techniques, promotion, and the right set of management and communication skills | x | x |
| The programme needs to create an evaluation framework to measure its impact. This assessment should not focus solely on immediate start-up creation but should also include indicators of human capital or the quality of partnerships | x | x |

Source: Ecorys

Potential replication and scaling-up problem include **mission drift - when the number of participants and activities increases significantly and the number of experienced advisors does not.**

CONCLUSIONS

The Battle for Green Talent supports the development of entrepreneurship and the acquisition of the competencies needed to build and run a business. The programme allows MBA students to try their hand as investors who not only value companies but also influence the direction of their development. **The programme**



is described as demanding and the first profound experience shaping business thinking. It encourages students to discover to what extent they have an entrepreneurial spirit.

Lasting several months, the BoGT journey is structured so that students have time to gather the vastest range of experiences and develop hard and soft skills in multidisciplinary teams. **The Battle for Green Talent is a fresh educational initiative that is only gaining momentum.** It is being developed from edition to edition with the support of participants who share their insights and advice on challenges or tips on how to improve the programme to make it better suited to the needs of participants and attract more and more talents.

The BoGT team listens to participants' and partners' voices and introduces new solutions, testing and adapting them. **Despite its short tenure, BoGT already has early successes to its credit.** At least four of the 20 start-ups developed during the programme's first edition have progressed to the implementation phase. They operate successfully in European and non-European markets, winning competitions, raising funds and investors and growing their young companies.

The holistic approach to the programme's design and how it is embedded in the institution and linked to its various units needs to be emphasised. The BoGT is designed to offer added value to all Master students and guarantees them access through a versatile, intuitive, user-friendly and handy online platform where students can work in multidisciplinary teams. **The BoGT is directly merged into the educational offer of the EIT InnoEnergy Master School, and it also involves the employees of the two business lines (the Education Programmes and the Innovation Projects) who advise on business development and technology.**

They not only can shape the development of these young ventures, but also invest when the idea is ready to hit the market. The return on such an investment will support the operation of EIT InnoEnergy as a company. Even though BoGT has various revenue sources and forms of non-monetary support, the programme is intended to be relatively low-cost as its financial sustainability is based on the EIT InnoEnergy economic situation.

Basing the BoGT programme on investment funds' rounds promotes the ease with which it can be transferred and adapted in other institutions. **The business development model is replicated across different sectors of the economy; hence the growth and scaling potential of the Battle of Green Talent is very high.**

The Battle of Green Talent is an excellent learning experience for students, enabling young people to create and develop innovative solutions strengthening Europe's sustainable energy future with solid support from the education and business sectors