

Inspiration Fiche

Entrepreneurial Teaching and Learning

Andrea Kottmann
CHEPS, University of Twente

Inspiration Fiches

Digi Buddy is a web-based platform (<https://www.digi-buddy.eu/>) for HEIs seeking support and partners for collaboration and peer-learning when strengthening entrepreneurship in their institutions.

Through the Digi Buddy System HEIs can start engaging in peer-learning, exchanging experiences, and discussing plans. The platform allows HEIs to contact other HEIs on the platform that also are interested to work on similar projects or tackle similar challenges.

Digi Buddy facilitates collaboration and networking, and possibly mentorship opportunities between HEIs.



Inspiration Fiches

HEI practitioners and managers using the Digi Buddy system are provided with the opportunity to not only contact like-minded institutions/individuals, but also to access information on the basis of thematic clusters, and challenges through an “Inspiration Fiche”.

This fiche is a piece of condensed information about strategies, policies and initiatives undertaken by HEIs to address the entrepreneurship and innovation agenda. The Fiche is based on (practical) HEInnovate & BeyondScale experiences and the academic literature on transformation processes in higher education.

The fiches provide a unique set of recommendations on how HEIs can use the HEInnovate approach to further their entrepreneurial agenda. They also provide narratives describing the outcomes, contribution and impact of the use and experimentation with HEInnovate in achieving the outcomes and objectives in each activity area.

Being a digital tool, the fiche links its users to the evidence underlying the keywords in the fiche.

For example, a user interested in the **intervention “Train Teachers”** will be provided with a pop-up window that includes a presentation or definition of such a centre and provides links to other issues that are related to implementing these centres, such as the resources and inputs, potential barriers, and motivators, etc. In addition, the pop up-windows will include links to the most relevant publications underlying the evidence that is summarised in the texts.

Online versions of the Inspiration Fiche: <https://www.digi-buddy.eu/>

Challenge/Goals

Tile 1: Create entrepreneurial skills in students

Title	Create entrepreneurial skills in students
Introduction/ Background	In line with recent educational reforms, higher education institutions are requested to equip students with transversal or soft skills to prepare them better for their later jobs and careers in labour markets beyond academia. Entrepreneurial skills are part of these transversal and soft skills. Recently, the European Skills Agenda has been expanded to domains beyond labour markets. Now, also skills that support the green deal, are relevant for nurturing social inclusion and make individuals and societies more resilient in reacting to crisis.
The goal	<p>Foremost, entrepreneurship education aims at creating skills in students that increases their later employability and supports them in developing an entrepreneurial mindset.</p> <p>The Entrecomp Framework helps higher education institutions in identifying relevant entrepreneurial competencies and defining learning outcomes.</p> <p>Entrecomp distinguishes three main areas with five specific competencies:</p> <ul style="list-style-type: none"> - The area 'ideas and opportunities' links to competencies that enable students, to develop, evaluate and select ideas and opportunities (also against ethical and sustainability backgrounds) - The area 'resources' includes competencies to mobilise and use own resources and those of other while considering ethical and sustainability issues - The area 'into action' includes competencies to act upon ideas and realise them through e.g., team work competencies or planning and management
Examples of interventions at institutional level	- Integrating entrepreneurship education in higher education teaching and learning can differ substantially with regard to form and scope: Large-scale interventions foremost include the change of the curricula through e.g., the definition of additional learning outcomes. Small-scale interventions include the implementation of (new) didactical methods or tools such as serious games or case studies.
Other relevant resources	- Information on the Entrecomp framework, including support material etc.: https://joint-research-centre.ec.europa.eu/entrecomp-entrepreneurship-competence-framework_en
Links to selected HEInnovate case studies	- Tampere University of Applied Sciences, Finland: Team learning and team entrepreneurship; https://heinnovate.eu/sites/default/files/tampere_uas_team_learning_and_entrepreneurship.pdf

Title	Create entrepreneurial skills in students
	<p>- Milan Polytechnic University, Italy: Experienceoriented entrepreneurship education; https://heinnovate.eu/sites/default/files/milan_polytechnic_university_experience-oriented_entrepreneurship_education.pdf</p>
Further reading	<p>Bridge, Simon; Hegarty, Cecilia; Porter, Sharon (2010): Rediscovering Enterprise: Developing Appropriate University Entrepreneurship Education. In <i>Education & Training</i> 52, pp. 722–734. https://doi.org/10.1108/00400911011089015</p> <p>Dinning, Track (2019): Articulating Entrepreneurial Competencies in the Undergraduate Curricular. In <i>Education & Training</i> 61, pp. 432–444. https://doi.org/10.1108/ET-09-2018-0197</p> <p>Williams, Perri; Fenton, Mary (2013): Towards a Good Practice Model for an Entrepreneurial HEI: Perspectives of Academics, Enterprise Enablers and Graduate Entrepreneurs. In <i>Industry and Higher Education</i> 27, pp. 499–506. https://doi.org/10.5367/ihe.2013.0183</p>
Links to further Tiles	<p>➔ Change of curricula (3) ➔ Train teachers (4)</p>

Tile 2: Create student entrepreneurs

Title	Create student entrepreneurs
Introduction/ Background	<p>Creating student entrepreneurs refers to supporting and educating students who want to start their own business already during their study or upon their graduation. The creation of student entrepreneurs is, besides the creation of entrepreneurial skills a major important goal of entrepreneurial teaching and learning. Promoting the creation of student or graduate businesses contributes to regional development and innovation capacity.</p>
The goal	<p>The term ‘student entrepreneur’ points to students who started their own company or business already during their studies or shortly upon graduation.</p> <p>Higher education institutions can support these students with special programmes and initiatives. Both can help students to translate their ideas into business plans, find investors, provide seed money or infrastructure.</p> <p>Creating student entrepreneurs aims at increasing the (regional) innovation capacity and create employment opportunities for students and other highly qualified persons.</p> <p>Supporting student to venture into their own business is a huge challenge for higher education institutions. Successful programmes and initiatives</p> <ul style="list-style-type: none"> - need to make substantial investments, e.g. providing infrastructure (laboratories, office space) and eventually seed money to start up the business; - need to have expertise and experience in setting up companies and business; - need to have established networks with their regional economy; - should have set up educational modules or programmes on entrepreneurship
Examples of interventions at institutional level	<ul style="list-style-type: none"> - Venture Creation Programmes which can be defined as: “entrepreneurship education programs which utilize the on-going creation of a real-life venture as the primary learning vessel (thus involving venture creation as part of the formal curriculum), including intention to incorporate” Lackus and Middleton (2015) analyse the types of educational programmes and mention five design principles that contribute to their success: “targeting and selecting students, creating start-up teams, collaborating with external partners, designing the learning environment, developing entrepreneurial attitudes”. - Campus Incubators: these are organisations that are located at the boundaries of higher education institutions and link between the institution and the (regional) business sector. Main functions of such a business incubator are: <ul style="list-style-type: none"> - Provide physical infrastructure for business start-ups

Title	Create student entrepreneurs
	<ul style="list-style-type: none"> - Link start-ups and the (regional) business-sector through networking activities - Supporting start-ups in their first years
Support at European level	The European Commission supports start-ups and other forms of venture creation with funding: Information on initiatives can be found here: https://ec.europa.eu/growth/smes/sme-strategy/start-procedures_en
Links to selected HEInnovate case studies	<ul style="list-style-type: none"> - Gründerskolen Norway - Norway School of Entrepreneurship; https://heinnovate.eu/en/heinnovate-resources/resources/grunderskolen-norway-norway-school-entrepreneurship - Support for entrepreneurs through the Centre for Entrepreneurship at the University of Cyprus; https://heinnovate.eu/sites/default/files/Centre%20for%20Entrepreneurship%20at%20the%20University%20of%20Cyprus.pdf - Junior Enterprise: Preparing and supporting entrepreneurs - The Junior Enterprise concept; https://heinnovate.eu/en/heinnovate-resources/resources/junior-enterprise-preparing-and-supporting-entrepreneurs
Further reading	<p>Lackus, Martin; Williams Middleton, Karen (2015): Venture Creation Programs: Bridging Entrepreneurship Education and Technology Transfer. In <i>Education & Training</i> 57, pp. 48–73. DOI: 10.1108/ET-02-2013-0013.</p> <p>O'Connor, John; Fenton, Mary; Barry, Almar (2012): Entrepreneurship Education: Ireland's Solution to Economic Regeneration? In <i>Industry and Higher Education</i> 26, pp. 241–249. DOI: 10.5367/ihe.2012.0097.</p> <p>Ortiz-Medina, L.; Fernandez-Ahumada, E.; Lara-Vlez, P.; Taguas, E. V.; Gallardo-Cobos, R.; del Campillo, M. C.; Guerrero-Ginel, J. E. (2016): Designing an Accompanying Ecosystem to Foster Entrepreneurship among Agronomic and Forestry Engineering Students. Opinion and Commitment of University Lecturers. In <i>European Journal of Engineering Education</i> 41, pp. 393–410. DOI: 10.1080/03043797.2015.1079815.</p> <p>Teixeira, Aurora A. C.; Davey, Todd (2010): Attitudes of Higher Education Students to New Venture Creation: The Relevance of Competencies and Contextual Factors. In <i>Industry and Higher Education</i> 24, pp. 323–341. DOI: 10.5367/ihe.2010.0005.</p> <p>Williams, Perri; Fenton, Mary (2013): Towards a Good Practice Model for an Entrepreneurial HEI: Perspectives of Academics, Enterprise Enablers and Graduate Entrepreneurs. In <i>Industry and Higher Education</i> 27, pp. 499–506. DOI: 10.5367/ihe.2013.0183.</p>
Links to further Tiles	<ul style="list-style-type: none"> ➔ Change of curricula ➔ Training teachers ➔ Create new (infra)structures for entrepreneurship

Interventions

Tile 3: Change of Curricula

Title	Change of Curricula
<p>Introduction/ Background</p>	<p>There are two major forms that link to the change for curricula towards more entrepreneurship: Either the training becomes <i>integrated into the already existing curricula</i> (frequently as new learning outcomes), or institutions develop <i>entrepreneurship modules</i> that become electives or even mandatory in some study programmes.</p> <p>Frequently, ideas about entrepreneurship education differ strongly between the technical or natural sciences and the arts, humanities, and social sciences. For the latter disciplines, the papers also report less acceptance or a negative image of entrepreneurship education. Therefore, irrespective of the chosen form of entrepreneurship education institutions face the challenge of creating a general and shared understanding of entrepreneurship education (Dinning, 2019).</p> <p>The integration of skill training requires the higher education institutions to develop these competences in their teaching staff, make investments in building the infrastructure (for example, such as a physical centre for entrepreneurship education), and create or enhance their ecosystem (regional) economic sector.</p> <p>Also, when integrating the training of entrepreneurship competencies in existing curricula, teachers report that they often don't know how to do this or link it with academic skills training. Due to the differences in perception of value and content of entrepreneurial education, these institutions often face the challenge to stimulate and nurture motivation among their staff and students. Also, measuring the impact, i.e., how students benefit from the training in their later professional careers, is mentioned as a challenge</p>
<p>The goal</p>	<ul style="list-style-type: none"> - Integrating entrepreneurship education in already existing curricula mainstreams entrepreneurship across the institution. The major goal is to create entrepreneurial skills in students. - Entrepreneurship modules frequently are self-standing education units that student can choose as electives or need to attend as a mandatory part of their degree programmes. Entrepreneurship modules often simulate or support the start-up of a company (->student entrepreneurs). In these modules students learn basic principles of running a business, writing a business plan, and starting the company virtually or in real life. Also, internships or collaboration projects with companies in the institution's ecosystem can be integrated.

Title	Change of Curricula
Examples of interventions at institutional level	<ul style="list-style-type: none"> - Integrating entrepreneurship education in existing curricula can use large and small-scale interventions. Large-scale interventions foremost include the change of the curricula through e.g., the definition of additional learning outcomes. Small-scale interventions include the implementation of (new) didactical methods or tools such as serious games or case studies. - Setting up entrepreneurship modules is more complex process, it involves all steps related to developing new modules or programmes, including quality assurance and accreditation processes. Frequently, entrepreneurship modules have been established by business schools. <p>In any case, when setting up entrepreneurship education several stakeholders (students, teachers, business partners etc.), objectives, (innovative) pedagogies should be considered. The paper of Maritz and Brown (2013) provides a frameworks that list elements that are crucial in the development of entrepreneurship education programmes.</p>
Other relevant resources	<ul style="list-style-type: none"> - OECD: Entrepreneurship in Education, What, Why, When, How; https://www.oecd.org/cfe/leed/BGP_Entrepreneurship-in-Education.pdf - European University Association: Meeting skills and employability demands https://eua.eu/downloads/publications/eua%20tpg%20report_meeting%20skills%20and%20employability%20demands.pdf
Links to selected HEInnovate case studies	<ul style="list-style-type: none"> - Technical University of Kosice, Slovakia: Extracurricular entrepreneurship education activities and start-up coaching within the region; https://heinnovate.eu/sites/default/files/technical_university_of_kosice_extra-curricular_entrepreneurship_education_activities_and_start-up_coaching_within_the_region.pdf
Further reading	<p>Clements, Mike (2012): Contribution of the SPEED Programme to the Enhancement of an Enterprise Culture in a UK University. In <i>Industry and Higher Education</i> 26, pp. 101–106. DOI: 10.5367/ihe.2012.0088.</p> <p>Coleman, Maebh; Hamouda, Angela; Cormican, Kathryn (2010): The Accelerating Campus Entrepreneurship (ACE) Initiative: Creating Entrepreneurial Graduates for Ireland. In <i>Industry and Higher Education</i> 24, pp. 443–454. DOI: 10.5367/ihe.2010.0011.</p> <p>Dinning, Track (2019): Articulating Entrepreneurial Competencies in the Undergraduate Curricular. In <i>Education & Training</i> 61, pp. 432–444. DOI: 10.1108/ET-09-2018-0197.</p> <p>Maritz, Alex; Brown, Christopher R. (2013): Illuminating the Black Box of Entrepreneurship Education Programs: Education & Training (55). In <i>Education & Training</i>, pp. 234–252.</p>

Title	Change of Curricula
	Murray, Alan (2019): The Role of Practical Assessment in the Delivery of Successful Enterprise Education. In <i>Education & Training</i> 61, pp. 413–431. DOI: 10.1108/ET-10-2018-0216.
Links to further Tiles	<ul style="list-style-type: none"> ➔ Stimulate staff motivation (7) ➔ Connect to students intentions (8) ➔ Establish internal and external ecosystems (9)

Tile 4: Train teachers

Title	Train teachers
Introduction/ Background	<p>When discussing interventions for entrepreneurial teaching and learning these are mostly interventions that create benefits or skills for students. Interventions for teachers, in particular training teachers for entrepreneurship education is less often addressed.</p> <p>However, teachers and their qualifications are crucial for entrepreneurship education. Several studies report that when higher education institutions started to implement entrepreneurship education academic teachers criticized that they do not have sufficient knowledge about it or lack entrepreneurial skills themselves. To some, this situation hindered sufficient engagement.</p>
The goal	Interventions for teacher training aim at creating teaching skills in teachers that enable them to engage in entrepreneurial teaching. These skills are thus more than just entrepreneurial knowledge but include skills to teach entrepreneurship, liaise with the (regional) business sectors and to support student in becoming entrepreneurs.
Examples of interventions at institutional level	Interventions that aim at teachers can include measures to train teaching staff regards entrepreneurship competencies in their disciplinary area. This training can include a twofold approach: first, it can create the teachers' entrepreneurship competencies and second, it refers to enhancing their skills in integrating entrepreneurial training in their teaching. Studies on teacher training reveal that these interventions appear to be more self-initiated by staff rather than an intervention planned by the institution (Murray, 2019; Thom, 2017). However, interventions that aim to train teaching staff often happen as informal learning (for example, in peer learning or professional learning communities) as well as – though less frequently – as formal learning (for example, in (mandatory) didactical courses for young teachers (Terzaroli, 2019).

Title	Train teachers
	To date, there are no instruments that measure entrepreneurial competencies in teachers.
Other relevant resources	<ul style="list-style-type: none"> - Framework for Enterprise and Entrepreneurship Education; https://www.advance-he.ac.uk/knowledge-hub/framework-enterprise-and-entrepreneurship-education - Entertime: HEInnovate resource to train entrepreneurship educators; https://heinnovate.eu/en/related-projects/entertime
Links to selected HEInnovate case studies	<ul style="list-style-type: none"> - Preparing teachers for entrepreneurial education at University College of Christian Churches for Teacher Education Vienna/Krems, Austria; https://heinnovate.eu/sites/default/files/Preparing%20teachers%20for%20entrepreneurial%20education%20at%20University%20College%20of%20Christian%20Churches%20for%20Teacher%20Education%20Vienna_Krems-converted.pdf - Kozminski University, Poland: Developing minds for ambitious entrepreneurship and training teachers at other universities; https://heinnovate.eu/sites/default/files/kozminski_university_developing_minds_for_ambitious_entrepreneurship_and_training_teachers_at_other_universities.pdf
Further reading	<p>Murray, Alan (2019): The Role of Practical Assessment in the Delivery of Successful Enterprise Education. In <i>Education & Training</i> 61, pp. 413–431. DOI: 10.1108/ET-10-2018-0216.</p> <p>Terzaroli, Carlo (2019): Entrepreneurship as a Special Pathway for Employability. In <i>New Directions for Adult and Continuing Education</i> NA, pp. 121–131. DOI: 10.1002/ace.20346.</p> <p>Thom, Marco (2017): The Rough Journey into Arts Entrepreneurship: Why Arts Entrepreneurship Education Is Still in Its Infancy in the UK and Germany. In <i>Education & Training</i> 59, pp. 720–739. DOI: 10.1108/ET-01-2016-0015.</p>
Links to further Tiles	➔ Stimulate staff motivation (7)

Tile 5 Create new (infra-)structure for entrepreneurship education

Title	Create new (infra-)structure for entrepreneurship education
Introduction/ Background	<p>Embedding entrepreneurship education in higher education institutions requires adaptations of their structures. This can be understood as creating a special place in the institution that belong to entrepreneurship education, but also to create capacity and knowledge to respond to challenges that are linked to entrepreneurship education. These newly created structures can be physical in terms of buildings as well as non-material artefacts such as new professional roles or departments. These new structures do not need to be part of the creating higher education institution, they can also be units that are autonomous and located at the institution's organizational boundaries, such as business incubators. Also, new structures can be built at the centre level of the university to support institutional leadership in their attempts to embed entrepreneurship.</p>
The goal	<p>The creation of new infrastructure or the structural interventions aim at enhancing embedding of entrepreneurial teaching and learning.</p>
Examples of interventions at institutional level	<p>With structural interventions, we refer to those activities that aim to alter the organisational structure of higher education institutions. In detail, these changes alter existing or establish new roles, positions or even departments and other organizational units in higher education institutions. At first sight, one would not assume that these interventions would benefit the enhancement of entrepreneurial teaching and learning, as they do not offer teaching and learning. Rather, often these structural changes aim to enable this kind of teaching. Frequent examples are the establishment of a "Centre for Entrepreneurship Education" or of a business incubator (Maritz, 2017; O'Connor et al., 2012; Thom, 2017). Thus, these interventions can be regarded as a further structural differentiation and specialisation in which expert positions aim to support strengthening the entrepreneurial nature of the higher education institution (Ortiz-Medina et al., 2016). Often these are large-scale interventions, which include long-term planning, setting clear objectives or vast investments. Also, when altering existing or creating new organisational structures, institutions must consider the need to legitimise this change internally and create approval among staff and students. This legitimisation can support those new structures to become better integrated into the institution and that its services are used (Maritz, 2017; Maritz & Brown, 2013). In our sample, the outcomes and impacts of these structural interventions are hardly measured (Smith, 2015).</p>

Title	Create new (infra-)structure for entrepreneurship education
Other relevant resources	<ul style="list-style-type: none"> - EBN –The European Business and Innovation Centre Network, www.ebn.eu
Links to selected HEInnovate case studies	<ul style="list-style-type: none"> - Support for entrepreneurs through the Centre for Entrepreneurship at the University of Cyprus; https://heinnovate.eu/sites/default/files/Centre%20for%20Entrepreneurship%20at%20the%20University%20of%20Cyprus.pdf - University of Southern Denmark: IDEA centre for promoting entrepreneurship education across the university; https://heinnovate.eu/sites/default/files/university_of_southern_id_ea_centre_for_promoting_entrepreneurship_education_across_the_university.pdf - University Rotterdam, Netherlands: Building the Erasmus Centre for Entrepreneurship and advancing corporate entrepreneurship; https://heinnovate.eu/sites/default/files/university_rotterdam_building_the_erasmus_centre_for_entrepreneurship_and_advancing_corporate_entrepreneurship.pdf
Further reading	<p>Ayyash, Sarah Al; McAdam, Maura; OGorman, Colm (2020): Towards a New Perspective on the Heterogeneity of Business Incubator-Incubation Definitions. In <i>IEEE Trans. Eng. Manage.</i>, pp. 1–15. DOI: 10.1109/TEM.2020.2984169.</p> <p>Maritz, Alex (2017): Illuminating the Black Box of Entrepreneurship Education Programmes: Part 2. In <i>Education & Training</i> 59, pp. 471–482. DOI: 10.1108/ET-02-2017-0018.</p> <p>Ortiz-Medina, L.; Fernandez-Ahumada, E.; Lara-Vlez, P.; Taguas, E. V.; Gallardo-Cobos, R.; del Campillo, M. C.; Guerrero-Ginel, J. E. (2016): Designing an Accompanying Ecosystem to Foster Entrepreneurship among Agronomic and Forestry Engineering Students. Opinion and Commitment of University Lecturers. In <i>European Journal of Engineering Education</i> 41, pp. 393–410. DOI: 10.1080/03043797.2015.1079815.</p> <p>Smith, Kelly (2015): Measuring the Impact of Enterprise Education and Entrepreneurship Support in Higher Education: Can Routinely Collected Data Be of Use? In <i>Industry and Higher Education</i> 29, pp. 493–503. Available online at http://ezproxy2.utwente.nl/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1083884&site=ehost-live and http://www.ippublishing.com/ihe.htm.</p>
Links to further Tiles	<ul style="list-style-type: none"> ➔ Sufficient and continuous funding (6) ➔ Stimulate staff motivation (7) ➔ Connect to students' intentions (8) ➔ Establish internal and external ecosystems (9) ➔ Investment in infrastructure (10)

Input

Tile 6: Sufficient and continuous funding

Title	Sufficient and continuous funding
Introduction/ Background	As any activity also the provision of entrepreneurial teaching and learning is based on sufficient and continuous funding. The provision of entrepreneurship education might require additional funds compared to other, more traditional provisions. This is in particular true when new structures have to be established or capacity among teachers need to be build.
Relevance of input	Sufficient and continuous funding is indispensable for embedding entrepreneurial teaching and learning with a long-term perspective. To secure funding higher education institutions need to diversify their income streams and identify new money streams, e.g., through stronger collaboration with the business sector or establishing fund raising.
Examples of interventions at institutional level	<p>Besides staff, funding is an essential input for entrepreneurship education. In the studies we analysed, two major forms are mentioned. First, the funding includes institutional funds (such as first money stream), and second, funding from additional grants such as seed money from funding agencies or other (governmental) bodies. Irrespectively of the source of funding, studies addressing funding as crucial input point out that continuous funding is most relevant for a sustainable impact of entrepreneurship education. While additional funds are an essential factor for kicking off entrepreneurship education projects, they also bear the risk that interventions do not continue once the funding runs out.</p> <p>Papers also mention that entrepreneurship education involves more than staff costs and expenses for learning materials. In other words, funding crosscuts all other inputs as infrastructure and the maintenance of ecosystems also create these (Bridge et al., 2010; Maritz, 2017; Maritz & Brown, 2013)</p>
Other relevant resources	<ul style="list-style-type: none"> - Financially sustainable universities ii - European universities diversifying income streams; https://eua.eu/downloads/publications/financially%20sustainable%20universities%20ii%20-%20european%20universities%20diversifying%20income%20streams.pdf
Links to selected HEInnovate case studies	<ul style="list-style-type: none"> - THE ACE initiative (Accelerating Campus Entrepreneurship), Ireland; https://heinnovate.eu/sites/default/files/The%20ACE%20Initiative_Ireland.pdf

Title	Sufficient and continuous funding
Further reading	McClure, Kevin R. (2016): Building the Innovative and Entrepreneurial University: An Institutional Case Study of Administrative Academic Capitalism. In <i>The Journal of Higher Education</i> 87 (4), pp. 516–543. DOI: 10.1080/00221546.2016.11777412.
Links to further Tiles	➔ Lack of funding/time (12)

Tile 7: Stimulate staff motivation

Title	Stimulate staff motivation
Introduction/ Background	A shared understanding of the content and purpose of entrepreneurship education is crucial as it secures motivation and support of staff. Especially for teaching staff, the objectives of entrepreneurship education must fit well with their professional values. Sometimes institutional requirements to integrate entrepreneurship training in the teaching are not well accepted by staff. When there is a mismatch between the teachers' perceptions of what skills should be built and the entrepreneurial skill sets defined in the institutional requirements. This mismatch can result in teachers who only superficially address entrepreneurship.
Relevance of input	Research results have already pointed out that defining and communicating the value of entrepreneurship training is fundamental. As for any organisational change, the involvement and support of leadership is crucial to creating commitment among staff and students (Bin Yusoff, Mohd Nor Hakim et al., 2015). However, as higher education institutions frequently host several disciplinary cultures, institutional leadership needs to address these cultural differences in a sensitive manner. Describing entrepreneurial skills should avoid being dominated by one discipline. Rather institutional definitions should be either general or diversified to accommodate the cultural diversity. The involvement of the staff when defining entrepreneurial values also helps to secure their support (Clements, 2012). Concerning the students and further users of entrepreneurship training, such as business partners in the regions. A few papers report that the design of entrepreneurship curricula must also consider their demands to stimulate their interest (Mets et al., 2017).
Examples of interventions at institutional level	Concerning the motivations of teaching staff (and students), studies investigated a few incentives. While the provisions of time and financial incentives can be helpful, it turned out that making new experiences is a strong motivator in the research. Interventions that gave teachers and

Title	Stimulate staff motivation
	<p>students new to entrepreneurship training the opportunity to learn about it and continue in this area were very effective. Here, it is argued that the newness of the knowledge, experiences and contacts made is the incentive (Ghina et al., 2014; Mkimurto-Koivumaa & Belt, 2016; Thom, 2017). However, we would like to note that this incentive might preferably unfold in well-organised learning opportunities.</p> <p>Some studies also point out that teachers sometimes are not well prepared for teaching entrepreneurial skills. The provision of training can be beneficial for those teachers, especially when it includes new or innovative teaching practices or the opportunity to collaborate with other teachers (Terzaroli, 2019)</p>
Other relevant resources	- n/a
Links to selected HEInnovate case studies	<ul style="list-style-type: none"> - Leadership and governance for an entrepreneurial culture at Aalto University; https://heinnovate.eu/sites/default/files/Leadership%20and%20governance_Aalto%20University_Finland.pdf - Entrepreneurial Behaviours and Organisation Culture – A Case Study; https://heinnovate.eu/sites/default/files/Entrepreneurial%20behaviours%20and%20organisation%20culture_Dunlalk%20IoT_Ireland.pdf
Further reading	<p>Clements, Mike (2012): Contribution of the SPEED Programme to the Enhancement of an Enterprise Culture in a UK University. In <i>Industry and Higher Education</i> 26, pp. 101–106. DOI: 10.5367/ihe.2012.0088.</p> <p>Ghina, Astri; Simatupang, Togar M.; Gustomo, Aurik (2014): A Systematic Framework for Entrepreneurship Education within a University Context. In <i>International Education Studies</i> 7.</p> <p>Mets, Tnis; Kozlinska, Inna; Raudsaar, Mervi (2017): Patterns in Entrepreneurial Competences as the Perceived Learning Outcomes of Entrepreneurship Education: The Case of Estonian HEIs. In <i>Industry and Higher Education</i> 31, pp. 23–33. DOI: 10.1177/0950422216684061.</p> <p>Mkimurto-Koivumaa, Soili; Belt, Pekka (2016): About, for, in or through Entrepreneurship in Engineering Education. In <i>European Journal of Engineering Education</i> 41, pp. 512–529. DOI: 10.1080/03043797.2015.1095163.</p> <p>Terzaroli, Carlo (2019): Entrepreneurship as a Special Pathway for Employability. In <i>New Directions for Adult and Continuing Education</i> NA, pp. 121–131. DOI: 10.1002/ace.20346.</p> <p>Thom, Marco (2017): The Rough Journey into Arts Entrepreneurship: Why Arts Entrepreneurship Education Is Still in Its Infancy in the UK and Germany. In <i>Education & Training</i> 59, pp. 720–739. DOI: 10.1108/ET-01-2016-0015.</p>

Tile 8: Connect to students' intentions

Title	Connect to students' intentions
Introduction/ Background	Students' entrepreneurial intentions are an important variable for the design of entrepreneurial teaching and learning at a higher education institution. Some students already developed ideas about starting their own company before attending an entrepreneurial course or seeking institutional support for their plans. The design of entrepreneurial teaching however includes besides programmes or modules on entrepreneurship also regulations, culture and the provision of information. Students who perceive the different aspects of the entrepreneurial teaching and learning design, the more likely is that their entrepreneurial intentions will realise as action, e.g., as founding a start-up business.
Relevance of input	Considering students' intentions in the design of entrepreneurial teaching and learning is a must for higher education institutions. Cultures, regulations or information that is found to be unclear, too bureaucratic or irrelevant will hinder students to venture into their own businesses or develop an entrepreneurial mindset.
Examples of interventions at institutional level	To better connect to students' entrepreneurial intentions higher education institutions can – besides surveying these intentions – create a climate for entrepreneurship that support students' intentions. Oftedal et al. (2017) mention the creation of a positive entrepreneurial cultures, including the establishment of a positive image of the entrepreneur, media campaigns on entrepreneurship, including events and business plan competitions can also be helpful. Encouraging students with concrete plans, and also clear regulations for financial support for start-up companies are further instrument to connect to students' intentions.
Other relevant resources	- n/a
Links to selected HEInnovate case studies	<ul style="list-style-type: none"> - Supporting students' business ideas at the University of Belgrade's Startup Centar, Serbia; https://heinnovate.eu/sites/default/files/HEInnovate_Belgrade.pdf - Engaging students and staff in knowledge exchange Warsaw University of Technology; https://heinnovate.eu/sites/default/files/engaging_students_and_staff_in_knowledge_exchange_at_warsaw_university_of_technology.pdf

Title	Connect to students' intentions
Further reading	Oftedal, Elin Merethe; Iakovleva, Tatiana A.; Foss, Lene (2018): University Context Matter: An Institutional Perspective on Entrepreneurial Intentions of Students. In <i>Education & Training</i> 60, pp. 873–890. DOI: 10.1108/ET-06-2016-0098.
Links to further Tiles	➔ Lack of entrepreneurial culture (11)

Tile 9: Establish internal and external ecosystems

Title	Establish internal and external ecosystems
Introduction/ Background	Entrepreneurship ecosystems are all social networks that are linked to a higher education institution. These networks can develop in very different formats, either as external ecosystems, i.e., involving partners and stakeholders that are not members of the institution and internal ecosystems, which involve the institutions' members. A shared characteristic of the ecosystems is that these are not formal structures but are mostly informally organised. As an ecosystem, the networks support cultivating entrepreneurship in a higher education institution and its closer (regional) environment.
Relevance of input	The establishment, maintenance and extension of internal and external entrepreneurship ecosystems are another input that is crucial for entrepreneurship education. External networks bring relevant information on skill demands and opportunities for collaboration to higher education institutions (Ortiz-Medina et al., 2016). External networks create a closer link between the institution and its region (Lackus & Williams Middleton, 2015). Some entrepreneurship education formats are also dependent on involving external stakeholders as they can provide students with more real experiences than the experiences collected from virtual learning experiments (Gilbert, 2012). Also, teachers with entrepreneurship experiences can be recruited from these networks. Internal ecosystems, such as professional learning communities of teachers, can also provide value to the institution (Ghina et al., 2014). These networks can strengthen teachers' motivation, support the development, and use educational innovations to enhance entrepreneurship education. However, while ecosystems are an important input to entrepreneurship education, their establishment and maintenance require resources such as staff, funding and infrastructure itself (Ortiz-Medina et al., 2016).

Title	Establish internal and external ecosystems
Examples of interventions at institutional level	tbf
Other relevant resources	<ul style="list-style-type: none"> - The Entrepreneurship Ecosystem Strategy as a New Paradigm for Economic Policy: Principles for Cultivating Entrepreneurship; http://www.innovationamerica.us/images/stories/2011/The-entrepreneurship-ecosystem-strategy-for-economic-growth-policy-20110620183915.pdf
Links to selected HEInnovate case studies	<ul style="list-style-type: none"> - Knowledge exchange and collaboration_Examples from five Hungarian HEIs; https://heinnovate.eu/sites/default/files/Knowledge%20exchange%20and%20collaboration_Examples%20from%20five%20Hungarian%20HEIs.pdf - Linz University, Austria: Inspiring teaching and a support network for academic entrepreneurs; https://heinnovate.eu/sites/default/files/linz_university_inspiring_teaching_and_a_support_network_for_academic_entrepreneurs.pdf
Further reading	<p>Ghina, Astri; Simatupang, Togar M.; Gustomo, Aurik (2014): A Systematic Framework for Entrepreneurship Education within a University Context. In <i>International Education Studies</i> 7.</p> <p>Gilbert, David H. (2012): From Chalk and Talk to Walking the Walk: Facilitating Dynamic Learning Contexts for Entrepreneurship Students in Fast-Tracking Innovations. In <i>Education & Training</i> 54, pp. 152–166. DOI: 10.1108/00400911211210260.</p> <p>Lackus, Martin; Williams Middleton, Karen (2015): Venture Creation Programs: Bridging Entrepreneurship Education and Technology Transfer. In <i>Education & Training</i> 57, pp. 48–73. DOI: 10.1108/ET-02-2013-0013.</p> <p>Ortiz-Medina, L.; Fernandez-Ahumada, E.; Lara-Vlez, P.; Taguas, E. V.; Gallardo-Cobos, R.; del Campillo, M. C.; Guerrero-Ginel, J. E. (2016): Designing an Accompanying Ecosystem to Foster Entrepreneurship among Agronomic and Forestry Engineering Students. Opinion and Commitment of University Lecturers. In <i>European Journal of Engineering Education</i> 41, pp. 393–410. DOI: 10.1080/03043797.2015.1079815.</p>
Links to further Tiles	➔

Tile 10: Investment in Infrastructure

Title	Investment in infrastructure
Introduction/ Background	Creating a physical space such as a materialised Centre for Entrepreneurship provides a strong message that entrepreneurship education is part of the institution. These physical manifestations can also provide space for the HEI and the external ecosystem. Also, for those institutions supporting students to venture into business, these centres can provide affordable office space and help them creating their network within the institutions and the external ecosystem. Building physical infrastructure for entrepreneurship centres can mean huge investments for the institutions. Therefore, it is crucial to consider if the investment is fit for purpose to create value from these investments. I.e., when planning such centres or similar, the location (on-site or close to campus), size and (technical) equipment must be designed carefully. (Bin Yusoff, Mohd Nor Hakimin et al., 2015; Hyclak & Barakat, 2010).
Relevance of input	Providing space for entrepreneurship education is relevant. However, the establishment of an entrepreneurial culture or spirit can contribute to legitimize huge investments.
Examples of interventions at institutional level	With structural interventions, we refer to those activities that aim to alter the organisational structure of higher education institutions. In detail, these changes alter existing or establish new roles, positions or even departments and other organizational units in higher education institutions. At first sight, one would not assume that these interventions would benefit the enhancement of entrepreneurial teaching and learning, as they do not offer teaching and learning. Rather, often these structural changes aim to enable this kind of teaching. Frequent examples are the establishment of a “Centre for Entrepreneurship Education” or of a business incubator (Maritz, 2017; O'Connor et al., 2012; Thom, 2017). Thus, these interventions can be regarded as a further structural differentiation and specialisation in which expert positions aim to support strengthening the entrepreneurial nature of the higher education institution (Ortiz-Medina et al., 2016). Often these are large-scale interventions, which include long-term planning, setting clear objectives or vast investments. Also, when altering existing or creating new organisational structures, institutions must consider the need to legitimise this change internally and create approval among staff and students. This legitimisation can support those new structures to become better integrated into the institution and that its services are used (Maritz, 2017; Maritz & Brown, 2013). In our sample, the outcomes and impacts of these structural interventions are hardly measured (Smith, 2015).

Title	Investment in infrastructure
Other relevant resources	- n/a
Links to selected HEInnovate case studies	<ul style="list-style-type: none"> - Support for entrepreneurs through the Centre for Entrepreneurship at the University of Cyprus; https://heinnovate.eu/sites/default/files/Centre%20for%20Entrepreneurship%20at%20the%20University%20of%20Cyprus.pdf - University of Southern Denmark: IDEA centre for promoting entrepreneurship education across the university; https://heinnovate.eu/sites/default/files/university_of_southern_idea_centre_for_promoting_entrepreneurship_education_across_the_university.pdf - University Rotterdam, Netherlands: Building the Erasmus Centre for Entrepreneurship and advancing corporate entrepreneurship; https://heinnovate.eu/sites/default/files/university_rotterdam_building_the_erasmus_centre_for_entrepreneurship_and_advancing_corporate_entrepreneurship.pdf
Further reading	<p>Bin Yusoff, Mohd Nor Hakim; Zainol, Fakhrul Anwar; Bin Ibrahim, Mohamed Dahlan (2015): Entrepreneurship Education in Malaysia's Public Institutions of Higher Learning--A Review of the Current Practices. In <i>International Education Studies</i> 8, pp. 17–28.</p> <p>Hyclak, Thomas; Barakat, Shima (2010): Entrepreneurship Education in an Entrepreneurial Community. In <i>Industry and Higher Education</i> 24, pp. 475–486. DOI: 10.5367/ihe.2010.0018.</p>
Links to further Tiles	<ul style="list-style-type: none"> ➔ Lack of funding/time (12) ➔ Legal/organisational obstacles (13) ➔ Lack entrepreneurial experience/knowledge (15)

Barriers and Solutions

Tile 11: Lack of entrepreneurial culture

Title	Lack of entrepreneurial culture
Introduction/ Background	A lack of entrepreneurial culture can have an impact on the motivation of staff and the entrepreneurial intentions of students.
The problem	<p>Especially for teaching staff, the objectives and values of entrepreneurship education must fit well with their professional values. Sometimes institutional requirements to integrate entrepreneurship training in the teaching are not well accepted by staff, in particular when there is a mismatch between the teachers' perceptions of what skills should be built and the entrepreneurial skill sets defined in the institutional requirements. This mismatch can result in teachers who only superficially address entrepreneurship.</p> <p>Students who perceive institutional regulations, values and support negatively often refrain from their entrepreneurial intentions, i.e., they less frequently transform their ideas into a business start-up or do not develop an entrepreneurial attitude.</p>
Solutions at institutional level	<p>Communication is key to achieving a shared entrepreneurial culture. Studies point out that defining and communicating the value of entrepreneurship training is fundamental. As for any organisational change, the involvement and support of leadership are crucial to creating commitment among staff and students (Bin Yusoff, Mohd Nor Hakim et al., 2015). However, as higher education institutions frequently host several disciplinary cultures, institutional leadership needs to address these cultural differences in a sensitive manner. Describing entrepreneurial skills should avoid being dominated by one discipline. Rather institutional definitions should be either general or diversified to accommodate the cultural diversity. The involvement of the staff when defining entrepreneurial values also helps to secure their support (Clements, 2012). Concerning the students and further users of entrepreneurship training, such as business partners in the regions. A few papers report that the design of entrepreneurship curricula must also consider their demands to stimulate their interest (Mets et al., 2017).</p> <p>Incentives can stimulate the motivation and intentions of teachers and students. Time and financial incentives can be helpful, but also the opportunity of making new experiences turned out to be a strong motivator. Interventions that gave teachers and students who were new to entrepreneurship training the opportunity to learn about it and continue in this area were very effective. Here, it is argued that the newness of the knowledge, experiences and contacts made is the incentive (Ghina et al., 2014; Mkimurto-Koivumaa & Belt, 2016; Thom, 2017).</p>

Title	Lack of entrepreneurial culture
	Finally training teachers for entrepreneurial education can ease their uncertainties and feelings of insufficient preparation. The provision of training can be beneficial when it includes new or innovative teaching practices or the opportunity to collaborate with other teachers (Terzaroli, 2019)
Other relevant resources	<ul style="list-style-type: none"> - Entertime: HEInnovate resource to train entrepreneurship educators; https://heinnovate.eu/en/related-projects/entertime
Links to selected HEInnovate case studies	<ul style="list-style-type: none"> - Leadership and governance for an entrepreneurial culture at Aalto University; https://heinnovate.eu/sites/default/files/Leadership%20and%20governance_Aalto%20University_Finland.pdf - Entrepreneurial Behaviours and Organisation Culture – A Case Study; https://heinnovate.eu/sites/default/files/Entrepreneurial%20behaviours%20and%20organisation%20culture_Dunlalk%20IoT_Ireland.pdf
Further reading	<p>Bin Yusoff, Mohd Nor Hakim; Zainol, Fakhrul Anwar; Bin Ibrahim, Mohamed Dahlan (2015): Entrepreneurship Education in Malaysia's Public Institutions of Higher Learning--A Review of the Current Practices. In <i>International Education Studies</i> 8, pp. 17–28.</p> <p>Clements, Mike (2012): Contribution of the SPEED Programme to the Enhancement of an Enterprise Culture in a UK University. In <i>Industry and Higher Education</i> 26, pp. 101–106. DOI: 10.5367/ihe.2012.0088.</p> <p>Ghina, Astri; Simatupang, Togar M.; Gustomo, Aurik (2014): A Systematic Framework for Entrepreneurship Education within a University Context. In <i>International Education Studies</i> 7.</p> <p>Mets, Tnis; Kozlinska, Inna; Raudsaar, Mervi (2017): Patterns in Entrepreneurial Competences as the Perceived Learning Outcomes of Entrepreneurship Education: The Case of Estonian HEIs. In <i>Industry and Higher Education</i> 31, pp. 23–33. DOI: 10.1177/0950422216684061.</p> <p>Mkimurto-Koivumaa, Soili; Belt, Pekka (2016): About, for, in or through Entrepreneurship in Engineering Education. In <i>European Journal of Engineering Education</i> 41, pp. 512–529. DOI: 10.1080/03043797.2015.1095163.</p> <p>Terzaroli, Carlo (2019): Entrepreneurship as a Special Pathway for Employability. In <i>New Directions for Adult and Continuing Education</i> NA, pp. 121–131. DOI: 10.1002/ace.20346.</p> <p>Thom, Marco (2017): The Rough Journey into Arts Entrepreneurship: Why Arts Entrepreneurship Education Is Still in Its Infancy in the UK and Germany. In <i>Education & Training</i> 59, pp. 720–739. DOI: 10.1108/ET-01-2016-0015.</p>
Links to further Tiles	➔ n/a

Tile 12: Lack of funding

Title	Lack of funding
Introduction/ Background	The implementation and enhancement of entrepreneurial teaching and learning require institutional investments. When planning their investments, institutions need to sensitively estimate how much resources such as staff, funding, infrastructure, and ecosystems must be invested.
The problem	A frequent barrier for entrepreneurial teaching and learning projects is that no further funding is available once the project ended. Often promising initiatives then come to an end. Securing resources and continuing projects is often dependent on whether the project can show if it has achieved the set goals. (Bin Yusoff, Mohd Nor Hakim et al., 2015; Ghina et al., 2014; Maritz & Brown, 2013).
Solutions at institutional level	Thus, projects that monitor their outcomes and impact from their start might be more likely to display their added value for the institution. Their proven impact might also increase their chances for continuation. Diversifying income resources and raising funds from the business sector, regional environment, or alumni already during projects or initiatives can secure their continuation after the initial funding runs out.
Other relevant resources	Pruvot, Enora Bennetot; Estermann, Thomas (2012): European Universities Diversifying Income Streams. In Adrian Curaj (Ed.): European Higher Education at the Crossroads. Between the Bologna Process and National Reforms. With assistance of Peter Scott, Lesley Wilson, Lazăr Vlasceanu. 1st ed. Dordrecht: Springer Netherlands, pp. 709–726. DOI: 10.1007/978-94-007-3937-6_38.
Links to selected HEInnovate case studies	<ul style="list-style-type: none"> - Measuring the Impact at the University of Twente; https://heinnovate.eu/en/heinnovate-resources/resources/measuring-impact-university-twente - Autonomous University of Barcelona - Measuring the impact; https://heinnovate.eu/en/heinnovate-resources/resources/autonomous-university-barcelona-measuring-impact
Further reading	Etzkowitz, Henry (2013): Anatomy of the entrepreneurial university. In <i>Social Science Information</i> 52 (3), pp. 486–511. DOI: 10.1177/0539018413485832.

Title	Lack of funding
	Dahlan, Ahmad; Ibrahim, Jamaludin; Jalaldeen, Mohamed; Mohajir, Mohammed (2020): Redesign "University of the Future" Conceptual Business Model: Sustainability and Staying Relevant in the Digital Age. In Journal of Information Systems and Digital Technologies 2 (1), pp. 47–59, checked on 4/20/2021.
Links to further Tiles	→ n/a

Tile 13: Legal and organisational obstacles

Title	Legal and organisational obstacles
Introduction/ Background	Legal and organisational obstacles to implementing and enhancing entrepreneurship education can involve bureaucratic hurdles that stand in the way for university-business collaboration, legal issues to quality assurance and accreditation of programmes, data security and intellectual property rights. These problems mostly root in the different logics of university and business organisation. While the first has to apply regulations on public funding and serve the public good, the latter mostly orient to markets and profitability.
The problem	<p>Institutional regulations can stand in the way of implementing entrepreneurship education. These regulations can, among others, include:</p> <ul style="list-style-type: none"> - Funding problems, while there might be sufficient resources available, institutions might be restricted to spend the funds on assets related to entrepreneurship education, e.g., provision of seed money for students' business start-ups or investing in infrastructure that is not directly linked to educational or research functions. - Funding regulations: Incentives for academic staff might not stimulate their engagement of entrepreneurship education or entrepreneurship as such. E.g. regulations for promotion might put too much focus on publications, while not recognising educational achievements or the development of business ideas. - Quality assurance: Integrating entrepreneurship education in curricula and setting up special entrepreneurship programmes eventually requires that programmes must renew or undertake the full accreditation procedure. - Data security and intellectual property rights: Both can hinder university-business collaboration as students might not be able to

Title	Legal and organisational obstacles
	<p>access data they need for their studies. Also, the exploitation of innovations that were developed in entrepreneurship education might be restricted/limited.</p> <ul style="list-style-type: none"> - Legal issues, involving the insurance of students might limit their chances to do internships and work in industry premises.
Solutions at institutional level	<p>The implementation and enhancement of entrepreneurship education needs the support of legal and other experts, e.g., for question of quality assurance or funding. Integrating these experts from the start can prevent that implementation is not hindered or blocked when interventions will be implemented.</p> <p>Institutions also need to review their funding regulations and incentives for students and staff. Also, the founding of spin-offs and extra-university structures needs to be considered.</p>
Other relevant resources	n/a
Links to selected HEInnovate case studies	<ul style="list-style-type: none"> - University of Roviri I Virgili - Organisational Capacity, people and incentives https://www.heinnovate.eu/en/heinnovate-resources/resources/university-roviri-i-virgili-organisational-capacity-people-and - Utrecht University:Alignment for impact https://www.heinnovate.eu/sites/default/files/Alignement%20for%20Impact_Utrecht%20University_Netherlands_0.pdf
Further reading	<p>Davey, Todd; Meerman, Arno; Galan Muros, Victoria; Orazbayeva, Balzhan; Baaken, Thomas (2018): The state of university-business cooperation in Europe. Final report. Luxembourg: Publications Office of the European Union.</p>
Links to further Tiles	➔ n/a

Tile 14: Difficulties establishing networks

Title	Difficulties establishing networks
Introduction/ Background	Having an external and internal entrepreneurial ecosystem is a crucial factor for implementing and strengthening entrepreneurial teaching and learning (Lackus & Williams Middleton, 2015).
The problem	Research shows that higher education institutions with no external ecosystems or only very few of these networks face problems in achieving good outcomes of entrepreneurial teaching and learning. The lack of external networks often results in a lack of knowledge about what potential employers need as entrepreneurial skills. Further, these institutions are less able to provide their students with internships or collaborative education. It is also more difficult to attract guest teachers with professional experience or provide students and graduates who want to start their own business with contacts in these sectors. The lack of these networks might thus diminish the entrepreneurial learning outcomes for students and their later careers.
Solutions at institutional level	A key solution to this problem is that institutions that plan to engage in entrepreneurial teaching and learning should also assess their performance in the dimension “knowledge transfer and exchange” (with their close environment) when developing their interventions and strategies. In doing so, they can determine if these networks are sufficient for their plans or if they eventually need to be extended. Compiling an inventory of existing contacts, including contacts of staff, can be a first step here. Some institutions also report that they have established professional roles and specialised departments such as knowledge transfer offices and centres for entrepreneurship that maintain these networks and aim to extend them. Thus, investing in the creation of inhouse capacity will embed the institutions in their regions (Clements, 2012; Fenton & Barry, 2011; Williams & Fenton, 2013).
Other relevant resources	- tbc
Links to selected HEInnovate case studies	<ul style="list-style-type: none"> - Knowledge exchange and collaboration_Examples from five Hungarian HEIs; https://heinnovate.eu/sites/default/files/Knowledge%20exchange%20and%20collaboration_Examples%20from%20five%20Hungarian%20HEIs.pdf - Linz University, Austria: Inspiring teaching and a support network for academic entrepreneurs; https://heinnovate.eu/sites/default/files/linz_university_inspiring_teaching_and_a_support_network_for_academic_entrepreneurs.pdf

Title	Difficulties establishing networks
Further reading	<p>Clements, Mike (2012): Contribution of the SPEED Programme to the Enhancement of an Enterprise Culture in a UK University. In <i>Industry and Higher Education</i> 26, pp. 101–106. DOI: 10.5367/ihe.2012.0088.</p> <p>Fenton, Mary; Barry, Almar (2011): The Efficacy of Entrepreneurship Education: Perspectives of Irish Graduate Entrepreneurs. In <i>Industry and Higher Education</i> 25, pp. 451–460. DOI: 10.5367/ihe.2011.0069.</p> <p>Williams, Perri; Fenton, Mary (2013): Towards a Good Practice Model for an Entrepreneurial HEI: Perspectives of Academics, Enterprise Enablers and Graduate Entrepreneurs. In <i>Industry and Higher Education</i> 27, pp. 499–506. DOI: 10.5367/ihe.2013.0183.</p>
Links to further tiles	➔ n/a

Tile 15: Lack of entrepreneurial experience and knowledge

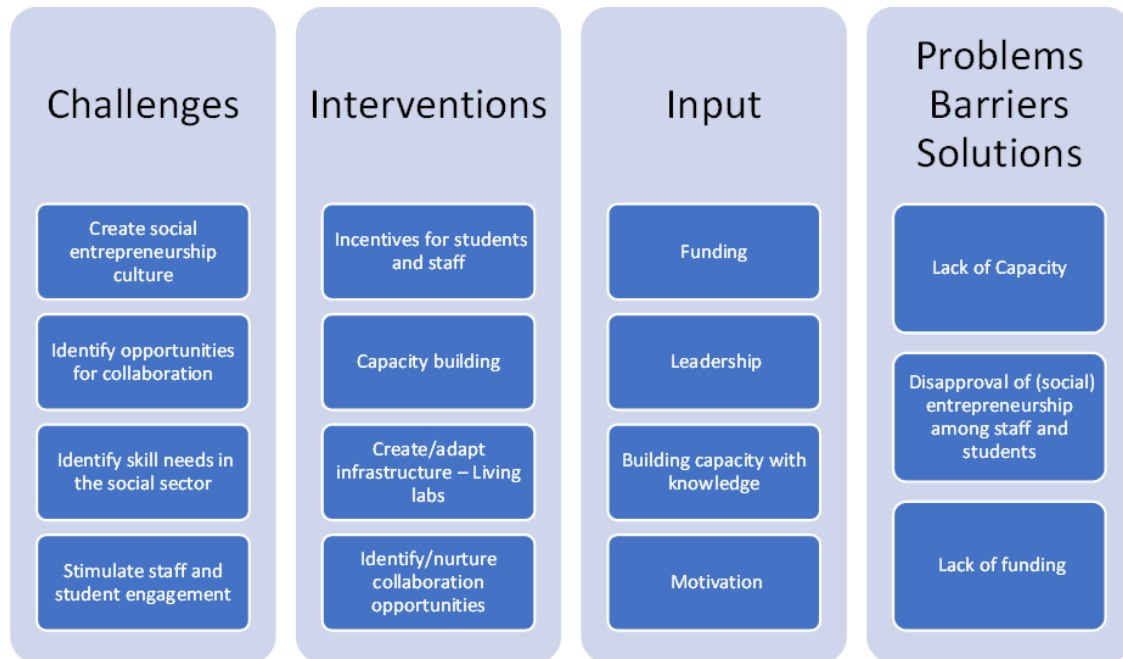
Title	Lack of entrepreneurial experience and knowledge
Introduction/ Background	Some higher education institutions are more or less completely new to entrepreneurialism or entrepreneurship education. They need to build up knowledge as well as (infra-)structure(s) so that they can provide high quality entrepreneurship education.
The problem	The establishment of entrepreneurial experience and knowledge in higher education institutions requires them strongly invest in capacity, staff, and structures. A lack of all these resources could have a negative impact on the quality of entrepreneurship education. Also, the retention of entrepreneurial capacity is a challenge for higher education institutions.
Solutions at institutional level	<ul style="list-style-type: none"> - Lack of entrepreneurial capacity among staff – Frequently academic staff does not have extensive knowledge or experience in entrepreneurship or entrepreneurship education. To overcome this lack, higher education institutions can consider creating new positions for staff with experience in both areas. Also, job requirements can be amended by entrepreneurial qualifications when re-filling staff positions. - Providing entrepreneurship courses for staff can also be a suitable instrument to build capacity and experiences among staff. However, staff training needs to consider interests and cultures of disciplines. Training appeared mostly effective when providing opportunities to learn and test new knowledge and techniques.

Title	Lack of entrepreneurial experience and knowledge
	<ul style="list-style-type: none"> - Training for staff should also include some support for establishing contacts with the business-sector, e.g., through transfer-offices or support the interaction with external stakeholders. - Training for staff might also be provided as internship or establishing collaborations with the business-sector. E.g., collaborative doctoral degrees, where doctoral students collaborate in research and innovation with firms (from their region) while simultaneously studying for their PhD can contribute to increasing entrepreneurship capacity or experience in the higher education institutions. - While training of staff is the most crucial solution, higher education institutions also need to consider the implementation of structures with which the knowledge and capacity is consolidated, i.e., that it is not linked to specific persons and lost once these leave the organisation. Establishing chairs for entrepreneurship or centres for entrepreneurship can support this and can help to ensure that this capacity is permanently anchored in the organisation and can persist independently of individuals.
Other relevant resources	n/a
Links to selected HEInnovate case studies	<ul style="list-style-type: none"> - Kozminski University, Poland: Developing minds for ambitious entrepreneurship and training teachers at other universities https://www.heinnovate.eu/sites/default/files/kozminski_university_developing_minds_for_ambitious_entrepreneurship_and_training_teachers_at_other_universities.pdf
Further reading	<p>Clements, Mike (2012): Contribution of the SPEED Programme to the Enhancement of an Enterprise Culture in a UK University. In <i>Industry and Higher Education</i> 26, pp. 101–106. DOI: 10.5367/ihe.2012.0088.</p> <p>Fenton, Mary; Barry, Almar (2011): The Efficacy of Entrepreneurship Education: Perspectives of Irish Graduate Entrepreneurs. In <i>Industry and Higher Education</i> 25, pp. 451–460. DOI: 10.5367/ihe.2011.0069.</p> <p>Williams, Perri; Fenton, Mary (2013): Towards a Good Practice Model for an Entrepreneurial HEI: Perspectives of Academics, Enterprise Enablers and Graduate Entrepreneurs. In <i>Industry and Higher Education</i> 27, pp. 499–506. DOI: 10.5367/ihe.2013.0183.</p>
Links to further Tiles	➔ n/a

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Inspiration Fiche

Social Entrepreneurship

Andrea Kottmann
CHEPS, University of Twente

Inspiration Fiches

Digi Buddy is a web-based platform (<https://www.digi-buddy.eu/>) for HEIs seeking support and partners for collaboration and peer-learning when strengthening entrepreneurship in their institutions.

Through the Digi Buddy System HEIs can start engaging in peer-learning, exchanging experiences and discussing plans. The platform allows HEIs to contact other HEIs on the platform that also are interested to work on similar projects or tackle similar challenges.

Digi Buddy facilitates collaboration and networking, and possibly mentorship opportunities between HEIs.



Inspiration Fiches

HEI practitioners and managers using the Digi Buddy system are provided with the opportunity to not only contact like-minded institutions/individuals, but also to access information on the basis of thematic clusters, and challenges through an “Inspiration Fiche”.

This fiche is a piece of condensed information about strategies, policies and initiatives undertaken by HEIs to address the entrepreneurship and innovation agenda. The Fiche is based on (practical) HEInnovate & BeyondScale experiences and the academic literature on transformation processes in higher education.

The fiches provide a unique set of recommendations on how HEIs can use the HEInnovate approach to further their entrepreneurial agenda. They also provide narratives describing the outcomes, contribution and impact of the use and experimentation with HEInnovate in achieving the outcomes and objectives in each activity area.

Being a digital tool, the fiche links its users to the evidence underlying the keywords in the fiche.

For example, a user interested in the **intervention “Building Capacity”** will be provided with a pop-up window that includes a presentation or definition of such a centre and provides links to other issues that are related to implementing these centres, such as the resources and inputs, potential barriers and motivators, etc. In addition, the pop up-windows will include links to the most relevant publications underlying the evidence that is summarised in the texts.

Online versions of the Inspiration Fiche: www.digi-buddy.eu

Challenges

Tile 1: Create social entrepreneurship culture

Title	Create social entrepreneurship culture
<p>Introduction/ Background</p>	<p>In the literature, one can find various definitions and understandings of what social entrepreneurship signifies. While there is some variation, all definitions state the following characteristics as central to social entrepreneurship:</p> <ul style="list-style-type: none"> - Innovative use and combination of resources to pursue opportunities for catalysing social change or addressing social needs. - Creating social value and stimulating changes in the social sector; also sustaining social value - The generation and development of resources and innovations to stimulate social change <p>While these criteria mostly point to what entrepreneurial behaviour could involve, a culture of social entrepreneurship in higher education institutions consists foremost of values that support staff, students, and other relevant stakeholders to function as social entrepreneurs. However, these values can have different orientations which can range from the idea of a philanthropic higher education institution to a university in which social entrepreneurship to a university where social entrepreneurship is also primarily seen as a special form of entrepreneurship that focuses on the beneficial realisation of ideas in the social sector. Besides social entrepreneurship other terms, such as civic engagement, community engagement or civic university are used to point to this activity area of higher education institutions.</p> <p>While higher education institutions have become more familiar with the entrepreneurial agenda in recent years, practitioners report that social entrepreneurship is frequently perceived as an alien concept, particularly in the social sciences and arts and humanities. Contributing to social value creation and social change opposes traditional values of these disciplines to some extent. Often, these disciplines understand their role as observing society and social change from a neutral and outside position, rather than being actively involved or contributing these processes. These differences in perception can bring about tension in staff and students as social entrepreneurship values do not match well with traditional disciplinary values.</p>

Title	Create social entrepreneurship culture
	<p>Hazelkorn (2016) distinguishes three indicative institutional models that prevail in higher education institutions and among others also point to the values that are underlying these models (Hazelkorn 2016, p. 69):</p> <ul style="list-style-type: none"> - Social justice model: “emphasizes students, service learning and community empowerment.” In the social justice model, the collaboration with (socially excluded) communities, their empowerment and to have an impact are at the heart of activities. In this model, the focus is more on teaching. - Economic development model: This model is more oriented towards knowledge transfer and creating innovations that support (regional) stakeholders in solving problems or furthering social change. Thus, here the focus is on research. - Public good model: This model would aim to embed social engagement in higher education institutions' activity areas. The model assumes that these institutions are strongly embedded in their closer and wider environment and engage in vivid relationships (with regional) public and social sector organisations. This collaboration would permeate all activities, contributing to the public good and social change would be their central focus. <p>These three models can help higher education institutions to select a structured approach when engaging in social entrepreneurship as selecting a focus can help designing a coherent and efficient strategy.</p>
The goal	<ul style="list-style-type: none"> - Selecting a clear-cut orientation of social entrepreneurship activities can help institutions develop focused strategies and activities and stimulate support from staff, students, and (regional) stakeholders. - When implementing or promoting social entrepreneurship, leadership of higher education institutions need to be aware of potential clashes between social entrepreneurship and academic values, as these can be at odds. - As social entrepreneurship will generate more immaterial values than funds and additional income, the values underlying social entrepreneurship need to be communicated clearly to generate support and legitimacy.
Examples of interventions at institutional level	<p>There are very different interventions that can create social entrepreneurship values in higher education institutions, a set of selected interventions will be explained in detail in the section “interventions” of this inspiration fiche. Providing information on social entrepreneurship, as good practice examples or developing knowledge and capacity in staff and students, including social engagement in the mission strategies of universities can start up the process.</p>

Title	Create social entrepreneurship culture
Other relevant resources	<p>Benneworth, Paul; Culum, B.; Farnell, T.; Kaiser, F.; Seeber, M.; Scukanec, N. et al. (2018): Mapping and Critical Synthesis of Current State-of-the Art on Community Engagement in Higher Education. Zagreb.</p> <p>Reichert, Sybille (2019): The Role of Universities in Regional Innovation Ecosystems. European University Association. Brussels (EUA Study).</p>
Links to selected HEInnovate case studies	- Not covered in HEInnovate
Further reading	<p>Apostolakis, Christos (2011): The role of higher education in enhancing social entrepreneurship. In <i>IJSEI</i> 1 (2), p. 124. DOI: 10.1504/IJSEI.2011.043739.</p> <p>Cinar, Ridvan (2019): Delving into social entrepreneurship in universities: is it legitimate yet? In <i>Regional Studies, Regional Science</i> 6 (1), pp. 217–232. DOI: 10.1080/21681376.2019.1583602.</p> <p>Cunha, Jorge; Benneworth, Paul; Oliveira, Pedro (2015): Social Entrepreneurship and Social Innovation. In Patricia Ordóñez de Pablos, Luís M. Carmo Farinha, João J. M. Ferreira, Helen Lawton Smith, Sharmistha Bagchi-Sen (Eds.): <i>Handbook of Research on Global Competitive Advantage through Innovation and Entrepreneurship</i>: IGI Global (Advances in Business Strategy and Competitive Advantage), pp. 616–639.</p> <p>Hazelkorn, Ellen (2016): Contemporary debates part 2: initiatives, governance, and organisational structures. In J. B. Goddard, Ellen Hazelkorn, Louise Kempton, Paul Vallance (Eds.): <i>The civic university. The policy and leadership challenges</i>. Cheltenham UK: Edward Elgar Publishing, pp. 65–93.</p> <p>Roslan, Muhammad Hamirul Hamizan; Hamid, Suraya; Ijab, Mohamad Taha; Yusop, Farrah Dina; Norman, Azah Anir (2020): Social entrepreneurship in higher education: challenges and opportunities. In <i>Asia Pacific Journal of Education</i>, pp. 1–17. DOI: 10.1080/02188791.2020.1859354.</p>
Links to further Tiles	<p>➔ 5: Incentives for students and staff</p> <p>➔ 6: Capacity building</p> <p>➔ 7: Create/adapt infrastructure – Living labs</p> <p>➔ 8: Identify/nurture collaboration opportunities</p>

Tile 2: Identify opportunities for collaboration

Title	Identify opportunities for collaboration
Introduction/Background	<p>When engaging in social entrepreneurship higher education institutions aim to contribute to social value and social change. Higher education institutions need to become aware of societal needs, which actors either need support or would like to collaborate. Also, higher education institutions need to develop capacity in raising funds and resources to support their social engagement.</p> <p>Identifying opportunities is determined by the social entrepreneurship/community engagement model the higher education institution selects. For example, universities which engage in social justice models should investigate how their educational activities can contribute to regional development and bettering of excluded groups. On the other hand, institutions devoted to economic development should engage in (social) innovations and knowledge transfer that better living conditions in regions (housing, environmental issues etc.).</p>
The goal	<p>The challenge related to identifying opportunities for collaboration for universities lies in finding opportunities that match with the university's engagement mission and capacity. Depending on their institutional profile, HEIs that are more engaged in education will contribute stronger to the regional development when educating graduates with transdisciplinary skills for solving wicked problems. Higher education institutions with a strong research record will be more likely to support social change with technical solutions and social innovations. Selecting opportunities to which higher education institutions can contribute significantly will secure support of external stakeholders in the long run.</p> <p>The successful identification of collaboration opportunities thus depends on a clear institutional awareness of its strengths and weaknesses and demands and needs for regional development and stakeholders from the (regional) social sector.</p>
Examples of interventions at institutional level	<p>Institutional interventions that support the identification of opportunities include:</p> <ul style="list-style-type: none"> - Defining clear mission of social entrepreneurship engagement - Self-assessment of institutional capacities in collaboration with regional stakeholders (e.g., using HEInnovate, the TEFCE

Title	Identify opportunities for collaboration
	<p>toolbox, or the Value Proposition Canvas Workshop Format as suggested by BeyondScale)</p> <ul style="list-style-type: none"> - Exploring needs of regional stakeholders from the social sector - Scan of the regional social market
Other relevant resources	<p>www.tefce.eu - includes the TEFCE toolbox</p> <p>www.heinnovate.eu</p> <p>www.beyondscale.eu – includes the VPC workshop format</p>
Links to selected HEInnovate case studies	<ul style="list-style-type: none"> - Not covered by HEInnovate case studies
Further reading	<p>Cheah, Sarah; Ho, Yuen-Ping (2019): Building the Ecosystem for Social Entrepreneurship: University Social Enterprise Cases in Singapore. In <i>Science, Technology and Society</i> 24 (3), pp. 507–526. DOI: 10.1177/0971721819873190.</p> <p>Lepik, Katri-Liis; Urmanavičienė, Audronė (2022): The Role of Higher Education Institutions in Development of Social Entrepreneurship: The Case of Tallinn University Social Entrepreneurship Study Program, Estonia. In Carmen Păunescu, Katri-Liis Lepik, Nicholas Spencer (Eds.): <i>Social Innovation in Higher Education. Landscape, Practices, and Opportunities</i>. 1st ed. 2022. Cham: Springer International Publishing; Imprint Springer (Springer eBook Collection), pp. 129–151.</p> <p>Roslan, Muhammad Hamirul Hamizan; Hamid, Suraya; Ijab, Mohamad Taha; Yusop, Farrah Dina; Norman, Azah Anir (2020): Social entrepreneurship in higher education: challenges and opportunities. In <i>Asia Pacific Journal of Education</i>, pp. 1–17. DOI: 10.1080/02188791.2020.1859354.</p>
Links to further Tiles	<ul style="list-style-type: none"> ➔ 1: Create entrepreneurship culture ➔ 5: Incentives for students and staff ➔ 6: Capacity building ➔ 7: Create/adapt infrastructure – Living labs ➔ 8: Identify/nurture collaboration opportunities

Tile 3: Identify skill needs in the social sector

Title	Identify skill needs in the social sector
Introduction/Background	<p>Social entrepreneurs need a specific skill set which enables them to contribute to solve social problems and achieving social change. While there is no standardized set of skills, research has shown that disciplinary skills are frequently too limited to solve social problems (Durking and Gunn 2017). For example, the development and implementation of technical innovations to solve environmental problems also must consider how these changes will affect social communities. Also, social innovations that aim to include socially disadvantaged groups should consider the multiple effects such interventions have and accompanying measures to effectively implement the intervention.</p> <p>Identifying skill needs in labour markets and adapting educational activities to best prepare students for future careers is already challenging for higher education institutions in business or industry sectors. Relating to the social sector is even more challenging to them due to transdisciplinary character of social problems but also because of the social sectors organisations' difficulties to specify their skill needs. Some higher education institutions also lack insights into their (regional) social sectors as they did not yet develop an extensive ecosystem including social organisations.</p>
The goal	<p>For higher education institutions that want to address skill needs in the social sectors or social entrepreneurship, it is crucial to develop organisational structure or roles that collect information about these needs. Hazelkorn (2016, p. 84ff) and Benneworth et al (2013, p. 91, 95ff) make several suggestions for these structures and roles.</p> <p>It is important that these bodies can identify generic skill needs that can be applied in solving a wide range of social problems.</p>
Examples of interventions at institutional level	<ul style="list-style-type: none"> - Revisit skills frameworks: Entrecomp, etc. - Establishment of specialised unit such transfer offices or corporate liaisons offices - Corporate partnerships with social sector organisations - Engaging companies that scan regional skill requirements, such as abodoo.com
Other relevant resources	<p>The European Entrepreneurship Competence Framework: Entrecomp</p> <p>www.ec.europa.eu/social/main.jsp?catId=1317&langId=en</p>

Title	Identify skill needs in the social sector
	OECD (2021): Building Local Ecosystems for Social Innovation. A Methodological Framework. OECD. Paris (OECD Local Employment and Economic Development (LEED) Papers).
Links to selected HEInnovate case studies	- Not covered by HEInnovate
Further reading	<p>Benneworth, Paul; Charles, David; Hodgson, Catherine; Humphrey, Lynne (2013): The Relationship of Community Engagement with Universities' Core Missions. In Paul Benneworth (Ed.): University Engagement with Socially Excluded Communities. Dordrecht: Springer Netherlands, pp. 85–101.</p> <p>Durkin, Chris; Gunn, Robert (2017): Social entrepreneurship. Skills approach. Second edition. Bristol, UK: Policy Press.</p> <p>Hazelkorn, Ellen (2016): Contemporary debates part 2: initiatives, governance and organisational structures. In J. B. Goddard, Ellen Hazelkorn, Louise Kempton, Paul Vallance (Eds.): The civic university. The policy and leadership challenges. Cheltenham UK: Edward Elgar Publishing, pp. 65–93.</p> <p>Montes-Martínez, Ruth; Ramírez-Montoya, María Soledad (2020): Training in Entrepreneurship Competences, Challenges for Educational Institutions: Systematic Literature Review. In Francisco José García-Peñalvo (Ed.): Eighth International Conference on Technological Ecosystems for Enhancing Multiculturality. With assistance of Alicia García-Holgado. TEEM'20: Eighth International Conference on Technological Ecosystems for Enhancing Multiculturality. Salamanca Spain, 21 10 2020 23 10 2020. New York, NY, United States: Association for Computing Machinery (ACM Digital Library), pp. 358–364.</p> <p>Smith, Wendy K.; Besharov, Marya L.; Wessels, Anke K.; Chertok, Michael (2012): A Paradoxical Leadership Model for Social Entrepreneurs: Challenges, Leadership Skills, and Pedagogical Tools for Managing Social and Commercial Demands. In <i>AMLE</i> 11 (3), pp. 463–478. DOI: 10.5465/amle.2011.0021.</p>
Links to further Tiles	<p>➔ 6: Capacity building</p> <p>➔ 7: Create/adapt infrastructure – Living labs</p> <p>➔ 8: Identify/nurture collaboration opportunities</p>

Tile 4: Stimulate staff and student engagement

Title	Stimulate staff and student engagement
Introduction/Background	<p>Engagement to contribute to social change or to solving social problems links to certain intentions of individuals, frequently these are referred to as altruistic motives or motivations. These intentions lead individuals to commit themselves to collective goals and voluntary work that only brings indirect or even none benefits. Therefore, intentions for social entrepreneurship differ from intentions for ‘classical’ entrepreneurship, which is stimulated by self-interest.</p> <p>When promoting social entrepreneurship higher education institutions might face the problem that staff, and students might be reluctant to engage in these areas due to a lack of understanding. Frequently, staff and students from less business-oriented programmes and disciplines perceive entrepreneurship negatively as not matching their intentions.</p>
The goal	<p>When promoting social entrepreneurship higher education institutions should create a shared understanding of what social entrepreneurship is, and this understanding should relate to staff and students’ intentions to stimulate their engagement. Further, higher education institutions should also create language regulations that represent the character of social entrepreneurship.</p>
Examples of interventions at institutional level	<ul style="list-style-type: none"> - Information campaigns - Good practice examples - Surveying staff and student’s intentions for engagement
Other relevant resources	n/a
Links to selected HEInnovate case studies	<ul style="list-style-type: none"> - Not covered in HEInnovate
Further reading	<p>Ahuja, Vivek; Akhtar, Asif; Wali, O. P. (2019): Development of a comprehensive model of social entrepreneurial intention formation using a quality tool. In <i>J Glob Entrepr Res</i> 9 (1). DOI: 10.1186/s40497-019-0164-4.</p> <p>Bazan, Carlos; Gaultois, Hannah; Shaikh, Arifusalam; Gillespie, Katie; Frederick, Sean; Amjad, Ali et al. (2020): A systematic literature review of the influence of the university’s environment and support</p>

Title	Stimulate staff and student engagement
	<p>system on the precursors of social entrepreneurial intention of students. In <i>J Innov Entrep</i> 9 (1). DOI: 10.1186/s13731-020-0116-9.</p> <p>Kruse, Philipp (2020): Can there only be one? – an empirical comparison of four models on social entrepreneurial intention formation. In <i>Int Entrep Manag J</i> 16 (2), pp. 641–665. DOI: 10.1007/s11365-019-00608-2.</p>
Links to further Tiles	<ul style="list-style-type: none"> ➔ 5 Incentives for students and staff ➔ 6 Capacity building

Interventions

Tile 5: Incentives for students and staff

Title	Incentives for students and staff
Introduction/ Background	Incentives are often used to stimulate staff and students to perform a wanted behaviour they would not show otherwise. Social entrepreneurship frequently requires students and staff to engage for collective goals not linked to their benefits and not to 'traditional' academic goals such as publishing or graduating. Therefore, engagement for these collective goals might be hampered or limited. Incentives that provide individuals gains when performing social entrepreneurship can stimulate staff and students.
The goal	Incentives for social entrepreneurship engagement aim at integrating it into the portfolio of academic behaviour.
Examples of interventions at institutional level	<p>Incentives for staff:</p> <ul style="list-style-type: none"> - Community engagement as a promotion criterion Academic careers are mostly determined by research achievements, while other areas such education and community engagement are not relevant for promotion. Defining promotion criteria that recognise community engagement can stimulate this behaviour. - Frequently, academic staff does not have sufficient knowledge on how they can engage in their region, find collaboration partners, or employ their research and educational activities to support social organisations. Learning about these types of opportunities and seeing their work being applied in social change can support them to engage in social entrepreneurship. Higher education institution can support them through information, training and offering structures such as liaison or knowledge transfer offices. - Recognizing social entrepreneurship of staff through awards and prizes - Providing additional funds for collaboration with social sector organisations <p>Incentive for students</p> <ul style="list-style-type: none"> - Enhancing employability through service learning or collaborative research projects with the social sectors - Support for start-ups in the social sector
Other relevant resources	n/a
Links to selected	- Not covered in HEInnovate

Title	Incentives for students and staff
HEInnovate case studies	
Further reading	<p>Ahoba-Sam, Rhoda (2019): Why do academics engage locally? Insights from the University of Stavanger. In <i>Regional Studies, Regional Science</i> 6 (1), pp. 250–264. DOI: 10.1080/21681376.2019.1583600.</p> <p>Kopelyan, Sofya (2018): Academic ‘boundary work’ in a regionally engaged university. RUNIN Network (Working Paper of the RUNIN Network, 10). Available online at https://ris.utwente.nl/ws/portalfiles/portal/62099279/Kopelyan2018academic.pdf.</p> <p>Waghid, Zayd (2017): Cultivating social entrepreneurial capacities in students through film: implications for social entrepreneurship education. In <i>Educ. res. soc. change</i> 6 (2), pp. 76–100. DOI: 10.17159/2221-4070/2017/v6i2a6.</p>
Links to further Tiles	➔ 12 Motivation

Tile 6: Capacity building

Title	Capacity building
Introduction/ Background	<p>In general terms capacity building refers to organisational development of higher education institutions to ensure that they are able to deliver on their mission.</p> <p>This includes foremost that higher education institutions consciously select and establish interventions, roles, and structures that help to realise their selected goals.</p> <p>Higher education institutions can select from different engagement models (social justice, economic or public good model – see tile “Create culture of social entrepreneurship) – when planning their organisational development activities their selections should be oriented towards these models.</p>
The goal	<p>Capacity building should consider the selected mission for social entrepreneurship. The goal is to select appropriate measures and interventions and to avoid misguided investments.</p>
Examples of interventions at institutional level	<p>Interventions relevant to the social justice model</p> <ul style="list-style-type: none"> - Differentiating leadership roles such as Vice-president for diversity and social inclusion - Implementation of service learning (including the training of teachers) - Establishment of access and social inclusion units to support students from non-traditional backgrounds - Teaching and learning units to support teachers <p>Interventions relevant to the economic model</p> <ul style="list-style-type: none"> - Differentiating leadership roles such as Vice-president for knowledge transfer and regional engagement - Provide (financial) support for collaborative research projects with (regional) social sector organisations - Establishment/Amendment of knowledge transfer offices to sustain collaboration with the social sector <p>Interventions relevant to the public good model</p> <ul style="list-style-type: none"> - Forster a strong social entrepreneurship culture – community engagement permeates all institutional activities - Establishment of a matrix organisation – all activities have to address ‘traditional’ standards but must also be relevant for regional development or the social community - Creation of a dense ecosystem with public organisations and other social organisations that allows the higher education institution to participate in regional planning and other social initiatives

Title	Capacity building
Other relevant resources	CEE program: Service-learning promotion network for Central and Eastern Europe, https://www.clayss.org.ar/CEE/index_1.html EASLHE – European Association for Service Learning in Higher Education https://www.eoslhe.eu/easlhe/
Links to selected HEInnovate case studies	- Not covered in HEInnovate
Further reading	<p>Benneworth, Paul; Charles, David; Hodgson, Catherine; Humphrey, Lynne (2013): The Relationship of Community Engagement with Universities' Core Missions. In Paul Benneworth (Ed.): University Engagement with Socially Excluded Communities. Dordrecht: Springer Netherlands, pp. 85–101.</p> <p>Hampton Holland, Joseph; George, Phillis L.; Nelson, Karson M. (2019): Building a Service Corps: Using Capacity Building Strategies to Promote Service-Learning and Social Entrepreneurship within a Higher Education Consortium. In <i>Partnership: A Journal of Service-Learning & Civic Engagement</i> 10 (2), pp. 208–228.</p> <p>Hazelkorn, Ellen (2016): Contemporary debates part 2: initiatives, governance and organisational structures. In J. B. Goddard, Ellen Hazelkorn, Louise Kempton, Paul Vallance (Eds.): The civic university. The policy and leadership challenges. Cheltenham UK: Edward Elgar Publishing, pp. 65–93.</p>
Links to further Tiles	➔ 11 Building capacity with knowledge

Tile 7: Create/adapt infrastructure – Living labs

Title	Create/adapt infrastructure – living labs
Introduction/ Background	<p>Embedding social entrepreneurship requires higher education institution to create and adapt infrastructures so that they can also provide a physical space to it. Many higher education institutions have already done this for entrepreneurship, e.g., through the establishment of incubators, office space for spin-offs and start-ups, centres for entrepreneurship or special units for entrepreneurship.</p> <p>While these infrastructures can also be used for social entrepreneurship activities, some higher education institutions have also established special facilities that host meetings of staff and students with representatives of regional social organisations. In some cases, these facilities provide specific equipment that enables participant to work together creatively. In these “Living Labs” researchers, students and representatives of social organisations work together to develop social innovations addressing social problems in the region.</p> <p>In living labs people can collaborate under real-work conditions and co-create solutions and interventions for goals. Currently, several European higher education institutions engage in implementing living labs, while other already work with them for some time.</p> <p>Living labs are often used for developing social innovations in the sustainability area.</p>
The goal	<p>Living labs represent a special infrastructure that aims at facilitating collaboration and co-creation with the social sector. Providing it as a physical space for social entrepreneurship shows its significance to the institutional environment.</p>
Examples of interventions at institutional level	<p>Living labs are often defined as real-life laboratories in which scientist and stakeholders from civil society collaborate. Living labs are strongly user-oriented, with a focus on multidisciplinary, experimentation and peer-learning. Frequently, major processes of living labs have been described as co-creation, exploration, experimentation, and evaluation with regard to finding solutions to social problems.</p>
Other relevant resources	<p>https://enoll.org/ - European Network of Living Labs</p> <p>https://enoll.org/toolkits/ provides toolkits for selected living lab processes</p>

Title	Create/adapt infrastructure – living labs
Links to selected HEInnovate case studies	- Not covered
Further reading	<p>Plummer, Ryan; Witkowski, Samantha; Smits, Amanda; Dale, Gillian (2022): Higher Education Institution–Community Partnerships: Measuring the Performance of Sustainability Science Initiatives. In <i>Innov High Educ</i> 47 (1), pp. 135–153. DOI: 10.1007/s10755-021-09572-8.</p> <p>Thees, Hannes; Pechlaner, Harald; Olbrich, Natalie; Schuhbert, Arne (2020): The Living Lab as a Tool to Promote Residents’ Participation in Destination Governance. In <i>Sustainability</i> 12 (3), p. 1120. DOI: 10.3390/su12031120.</p> <p>van den Heuvel, Renée; Braun, Susy; Bruin, Manon de; Daniels, Ramon (2021): A Closer Look at Living Labs and Higher Education using a Scoping Review. In <i>Technology Innovation Management Review</i> 11 (9/10), pp. 30–46.</p> <p>Nguyen, Huong Thu; Marques, Pilar (2021): The promise of living labs to the Quadruple Helix stakeholders: exploring the sources of (dis)satisfaction. In <i>European Planning Studies</i>, pp. 1–20. DOI: 10.1080/09654313.2021.1968798.</p>
Links to further Tiles	<p>➔ 9: Funding</p> <p>➔ 11: Building capacity with knowledge</p> <p>➔ 12: Motivation</p>

Tile 8: Identify/nurture collaboration opportunities

Title	Identify/nurture collaboration opportunities
Introduction/ Background	<p>When engaging in social entrepreneurship need to be aware in which areas they can support and collaborate with the social sector. A self-assessment in collaboration with stakeholders can provide insights in strengths and weaknesses and point to potential engagement areas.</p> <p>However, establishing an ecosystem with the social sector is to some extent comparable to setting up a network for business collaboration. First steps involve a scan of the social sector to explore needs and demands related to regional development. Major differences to university-business ecosystems lie in:</p> <ul style="list-style-type: none"> - Funding – social sector organisations frequently face scarce resources which make it difficult to invest in research and collaboration with higher education institutions (Cheah and Ho 2019). Therefore, higher education institutions have to be aware that they might need to invest in these collaborations, e.g., their own funds or voluntary work of staff and students - The TEFCE project highlighted that community engagement requires higher education institutions to base their collaboration on certain principles that help establishing good working relationships (Benneworth et al 2018, p. 145-146). These principles point out that <ul style="list-style-type: none"> o Authentic commitment to community engagement o Empowerment of individual academics and other actors o Allowing ‘end- ‘users to evaluate the value of the academic engagement o Highlighting the collaborative learning <p>are beneficial to establishing an enduring and well-functioning ecosystem with regional social communities or the social sector.</p>
The goal	<p>Identifying opportunities and nurturing the collaboration with the social sector should contribute to sustainable ecosystems with the social sector. These ecosystems should benefit social sector organisation, the region, the higher education institution and its internal stakeholders, staff, and students. Sustainable ecosystems can contribute to securing and heightening the status of the higher education institution as a relevant socially, embedded actor.</p>
Examples of interventions at institutional level	<ul style="list-style-type: none"> - Establish open innovation models and engage in co-creation In essence open innovation models refer to opening innovation processes to external communities and include them in the development of social innovations. Living labs (see tile on living

Title	Identify/nurture collaboration opportunities
	<p>labs) can provide space for exchanging and collaborating with relevant stakeholder groups.</p> <ul style="list-style-type: none"> - Connective leadership The term connective leadership refers to leaders who are well embedded in regional networks and have agile/vivid relationships with the social sector. Case studies have shown rectors or presidents of higher education institutions who actively engage with the social sector can bring about major contributions to regional (social) innovations and strengthen the institution's relationship with the sector (Reichert 2019, p. 67ff) - Self-assessment of strength and weaknesses of performance of higher education institution in collaboration with regional stakeholders (see also tile "opportunity identification")
Other relevant resources	Reichert, Sybille (2019): The Role of Universities in Regional Innovation Ecosystems. European University Association. Brussels (EUA Study).
Links to selected HEInnovate case studies	<ul style="list-style-type: none"> - Not covered by HEInnovate
Further reading	<p>García-González, Abel; Ramírez-Montoya, María Soledad (2019): Higher education for social entrepreneurship in the quadruple helix framework. In Miguel Ángel Conde González (Ed.): Proceedings of the Seventh International Conference on Technological Ecosystems for Enhancing Multiculturality. With assistance of Francisco Jesús Rodríguez Sedano, Camino Fernández Llamas, Francisco José García-Peñalvo. TEEM'19: Technological Ecosystems for Enhancing Multiculturality. León Spain, 16 10 2019 18 10 2019. New York, NY, United States: Association for Computing Machinery (ACM Digital Library), pp. 925–929.</p> <p>Yun, JinHyo Joseph; Zhao, Xiaofei; Jung, KwangHo; Yigitcanlar, Tan (2020): The Culture for Open Innovation Dynamics. In <i>Sustainability</i> 12 (12), p. 5076. DOI: 10.3390/su12125076.</p>
Links to further Tiles	<ul style="list-style-type: none"> ➔ 2 Identify opportunities for collaboration ➔ 9 Funding ➔ 10 Leadership

Input

Tile 9: Funding

Title	Funding
Introduction/ Background	<p>The generation of funds and other resources that enable social entrepreneurship engagement of higher education institutions is the most crucial input. However, raising funds for social entrepreneurship is difficult for two reasons: the scarcity of resources that are available for the social sector and the difficulty to show the return on investment for social innovations. Compared to technological innovations for which revenues in terms of generated income can more easily be identified, for social innovations their social impact or they capacity to contribute to solving social problem or to social change has to be determined. This social impact however is difficult to define as benefits cannot be easily measured and are demonstrated differently by the involved stakeholder group. Difficulties in demonstrating the social impact of community engagement can create vicious circles when it comes to securing funding. Though the social innovation might have revealed its ends, the funding could discontinue as outcomes and impacts are not well defined (Roslan et al 2020, p. 9; Benneworth and Jongbloed 2013).</p> <p>Developing frameworks that support measuring the social impact of social entrepreneurship activities and disseminating these results could secure long-term funding for higher education institutions (Jongbloed and Benneworth 2013).</p>
Relevance of input	<p>Like ‘mainstream’ entrepreneurship also for social entrepreneurship sufficient and continuous funding is indispensable for embedding it with a long-term perspective.</p> <p>To secure funding higher education institutions need to diversify their income streams and identify new money streams, through fund raising initiatives and liaising with (local) donors. Also, forming networks collaborative (research) projects in which higher education institutions and social sector organisations share infrastructures can increase the return on the investment. In addition, voluntary work of staff and students forms a further important resource which will make social entrepreneurship possible. To stimulate staff and students, higher education institutions need to link to their motivations (see tile on motivations)</p>

Title	Funding
Examples of interventions at institutional level	<ul style="list-style-type: none"> - Fund raising - Collaborative/shared infrastructure - Implementing frameworks for measuring social impact
Other relevant resources	<p>Jonkers, Koen; Tijssen, Robert; Karvounaraki, Athina; Goenaga, Xabier (2018): A Regional Innovation Impact Assessment Framework for Universities.</p> <p>Jongbloed, Ben; Benneworth, Paul (2013): Learning from History. Previous Attempts to Measure Universities' Community Impacts. In Paul Benneworth (Ed.): University Engagement with Socially Excluded Communities. Dordrecht: Springer Netherlands, pp. 263–283.</p>
Links to selected HEInnovate case studies	<ul style="list-style-type: none"> - Not covered in HEInnovate
Further reading	<p>Ahuja, Vivek; Akhtar, Asif; Wali, O. P. (2019): Development of a comprehensive model of social entrepreneurial intention formation using a quality tool. In <i>J Glob Entrepr Res</i> 9 (1). DOI: 10.1186/s40497-019-0164-4.</p> <p>Bazan, Carlos; Gaultois, Hannah; Shaikh, Arifusalam; Gillespie, Katie; Frederick, Sean; Amjad, Ali et al. (2020): A systematic literature review of the influence of the university's environment and support system on the precursors of social entrepreneurial intention of students. In <i>J Innov Entrep</i> 9 (1). DOI: 10.1186/s13731-020-0116-9.</p> <p>Reichert, Sybille (2019): The Role of Universities in Regional Innovation Ecosystems. European University Association. Brussels (EUA Study).</p> <p>Roslan, Muhammad Hamirul Hamizan; Hamid, Suraya; Ijab, Mohamad Taha; Yusop, Farrah Dina; Norman, Azah Anir (2020): Social entrepreneurship in higher education: challenges and opportunities. In <i>Asia Pacific Journal of Education</i>, pp. 1–17. DOI: 10.1080/02188791.2020.1859354.</p>
Links to further tiles	<ul style="list-style-type: none"> ➔ 15 Lack of funding ➔ 12 Motivation

Tile 10: Leadership

Title	Leadership
Introduction/ Background	<p>Research states that management and leadership styles are key to implementing community engagement or social entrepreneurship in higher education institutions. Hazelkorn (2016) suggests that depending on the selected institutional model of social entrepreneurship, institutional governance structures could include leadership positions for the specific tasks or that the tasks portfolio of these positions should be amended by these tasks. In any case leadership support is seen as a major input for fostering social entrepreneurship in higher education institutions as it signifies its relevance and indicates support to students and staff engaging in these areas.</p>
Relevance of input	<p>The engagement of leadership for social entrepreneurship is relevant as</p> <ul style="list-style-type: none"> - it contributes to creating a culture of social entrepreneurship and community engagement in the higher education institutions. - Leaders who engage in these areas provide strong good practice examples that can stimulate staff and students to also engage in these activities. - Leaders supporting engagement strengthen its relevance and increase its legitimacy. - Engaged leaders can mobilise funds and further resources from internal and external stakeholders and donors.
Examples of interventions at institutional level	<p>The literature provides several models of leadership for social entrepreneurship:</p> <ul style="list-style-type: none"> - Embedded leadership (Powell and Dayson 2013) <p>This model zooms in on the internal processes of higher education institutions. Central to the concept is the creation of middle management roles (such as associate deans at faculty level) who are commissioned with specific tasks to promote social entrepreneurship and social engagement. The task include:</p> <ul style="list-style-type: none"> ○ Sharing, refining, and embedding the general vision of social entrepreneurship/community engagement in the institution ○ Spreading knowledge and ideas around the topic ○ Support academic staff implementing entrepreneurship in their research and education and serve as problem solvers <ul style="list-style-type: none"> - Connective leadership (Reichert 2019)

Title	Leadership
	<p>This model points to managers from the top level of the higher education institutions engaging or collaborating actively with regional stakeholders. Their activities are strong good practice exemplars for internal stakeholders as well as regional, external stakeholders who are interested in collaborating/innovating with the higher education institution.</p> <ul style="list-style-type: none"> - Distributed leadership (Cannatelli et al 2017) <p>In distributed leadership models, leadership is defined by performed task and not by position. Thus, any person who engages in social entrepreneurship in an institution can serve as a leader in this area. However, institutions must be able to identify these persons and support them in collaborating with others and exploiting their expertise.</p> <ul style="list-style-type: none"> - Cultural leadership (Muralidharan and Pathak 2019) <p>Cultural leadership finally focusses on how staff evaluates the social entrepreneurship behaviour of leaders against their (cultural) stereotypes of good social entrepreneurship behaviour. Positive evaluations might stimulate a similar behaviour. However, management interventions could relate to these stereotypes to stimulate copying behaviour and wider acceptance of social entrepreneurship activities.</p>
Other relevant resources	N/A
Links to selected HEInnovate case studies	<ul style="list-style-type: none"> - Not covered by HEInnovate
Further reading	<p>Cannatelli, Benedetto; Smith, Brett; Giudici, Alessandro; Jones, Jessica; Conger, Michael (2017): An Expanded Model of Distributed Leadership in Organizational Knowledge Creation. In <i>Long Range Planning</i> 50 (5), pp. 582–602. DOI: 10.1016/j.lrp.2016.10.002.</p> <p>Muralidharan, Etayankara; Pathak, Saurav (2019): Consequences of Cultural Leadership Styles for Social Entrepreneurship: A Theoretical Framework. In <i>Sustainability</i> 11 (4), p. 965. DOI: 10.3390/su11040965.</p> <p>Powell, James; Dayson, Karl (2013): Engagement and the Idea of the Civic University. In Paul Benneworth (Ed.): <i>University Engagement</i></p>

Title	Leadership
	<p>with Socially Excluded Communities. Dordrecht: Springer Netherlands, pp. 143–162.</p> <p>Reichert, Sybille (2019): The Role of Universities in Regional Innovation Ecosystems. European University Association. Brussels (EUA Study).</p>
Links to further tiles	<p>➔ 12 Motivation</p> <p>➔ 13 Disapproval of entrepreneurship among staff and students</p>

Tile 11: Building capacity with knowledge

Title	Building capacity with knowledge
Introduction/ Background	<p>Embedding social entrepreneurship in higher education institutions requires them to establish adequate structures that match its selected social entrepreneurship culture. Knowledge and data can support the institutions in creating these structures.</p> <p>While social entrepreneurship can be a novel engagement area to higher education institutions there is also the chance that academic staff and students has already developed tacit and explicit knowledge about it. Frequently, these knowledge resources remain at the level of the individuals and are exploited with the institutional context. Exploring and tapping these knowledge resources and experiences can support higher education institutions in selecting and developing matching structures.</p>
Relevance of input	<ul style="list-style-type: none"> - The embedding of social entrepreneurship can mean a significant investment for the higher education institution. Interventions that do not match well with experiences and interests of staff and students can lead to malinvestment and a lack of acceptance. The tacit and explicit knowledge of staff and students represents an important orientation for designing an effective social entrepreneurship strategy. Including these can secure their support.
Examples of interventions at institutional level	<p>To mobilise this knowledge higher education institutions can employ different instruments. However, in the literature knowledge mobilisation is hardly addressed as an intervention that can support capacity building for social entrepreneurship in higher education institution. However, research on other professional organisations such as health care organisations pointed out that mobilising knowledge from staff should consider the following (Kislov, Waterman and Boaden 2014)</p> <ul style="list-style-type: none"> - Rather than building a capacity the process should be understood as developing capacity - Involving staff as active participant who contribute to a collaborative project rather than treating them as passive recipients of established instruments secure high acceptance of new strategies and processes - Besides mechanism to explore the tacit and explicit knowledge of staff, institutions should exploit this knowledge and upscale it/disseminate across the whole organisations (see also Kolster 2021) - Collective learning should complement individual learning.

Title	Building capacity with knowledge
Other relevant resources	n/a
Links to selected HEInnovate case studies	- Not covered in HEInnovate.
Further reading	<p>Kolster, Renze (2021): Structural ambidexterity in higher education: excellence education as a testing ground for educational innovations. In <i>European Journal of Higher Education</i> 11 (1), pp. 64–81. DOI: 10.1080/21568235.2020.1850312.</p> <p>Nichols, Naomi; Phipps, David J.; Provencal, Johanne; Hewitt, Allyson (2013): Knowledge Mobilization, Collaboration and Social Innovation: Leveraging Investments in Higher Education. In <i>Canadian Journal of Nonprofit and Social Economy Research</i> 4 (1), pp. 25–42.</p> <p>Tremblay, Crystal; Hall, Budd L. (2014): Learning form community-university partnerships: A Canadian study on community impact and conditions for success. In <i>International Journal of Action Research</i> 10 (3), pp. 376–404.</p>
Links to further tiles	➔ 12 Motivation

Tile 12: Motivation

Title	Motivation
Introduction/ Background	Institutional interventions that aim at stimulating academic staff and students to engage in social entrepreneurship need to address their motivation. In this respect, intrinsic and extrinsic motivations are distinguished. Intrinsic motivation relates to those internal beliefs that drive individuals' engagement, extrinsic motivation mostly relates to incentives that individuals find attractive or would like to gain. Finding the right incentives and linking cultures and values to the internal beliefs of academic staff and students will make their engagement for social entrepreneurship more likely.
Relevance of input	<ul style="list-style-type: none"> - The motivation of academic staff and students to engage in social entrepreneurship activities is crucial for the success of institutional attempts to embed social entrepreneurship. A mismatch between institutional incentives or cultural values and beliefs and expected benefits related to community engagement on the side of staff and students can lead to their disengagement and a disapproval of institutional interventions.
Examples of interventions at institutional level	<p>Some studies suggest list of entrepreneurial values of staff and students (see for example Bicknell 2010), these can inspire a mapping of their beliefs to inform institutional strategies</p> <p>Incentives include the following:</p> <p>A systematic review summarises the following incentive categories as having a positive effect on the motivation of academic staff (Neves and Brito 2020):</p> <ul style="list-style-type: none"> - Career related <ul style="list-style-type: none"> o Promotion and career progress o Advancing in research o More tangible resources accessible o More research funding - Personal development <ul style="list-style-type: none"> o Increase in learning o Joy and challenge o Curiosity - Pecuniary factors <ul style="list-style-type: none"> o Increase of personal income - Moral <ul style="list-style-type: none"> o Moral obligation or duty <p>In a study on service learning, Mueller et al (2015) found that students' motivations culminate around:</p> <ul style="list-style-type: none"> - Having impact on social change

Title	Motivation
	<ul style="list-style-type: none"> - Match between activity and personal interests and beliefs - Balancing social and economic aspects of entrepreneurial actions
Other relevant resources	N/A
Links to selected HEInnovate case studies	<ul style="list-style-type: none"> - Not covered by HEInnovate
Further reading	<p>Bicknell, Ann; Francis-Smythe, Jan; Arthur, Jane (2010): Knowledge transfer: de-constructing the entrepreneurial academic. In <i>International Journal of Entrepreneurial Behavior & Research</i> 16 (6), pp. 485–501. DOI: 10.1108/13552551011082461.</p> <p>Mueller, Susan; Brahm, Taiga; Neck, Heidi (2015): Service Learning in Social Entrepreneurship Education: Why Students Want to Become Social Entrepreneurs and How to Address Their Motives. In <i>J. Enterprising Culture</i> 23 (03), pp. 357–380. DOI: 10.1142/S0218495815500120.</p> <p>Neves, Sara; Brito, Carlos (2020): Academic entrepreneurship intentions: a systematic literature review. In <i>JMD</i> 39 (5), pp. 645–704. DOI: 10.1108/JMD-11-2019-0451.</p>
Links to further tiles	➔ 14 Disapproval of entrepreneurship

Problems/Barriers/Solutions

Tile 13: Lack of Capacity

Title	Lack of Capacity
Introduction/ Background	Developing organisational structures that match internal as well as needs of external stakeholders is crucial for successfully embedding social entrepreneurship in higher education institutions (see also tile 6 and tile 11)
The problem	<ul style="list-style-type: none"> - A lack of capacity points to <ul style="list-style-type: none"> o The development of non-matching structures o Missing organisational structures
Solutions at institutional level	<p>Several reasons might account for a lack of capacity, including the list below:</p> <ul style="list-style-type: none"> - Too rigid design of organisational structures While having developed structures and processes to facilitate social entrepreneurship some higher education institutions might face a situation in which these formal structures are hardly used, but more informal sorts of collaborations develop alongside these. Mostly this situation is caused by too strict and narrowly defined regulations that are not aligned with the needs of internal and external stakeholders. Assigning more degrees of freedom and loops to adapt structures can contribute to avoid the proliferation of additional structures. - Lack of resources A lack of resources is not limited to a shortage of funding but also include a lack of expertise, knowledge and infrastructure needed to develop and embed social entrepreneurship in higher education institutions. Even well-funded institutional strategies might fail if the appropriate expertise and knowledge to implement them is not available. The planning of strategies should therefore consider these different aspects and aim at monitoring their implementation. - No ownership of social entrepreneurship strategy Higher education institutions that do not define clear ownership at the level of institutional leadership or management often face the problem that activities fizzle out and planning is not followed up. Devoting managerial roles with clear tasks and competencies to embed entrepreneurship are indispensable for embedding social entrepreneurship.

Title	Lack of Capacity
Other relevant resources	N/A
Links to selected HEInnovate case studies	- Not covered by HEInnovate
Further reading	<p>Benneworth, Paul; Charles, David; Hodgson, Catherine; Humphrey, Lynne (2013): The Relationship of Community Engagement with Universities' Core Missions. In Paul Benneworth (Ed.): University Engagement with Socially Excluded Communities. Dordrecht: Springer Netherlands, pp. 85–101.</p> <p>Benneworth, Paul; Cunha, Jorge (2015): Universities' contributions to social innovation: reflections in theory & practice. In <i>European Journal of Innovation Management</i> 18 (4), pp. 508–527. DOI: 10.1108/EJIM-10-2013-0099.</p> <p>Cunha, Jorge; Benneworth, Paul; Oliveira, Pedro (2015): Social Entrepreneurship and Social Innovation. In Patricia Ordóñez de Pablos, Luís M. Carmo Farinha, João J. M. Ferreira, Helen Lawton Smith, Sharmistha Bagchi-Sen (Eds.): Handbook of Research on Global Competitive Advantage through Innovation and Entrepreneurship: IGI Global (Advances in Business Strategy and Competitive Advantage), pp. 616–639.</p> <p>Hazelkorn, Ellen (2016): Contemporary debates part 2: initiatives, governance and organisational structures. In J. B. Goddard, Ellen Hazelkorn, Louise Kempton, Paul Vallance (Eds.): The civic university. The policy and leadership challenges. Cheltenham UK: Edward Elgar Publishing, pp. 65–93.</p>
Links to further Tiles	<p>➔ 6 Capacity building</p> <p>➔ 11 Building capacity with knowledge</p>

Tile 14: Disapproval of (social) entrepreneurship among staff and students

Title	Disapproval of (social) entrepreneurship among staff and students
Introduction/ Background	<p>The core of social entrepreneurship is to contribute to social change and create social values. While social entrepreneurship is not a new phenomenon and widely accepted in higher education, these central values are still to some extent at odds with traditional values of disciplines in the social sciences and the arts. These still favour more the role of the researcher as standing outside the society and contributing to enlightenment rather than being a societal actor enacting social change.</p>
The problem	<p>These differences in perception on the role of science and scientific knowledge in societies challenge academic staff to reflect on their attitudes and values about valorising their work. In some cases, this can cause resistance against social entrepreneurship, when the concept is misunderstood with regard to value creation and contributing to social change. Also, the propagation of social entrepreneurship as an additional task to the academic portfolio can create disapproval among academic staff when individual benefits of engagement are not communicated well.</p> <p>While most students have a positive attitude towards social entrepreneurship, some are reluctant to engage in it as they see it as an additional burden that or task that will not add to their skills profile or delay their graduation.</p>
Solutions at institutional level	<ul style="list-style-type: none"> - Awareness building among academic staff Awareness building is a major remedy to clarify on misunderstandings of the concept of social entrepreneurship. Dissemination of good practice examples and including staff in the development of social entrepreneurship strategy as active participants. Awareness building should consider the various concepts of social entrepreneurship that are currently available (Paunescu et al 2013). - Awareness building among students Awareness building among students can point to the special skill set they can gain from participating in service learning or collaborative research projects with the social sector. - Incentives for academic staff To stimulate social entrepreneurship among academic staff various incentives beyond financial compensations can be used. Effective incentives are able to demonstrate a individual benefit for academic staff. These can be: Including social entrepreneurship as a promotion criterion in career schemes is one opportunity. In

Title	Disapproval of (social) entrepreneurship among staff and students
	<p>addition, social entrepreneurship can also be stimulated by benefits that represent aspects of academic work, including joy in finding solutions and doing research, creativity. Also, tapping the morale of academics and representing their special contribution to social communities stimulate these behaviours.</p> <ul style="list-style-type: none"> - Incentives for students Adding ECTS to achievements or engagement in the social sector represent an important incentive. Supporting students in finding opportunities to work in the social sector are also helpful.
Other relevant resources	N/A
Links to selected HEInnovate case studies	<ul style="list-style-type: none"> - Not covered in HEInnovate
Further reading	<p>Lepik, Katri-Liis; Urmanavičienė, Audronė (2022): The Role of Higher Education Institutions in Development of Social Entrepreneurship: The Case of Tallinn University Social Entrepreneurship Study Program, Estonia. In Carmen Păunescu, Katri-Liis Lepik, Nicholas Spencer (Eds.): Social Innovation in Higher Education. Landscape, Practices, and Opportunities. 1st ed. 2022. Cham: Springer International Publishing; Imprint Springer (Springer eBook Collection), pp. 129–151.</p> <p>Neves, Sara; Brito, Carlos (2020): Academic entrepreneurship intentions: a systematic literature review. In <i>JMD</i> 39 (5), pp. 645–704. DOI: 10.1108/JMD-11-2019-0451.</p> <p>Paunescu, Carmen; Dragan, Denisa; Cantaragiu, Ramona; Filculescu, Adina (2013): Towards a Conceptualization of Social Entrepreneurship in Higher Education. In <i>The International Journal of Management Science and Information Technology</i> (10), pp. 51–69. Available online at https://www.econstor.eu/bitstream/10419/97880/1/786337125.pdf.</p> <p>Harding, Rebecca (2007): Understanding Social Entrepreneurship. In <i>Industry & Higher Education</i>, pp. 73–84.</p> <p>Roslan, Muhammad Hamirul Hamizan; Hamid, Suraya; Ijab, Mohamad Taha; Yusop, Farrah Dina; Norman, Azah Anir (2020): Social entrepreneurship in higher education: challenges and opportunities. In <i>Asia Pacific Journal of Education</i>, pp. 1–17. DOI: 10.1080/02188791.2020.1859354.</p>
Links to further Tiles	<ul style="list-style-type: none"> ➔ 1 Create social entrepreneurship culture ➔ 5 Incentives for staff and students ➔ 12 Motivation

Tile 15: Lack of funding

Title	Lack of funding
Introduction/ Background	<p>When comparing to cooperation with the industry and business sector, collaborations with social sector organisations are mostly less well funded. Also acquiring funds from public bodies or research funders is difficult due to a high competition and low funding rates. In some countries there is also no culture of donorship in higher education. Lack of funding or insufficient funding of collaboration can form a major hurdle to establishing collaboration with the social sector.</p>
The problem	<p>Three major problems are associated with the lack of funding:</p> <ul style="list-style-type: none"> - Limited funding for the social sector - Difficulties in demonstrating the impact and value of social entrepreneurship - Misconceptions of social sector organisations about the cost of academic research
Solutions at institutional level	<p>Several solutions to remedy the lack of funding are available. Not all of these solutions aim at increasing income but try to generate other resources or advertise the outcomes social entrepreneurship.</p> <ul style="list-style-type: none"> - Diversifying income resources for the social sector Higher education institutions can engage in uncovering further income resources. Connective leadership, i.e., the engagement of institutional leaders with (private) donors and foundations is an option. - Investing non-financial resources Besides money, volunteering of staff and students represents a resource that is relevant in establishing collaboration with the social sector. However, incentives to motivate staff and students to provide their voluntary engagement to the higher education institution have to be in place. - Adapting/establishing an indicator system to monitor/report social impact Information on the social impact of the institution's community engagement can be helpful to demonstrate its value and engage further donors, charities and public bodies to provide resources for this work. - Dissemination of social engagement achievements A targeted dissemination of achievements and ongoing social sector collaboration creates greater public interest. Higher

Title	Lack of funding
	<p>education institutions are more likely to become recognized as relevant actors who contribute to regional development.</p> <ul style="list-style-type: none"> - Awareness building among social sector organisations Some social sector organisations are reluctant to collaborate with higher education institutions as they believe that they cannot afford their services. Awareness building campaigns should point out the actual costs and benefits of collaboration. Further, higher education institution should consider adapting their tariffs to the possibilities of the social sector.
Other relevant resources	<p>Benneworth, Paul; Culum, B.; Farnell, T.; Kaiser, F.; Seeber, M.; Scukanec, N. et al. (2018): Mapping and Critical Synthesis of Current State-of-the Art on Community Engagement in Higher Education. Zagreb.</p> <p>Reichert, Sybille (2019): The Role of Universities in Regional Innovation Ecosystems. European University Association. Brussels (EUA Study).</p>
Links to selected HEInnovate case studies	<ul style="list-style-type: none"> - Not covered by HEInnovate
Further reading	<p>Jongbloed, Ben; Benneworth, Paul (2013): Learning from History. Previous Attempts to Measure Universities' Community Impacts. In Paul Benneworth (Ed.): University Engagement With Socially Excluded Communities. Dordrecht: Springer Netherlands, pp. 263–283.</p>
Links to further Tiles	<ul style="list-style-type: none"> ➔ 8 Identify/nurture collaboration opportunities ➔ 9 Funding ➔ 10 Leadership

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