Sustainability toolkit

Draft Version 1 (Live document)

EIT Health e. V.

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Purpose of this document

The Sustainability Toolkit document is an initiative of the EIT Health Campus team to provide additional background and resources to the EIT Health Campus team as well as to the Partners preparing project proposals and implementing funded projects starting with the 2021 Call cycle, as well as re-applying projects.

The Sustainability Toolkit document is a living document which will be updated regularly with new updates examples and other resources. It is supporting material, and it should be read together with the EIT Health Business Plan Call Document 2021 as well as other relevant communications issued by the EIT Health Campus team. The examples, approaches and tools mentioned in this document are meant to illustrate the requirements for sustainability in the context of EIT Health and to support the project teams in addressing them; by design, they can neither be complete nor do they replace the work within the project teams in developing the most suitable sustainability plan for their specific project.

Some of the mechanisms suggested in this document are in the process of a legal evaluation at the EIT Health HQ or require such an evaluation at the levels of the CLCs and the partners in the future. **It is important to note that customized solutions are possible and that partners are encouraged to jointly explore different solutions and propose the mechanism that is best suited to them to ensure the successful delivery of their projects.** For proposed solutions is envisioned to be collected and discussed further, as part of the strategic agenda process.

For all further questions and inquiries, please contact the EIT Health HQ Campus team (urska.bux@eithealth.eu) or your CLC Campus Manager.

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1 Sustainability in the EIT Health context

1.1 Importance of including sustainability goals into EIT Health

Education institutions and programmes typically pursue a multitude of missions from providing quality education to fulfilling demands for human capital in certain areas, as well as to instil a quest for lifelong learning, innovation and entrepreneurship. Although frequently seen as 'given', the availability of sufficient resources is at the centre of achieving these missions, whether the resources come from EU, national, regional or private stakeholders. But in times when rising student numbers, limited resources dedicated to education and increased competition between programmes are becoming more pressing issues, sustainable programme funding has become a concern.

EIT Health is under the umbrella of the EIT that is in itself a body of the EU. With the landscape of European innovation and research funding fast-evolving, also the EIT is accelerating its developments. The EIT as a whole has and will further evolve from a traditional funding organisation. As a result of the newly emerging challenges in the world, EIT Health will apply more and more market-driven sustainable approaches that can ensure the continuity of its funded projects. This is for two reasons:

- One is that EIT and EIT Health see the need to evolve from being a network and funding facilitator to an organisation that will support innovation through a multitude of services and network offers.
- Second, EIT Health strives to achieve long-term financial sustainability in order to maintain its programmes and its impact on an increasing number of stakeholders within the sector.

EIT Health Education Programmes have been successful in providing funding to develop, initiate and sustain quality education programmes in the different Co-Location Centres (CLCs). However, EIT Health funding is finite, and often programmes are found to be discontinued after the end of the initial funding period. Therefore, the topic of (financial) sustainability has become one of the focuses of the 2021 Call cycle.

A broad definition of financial sustainability in the context of EIT Health campus could read like this:

> *Financial sustainability at its core is an institution's or programme's ability to continue its operations, i.e. meeting its working capital requirements, if one of its main sources of funding is withdrawn, and to ensure that the program itself does not generate losses or accumulate debts.*

Campus programmes must achieve financial sustainability within four years at most. Despite the obvious financial component, it is therefore essential to see financial sustainability not merely as an isolated financial topic, but rather as a comprehensive management task that includes, among others:

- A strategic approach and detailed understanding of programme **positioning and value creation**, which can be translated into a clear market need and demand, a gap in the market and a competitive niche for the EIT Health programme partners, and potentially a market price/willingness to pay for programme participants;
- The detailed understanding of current and future **programme revenues** from different sources, as well as the opportunity to diversify those revenues over the funding period from reliance on few to several sources of revenue;

- The ability to identify, analyse and prioritize the full **cost of programme design and delivery** which is required to determine cost-saving potentials as well as a break-even point under different funding scenarios;
- The setting, assessment and monitoring of programme sustainability **targets** with clearly described actions, measurable target and outcomes, and timelines, to highlight awareness of the sustainability topic and to demonstrate accountability to current funders;
- The effective and forward-looking management of programme sustainability **risks** that raises challenges in revenue generation and funding and facilitates stakeholder engagement to solve or reduce them;
- The management and engagement of **stakeholders** throughout the programme design and implementation period as collaborators, employers, supporters and potential sources of funding.

Establishing and maintaining financial sustainability should be viewed as a dynamic process over the whole lifespan of the project, based on a detailed understanding of when the initial funding/resources will run out. When possible, financial sustainability should be a key consideration during the programme design and establishment phase and should then be regularly monitored (depending on program length and complexity, *e.g.* every six months) during programme design and implementation. Of course, the pursuit of financial sustainability requires a detailed understanding of the funding structure, duration and eligibility.

The 2021 Call requires for specific programmes that the KAVA's contribution to the KIC's financial sustainability should be described, indicating the types of additional funding or revenues planned and/or a progress made in reaching revenues on an annual basis. The funded projects are therefore asked to provide a concrete proposal, indicating numbers and planned mechanisms to share generated revenue.

1.2 Financial sustainability and funding model in the EIT Health 2021 call cycle

The aim of EIT Health Campus programmes is to develop high-quality, impactful programmes that have a unique positioning and that are attractive additions to the European health education market. It is the Campus goal to ensure that all programmes can become financially self-sustaining after the end of the EIT Health funding period without losing the quality and the stated objectives of the EIT Health call.

From the 2020 call cycle onwards, the definition of a financial sustainability and funding model is required as a core element for all programme bids within EIT Health Campus. EIT Health Campus asks all proposals to include a firm commitment to sustainability, evidenced, for example, by letters of intent or other documentation from potential sources of funding.

Sustainability will also be a key element for reviewing and evaluating programme proposals: In selecting new programme proposals for the hearing (Phase 1) and during the hearing process (Phase 2), evaluators are required to include sustainability as part of the Impact score (III.), accounting for 40% of the overall programme score. The call text asks for specific activities that will ensure the sustainability of the programme and prove that it will become self-sustainable beyond EIT Health funding. The same logic applies for re-applications: Re-applying projects are required to add a sustainability plan to their submissions even where it was not previously required. The sustainability plan should consider all the angles of the project, for example, the possibility of conducting the activity remotely or through online means (if possible).

According to the Call text, "Campus proposals are required to demonstrate their commitment to the sustainability of their programme beyond the financial support of EIT Health. They will describe concrete

solutions and demonstrate that the consortia have the expertise required to implement it in their operational and business plan to develop, deliver and scale the educational offering."

In this context, campus programme proposals are expected to develop a valid **Education Business Model** for the coming years that will allow the activity to continue to be delivered and to generate impact, beyond EIT Health funding. with the following elements (from the Campus call document, section 2.2):

- "All programmes must commit to a four-year sustainability plan. From the first year of implementation, proposals must demonstrate their commitment, with significant buy-in from their partners, to keep running after EIT Health funding ceases, as part of a valid Education Business Model.
- As specified in the Call 2021, certain activities are expected that proposals: (1) include a sustainability strategy that demonstrates how costs will be covered beyond EIT Health Funding and guarantees that the programme is running on its own; (2) also explore revenue share mechanisms with the KIC."

With a few specific exceptions, the following funding scheme applies to new programme proposals within EIT Health Campus, which also impacts the need to develop and implement a sustainability action plan:

- 100% of funding in year 1
- 75% of funding in year 2
- 50% of funding in year 3
- 25% of funding in year 4

The staggered decrease of funding allows the programmes to be initially established and operating with a comfortable budget while having to continuously replace the EIT Health funding from other sources. Already funded or re-applying programmes will have different funding schemes and therefore, a higher urgency to develop and implement a sustainability action plan.

2 Guidelines for financial sustainability

2.1 How to think about the sustainability of education programmes

In many instances, educational programmes do not have to consider their (financial) sustainability during project design and implementation: They can be sure to receive funding from their institution or the relevant government to ensure the continuity of the programme from the start. Transfers from these entities ensure that costs are covered and that the programme can run without requiring additional revenue-generating or cost-reduction efforts. The objectives set by these education programmes do not seek economic or financial profitability, but above all, they seek to provide direct positive impact and broader positive externalities to society.

Initially, the same is true for many education projects funded through EIT Health: For the first year of the funding period, programmes are typically fully funded through EIT Health transfers, and the focus can be on building up and running the programme. However, due to diminishing EIT Health funding over the years, programmes need to start considering their financial sustainability early on, ideally already during the project planning phase (see Chapters 3.1 and 3.2). It is important to appreciate that this type of decreasing

funding requires a decision at the institutional level in terms of funding priorities which could impact the operations or even the continuation of other existing programmes.

Financial sustainability is a product of key elements of programme design and implementation, such as:

- The definition of a '**business/operating model**' for the programme, including considerations such as: who is this programme for, what are the tangible and intangible benefits to the target audience, who does it compete with, what is the willingness to pay for this programme
- The **transparency of revenues and costs** which can often be clouded between different sources of funding and different entities covering expenses, but making it difficult to determine what is needed to achieve financial sustainability
- The definition of basic **programme KPIs** such as cost per student or capacity utilization which are important when considering the feasibility of programmes as well as conducting basic accounting in a profit & loss statement or calculating returns on investment
- The promise of **programme continuity** which will encourage students/participants to apply to the programme and will allow the programme management to retain key employees on multi-year contracts
- The ability to **attract partners** (such as academic, institutional and business partners) through their demonstrated value-add in academic excellence, financial sustainability as well as opportunities for students and other participants.

In the following paragraphs, the way to identify and manage the project revenues and the project cost will be outlined, along with guidelines for revenue sharing mechanisms achieving project profitability. Furthermore, we will also explore some revenue share mechanisms with the EIT Health KIC, as an interim action required by EIT and will be discussed further as part of the strategic agenda process in the future.

Typically, not all these elements will be relevant for a given programme under the EIT Health Education scheme. However, it is useful to consider them during the programme planning phase and at regular intervals during programme implementation as levers to ensure long-term financial sustainability beyond the EIT Health funding.

Beyond purely financial considerations, programmes are also encouraged to consider achieving sustainability through other means, for example:

- The adoption of a programme into the core university curriculum, ideally supported by the institution's base funding;
- The adoption of the programme into the programme portfolio of a non-academic partner (*e.g.* a hospital) in the context of their own education activities (*e.g.* for the purpose of CPD);
- The transfer on an interdisciplinary training approach to other universities via a train the trainer approach;
- The ability to participate or co-invest in the capital of certain start-ups that are formed during an academic program;
- Fees by participants or professional organisations that can also be shared with EIT Health;
- Sponsorship by business partners;
- Or the continued use of the EIT Health branding and affiliation with the EIT Health network after the initial funding period.

However, achieving financial sustainability while considering the necessary quality standards remains the focus during the project planning and implementation phases.

2.1.1 Identifying and managing project revenues

Figure 1 gives an overview of the potential revenue and cost categories to consider for ensuring a programme's financial sustainability. On the **revenue side**, educational programmes may want to consider – beyond the initial transfers from EIT Health and other sources – to manage and grow the following revenue components and the critical questions:

- **Participation and study fees:** Would the participants be willing (or legally able) to pay for the programme, either to fully cover costs or even just a nominal fee? What would be a reasonable tuition payment? Would the fee be comparable with similar programmes charging participation/study fees?
- **In-kind contributions:** Would the hosting institutions or programme partners be able to provide in-kind (non-financial) contributions to make the programme sustainable in the mid-term? What kind of contributions could be requested from which partner? How will in-kind contributions be valued?
- **Sponsorships and partnerships:** Would the beneficiaries of the programme (e.g. employers of participants or graduates) be willing to sponsor study fees or other programme elements (e.g. opening/ graduation ceremonies, publications)? What, if any, would be the collateral (e.g. marketing placement, programme name)? What are the differences between being a sponsoring institution and an external partner?
- **Other own revenues:** How can the programmes leverage and monetize its knowledge, content and IP (e.g. through consulting, content generation, transfer or licensing)? Can this knowledge and IP be systematically built during the programme delivery phase with commercialization in mind?
- **Programme customization and delivery:** Can the programme be adapted to suit the requirements of other organizations? Can it be delivered there for a market-based fee? How much can the programme cope with the uncertainties or natural adversities?
- **Fundraising and donations:** How can the programme leverage its existing and emerging networks to raise fund and receive donations without collateral? How can the programme's or institution's tax exemption status be used to incentivize donations (*e.g.* by being included in the will of potential donors)?
- **Endowments and investments:** Did the programme effectively try to raise endowments or investments which will benefit programme operations with its interest revenue? Have different types of endowment been explored, e.g. an endowment to provide study fee sponsorships for students with a certain nationality?
- **Tax exemptions:** Does the programme effectively use all possible areas to benefit from tax exemptions? Has the legal form of the programme operation been studied in detail and was the most effective set-up chosen?

2.1.2 Identifying and managing project costs

On the **cost side** it is important to generate transparency about the true, full cost of programme design and delivery (including programme overheads). Only then, it will be possible to really understand how the program can break even without losing quality. This may include items that can initially be assumed as

'given' as an in-kind contribution (*e.g.* office space or access to IT infrastructure), but that would be very costly to the programme if it would have to be purchased at cost in the market or valued at their current level of depreciation. Therefore, programmes need to consider and carefully manage the following items in their cost structure:

- Salaries and benefits: What are the full costs of employment in support of the programme? How does it change if in addition to salary other benefits (*e.g.* health, social, retirement, training) have to be considered? How to allocate costs in a reasonable way? Does the budget include academic and administrative staff? How does the budget reflect the costs of part-time and supporting staff?
- Other personnel costs: Does the programme budget for other personnel costs for those who are not employed (e.g. contractors, experts, consultants, trainers)? Are these costs reflecting market rates as well as additional costs (such as travel and accommodation)?
- Other variable costs: How much does the programme (need to) spend on other variable items such as study materials, books, online resources, staff training as well as catering and general consumables, such as computers, stationery and paper? Do the budgets adequately represent the actual costs of consumption and replacement? Is there a mechanism for reimbursements or cutting costs in case of any kind of emergency or unforeseeable events?
- Basic utilities: What would be the cost of basic utilities and rent for office space if the programme had to procure them at market price (*e.g.* as referenced in the university's letting policy)?
- Asset maintenance and depreciation: How much does the programme have to spend on asset maintenance and depreciation, to ensure a longer lifetime and to enable upgrades/replacements when necessary?

  Initial set-up costs: Especially relevant during pre-funding and in the first year of funding, how much was spent (as one-off costs) on setting up the programme? Do the set-up costs adequately reflect the time spent writing the project grant proposal, the forging of partnerships and the expert input received?

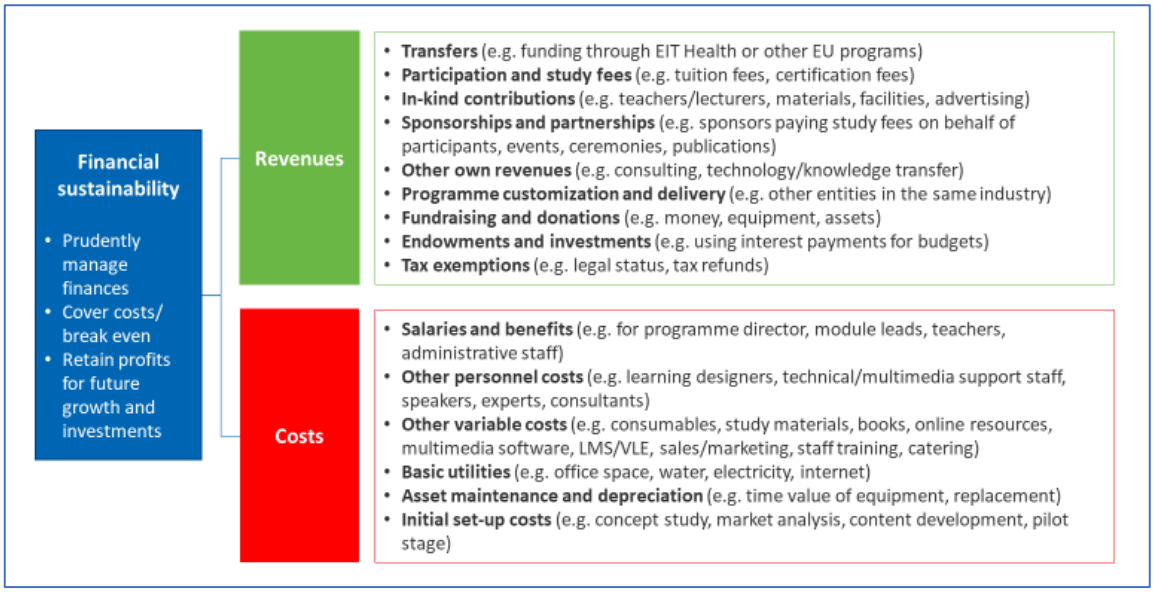


Figure 1: Potential levers of financial sustainability during the Campus project lifecycle

2.1.3 Managing overall profitability

The careful management of revenues and cost will jointly enable programmes to achieve sustainability during the funding period and continued beyond that. As was mentioned earlier, the submission of a sustainability strategy is required from **all** projects from Call Cycle 2020 onwards; sustainability carries a significant weight (40%) in the evaluation of all project proposals. Project proposals that clearly demonstrate the possibility of becoming financially sustainable during the funding period will have a higher chance of awarding.

Project teams should also note that Campus activities running in 2020, should explore mechanisms to generate and share revenues with EIT Health. This will ensure the long-term sustainability of the EIT Health Campus business model overall for the support of its eco-system, community and activities.

No specific mechanism to generate and share revenues with EIT Health has been defined yet. Instead, the projects are required to propose the mechanism that is best suited to ensure the successful delivery of their projects. The general guidelines for contributing to EIT Health outlined below:

- Contributions can be made through different mechanisms, such as revenue sharing, project equity allocation, co-ownership of IP, and others. Also, contributions could be conceived as annual or one-time payments.
- Depending on the chosen mechanisms, contributions might continue beyond the initial funding period.
- Contributions should also include a moderate time and risk component in recognition of the provided EIT Health funding, e.g. in the form of an increased profit share or an applied nominal interest rate.
- In cases where partners are legally not able to collect generated revenues, handling of all payments through EIT Health HQ can be further explored.

EIT Health also recognises that the activity lines within EIT Health Campus differ in their ability to generate and share the revenue to contribute to the financial sustainability of the KIC. These differences are considered in the Call 2021 amendments. Furthermore, financial sustainability contributions asked for in a Call 2021 are an interim action required by EIT and will be discussed further as part of the strategic agenda process.

Activities are asked to propose such mechanisms where feasible. Please refer to the table below for some examples of financial revenue creation. The enforcement of this rule may have an impact on the activity selection whilst individual excellence of activity will never be compromised in the selection process.

The following table provides guidance on the revenue creation mechanisms by activity lines. It is mandatory for all Campus activity lines to create and share revenue with EIT Health, with the exception of continuing Degree Programmes and Citizen. However, these two activity lines are encouraged to explore mechanisms to create financial revenue.

Campus Activity Lines	Examples of financial revenue creation
Continuing Degree Programmes	Not applicable
Training for students **Non-degree programmes and other offers where charging of fees is permitted and feasible**	Application fees, participation fees, course fees, and certificate fees (following the branding guidelines).
Training for Entrepreneurs & Innovators	
Innovation Fellowships Network, Catalyst Europe	Application fees, organising a Talent Fair, shared revenues from sponsorship
Training for Executives and Professionals	Application fees, course fees, and certificate fees
Citizen and Patient Engagement activities	Not applicable

Placement in one of the tentative categories does not excuse projects from identifying a suitable business model; this will be required from all project submissions. On the contrary, during the review process evaluators will look favourably at project proposals that outline a path towards financial sustainability, especially for those activity lines where this is presumably more difficult to achieve.

Projects are requested to make **specific proposals** regarding their suggestion mechanism for contributing to EIT Health. These proposals must be included in the required ''Education Business Plan'' which has to be submitted with each proposal. Annexe 3 includes an example of a general Profit & Loss statement which the Partners can use to detail their assumptions for revenues, costs during the funding period and beyond.

Examples of mechanisms for programmes with continuous revenues (e.g. programmes)	Examples of mechanisms for programmes with dis-continuous revenues
• Application fees • Course/Participation fees • Certification fees • Fees to download developed applications • Organising Talent Fairs • *Others*	• Share in company equity • Commercialization of IP • Share of future salary • Reimbursement/cross-subsidy for innovation projects from industry partners • *Others*

2.2 Sustainability in EIT Health Campus programmes

The funding model for Campus programmes follows the general model of decreasing funding over four years; from year five, all programmes have to be financially self-sustaining without the support of EIT Health. Programme proposals and funded projects are required to provide specific action plans to achieve financial sustainability at the end of the funding period. The proposal needs to have a sound sustainability plan in place that is integrated into the implementation of the programme and shows promise to deliver the first results in the following years.

The EIT Health Education scheme provides funding under five different lines, each of which has its own funding limits. All activity lines require the inclusion of sustainability and funding model elements in the submissions to the 2021 Call and beyond. In principle, all programme lines should consider the different levers to achieve financial sustainability, as described in the previous chapter.

The specific funding limits and allocations for different types of Campus education programmes are mentioned in the 2021 Call document. Based on their own planning, the partners must decide on the specific funding needs of their respective projects, even without reaching the funding limits for their activity line.

Activity lines	Funding model
1.1 Continuing Degree Programmes	• Up to €550 000 is available per Degree Programme. • Note that Degree Programmes are exempt from the 25% decreasing funding principle. According to the updated *Framework for Running Degree Programmes*, programmes receive one year of development funding, and four years of stable continuous funding.
1.2 Innovation Days Network	• New Innovation Days locations: up to €20 000. • Locations for the second edition: up to €15 000. • Locations for the third edition: up to €10 000. • Locations for fourth and final edition prior to sustainability and adoption by the market: €5 000.
1.3 Summer Schools	• Completely new schools developed for EIT Health will be funded with up to €75 000. • Re-applying Summer Schools can apply for decreasing funding according to the Funding Model described in the introduction, with the exception that they can only re-apply two times.
2. Training of Entrepreneurs and Innovators	• Up to €275 000 funding available for Innovation Fellowships (in their first year). • Up to €500 000 funding available for the Catalyst Programme (for the first year). • The continuing programme must adhere to the sustainability principles described in the introduction section of this call. Furthermore, continuing Fellowship Programmes can receive up to €50 000 of EIT Funding for their strategic development, faculty support and outreach.
3. Training for Professionals and Executives	• Between €250 000 and €700 000 is available. • Campus will not fund small pilots but only larger activities in 2021 and beyond, in order to ensure the highest impact.

4. Citizen and Patient engagement	• Between €200 000 and €700 000 in funding is available for individual programmes. • Campus will not fund small pilots but only fund larger activities in this activity line that have a scaling component and the ambition to become sustainable build in per design in order to ensure the highest impact.

3 Sustainability over the project life cycle

3.1 Sustainability during the full project life cycle

Sustainability is a topic that programmes in EIT Health Campus need to consider throughout the life cycle, from before the funding decision has been made until after the funding has ended. Figure 2 outlines the key considerations during each of the project phases:

- During the **programme proposal development** and before the funding decision has been made, programme teams need to focus on developing a sustainability concept and action plan in line with the requirements of the call document. Proposals should describe concrete sustainability solutions and demonstrate that the consortia have the expertise required to implement those solutions in their operational and business plans, so the programme can continue after the end of EIT Health funding.
- In addition to the concept, initial partner commitments to sustaining the project beyond the funding period are required (*e.g.* through a **letter of intent** signed by all consortium partners proving their strategic intention of sustaining the programme). Roles, responsibilities and contributions should be clearly articulated.
- During the **funding period**, the programme management team, supported by its stakeholders and supervised by its Board and by EIT Health, has to show progress in implementing the sustainability action plan in line with the initial concept. Due to the decreasing funding from EIT Health, this has to be a priority early on and especially during years three and four, when a majority of funding has to come from outside sources. The plan should show that at the end of year four, the programme will be able to continue operations without the support of EIT Health funding.
- After the **end of the funding period**, the programme needs to manage its own finances without oversight or support from EIT Health.

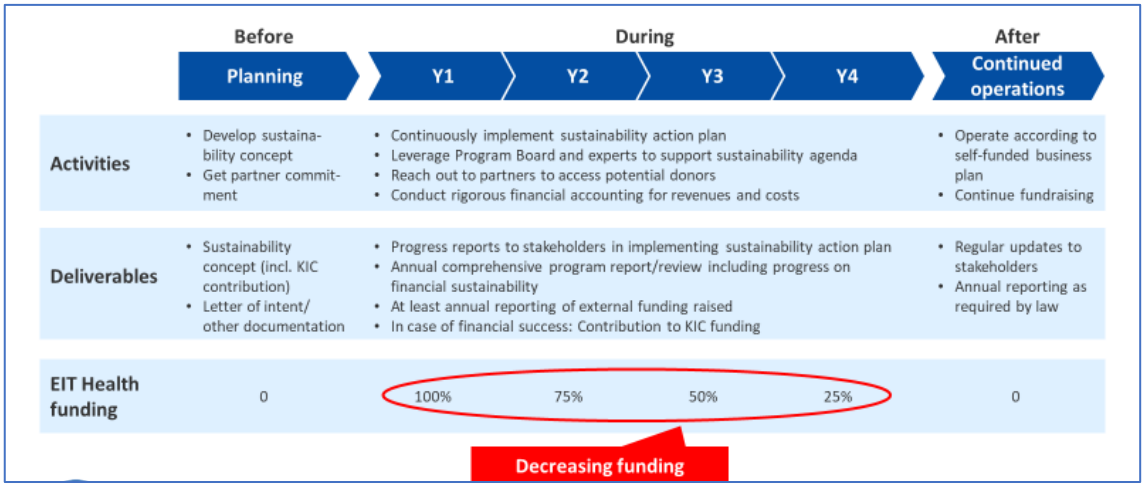


Figure 2: Financial sustainability during the Campus project lifecycle

3.2 Deep dive: Sustainability during the call cycle

In preparation of the programme proposal during the call cycle, programme teams will have to follow several key steps as outlined in Figure 3 below. Each step of the Call cycle requires a specific type of action towards developing and submitting a full sustainability concept, and different types of support are offered from EIT Health Campus team in each step.

In addition to these outlined activities, Annexe 1 at the end of this document outlines key questions in different categories that can be used to guide the development of the sustainability concept and action plan. These questions can be used as a checklist for internal programme management activities or as guidance for external consultants or experts.

	Call issuing	Intention	Match-making	Proposal development	Submission	Hearing	Post decision, pre-funding
General activities	• Study call document • Identify suitable program lines	• Submit intention to bid • Conduct initial partner search	• Participate in event • Network to identify suitable partners	• Develop full proposal • Review with partners and expert support	• Submit full proposal • Include letter of intent from partners	• Present to panel	• Develop detailed business plan and adapted budget • Start to build the project organization
Activities related to sustainability	• Select programs with potential to become sustainable	• Partners to support sustainability • Non-academic partnerships	• Participate in training workshop • Develop overall approach • Develop timeline	• Develop sustainability concept • Leverage resources and experts	• Include sustainability concept	• Prepare for questions about sustainability	• Develop detailed sustainability action plan • Start collaboration with partners on sustainability • Assign responsibility for sustainability in the team

Figure 3: Key activities for financial sustainability during the call cycle

3.3 Roles and responsibilities

While a programme's financial sustainability is primarily the duty of the programme management and its participating institutions, sustainability is also a team effort with a range of support offerings aiming to establish, enable and implement sustainable programmes beyond the EIT Health funding. The following paragraphs describe the roles of the different stakeholders in the context of programme financial sustainability:

3.3.1 Programme Management

During the bid preparation and the project implementation phase, the programme management team is responsible for including sustainability in its activities and ensure that the sustainability agenda is consistently pursued. Within the management team, there would ideally be an appointed 'sustainability champion' who owns the topic and is responsible for the delivery, with the support of other team members and programme stakeholders.

Financial sustainability should also be considered as one of the project risks during planning and implementation and be managed in a transparent and systematic way. In Annex 2, the use of the risk matrix is introduced as a common tool for identifying, prioritising and managing a range of project risks, including risks related to financial sustainability.

3.3.2 Other programme stakeholders

By design, EIT Health Education programmes can only be successful within a network of active and dedicated partners from academia, business and beyond. In addition to being supportive in programme operations and oversight, other stakeholders are also a potential source of funding directly (e.g. through employer sponsorships, in-kind contributions) or a gateway to approach other institutions for fundraising.

The diverse programme stakeholders also play an important role in using their complementary skillsets during the programme implementation. Based on EIT Health experience, it is a good practice to establish a Programme Board to guide and oversee the programme implementation, in close coordination with EIT Health. The Programme Board would ensure regular updates of all involved partners and stakeholders, discussions about the programme's progress in achieving its goals (including financial sustainability) and support the Programme Management in case of issues or conflicts.

3.3.3 Non-academic partners

The Call 2021 emphasizes the mandatory role of industry/non-academic partners in building a successful programme consortium. Examples for industry/non-academic partners include hospitals, industry partners, clusters, Tech Transfer Offices, NGOs, research centres, municipalities, patient organisations, and others. Industry/non-academic partners can support Campus activities that academic partners cannot always provide, such as putting together a sound business plan, defining the market need of the educational offering, reaching out to potential fee-paying organizations, and therefore supporting the consortium with sustainability. The benefits and potential areas of collaboration with industry/non-academic partners are outlined in a separate document.[1]

[1] https://connections.eithealth.eu/documents/21826/0/BP+2021+Campus+Calls+-+Non-academic+partners.pdf/91541e8a-e925-81e1-12c8-e15fdc006226

3.4 EIT Health Campus resources for sustainability

Within the EIT Health framework, the Campus team provides support for the programme teams to actively shape and pursue programme sustainability. EIT Health HQ and the Education Managers in the CLC act as centres of competence on the sustainability topic with the opportunity to provide a second layer of support whenever needed.

Additionally, there is a range of other support offerings that the CLCs and partners can use for the sustainability topic:

- *Sustainability resources:* This 'Sustainability Toolkit' document serves as the first layer of resources and frameworks and describes an initial range of items and examples to consider in the context of programme sustainability. It will be regularly updated and shared within the EIT Health Education community. Annexe 4 of this document provides an overview of good practice sustainability examples from EIT Health Campus projects; Annexe 5 provides selected examples for the sustainability of relevant education programmes worldwide, Annexe 6 provides answers to 'Frequently Asked Questions' about sustainability based on the discussions in Webinar 1 (January 23, 2020) while Annexe 7 provides a literature list of useful resources on managing financial sustainability of education programmes.
- *Sustainability workshops:* In addition to the toolkit document and the support provided by the EIT Health Campus team, experts and project board members, EIT Health did conduct two workshops led by subject matter experts on the topic of sustainability during the sustainability workshop in Barcelona (January 14, 2020) and the matchmaking event in Berlin (February 6, 2020).
- *Expert webinars:* After the workshops, the EIT Health Campus team organized two webinars where the sustainability subject matter experts answer additional questions submitted by the partners. Let us know If we should organise more of them?
- *Expert advisory:* To foster the development of the initial sustainability concept and the implementation for each programme, it may be useful to involve subject matter experts on programme sustainability. Experts may be selected from the same group that was moderating the sustainability workshops and webinars, to ensure consistency. This kind of support must be financed through partners who should directly contract the subject matter experts.

3.5 Specific guidance for the 2021 call cycle

As in previous years, the 'Sustainability Section' in the programme proposals as outlined in Plaza has two components which constitute the minimum of how this topic should be addressed by the project teams:

Sustainability strategy: The sustainability strategy should provide a clear plan for the coming years that will allow the project to become sustainable and less dependent on EIT Health funding. The project teams are asked to provide specific examples of how the project can become sustainable (*i.e.* support from industry or academic institutions, ability to sell the education content, etc.). It is highly recommended that letters of support/intent and/or clear business models (with supporting data) are listed here in order to provide evidence of potential sustainability. Furthermore, the ability to generate and share the revenue to contribute to the financial sustainability of the KIC should be explored by each programme proposal of the relevant programme.

- *Sustainability supporting documents:* In this section, project teams are asked to upload a single PDF containing any supporting documentation for their sustainability plan (*i.e.* Letters of support/intent, a short (max 1 page) business model explanation, and other supporting documents).

In addition to the general timeline described in the call document, teams preparing a campus proposal should keep in mind that preparing a comprehensive sustainability concept may take some time, and therefore:

- *Reach out to good practice examples within the EIT Health network:* As described in Annexe 4, there are already a few good examples of financial sustainability in the different funding lines for EIT Health campus. Interested project teams are encouraged to reach out to their colleagues in these projects for guidance and support.
- *Request resources from EIT Health:* As described above, there are limited resources (Workshops and webinars) and experts available specifically to promote sustainability in EIT Health Campus. Interested project teams should reach out to their Campus contact in the CLC or the HQ Campus team and express your need for an additional webinar or local best practices. In the case of experts, please contact them directly via email as this kind of support must be financed through partners who will directly contract the subject matter experts.

For all other questions regarding financial sustainability in the EIT Health campus call 2021 or to directly contact the sustainability subject matter experts, please contact the EIT Health Campus team.

4 Annexe: Programme sustainability resources

4.1 Annexe 1: Key questions for integrating sustainability during programme development

Programme strategy	• What is the overall and measurable goal the programme aims to achieve? • Who will this program be attractive for? • How does the programme create value for the participants and partners, and what is that value? • How has the potential demand (e.g. student numbers) for this programme been quantified? • Are there similar programmes in the market, and if so, how does their market positioning compare to the proposed programme? • What is the programme's unique positioning in the market that translates into a willingness to pay for participants?
Sustainability concept	• Has the programme formulated a sustainability concept that covers the funding period and at least 3-5 years beyond? • What are the key idea and element(s) (*e.g.* roles, responsibilities, financial targets) for making the programme sustainable during and after the funding period? • Does it include a preliminary business plan for the programme during and after the funding period?
Revenue generation	• What mechanisms for revenue generation have been identified? • Have they been prioritized and backed up with specific actions? • Was the impact of additional revenue generation quantified?
Cost management	• Have the full costs of programme development and operations been identified in detail (irrespective of who pays for them)? • Is there a detailed budget/spending plan for the funding period and beyond? • How does the project track fixed and variable costs against budget? • What is the plan to make the programme more cost-efficient over time?
Profitability management	• Have they specified the break-even point for the project? Have they determined projected revenue after the break-even point? • How will the programme regularly report actuals and variance against projections of revenues and costs? • In case of delays/issues, have mitigating measures been defined? • Has a mechanism to generate and share revenues with EIT Health been proposed? (if applicable)

Activity planning	• What type(s) of activities are planned for the different years of the funding period to ensure the sustainability of the programme? • Which communication and marketing activities planned for attracting participants? • Are the activities specific enough to serve as meaningful guidance for the work of the different project team members and stakeholders? • What targets have been set (*e.g.* quarterly or annually) to pursue the sustainability plan? • How often is progress against planned activities and achieved targets reviewed, and how are updates made to the activity plan?
Responsibility/ Accountability	• Who within the programme team and the stakeholders is responsible for developing and implementing the sustainability plan? • What other support can the programme leverage to promote sustainability? • What is the reporting mechanism to track progress on the sustainability plan?

4.2 Annexe 2: Risk matrix

The risk matrix is a widely used tool to identify, evaluate and mitigate project risks. Typically, the following steps will be conducted during a risk management exercise:

- **Risk identification:** Develop a long-list of potential project lists from a number of different perspectives, e.g. functional and product view, headquarter and regional view, project design and implementation view, top management and regular employees.
- **Risk evaluation:** Evaluate the long-list of risks by their likelihood (e.g. how likely is it that this risk will materialize within a given timeframe) and their impact (e.g. what would be the impact if this risk was to occur). For the evaluation, a simple (high/medium/low) or more complex (0-10) scale can be used, depending on the organization's ability to provide exact measurements.
- **Risk mitigation:** Based on the risk evaluation, the organization would then define mitigating actions to mitigate the occurrence of the risk, or to eliminate it entirely. The mitigating actions should also specify a timeline and allocate responsibility for achieving the actions.

The below table provides a sample output for a risk matrix after the above steps have been completed. It is recommended that the progress in risk mitigation is regularly reviewed (e.g. monthly) and that the risk matrix as a whole is regularly updated (e.g. quarterly or biannually).

Sample risk	Likelihood (H/M/L)	Impact (H/M/L)	Mitigation Actions
Project operational financial performance is below target	Medium	High	• Introduce course fees • Sale of materials externally • Seek sponsorship
Participant number is below the target	High	Medium	• Increased marketing • Over-enrol to allow for no shows
Printing of course materials is late	Low	High	Identify alternative print providers

4.3 Annexe 3: Projected Profit & Loss Statement

The table below shows the example of an outline of a typical profit and loss statement which should be projected at the beginning of a projected and then updated with actual data regularly (at least annual, but quarterly is recommended). The different revenue and expense categories should be projected on a monthly basis since most expenses are paid this way (e.g. salaries, rent, utilities). Other expenses and revenues should be projected for the month when they are likely to occur (e.g. quarterly or annually).

Projections are by their nature uncertain, but they are beneficial to understand the overall financial viability for a project. Projections should include the best knowledge (e.g. based on previous years) or the best estimates that the project teams have available. Other sources of valuable information could be market research, the CLC managers, as well as external experts.

Please note that this is a general example, that is not mandatory to use but can be very useful to understand the overall financial picture.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	AA	AN	BA	BN	BO	BP
1	**Profit & Loss Statement (Projection)**																			
2	**Proposed project**: xxx																			
3	[in EUR]																			
4	*Numbers are illustrative*																			
5		**Jan-21**	**Feb-21**	**Mar-21**	**Apr-21**	**May-21**	**Jun-21**	**Jul-21**	**Aug-21**	**Sep-21**	**Oct-21**	**Nov-21**	**Dec-21**	**2021**	**2022**	**2023**	**2024**	**2025**		
6	EIT Health funding	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€12,000	€9,000	€6,000	€3,000	€0		
7	Revenue stream 2	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€12,000	€12,000	€12,000	€12,000	€12,000		
8	Revenue stream 3	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€12,000	€12,000	€12,000	€12,000	€12,000		
9	Revenue stream 4	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€1,000	€12,000	€12,000	€12,000	€12,000	€12,000		
10	**Total net revenue**	**€4,000**	**€4,000**	**€4,000**	**€4,000**	**€4,000**	**€4,000**	**€4,000**	**€4,000**	**€4,000**	**€4,000**	**€4,000**	**€4,000**	**€48,000**	**€45,000**	**€42,000**	**€39,000**	**€36,000**		
11																				
12																				
13	Personnel	€2,500	€2,500	€2,500	€2,500	€2,500	€2,500	€2,500	€2,500	€2,500	€2,500	€2,500	€2,500	€30,000	€30,000	€30,000	€30,000	€30,000		
14	Sub-contracting	€200	€200	€200	€200	€200	€200	€200	€200	€200	€200	€200	€200	€2,400	€2,400	€2,400	€2,400	€2,400		
15	Sub-granting	€200	€200	€200	€200	€200	€200	€200	€200	€200	€200	€200	€200	€2,400	€2,400	€2,400	€2,400	€2,400		
16	Costs of large research infrastructure	€800	€800	€800	€800	€800	€800	€800	€800	€800	€800	€800	€800	€9,600	€9,600	€9,600	€9,600	€9,600		
17	Prizes	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0		
18	Travel & subsistence	€160	€160	€160	€160	€160	€160	€160	€160	€160	€160	€160	€160	€1,920	€1,920	€1,920	€1,920	€1,920		
19	Costs of other goods and services	€20	€20	€20	€20	€20	€20	€20	€20	€20	€20	€20	€20	€240	€240	€240	€240	€240		
20	Costs of internally invoiced goods and services	€20	€20	€20	€20	€20	€20	€20	€20	€20	€20	€20	€20	€240	€240	€240	€240	€240		
21	Depreciation	€70	€70	€70	€70	€70	€70	€70	€70	€70	€70	€70	€70	€840	€840	€840	€840	€840		
22	Indirect costs	€30	€30	€30	€30	€30	€30	€30	€30	€30	€30	€30	€30	€360	€360	€360	€360	€360		
23	Other expenses 1: Please name	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0		
24	Other expenses 2: Please name	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0		
25	**Total expenses**	**€4,000**	**€4,000**	**€4,000**	**€4,000**	**€4,000**	**€4,000**	**€4,000**	**€4,000**	**€4,000**	**€4,000**	**€4,000**	**€4,000**	**€48,000**	**€48,000**	**€48,000**	**€48,000**	**€48,000**		
26																				
27	**Earnings before Interest & Tax**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**-€3,000**	**-€6,000**	**-€9,000**	**-€12,000**		
28	**Income Tax**	0%																		
29	Earnings after Income Tax	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**-€3,000**	**-€6,000**	**-€9,000**	**-€12,000**		
30	Credit value	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0		
31	**Net Earnings**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**€0**	**-€3,000**	**-€6,000**	**-€9,000**	**-€12,000**		
32																				
33																				

Revenues & Cost Projection | Assumptions | Explanations

4.4 Annexe 4: Sustainability examples from EIT Health Education programmes

The following provides an overview of good practice examples for programme sustainability found in programme proposals and funded projects from previous EIT Health Education call cycles. This list of examples is expected to grow over the next years as more Campus programmes will graduate from EIT Health funding and become stand-alone sustainable offerings.

Example 1: Real-World Evidence	
Programme type: Online education	**Partners:** Imperial College London, Karolinska Institutet, Oxford University Hospital, University of Oxford, Université Grenoble Alpes
Programme focus	• Blended programme exposing participants to real medical data • Aimed at teaching postgraduates and healthcare professionals new methods for data analysis
Programme outcomes	• Costs: 249,589 € (2019) • Target 2019: 1000 professionals trained (502 trained in 2018) • Costs: 247,500 € (2018)
Contribution to sustainability	• Revenue from participation fees: 5,000 € (2018) • External funding: 50,000 € (2018)

Example 2: Advanced Management Programme on Health Innovation (AMP-HI)	
Programme type: Executive Education	**Partners:** IESE Business School, Imperial College Business School & Copenhagen Business School Executive
Programme focus	• Modules based programme implemented in three locations • Targeting top healthcare executives in hospitals, MedTech, pharma, consulting, regulatory agencies • Teaching how to use change management and innovation to make healthcare sustainable
Programme outcomes	• 15-20 participants per year
Contribution to sustainability	• First EIT funded health executive programme to become self-sustaining • Charging 14,000 €/participant (2019), 15-20 participants (2019) -> Revenues: 280,000 € • Costs: 544,521 € (2017)

Example 3: Transversal Programme in Medical Image Postprocess, Training Professionals: 3D Printing to Research (EXPERT 3D)	
Programme type: Medical Education	**Partners:** Hospital Sant Joan de Déu in Barcelona and Coimbra
Programme focus	• Innovative, transdisciplinary programme at the interface between medicine and engineering • Teaching radiologist doctors, bioengineers, computer scientists and senior technician's 3D printing and image processing skills for diagnosis

Programme outcomes	• 60 participants in 2019 • Costs: 352,599 € (2019))
Contribution to sustainability	• In the future, charging 1,200 €/participant * 60 participants (2019) -> Potential revenues: 72,000 €

Example 4: Caregiving and Ageing Reimagined in Europe	
Programme type: Online education	**Partners:** Imperial College London, Karolinska, Institutet, Sorbonne University, Oxford University, Universidade de Coimbra, Nanyang Technological University Singapore, Abbott, Global Coalition for Aging, Gerontopole Pays de la Loire
Programme focus	• Online comprehensive training in elderly care • Based on best practices in disease management (e.g. Alzheimer's), skin, oral and nutritional health, and applications for "end of life" value • Increasing the number of employed caregivers (especially among the young, unemployed, migrants)
Programme outcomes	• Available: 10 courses (edX) • Costs: 550,050 € (2019) • Target: 20 graduates & 1000 citizens (2019) • Up-to-date costs: 1,867,511 (since 2016) • Achieved: 147 professionals trained (2018)
Contribution to sustainability	• No participation fee but 43 € certificate fee

4.5 Annexe 5: Selected sustainability examples internationally

Case Study 1: Tecnocampus - A hub of knowledge, entrepreneurship and businesses

Summary. Tecnocampus is an ecosystem where students, entrepreneurs, businesses, researchers, academics and local government interact to share knowledge, contribute to regional economic development and build successful futures. The co-located university faculties, start-up incubator, business park and technological centres, are connected through the common focus on entrepreneurship that is integral to all Tecnocampus education in business, health and technology. A wide range of education, incubation and commercial activities intersect and underpin a modern entrepreneurship scene, led by successful young entrepreneurs, that fuses the Catalan tradition of medium-sized family businesses with the flourishing international spirit of entrepreneurship and innovation.

1 Background

The City of Mataró lies on the Mediterranean coast north of Barcelona in Catalonia. It was formerly a stronghold of textile production. The city council's commitment to fostering professional education had historical roots in the creation of the Miquel Biada Institute in the 1950s, which led to the formation of the Industrial Technical Engineering School of Mataró in 1983. In 1999, the Tecnocampus Foundation was created, through an agreement that incorporated the already established polytechnic and business schools in Mataró. When economic reliance on textiles declined, the local municipal administration led investment in the Tecnocampus infrastructure as a way of meeting future social and economic challenges in the region. Construction of the purpose-built Tecnocampus infrastructure took place during 2008-2010. A health school was added to the polytechnic and business schools and the university centres then formed the integrated education-business-entrepreneurship design of the campus space.

Tecnocampus is an affiliated centre of the prestigious Universitat Pompeu Fabra (UPF) Barcelona, which awards 16 undergraduate and Masters level degrees. Tecnocampus covers more than 50,000m^2, with the three teaching schools located alongside the two towers hosting the start-up incubator (and conference facilities) and the Business Park. The Business Park includes 18,000m^2 of space, hosting both established local companies and new firms emerging from the start-up incubator, which takes up one floor of the twin towers of the park. The infrastructure design is intended to facilitate informal interactions and ease of movement for students, staff and businesses across all these elements of the campus.

2 Objectives and motivations

The mission of Tecnocampus is to create a holistic knowledge and business ecosystem that contributes to economic growth and social progress, by hosting three university schools, a business park and incubator centre and by generating new opportunities among them.

The goals that support this mission are to:

- provide high-quality education and innovative learning opportunities for students entering the workforce and/or becoming successful entrepreneurs,

- promote, develop and support emerging start-up companies;
- generate spaces and moments for interactions between companies;
- make visible the supply and demand of products and services;
- stimulate informal relationships among people who work every day at Tecnocampus; and
- stimulate the sense of belonging at Tecnocampus.

The key driver of the Tecnocampus model is the creation of an entrepreneurial ecosystem that is based on both formal and informal interpersonal interactions facilitated by the collocated and purpose-built infrastructure, institutional coordination and cooperation. A homology between social and spatial relationships underpins this ecosystem.

3 Stakeholders

Tecnocampus can be considered a strategic instrument of local government, industry and education stakeholders to construct a dynamic interface that trains young people with an orientation toward business and entrepreneurship under the banner of jointly constructing the future.

Tecnocampus governance is a hybrid private non-profit foundation and public ownership model. The Tecnocampus Board is composed of representatives of the quadruple helix: public administration, business, UPF and civil society. The president of the board is a representative of the city council of Mataró. The board includes the General Director of Tecnocampus (Jaume Teodoro), who is directly responsible for the management of the three schools, the Business Park and the incubator. The hybrid Tecnocampus governance model confers strategic, and management flexibility beyond that accorded wholly public HEIs in Spain.

Operational instruments include a suite of cooperation activities including student internships, curriculum development, guest lectures and events featuring local entrepreneurs and businesses, student pre-incubator facility with business mentors and numerous mechanisms for formal and informal interactions between university and business stakeholders in Tecnocampus.

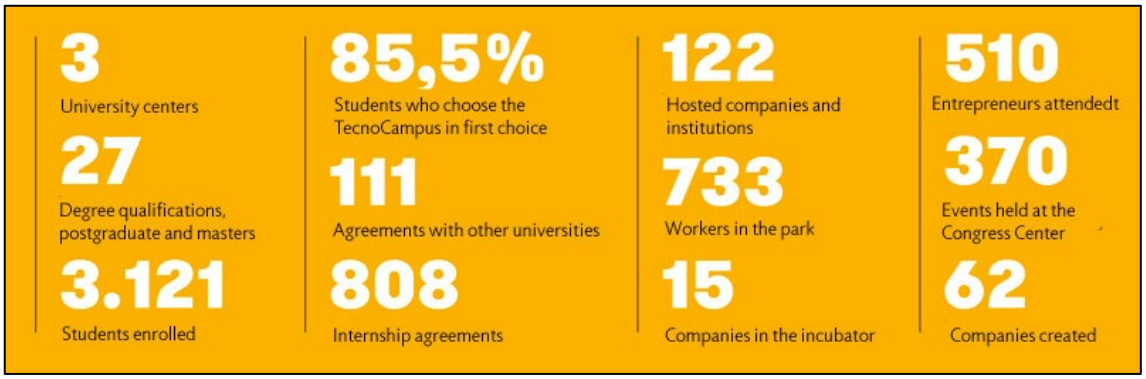
More than 120 companies are resident in the Tecnocampus Business Park. The companies present in the Business Park include more than 1,000 staff employed onsite. These companies provide mentorship and share their entrepreneurship experiences within the Tecnocampus ecosystem. They can also benefit from the access to and the recruitment of emerging talent and young creators from the student body. The Business Services Department is responsible for the companies in the Business park, the incubator and the transition of successful start-ups to the park.

4 Main Outputs

There are more than 3,000 students at Tecnocampus following courses in engineering, computer games, media studies, business administration, marketing, tourism, logistics, nursing, physiotherapy and sports sciences. Mandatory entrepreneurship courses are embedded in all degrees. Masters courses are available in entrepreneurship and innovation and in health and tourism management, whilst a range of extra-curricular offerings are available through the Business Services Department.

Tecnocampus is home to 159 academics and 62 administrative and service staff. Academic research groups in key linked areas include entrepreneurship, socio-economic welfare, signal processing, public health technical standards, health and ageing.

The TecnoCampus today, in figures:



Source: University Business Cooperation in Europe https://www.ub-cooperation.eu , European Commission

Case Study 2: Siemens research cooperation with universities #OpenInnovation #Research

Summary. Siemens has worked in close cooperation with numerous universities and research institutes around the world for decades. They have done so within the scope of the open innovation strategy, which fosters the company´s long term success and strengthens its innovative power. For the last 15 years, the University Relations Department has been operating Siemens´ long term strategic approach to university-business cooperation known as the Centre of Knowledge Interchange (CKI) Programme. Today Siemens cooperates extensively with eight CKI strategic partner universities in Germany, Austria, China and the United States. Here collaboration extends not only to individual departments or research groups but to the entire university focusing on joint research activities and talent acquisition

1 Background

This is an example of a long-term collaboration between a private company and the university with an open innovation model. Open innovation helps solve the main challenges facing a company or a public or private institution. Founded in 1847 in Germany by Werner von Siemens as a start-up for communication technology, Siemens has grown into one of the largest European industrial conglomerates with a global presence. One of the world's largest producers of energy-efficient, resource-saving technologies, Siemens today is a leading supplier of systems involving power generation, transmission and medical diagnosis. Business to Society (B2S) is a company´s philosophy, which reflects Siemens´ mission towards society – "ingenuity for life".

Siemens university relations have a long history of providing benefits for both company and higher education institutions. Today Siemens works in close cooperation with numerous universities and research institutes around the world within the scope of the open innovation strategy, which fosters the company´s long term success and strengthens its innovative power and potential of an open company.

Open Innovation, which means engaging third parties in the research and development (R&D) process, is crucial for Siemens' survival and effective existence in today´s globalised and competitive environment. Siemens University Relations (UR) Unit manages and coordinates the company´s interactions and

cooperation with universities, playing a crucial role in establishing networking points for Siemens´s employees with both academics and students.

In its relationships with universities, Siemens is working at three levels of cooperation.

1. All universities with which Siemens has non-strategic collaborations are called **Partner Universities**, which generally do not involve the UR unit. On this level of cooperation, the focus of the activity generally is contract research, which is limited in time and is dedicated to a specific topic.
2. **Principal Partner (PP) Universities** are the next level of cooperation, which universities can achieve after already having certain positive experiences in conducting research or performing other joint activities with Siemens. PP universities can be nominated for either R&D activities or human resources purposes, or both. Currently, Siemens has 16 global R&D PP universities all over the world and more than 50 local HR PPs.
3. The highest level of partnership is the Centre of Knowledge Interchange (CKI). CKI partnerships are of a much broader base than the other two kinds of university cooperation. Here collaboration extends not only to individual departments or research groups but to the entire university focusing on both joint research activities and talent acquisition. There are eight CKI universities, with which Siemens has a long-term strategic partnership. Partners include:
    - RWTH Aachen in Germany;
    - The Technical University of Berlin in Germany;
    - The Technical University of Munich in Germany;
    - The University of Erlangen-Nuremberg in Germany;
    - The Graz University of Technology in Austria;
    - Tsinghua University in China;
    - University of California at Berkeley in the United States; and
    - Georgia Institute of Technology in the United States.

2 Objectives and motivations

In the last decades, Siemens has engaged in collaborative activities with a great number of universities and research institutions. These relationships have proven to generate innovations for the company by bringing researchers and instructors into contact with Siemens' experts. The experts within Siemens aim to put research results into practice, provide professors with topics for their research agendas and students´ dissertations, acquire talent and enable PhD candidates to get in touch with potential employers.

However, during the development, Siemens found themselves working with a wide range of different stakeholders involved in the collaboration process. This made it significantly harder to meet all stakeholders´ expectations from the partnership and to manage and coordinate the interactions, which in turn hindered the effective and timely fulfilment of the UBC activities. Siemens' management discovered that without a dedicated management function, Siemens would cooperate with too many diverse higher education institutions, which would take place in mostly small one-off projects and not align with a long-term strategy.

For these reasons, in 2001, Siemens´ top management initiated the corporate UR Programme. Siemens saw the need to create a new strategic approach to facilitate partnerships with the most outstanding global universities on a higher and more strategic level. Resultantly, the UR Programme aims to coordinate the numerous existing collaborations whilst nominating strategic partner universities on two levels, CKI universities and PP universities. A further reason for creating the UR programme was the significant overlap that was experienced in their co-operation between the research and talent recruitment area. Consequently, there was a necessity to combine innovation and research activities with talent acquisition, bringing re-searchers and future employees together.

Both Siemens and universities benefit from the CKI type of cooperation. In order to produce a steady stream of high-quality technologies and innovations, Siemens works closely with the selected CKI universities to link industrial and academic worlds and thus to promote research and recruiting activities. CKI partnerships aim to identify strategic, long-term focussed technology fields, crucially important for the company, and to recruit talented, ambitious young employees.

3 Stakeholders

Inter-organisational intermediaries are playing the key role for managing the relations with CKI universities. There are four different types of intermediaries, who make the collaboration between two parties running: management sponsor, CKI director, UR managers (for R&D and HR) and CKI manager.

- The management sponsor is a top-level executive manager, normally either a Siemens management board member or country CEO. The main task of the management sponsor is to represent Siemens on the highest level in the bilateral relationship with the CKI partner university. Although the role of the management sponsor is considered an essential success factor for the effective realisation of strategic partnership development, he/she does not possess any dedicated Siemens CKI budget for the joint R&D projects. Normally management sponsors are appointed 'for life', which means that the personal interest in UBC with the specific CKI partner and their high level of commitment are essential;
- The CKI director together with the university president are the main contact persons on the university side. Therefore, it is essential that the CKI director has close relationships with the university management and the relevant Siemens units and departments. In practice, the choice of the CKI director depends on the history of the Siemens relationships with the CKI partner individually, varying from university to university. Ideally, the CKI director is either a top-management executive for the innovation and research or a dean of the relevant faculty, who already has working experience or close ties with Siemens;
- The UR Managers (R&D and HR) of Siemens work together with CKI managers and are responsible for building the management team and to ensure the proper and effective interaction between two parties;
- The UR Managers of R&D are the members of the Siemens Corporate Technology UR team in charge of relationships with a specific focus and are responsible for the development of the R&D activities. Usually, each UR manager of R&D is responsible for one CKI university, of which he/she is ideally an alumnus or already has personal and professional ties to. Since all UR managers of R&D are members of one Siemens unit, together they can ensure the effective exchange between all CKI universities as they are also representatives of each of the nine CKI partners. UR Managers of R&D spend about 20% of their working time at each university;

  The UR Managers of HR are also Siemens staff, working for the human resources department. Their specific focus is on the talent acquisition and on employer branding. They act as a central contact point for HR and manage the partnership in cooperation with the UR Manager R&D as well as the university sponsor. Usually, they take care of more than one CKI or PP university per country. Generally, UR Managers of HR spend about 10% of their working time per university;

- The CKI Managers are in charge of the network-building between academia and Siemens. They are employed within the university normally at the dedicated industry liaison offices, at the technology transfer units, at the president´s office or simply at the chair of CKI director. The spectrum of the tasks and responsibilities of CKI manager varies from university to university. However, they often organise, promote and manage events, such as for example CKI conferences, expert workshops, recruiting events, at the CKI partner universities and in cooperation with Siemens. Furthermore, one of their main tasks is to promote joint R&D projects within the university, which could be potentially interesting for both Siemens and academic researchers.

The main responsibility of the inter-organisational intermediaries is to distinguish and direct relations between the two organisations. This can be a complicated process as there are many different stakeholders involved in the bilateral ties: from the individual Siemens researchers working with CKI universities, academic researchers undertaking industrial collaboration to Siemens managers and PhD supervisors. The CKI programme is a monitored and structured way to strategically develop and effectively manage the collaboration between Siemens and the university partners.

Supporting this process, the Corporate Technology unit utilises Big Data applications (Academic Research Intelligence, e.g. Elsevier's SciVal) to identify and access the main fields of scientific research at all major universities worldwide, including the CKI university partners. Additionally, there is also the Siemens internal social media network platform (moderated by the UR unit), where the company can offer access to specific user and research groups to exchange ideas and experiences with regards to the joint research projects.

4 Main Outputs

Conducting research together, promoting talents and expanding contacts, the CKI programme is as a bond between Siemens and universities.

CKI contributes to the company´s success in many functions, including enhancement of the research and development, shaping Siemens´ technology and innovation agenda, new knowledge and technology absorption, effective talent acquisition and strong employer branding. The main output of the CKI programme for the company is that the whole spectrum of possible ties and contacts with the selected universities have been organised in a structured and transparent system. This allows Siemens to collaborate more effectively with academics, foster research and development and optimise student talent acquisition.

Academics are in turn also expected to profit extensively from the proposed framework for strategic collaboration with Siemens. This partnership brings academic researchers and educators into direct contact with the interested and engaged industry representatives. This means that their research results are brought into practice; provide new perspectives, enable extensive experience exchange and provide professors with topics for their students' dissertations. Additionally, it enables doctoral candidates to get in touch with potential employers, thus facilitating the student mobility channels between two parties at the same time.

The following are further signs of the success of their strategic collaborations with universities:

- All CKIs are consistently among the Siemens' top 10 research partners based on money spent in contract research and strategic projects undertaken by Siemens are mostly conducted with CKI universities (e.g. Manufacturing Centre of Excellence or SFB Future Train with RWTH, CT research building on TU Munich campus etc.);
- Strategic CKI are good sources of co-authored publications (higher rates of publications). In terms of top collaboration partners in terms of publications (Siemens employees are paper co-authors) 4 of the top 6 collaboration partners are CKI universities – all with well above 150 joint publications according to Elsevier Scopus;
- Whilst few patents are undertaken with university partners in comparison with their in-house patent numbers, the ones that are created primary come from strategic projects which are conducted at CKI universities;
- The level and speed with which research can be undertaken with their CKI partners is reduced because Siemens have created Master Research Agreements with all CKI and negotiation time for contracts is therefore reduced drastically, sometimes from months to days;
- For almost all CKI universities, in employer rankings among engineering students, Siemens ranks higher at the CKI units than it does on average among all engineering students in the country. In other words, their engagement at the CKI universities results in more students naming us their employer of choice, according to Universum Employability Ranking;

- Siemens experience four times more hires from CKI registered universities than they have for their second-tier universities (Principal Partner), indicating that CKI status is providing a good source of human capital

Sources:

- *University Business Cooperation in Europe https://www.ub-cooperation.eu , European Commission*
- *Heismann, G. (2015). Promising Partnerships. Picture of the Future – The Magazine for Research and Innovation.* http://www.siemens.com/innovation/en/home/pictures-of-the-fu-ture/research-and-management/innovations-research-cooperations.html
- *A view to the Future. Innovation at Siemens* http://www.siemens.com/content/dam/internet/siemens-com/innovation/innovation/pdfs/innovations-at-siemens.pd f
- *Corporate Technology.* https://www.siemens.com/content/dam/internet/siemens-com/innovation/innovation/pdfs/ct-standardpraesentation-16-9-en.pdf

Case Study 3: Team learning through starting a business at Tiimiakatemia (Team Academy) #Educational Innovation

Summary. Imagine an undergraduate learning environment where there are no exams, no classrooms, no teaching or teachers and no control over what students should learn. If this model seems somewhat futuristic, in fact, this educational model already has a successful 23-year history in Finland: Tiimiakatemia (Team Academy). Located in Jyväskylä, Finland, students run their own cooperative businesses, supported by coaches, and learn with real money and real customers to earn their Bachelor of Business Administration (BBA). Students emerge with well-developed individual soft skills crucial for business administration as well as a well-developed network of potential customers, employers, mentors and investors. With high student employability and rates of entrepreneurship in graduates, Team Academy has justifiably attracted interest from educators across the world, leading to its adoption at over 40 locations in 15 countries.

1 Background

Education is one of the sectors that has least evolved in the last hundred years. Therefore, being able to make an innovative proposal like the one made by Johannes Partanen in Finland is worth analysing. The starting point for a small revolution in higher education began in 1993 with the note "*Do you want to go on a trip around the world and learn some marketing on the side?*" is posted on the notice board of the Jyväskylä University of Applied Sciences (JAMK), in a small city in central Finland. The chief protagonist of the note was Johannes Partanen, a maverick marketing lecturer with a passion for making a difference, who was driven by the need for a new learning model to better engage students.

The model of education used then, and still being used today, turned the traditional bachelor model on its head. With no classrooms, no lectures or exams, the programme replaced classrooms with open offices, teachers with team coaches and has students start with practical work by managing real companies, which they then supplement by theory in an educational 'journey'.

The educational process itself entirely adopted an experiential learning model based upon Kolb's theory of experiential learning and combined the worlds of business and education. The model developed by Partanen was based upon the tenet that 'experiences obtained through practice and experimentation nourish our thoughts and concretise issues we read from books, resulting in more effective learning'.

This was the basis for the creation of Team Academy, a three-and-a-half-year bachelor programme of 210 ECTS in which 40 students per year (known as 'Teampreneurs') start and run their own cooperative businesses, learning about entrepreneurship and marketing using real money and customers.

By operating as a tertiary degree, Team Academy affords Teampreneurs the time to fully commit themselves to this specific study or work and allows them to build their business as they build their knowledge and understanding. Teampreneurs are between 19-32 years of age, with the average being 22.

2 Objectives and motivations

The concrete and visionary aim of Team Academy is for students to collect money for a round-the-world trip at the conclusion of their degree, by commencing their own enterprise and by supporting the students to learn the principles of entrepreneurship on their own learning path.

However, there are more substantive objectives underpinning the programme including to develop Teampreneurs capable of educating themselves for life, arming them with the skills, knowledge and personal qualities to create their own initiatives and enterprises as well as access to the business networks likely to sustain them in their business and through their career. All of this can be achieved, whilst also obtaining a university degree.

For the university, through Team Academy JAMK seeks to enhance its reputation within Finland and more globally, to increase student employability, get academia closer to practice and students closer to employers as well as to develop more entrepreneurial mind-sets.

On a regional level, Team Academy aims to develop a local entrepreneurship ecosystem whilst developing students capable of employing themselves and others. The capabilities developed by Teampreneurs are lifelong capabilities that serve them for a lifetime.

3 Stakeholders

The primary stakeholders involved in Team Academy in Finland include:

- Jyväskylä University of Applied Sciences (JAMK) – Team Academy exists within the structure of JAMK, hosted within the university premises and supported by the university;
- Team Academy Jyväskylä – the original Team Academy location has around 180 Teampreneurs as well as five Teamcoaches. It is also responsible for training different parties in the Team Academy Global Network to use the Team Academy's methodology, running programmes aimed at teachers, managers and entrepreneurs. It also provides service support to Team Academies and develops Team Academy's methodology further;
- Teampreneurs – are selected and form Teamcompanies as part of the programme, which is a central aspect of their individual learning path. They are the central focus of Team Academy;
- Team-coaches – are in place to support the learning of Teampreneurs and their Teamcompanies by coaching rather than teaching. They do this by ensuring that the dialogue in training sessions goes deep enough, that the topic is being handled from different angles and that the needs of the team company are being addressed; and
- Partus Ltd – is a unit that trains different parties to use the Team Academy's methodology, concentrating on transferring the team learning model to primary schools.

Furthermore, more recently Team Academy has been developed and expanded globally, leading to the creation of a further stakeholder:

- The Team4Learning Association - is an association/platform organised by Team Academy Finland that connects the Team Academy Global Network: team-coaches and the organisations that build and run Team Academies and other similar learning centres where people learn Teampreneurship. All of the organisations are independent of each other and have different kinds of activities, but all of them share various elements of Team Academy's practices and ways of doing things. Team4Learning is focussed on connecting members, sharing learnings and teamwork from the partner organisations. The association also arranges annual 'get-togethers', with the Teampreneurs from different parts of Europe being in charge of arranging the event.

4 Main Outputs

- Over 800 BBA's have graduated from Team Academy Jyväskylä throughout its history, whilst there have been around 70 student teams, and over 40 new businesses have been started from 1993 to 2013.
- Moreover, coming from Team Academy Jyväskylä, 96% of the graduates are already active in the job market six months after they graduate, while 39% are entrepreneurs six months after they finish university and 42% become entrepreneurs within two years of graduating10.
- Team Academy Jyväskylä Teamcompanies has an annual turnover of between €1.5m and €2m and contributes around €600,000 in tax back to the government. In 2009, 150 separate projects were completed by Teamcompanies with an average turnover per project of approximately €10,000.

Further endorsement for the programme can be evidenced through several other indicators. The selection of students and the programme development has been successful because only a few Team Academy students have gone back to conventional education. 85% of students commencing the Team Academy programme graduate. Additionally, Team Academy has earned a positive reputation amongst high schools, with upper secondary school teachers reporting that many of their active students already knew about Team Academy and wanted to apply as soon as they graduated.

Through the expansion of Team Academy beyond Jyväskylä, the impact of Team Academy has spread dramatically in the last years. The current status is that across the entire Team Academy Global Network:

- Over 6,000 students have been exposed to the Team Academy methodology;
- 600 teachers and business managers trained to work as team coaches in Team Mastery programme;
- 1,800 adult learners trained using Team Academy's methodology in long-term programmes; and

Having exported Team Academy internationally, Jyväskylä has also become the focus of significant international interest with visits from several international expert groups. As a result, over 40 different locations worldwide in over 15 countries have partly or wholly adopted the 'Team Academy model' of education, for example, in France, The Netherlands, Hungary, and Spain.

Source: University Business Cooperation in Europe https://www.ub-cooperation.eu , European Commission

Case study 4: Sharing expertise to identify earning opportunities[2]

Interface Food and Drink is a partnership of Scotland's 17 universities with industry groups such as Scotland Food and Drink, Scottish Enterprise, trade associations and trade bodies. A particular attraction of the Interface network for businesses is its capacity to match expertise from different universities to businesses through a single forum. The network facilitates this by matching businesses with the relevant department from any of the 17 Universities. This means businesses don't have to spend time establishing who the 'right person' to contact is as Interface consists of a broader range of expertise than if with a single institution. This provides more opportunities for universities to support entrepreneurs and innovators.

This network works with businesses to gain the appropriate scale to invest jointly in initiatives as undertaking research, or other activities may not be cost-effective for one business, but forming a common interest group makes it affordable. It then matches these needs from businesses with professors and departments across 17 Scottish Universities to find the most appropriate responses based on their academic offerings.

One example of the network's benefit was a local commercial bakery that was introduced to ultrasound technology – originally developed by Herriot Watt University for medical implant polymers – to improve the baking process of gluten free products. This cross-sector innovation facilitated by a large network can result in unexpected research opportunities and in this case commercial gains.

Competitive and diverse businesses can be engaged. For example, farmers from across Scotland form the Scottish Cold Pressed Rapeseed Oil Industry Group (SCPROIG) work with different university researchers to quantify the benefits of local soil conditions to their product and therefore their collective competitive advantage. Alternatively, those brought together may have a shared interest but be from unrelated business areas. For example, meat, agriculture and drinks businesses all wished to lower their waste levels and the costs associated with this. Through collaborating with researchers from the mathematics departments of different Scottish universities, they have used new algorithm-based modelling techniques to cut waste.

By assembling different groups of partners, the network can deliver targeted solutions to problems identified by businesses; increasing the innovative advantages of the businesses and creating opportunities for the universities and professors.

Case study 5: Crowdfunding

Crowdfunding asks for capital by addressing potential contributors online, in social media and through dedicated crowdfunding platforms. Crowdfunding can be used to raise donations or to seek investors or identify those willing to contribute in return for an incentive from the product/service. Most platforms will charge a fee for their services, usually a percentage of the funds raised. In return, the collection and accounting of funds from many sources is promoted, coordinated and tracked. Two examples demonstrate the potential impact:

Wayfinding Academy - This is a two-year college in Portland, Oregon, with a goal of providing students with a dynamic, real world-based education that reaches beyond the traditional classroom model. It started in 2016 and aimed to raise $200k for a brand-new college for a new model of higher education. This funding

[2] Based on: Edward Clarke Maire Williams https://www.centreforcities.org/reader/delivering-change-supporting-links-universities-high-growth-firms-cities/building-scale-networks/

was exceeded when they raised $206,451 from 801 donors and used a crowdfunded model to sustain its operations. Crowdfunding blogger Christina Pashialis attributes the success of the Academy to:

- Creating a sense of empathy for its mission;
- Regular updates to supporters and donors;
- Simple and effective infographics to show progress and impact.

University of Essex – The UK university launched a crowdfunding platform, Click, in November 2015. The platform launched with nine projects, eight of which met their minimum target and raised over £10,000 between them in five weeks. They believe it has meant being able to help a greater number and variety of student projects, and embed philanthropy across all the University. It is seen by them as a tool for teaching students skills in networking, communications, and promotion, which supports student employability. The crowdfunding programme is a recognised module on the University's award-winning employability award scheme, and students using the platform have their crowdfunding skills recognised on their degree transcripts.

Organizers attribute the success of their crowdfunding work to:

- Support from senior management;
- A vibrant launch to pitch funding proposals;
- Strong brand identity;
- Recruiting, in advance of launch, influencers who could act as advocates and contribute to the fund-raising efforts;
- Active and ongoing practical support for fundraising by students and potential beneficiaries.

Crowdfunding is not only an efficient way of showcasing your offer to large audiences, but direct communication with potential contributors allows for early validation and proof of concept.

Case study 6: Asking for support to address skills shortages

Lessons from other sectors can demonstrate some fundamental principles that apply in other contexts. A program for training chefs and front of house staff in a large city with a growing tourism sector was in danger of collapse, despite the local need for trained personnel. The large college training staff for the hospitality sector lacked the resources to provide the individuals, particularly chefs, on programs with the specialist personal equipment they would need on and after the program. The cost of knives, kitchen uniforms and essential equipment etc. was a barrier to entry for potential students, most of whom were from economically disadvantaged districts of the city.

The college approached several of the significant hospitality employers in the city individually and invited them to see the facilities, network and understand the problem and asked for support. The college led the discussions that resulted in employers' agreement to fund the purchase of uniforms and equipment and provide on-course placements and a guaranteed job to students at the end of their program. In order to gain employment, minimum attendance and achievement standards had to be met by the students. The college needed to adjust its program to accommodate the placements and utilize them as part of the learning and training process.

The outcome was that in the first year 12 students joined the program under the agreed terms and made the program viable. The arrangements filled the gap between what was needed for students and the funding provided by the central funding agency. This funding was now adequate as the college reduced

much of the expense for personal uniforms and equipment it had previously borne. The work placements and enhanced job progression improved the quality rating of the program in its quality assurance assessments.

The success factors in this approach were that the college ensured it understood the challenges facing both students and industry. It formulated a clearly articulated set of benefits and obligations on all parties and administered these flexibly and collaboratively on an ongoing basis.

Case study 7: Certificate in Independent Prescribing (UK)

Programme type:	**Online Education**			
Programme focus:	• Online programme Part time • 6 months • 2 Core modules – 2 Optional modules • Tuition fee: 3,550 EUR			
Market research:	• There are 52 online programmes available in the UK in Human Medicine (2018-2019). • 20,496 page views during that period. • Page views by potential students with India at the top (4,806 views) followed by the UK (2,446 views) and the US (2,279). • Of those, there are only 2 part time online programmes on Prescribing. • Good market opportunities for the UK, the Netherlands and Greece.			
Programme outcomes:	**Intake**	**2018**		**Intake 2019**
	Month	May	September	May	September
	Intake per cohort:	39 C1	29 C2	42 C3	45 C4
	Ongoing costs	30,000 EUR	30,000 EUR	30,000 EUR	30,000 EUR
	Income (fees):	138,450 EUR	102,950 EUR	149,100 EUR	159,750 EUR
	Profit per year:	-141,550 EUR	-68,600 EUR	50,500 EUR	129,750 EUR
Contribution to sustainability	• Funding – Programme set-up: 250,000 EUR • Break-even point: May intake (2019)			

Case study 8: MSc Global Health (UK)

Programme type:	**Online Education**				
Programme focus:	• Online programme • Part-time • 2 years • Tuition fee: 6,850 EUR/YEAR				
Market research:	• There are 136 part-time online programmes available in the UK on Public Health (2018-2019). • There were 91,162 page views on UK pages during that period. • Page views per potential students based in the UK at the top (9,520 views) followed by Vietnam (7,558 views) and India (7,148 views). • Good market opportunities for the UK.				
Programme outcomes:	**Intake 2017-18**		**Intake 2018-19**		**Intake 2019-20**
		September	**Jan**	**September**	**January**	**September**
	Cohort	C1	C2	C3	C4	C5
	Intake per cohort:	22	26	25	32	35
	No of students paying fee:	22	26	47	58	60
	Income (fees):	150,700 EUR	178,100 EUR	321,950 EUR	397,300 EUR	411,000 EUR
	Ongoing costs:	120,000 EUR	120,000 EUR	120,000 EUR	120,000 EUR	120,000 EUR
	Profit per year:	-469,300 EUR	-411,200 EUR	-209,250 EUR	68,050 EUR	291,000 EUR
Contribution to sustainability:	• Funding – Programme set-up: 500,000 EUR • Break-even point: Intake 2019-20 (C4 – January)				

Case study 9: Healthcare Data Analysis Bootcamp (UK)

Programme type:	**Blended Education**			
Programme focus:	• Blended programme 5 hours per week • 4 months • 2 face to face meetings (at the beginning and at the end of the Bootcamp) • Ongoing online support by mentors • 2,550 EUR			
Programme outcomes:	**Intake**	**2018**		**2019**
	Month	January	September	May	September
	Intake per cohort:	25 C1	28 C2	32 C3	37 C4
	Ongoing costs	10,000 EUR	10,000 EUR	10,000 EUR	10,000 EUR
	Income (fees):	63,750 EUR	71,400 EUR	81,600 EUR	94,350 EUR
	Income (sponsorship):	2,300 EUR	5,500 EUR	5,500 EUR	6,500 EUR
	Profit per year:	**6,050 EUR**	66,900 EUR	77,100 EUR	90,850 EUR
Contribution to sustainability:	• Funding – Bootcamp set-up: 50,000 EUR • Break-even point: January intake (C1 - 2018)			

Case study 10: The Industrial PhD programme bringing companies, foundations and universities together in a sustainable manner

(exchange rate: 1 DKK equals 0,13 Euro)

An Industrial PhD is an industrially focused research project which is conducted jointly by a private sector company, an Industrial PhD student and a university. The Industrial PhD student is employed by a company in Denmark and at the same time enrolled at a university. The student divides her/his working time between the company and the university and spends all working time at both places on the project and on the education. The project duration corresponds to the duration of the education, which in Denmark is three years.

The project can be within any research field, as long as the project's research quality and the direct or indirect short or long-term commercial significance and effect can be argued convincingly.

The Industrial Programme has the following specific purposes:

- To educate and develop researcher talents into industrial researchers
- To contribute to business-oriented innovation and development in Denmark
- To strengthen collaboration between Danish companies and universities at home and abroad

The Fund finances part of the student's salary and travel expenses in the company as well as the university's supervision, equipment and other expenses for the student's education.

The Industrial PhD student has a supervisor at both the university and the company, and a co- supervisor at the company.

Subsidy to the company

Innovation Fund Denmark finances up to DKK 17,000 per month of the Industrial PhD student's salary for three years, but no more than 50 pct. of the total salary (the sum of salary and pension contributions).

The company also has DKK 100,000 at disposal for the Industrial PhD student's:

- – Travels (project relevant conferences at home and abroad and stays abroad)
- – Participation in PhD courses which give ECTS credits and are not offered by the host university

If the host university for the Industrial PhD education is located in a different country than the company, an additional DKK 122,000 is available for travels and stays at the university. This includes round trips to the destination, visa, travelling insurance and lodging. Food, daily/local transportation, books etc. are not covered. The host university is the university that enrols the student during the entire education, is responsible for the education and the primary supervision, and which issues the PhD degree when the education is completed.

The company must pay all other expenses for the project, including equipment, materials and data collection. This also includes personal equipment for the Industrial PhD student, e.g. laptop, mobile phone, etc.

Innovation Fund Denmark provides a fixed amount of DKK 360,000 (incl. overhead) to the university, covering:

- Supervision of the Industrial PhD student
- The Industrial PhD student's work facilities at the university, including acquisition and/or use of equipment necessary for carrying out the university part of the project
- The Industrial PhD student's participation in relevant PhD courses (at the host university or other universities)
- Assessment of the PhD thesis
- Dissemination of results, including printing the thesis

The co-sponsoring of this educational activity by a foundation and different companies provides a sustainable basis for industry-focused PhD educational activities.

4.6 Annexe 6: Frequently asked questions (based on Webinar 1)

1. **What are the recommendations for the sustainability of the citizen engagement activities that are created by Universities and NGOs (and do not have for-profit goal per se)?**

Although universities and charity organisations do not earn profits for its owners, they need to maintain a healthy economic activity in order to pursue the organisation's objectives and keeping it running. This principle applies to the proposals expected within the Citizen engagement activity line. The team is expected to state clear sustainability activities that will bring revenue to the project. The revenue will support the continuity of the project with the potential of reinvesting profits for further developments.

2. **Can my sustainability plan involve potential clients from outside the EU?**

Indeed. Your project must meet a health-related need within Europe, but it doesn't exclude you from opening potential commercial activity outside the EU. For example, in the case of a Master in Public Health, you may have a potential student market within Europe, but for sure potential students from abroad may be willing to pay to take part in the programme.

3. **My project concentrates on the development of a Toolkit which would be difficult to sell. What kind of sustainability options may I have in that case?**

If your team is focusing on the development of a Toolkit, your team must have great expertise in that area. Think about the possibilities of developing related products of commercial value around the Toolkit. For example, a workshop or a Bootcamp focused on the use of the Toolkit may have a potential market. Consultancy in the use of the Toolkit may be another option. A paid App to support the implementation of the Toolkit may be another income stream.

4. **My project is focusing on the development of a blended programme. How can I maximise the use of resources to make it more profitable?**

To begin with, think about the way you have designed your 'blend'. The online modules can scale up to more efficiently at a lower cost and with better environmental outputs. Think about the way the programme works and the number of intakes you can support. Different cohorts could take part in the same module so you can save on tutor fees and student support related costs.

5. **In order to have additional revenue in our postgraduate program that we want to raise, we will try to have industry partners. Until May or June 2020, they will not confirm their participation. How can we reflect this in the proposal?**

The best way to include it is to negotiate with these potential partners a letter of intent and then a document that includes a greater detail of their contributions.

6. What could be the best way to generate a larger number of students in our activities?

Communication and dissemination are key to generating interest from potential participants. It is recommended to incorporate the development of a communication and dissemination plan to reach as many people as possible. It is also important to have partners who also contribute to this part.

7. Our proposal is about an academic project that is already underway by a consortium, and we want to expand and scale it. How would you recommend focusing the proposal?

According to the call, it is recommended that the proposal will specify and explains how impact will be measured based on the requirements as described in the call and provides evidence of the expected impact created by the activity. Also, you would provide evidence for the evaluation and monitoring of learners per the impact guidelines of the call. The proposal needs to explain how it plans to evaluate its learners' involvement and monitor the participants during and after the activity.

We would suggest explaining specifically how the partners plan to scale the training and disseminate the educational offering on a European level, within the partnership and beyond, and explains plans to share its learnings.

Do not forget to provide evidence of a plan to achieve sustainability according to the sustainability guidelines in the Call. The proposal needs to explain and specify how the activity will continue to be delivered and generate impact in the future, beyond EIT Health funding.

8. Apart from fees, how else might we get financial support ie from who and why would they contribute?

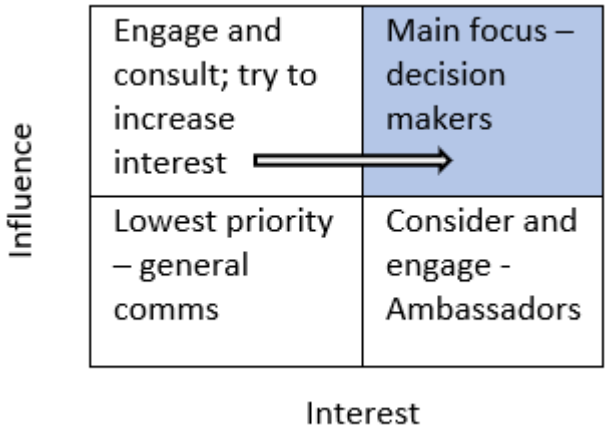
Targeted messages and/or personal approaches tailored to potential stakeholder groups outlined below:

Who	Why	How
Charities	Shared goals eg health improvement, employment, improved education.	Matched funding or donations; Promotion or endorsement
Employers	Skills shortages; CSR goals.	Fees; Contributions in kind; teaching input or advice on content
Product suppliers	Raise profile of products	Contributions in kind eg time / equipment / materials / marketing
Government agencies	Skills shortages; Reduce unemployment; aid social mobility.	Matched funding; Grants; Promotion or endorsement
Entrepreneurs	Access to IP; Financial returns;	Via chambers of commerce; Crowd funding for loans/equity.
Other institutions	Looking for cost effective value add to current offer.	Franchise, co-delivery, licensing, sale of IP.

9. We hear a lot about stakeholder engagement, but it is time-consuming. What is the most effective way to do this?

There is an easy approach for identifying and prioritizing your stakeholders for engagement (see diagram below):

- List the individuals and groups who you believe represent your stakeholders.
- Divide into internal and external groups.
- Categorize each group using a simple 2x2 matrix.
    - Horizontal axis: low interest to high interest;
    - Vertical axis: low influence to high influence.
- Tailor content and timings of communications and engagement as appropriate.
- Prioritize top right quadrant.



10. How can we guarantee our project will be sustainable?

No guarantees. You can reduce the risk of it not being sustained by:

- Market research: Look at labour market data, talk to professional bodies, talk to students, talk to employers then articulate what your response will be clear and with defined outcomes in terms of skills and knowledge to be delivered, saying who will benefit and how;
- Identify potential risks and plan mitigations -Articulate clearly what the risk is and what the impact will be, i.e. how will it impact students/staff/institution then identify how you might anticipate this or mitigate the impact;
- Scenario planning: In student number and financial projections prepare best, worst and intermediate scenario and decide what you will have to stop doing, start doing, do more of and do less of in each case.

4.7 Annex 7: Other selected resources on sustainability of education programmes

Bain (2012): The financially sustainable university https://www.bain.com/insights/financially-sustainable-university/

Beiträge zur Hochschulforschung (2011): European Universities Diversifying Income Streams: An Overview of the Study http://www.bzh.bayern.de/uploads/media/2-2011-estermann-pruvot_01.pdf

Center for Higher Education Policy Studies (CHEPS) (no year): Revenue generation strategies in Subsaharan African Universities https://ris.utwente.nl/ws/portalfiles/portal/6153833/A_Paper_Presented_at__ASTU%27s_International_conference_.pdf

Centrum für Hochschulentwicklung (CHE) (2016): International Trends and Good Practices in Higher Education Internal Funding and Governance https://www.che.de/downloads/LV_2nd_HEd_RAS_Ph1_Trends_and_Practices_20Dec16_post_review_final_2055.pdf

Engineering for Social Development (2018): Measuring financial sustainability of private higher education institutions http://www.tf.llu.lv/conference/proceedings2018/Papers/N343.pdf

European University Association (2008): Financially Sustainable Universities https://eua.eu/downloads/publications/financially%20sustainable%20universities%20towards%20full%20costing%20in%20european%20universities.pdf

Financial Sustainability Strategy Group (2016): 'Mind the gap' – Understanding the financial sustainability challenge https://webarchive.nationalarchives.gov.uk/20180319130311/http://www.hefce.ac.uk/funding/finsustain/pubs/mtg/#read

ICF International (2014): A financial sustainability resource guide https://www.acf.hhs.gov/sites/default/files/ofa/a_financial_sustainability_resource_guide.pdf

International Journal of Economics, Commerce and Management (2016): Determinants of financial sustainability in private middle level colleges in Nakuru County, Kenya http://ijecm.co.uk/wp-content/uploads/2016/10/41020.pdf

Investment Management and Financial Innovations (2017): Financial sustainability of private higher education institutions: The case of publicly traded educational institutions https://www.researchgate.net/publication/320439130_Financial_sustainability_of_private_higher_education_institutions_The_case_of_publicly_traded_educational_institutions

KPMG (2018): Achieving financial sustainability in higher education https://home.kpmg/content/dam/kpmg/uk/pdf/2018/10/achieving-financial-sustainability-in-higher-education.pdf

McKinsey (2019): Transformation 101: How universities can overcome financial headwinds to focus on their mission https://www.mckinsey.com/business-functions/transformation/our-insights/transformation-101-how-universities-can-overcome-financial-headwinds-to-focus-on-their-mission

National Audit Office (2015): Overseeing financial sustainability in the further education sector https://www.nao.org.uk/wp-content/uploads/2015/07/Overseeing-financial-sustainability-in-the-further-education-sector.pdf

New JNCHES Sustainability Issues Working Group (2011): The Financial Health and Sustainability of the HE sector https://uceastorage.blob.core.windows.net/ucea/download.cfm/docid/the_financial_health_and_sustainability_of_the_he_sector.pdf

OECD (2004): On the Edge – Securing a Sustainable Future for Higher Education http://www.oecd.org/education/imhe/33642717.pdf

OCED (2006): What Makes an Open Education Programme Sustainable? The Case of Connexions http://www.oecd.org/education/ceri/36781781.pdf

RAND (2012): Financial Sustainability for Nonprofit Organisations https://www.rand.org/content/dam/rand/pubs/research_reports/RR100/RR121/RAND_RR121.pdf

The Head Foundation (2014): Higher Education Practices Worldwide for Sustainable Financing https://www.headfoundation.org/papers/33)_Higher_Education_Practices_Worldwide_for_Sustainable_Financing.pdf

TIAA-CREF Institute (no year): The Higher Education Business Model https://www.tiaa.org/public/pdf/higher-education-business-model.pdf