



# CASE

Competencies for a sustainable  
socio-economic development

## Summary

# CASE Needs Analysis

*Based on interviews with partners from sustainability-  
driven enterprises and universities*



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[www.case-ka.eu](http://www.case-ka.eu)

# Summary CASE Needs Analysis

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# 1.

## Objectives and Research Design

The following summary represents the main outputs of the needs analysis, conducted within the Erasmus+ Knowledge Alliance Competencies for a sustainable socio-economic development (CASE).

CASE has the aim to develop innovative ways of teaching, learning and research for tackling the recent challenges of a sustainable socio-economic development.

The project contributes to the development of a new European Master Program and provides the necessary knowledge for its transfer and implementation at other European universities through an open access modular structure.

The needs-analysis is the starting work-package of the project, targeting the following objectives:

- To gather knowledge about perceived needs and necessary competencies, from entrepreneurial as

well as academic perspective, in order to meet the needs of sustainability-driven entrepreneurship in an appropriate way.

- To provide an analysis of best practice cases, in order to create synergies and use existing knowledge and good experiences of teaching towards sustainability-driven entrepreneurship.
- To open the access to entrepreneurial and university partners for future collaboration as possible starting-point for a long-lasting multi-stakeholder network

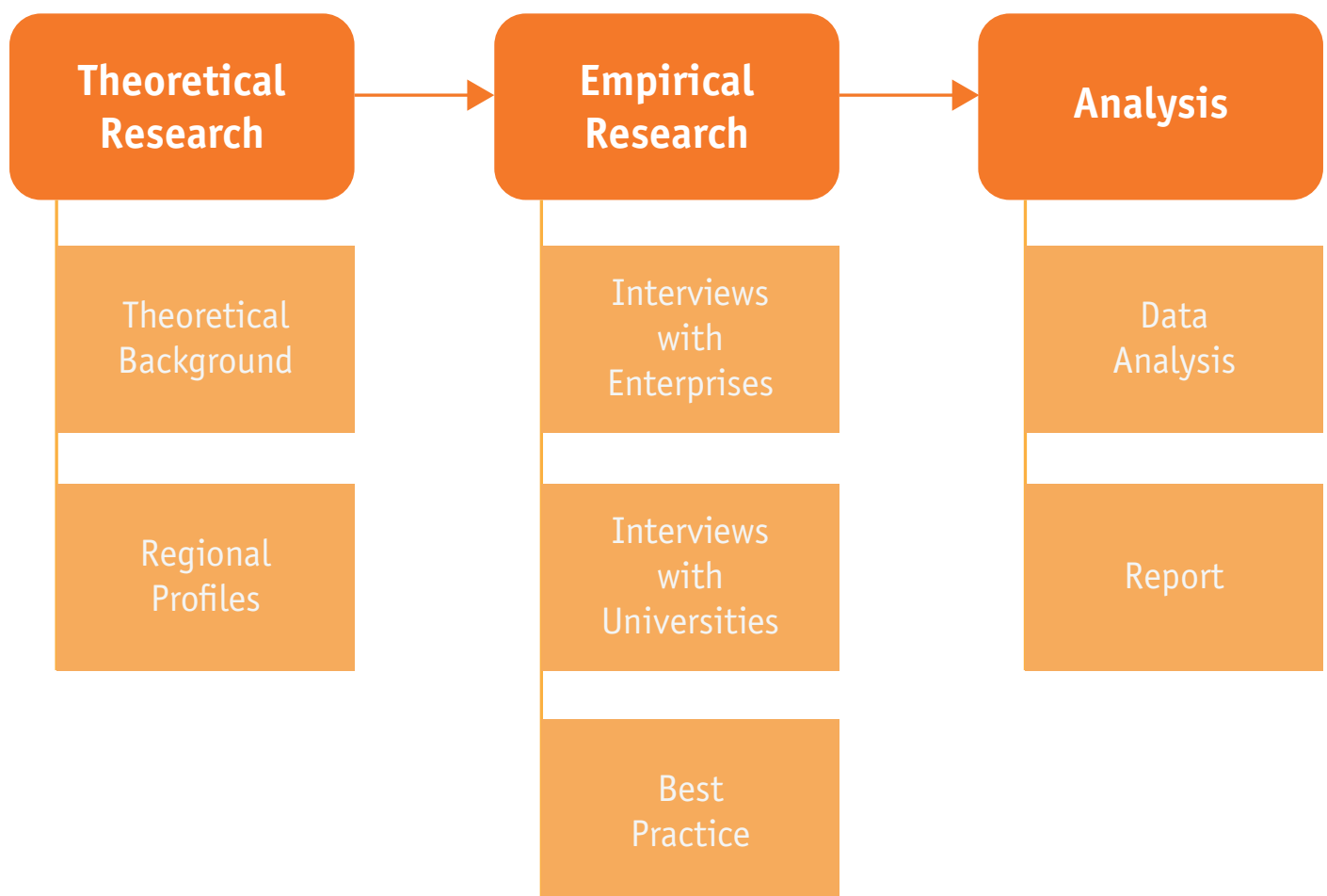


CASE Workshop

in the framework of the project and beyond.

For this purpose a qualitative research approach was chosen to bring together perspectives of enterprises and universities.

Interviews with sustainability-driven entrepreneurs and university partners are at the core of the study, supplemented with a best practice analysis from various university programs relevant for the CASE approach.



Graphic 1: Research Design graphic

## 2.

# Regional Context and Interview Partners

Sustainable socio-economic development is embedded in regional contexts.

As such the findings of the interviews have to be seen against the background of regional frames and conditions. The five regions, are characterized through heterogeneity in many ways, reflecting Europe's diversity.

The following regions are involved in the project:

- Vienna Region
- South Tyrol, Bolzano
- Oldenburger Münsterland, Vechta
- South Moravian Region, Brno
- Västra Götaland, Gothenburg

48 interviews were conducted with regional enterprises and non-profit organisations in total; 21 in the Autonomous Region of Bolzano, seven in each other region.

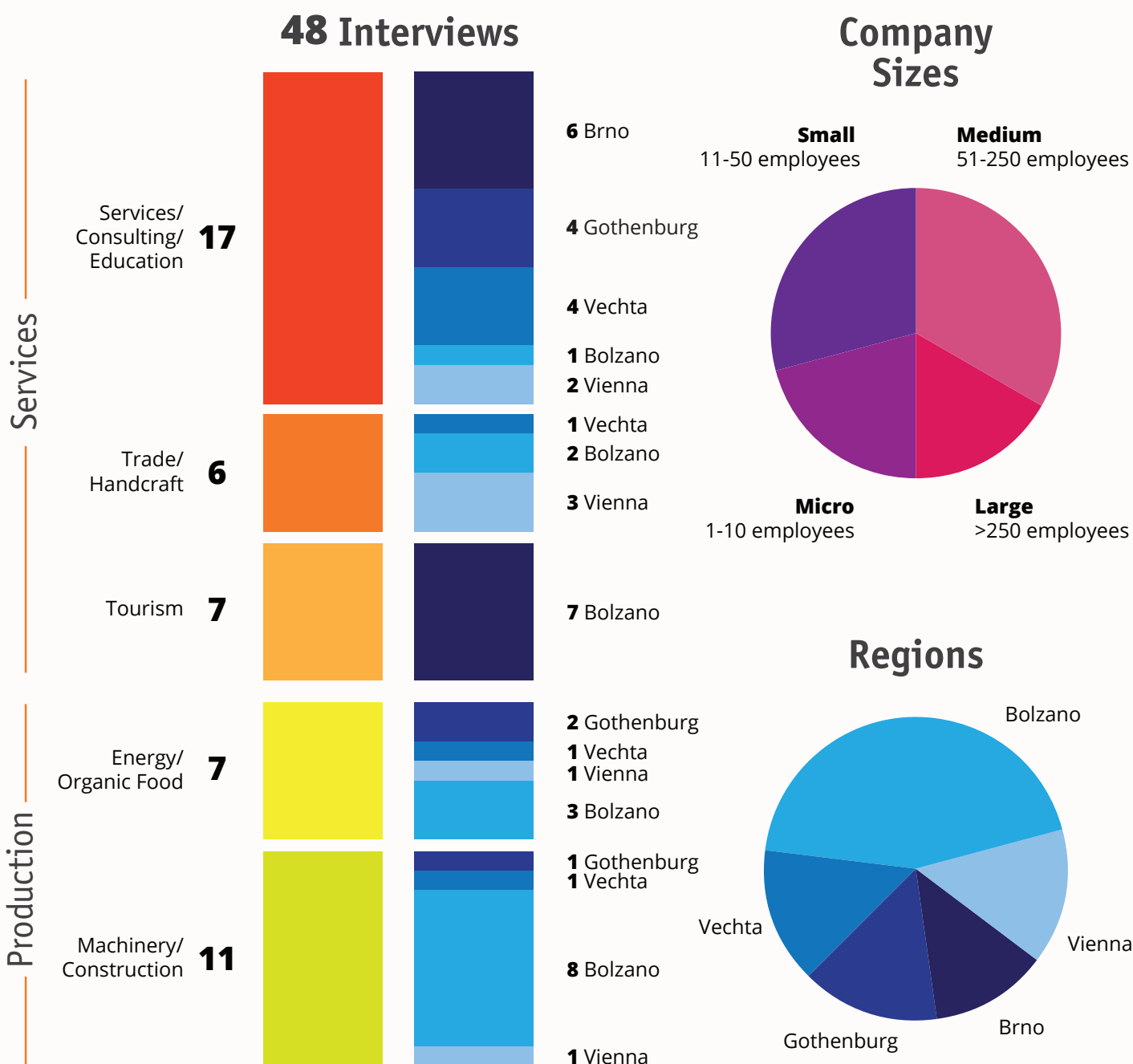
University	Faculty/Department/Institute
University of Economics and Business (WU) Vienna University of Natural Resources and Life Sciences (BOKU) Vienna	<ul style="list-style-type: none"> <li>• Institute for Entrepreneurship and Innovation</li> <li>• Department of Economics and Social Sciences</li> <li>• Institute of Agricultural Economics</li> <li>• Institute for Sustainable Economic Development</li> </ul>
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Masaryk University, Brno	<ul style="list-style-type: none"> <li>• Faculty of Economics and Administration</li> <li>• Faculty of Social Studies</li> <li>• Department of Environmental Studies</li> </ul>
University of Gothenburg	<ul style="list-style-type: none"> <li>• Faculty of Fine, Applied and Performing Arts</li> <li>• School of Social Science</li> <li>• Environmental Science</li> <li>• Faculty of Economics</li> <li>• School of business, economics and law.</li> </ul>

Table 1: Designation of the interview partners (universities)

In selecting the interview-partners it was aimed to cover a wide range of entrepreneurial realities, in order to provide an empirical basis for later conception of inter- and transdisciplinary modules, which should address students from various disciplines and give access to different professional contexts and working environments. Thus the sample represents different economic sectors, different sizes and different implementation-levels of sustainability.

25 interviews were conducted with universities; five in each region of the Erasmus+ project. The criteria for selecting interview partners from universities were:

- Variety of disciplines
- Approaches of inter- and transdisciplinary work
- Integration of f sustainable development in teaching and research



Graphic 2: Interview allocation



## 3. Theoretical Background

Sustainability-driven entrepreneurs, sustainable entrepreneurship or sustainability entrepreneurship are often used as synonyms.

Generally, all the terms see entrepreneurs as important drivers for a far-reaching socio-economic transformation towards a sustainable economy. The concept of socio-economic transformations is understood as an expanded concept of change, in terms of social innovation practices and technologies (Seyfang and Haxel, 2012).

Sustainability entrepreneurs are actors who initiate and successfully implement sustainability innovations and pursue in addition to economic, social and ecological objectives as the basis of their organizational form (Rammel, 2012). For Schaltegger and Wagner (2011) sustainable entrepreneurship is the realisation of sustainability innovations (societal, environmental and institutional) aimed at the mass market and providing benefit to the larger part of society.

Not only shareholders are important, but the interests of various stakeholders as well. Sustainable entrepreneurship goes beyond the traditional understanding of entrepreneurship and turns towards personal initiative and the skills of entrepreneurs or a team.

In their most recent collaborative work Young and Tilley (2010) suggest that in order to recognise and promote the role of sustainability-driven entrepreneurship, there is

a need to shift to a much broader definition of wealth creation. In this context, sustainable wealth means contributing a holistic net benefit to the economy, community and the natural environment (Young and Tilley, 2010). Nevertheless, sustainability-driven entrepreneurs are confronted with trade-offs to survive in the market-based economy (Stagl, 2013).

Hence, sustainability-driven entrepreneurship can hardly be achieved within the current economic and regulatory frameworks. Going further, Cohen et al. (2008) also see the lack of adequate measures of the contribution to the social and ecological wealth of the community as a barrier for such a development.

However, the definition of sustainability-driven entrepreneurship according to Schaltegger and Wagner (2011) describes sustainable entrepreneurs as innovative companies, driven via individuals and their values, goals, motivations and skills. Business models are based on innovations that are attributable to the ideas of the founders.

The complexity of the process of generating something new and sustainable in the socio-economic context, namely to understand and apply sustainable innovations, asks for particular mind sets. Innovation involves creativity and willingness to experiment but it also needs some key competencies, like discovering, framing and assessing new opportunities, or the discipline to accelerate and



launch a new project to make innovation successful and sustainable (Canals, 2015).

"Companies are in need of owners, managers and staff-members who are able to recognise sustainability as an opportunity, i.e. as a driver for strategic renewal, innovation and venturing" (Lans et al., 2014: 37).

Following Rieckmann (2012: 129), competencies are „individual dispositions of self-organization which include cognitive, affective, volitional [...] and motivational elements". Competencies in terms of "knowledge, skills and attitudes" are not perceived as given facts but have to be understood within its process-based character.

Key competencies are defined as competencies with a special significance in order to develop important social goals concerning a special framework like sustainability (Rieckmann, 2012: 129). More than general competencies, like critical thinking or communication skills, key competencies "require a high degree of individual reflexivity" (Rieckmann, 2012: 129).

In particular regard to sustainability, Wiek et al. (2011: 204) define key competencies as "essential for sustainability that have not been the focus of traditional education and therefore require special attention".

Key competencies for sustainability are linked to a context, which is highly characterised by complexity, uncertainty, high velocity of social change, individualization, diversity, uniformity, etc.

Therefore it becomes crucial that key competencies for sustainability have to be seen as such competencies which enable people to solve problems in a successful way "with respect to real-world sustainability problems, challenges, and opportunities" (Wiek et al., 2011: 204).

Wiek et al. (2011) distinguish five sustainability key competencies: systems thinking competence, anticipatory competence, normative

competence, strategic competence, and interpersonal competence.

Lans et al. (2014) deal with the competence discourse in entrepreneurship education and education for sustainable development and ask "which competencies constitute the heart of entrepreneurship and sustainable development (i.e. sustainable entrepreneurship)" (Lans et al., 2014: 38).

They define entrepreneurial competence as "the ability to identify and pursue entrepreneurial opportunities within a specific position and context" (Lans et al., 2014: 39). In this sense, on the one hand the following competencies are identified as elements of entrepreneurial competence (Lans et al., 2014: 39): opportunity competence, social competence, business competence, industry-specific competence, and entrepreneurial self-efficacy.

On the other hand, competencies for sustainable development in a business environment are (Lans et al., 2014: 40f.): systems-thinking competence, foresight-thinking competence, normative competence, embracing diversity

and inter-disciplinarity, interpersonal competence, action competence and strategic management.

Through focus groups discussions with university teachers both lists are integrated in a list of sustainable entrepreneurship competencies (Lans et al., 2014: 43): systems thinking competence, embracing diversity and inter-disciplinarity, foresighted thinking, normative competence, action competence, interpersonal competence, strategic management competence, and entrepreneurial self-efficacy.

In short, sustainability-driven entrepreneurship needs specific key competencies in order to respond in an effective way to sustainable socio-economic demands. The CASE needs analysis contributes to the existing literature in defining key competencies for sustainability-driven entrepreneurship.



*Excursion to an interview-partner*

## 4. Results

### 4.1. Mind sets of Sustainability-driven Entrepreneurship

The mind sets of sustainability-driven entrepreneurs are constituted by their understanding of sustainable entrepreneurship and within a broad understanding of socio-economic development.

From this understanding, so the hypothesis, their motivation to implement sustainability is driven.

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#### *Understanding of Socio-economic Development*

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As the results show most of the interview-partners connect sustainability with the three dimensions – the ecological, social and economic one – and have either the concept of the three columns or the so-called “magic triangle” in mind.

They stress the holism of the approach but are also aware of the challenge to follow an integrative concept, where the three dimensions are in balance. Moreover, sustainable economy in the interviews is linked to a long-term orientation, especially in using natural resources and natural environment.

An approach that is more protection-oriented and sometimes also linked with harsh critics on the wide spread philosophy of growth in economy. Others take the responsibility for future generations into account.

Some explicitly mention the definition of the Brundtland Report (1987), which is formulated as follows: “to act in a way that future generations will find equal conditions to live”. Some focus on people’s welfare and meaningful jobs, when talking about sustainable economy.

Another group of interviewees, espe-

*“Our earth we haven’t inherited from our parents but lent from our grandchildren. Therefore we have huge responsibility to tread the natural and cultural treasures with respect and attentiveness”*

(Int. 22, companies, 2015).

cially from rural areas, put the focus on regional cycles and cycle-economy. Last but not least, sustainable economy is very much linked with doing business in a respon-



Graphic 3: Background for sustainability-driven entrepreneurship

sible and honest way. The traditional codex of the “honourable businessman” celebrates a rebirth.

Following Granovetter (1990) economic behaviour is never context-free but is always embedded in socio-economic and natural environments.

As such it is important to know, how companies perceive their regional context, its opportunities but its challenges as well. In general the interviews reflect a great need to economic transformation in all regions.

Sustainable development seems not to be just a recent trend but seems to become more and more a societal movement.

That evokes transformation-processes regarding all stakeholders and creates a certain pressure even towards regional governments to set up appropriate political measures.

Consequently preconditions for sustainable entrepreneurship and opportunities for innovation are regarded as better than ever. Changing awareness is considered as one of the key-aspects, economic prosperity as another.

Mind sets of people are regarded as the most limiting aspect. "Sustainability thinking" has not reached the broad society and thus the old way of business is perpetuated.

Classical economic thinking of big players and lobbies still dominate the markets and continue the "paradigm of growth-orientation". Higher costs, caused by using regional, organic or fair trade resources, are seen as challenge, as well as higher staff-costs in high-salary countries.

Consumers who are willing and able to pay higher prices are still the minority.

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## Motivations

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A first group of entrepreneurs indicate personal reasons as a key factor for starting a change process in their career paths. For some the change was linked with the question of meaning and happiness or the wish to achieve something valuable in life.

For others sustainability is part of their philosophy and private life-style, sometimes with a long history connected to their personal biography. "I was member of the "Movement for an Autonomous Live" in the 1970. There I already assumed that we need an alternative way of economy and started my own business. In the beginning I was regarded as mad but I didn't stop, as it is an inner conviction" (Int. 16, companies, 2015).

*"We live in a region, where sustainability is appreciated. As basic needs are satisfied, customers can afford sustainability, as a kind of surcharge"*

(Int. 6, companies, 2015).

Others are parents and sorrows about the future of their children are the driving-forces for acting as role models.

Also fears and anger are mentioned as starting-points. "I read a lot about the hous-

ing-bubble, backgrounds of the financial disaster and peak oil. That created fear and uncertainty about the future of my family. But I didn't want to be swept away by fear, as such I began to work with it and began to integrate sustainability also in my personal lifestyle" (Int. 47, companies, 2015).

For some the interest in sustainability-issues, like CSR or Carbon Foot-print, was the starting point.

A second group of entrepreneurs is concerned about the current economic developments and the effects of the traditional linear economy-system.

Others worry about the overexploitation of nature and resources and regard it as entrepreneurial duty to save an intact natural and social environment, wherever possible, or to

*"Economy has to serve the wellbeing of people, not the other way round.  
Of course it is necessary to earn money but that is not central"*

(Int. 24, companies, 2015).

give something back. Also trust in the ability to transformation is a big motivation.

A third group refers to strategic and economic arguments. Some regard sustainable economy as mega-trend, driven by well-informed and critical clients, who create a demand for sustainable products and services.

That opens successful niches for innovative entrepreneurs and also start-ups in more or less saturated markets.

For some, especially producing companies, the starting-point was a kind of pressure from distributors to provide sustainability-certificates.

Others, mostly larger companies, have implemented sustainability as part of their company-strategy over years, integrated in the organigram and well-endowed with personal and financial resources.

Last but not least for some financial sources out of European or International Funding Programs were the starting-points.

## *Implementation of Sustainability in the Entrepreneurial Context*

For the interviewed entrepreneurs, sustainability is not just a normative concept but of great relevance for entrepreneurial decisions and concrete implementation in daily business. Knowledge about the origin of resources becomes more relevant, as well as efficiency in usage, waste management or new ways of sustainable product-design.

Many entrepreneurs have also adapted their internal processes towards environmental standards, in order to keep their ecological food-print as low as possible. Energy is a big issue for both, production- and service-companies, as well as the question of transportation.

Social sustainability is often prioritised and integrated in two ways: firstly, through internal measures for employees and secondly, through support of local or international socio-cultural relevant projects.

For the interviewed entrepreneurs it is of particular importance to integrate sustainability-values in human resource development. That means to foster participation, gender-equality, trans-generational and transcultural co-working.

*"We are in a transformation-process. What I observe is an increasing separation between entrepreneurs and staff. Entrepreneurs fall into isolation, into burnout and close their companies. Employees don't see a way to participate. That was the driving-force to overtake self-responsibility and to change my professional and personal life"*

(Int. 38, companies, 2015).

They also regard education and training, especially for new employees, as crucial and offer apprenticeship-programs, vocational trainings or seminars. Good working-conditions, like fair salaries, family-friendly working-hours or health-projects, are further measures to support good, long-term oriented employee-relations.

Economic sustainability is linked with long-term viability in a competing world and thus it is seen as one of the biggest challenges.

*"I have trust in a fair society, where people cooperate, respect human rights and are responsible, reflective and open to changes in their attitudes and behaviour"*

(Int. 38, companies, 2015).

They are convinced that it is not possible to survive without clear management-structures, controlling- and evaluation processes, which may be supported through sustainability-tools, like Economy of the Common Good-balance or Eco Label.

Further, financial independence combined with cost-reduction is considered as crucial.

Last but not least the need to support new and innovative ways to make good practice of sustainability-driven entrepreneurship more visible in the public is significant.

In sum, sustainability-driven entrepreneurship involves particular mind sets driven by different motivations – personal, global and economic reasons – In order to implement sustainability in the entrepreneurial context.

Besides the willingness to experiment, it needs some key competencies to accelerate and launch a new project or enterprise and to make innovation successful and sustainable.

Therefore, the question of how enterprises and university-partners define competencies for sustainability-driven entrepreneurship is discussed in the following section.



## Competencies for Sustainability-driven Entrepreneurship

Both, interview partners from universities and enterprises agree that the grand sustainability challenges call for a specific bundle of competencies.

### *Systemic Competencies*

As the graphic shows, most entrepreneurs underline the importance of systems-thinking competence.

Against the background of the global and local transformation processes it becomes necessary to develop a way of thinking, which is able to analyse complex dynamics, within which especially sustainability-driven entrepreneurs act.

Holistic and complex thinking, the ability to understand complex economic cycles and their social and ecological embeddedness, seems a necessary condition of mind sets for future entrepreneurship.

Furthermore, it seems to be important to act not only on a regional level, but to have the ability to think outside the box and to understand the interlinking process, which connects the regional context to a broader global level.

As entrepreneurs point out, it is further crucial to be able to think and work in an inter- and transdisciplinary way.

Entrepreneurs recognise the importance of linking their entrepreneurial expertise with others but underline the cooperation with universities as well in order to give an additional scientific value to their work.

Linking different forms of knowledge is fundamental in order to create a more stable ground for action.

### *Anticipatory Competencies*

Moreover, as the interviews show, there is a great demand for long term and transgenerational-thinking competencies.

Some entrepreneurs, especially in the context of family owned companies, are confronted with the generation thematic in their daily business and regard it as personal duty to build bridges between generations.

In the interviews with entrepreneurs, long-term thinking is directly linked to active confrontation with uncertainty and risks. Coping with uncertainty in an appropriate way calls for the competence of self-reflection and the ability to reflect socio-political and environmental developments.

In this context it seems important to learn from experiences, also from failures, and to use the learnings for scenario building of a sustainable world.

### *Normative Competencies*

For most of the interviewed partners a specific concept of ethics is the basis for sustainability-driven entrepreneurship.

"Ethics" are interpreted as a certain set of values, which help to make every day's decisions in favour of sustainability. It is regarded as an axis, which allows developing the competence to distinguish between alternatives and act autonomously in critical situations of dilemmas and contradictions.

As external behaviour is inspired and caused through internal mind sets, interview partners underline the importance of self-esteem, inner balance and awareness of meanings.

Following the study of Lans et al. (2014) normative competencies are more important for



Graphic 4: Dimensions of competencies



the sustainability world and not so much for the entrepreneurial world.

Connecting these two realities, the interviews show, that for sustainability-driven entrepreneurship doing the right thing is a fundamental prerequisite for action. Normative competence results therefore as a key competence for sustainability-driven entrepreneurship.

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### *Strategic Competencies*

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In addition, strategic and action competencies are crucial for entrepreneurship in general. In complex and rapidly changing economic environments they become even more important.

Strategic and action competencies are regarded as bundle of skills that include the ability to recognise and analyse problems, see new opportunities and possible solutions and to bring ideas and solutions “down to earth”. Innovation is regarded as a key competence either, as many European SMEs face harsh international competition and secure their survival through building up innovative niches.

Strategic and action competencies are seen important also for the daily work, such as creating a corporate philosophy and working along a well contracted organisation model, setting up milestones and controlling processes.

Establishing a learning culture in the company is also considered in this context. In other words, it is important to establish reflection and evaluation processes that foster skills to deal with failure but also with success in terms of transformative learning processes and to bridge experiences and theoretical concepts.

Management competencies and know-how about daily working-routines are also highlighted. Project- and process management are regarded as key competencies, as well as controlling of success and real costs, caused by sustainability activities. “You have to know your organisation quite well, unless you can change it” (Int. 26, companies, 2015).

This can be linked to what Lans et al. (2014: 41) define as strategic management compe-

tence. In other words, the ability to “collectively design projects, implement interventions, transitions, and strategies” towards sustainability.

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### *Interpersonal Competencies*

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Finally, entrepreneurs underline the importance of interpersonal competencies. Transformation towards sustainability-driven entrepreneurship is not a mechanistic process but very much a matter of dialogue and interpersonal relations. That calls for a set of social competencies to shape internal and external relations in an appropriate way.

The ability to work in networks, especially to work in multi-stakeholder networks is crucial. It seems to be a clear mandate to develop strategic educational programs to foster understanding and handling of diversity in multi-stakeholder networks.

The ability to work within a team has also high priority, as team solutions encounter the growing complexity of entrepreneurial environments better than single solutions. That calls for a new type of leadership as well, which includes the ability to compose teams, to evoke enthusiasm and to foster self-responsibility.

Less surprising is the high importance of communication skills. Being able to lead dialogues and discourses on different levels is regarded as a key competence. That goes far beyond applying communication techniques (see embracing diversity and interdisciplinary competence in Lans et al, 2014: 40).

Competencies defined by university partners mostly overlap with the competencies described by entrepreneurs.

Moreover university partners also emphasize competencies, which help to foster cooperation with entrepreneurs and local actors.

University partners underline the abilities to recognise partners on a local and international level, to have the know-how in order to connect praxis and science, to bundle forces and the ability to transfer (of knowledge) between project partners and students and to translate interests (same language).

### 4.3.

## Gaining Competencies

For the interview partners gaining competencies for a sustainable socio-economic development is considered as a lifelong learning process, supported through appropriate learning settings and innovative methods, which provide pleasure and evoke curiosity.

### *From an Entrepreneurial Perspective*

The earlier, the better and thus education towards sustainability should start in early childhood. Family members function as role models and have great influence on developing basic values.

Later on the kindergarten or school provide the social setting for deepening values. Especially schools could fulfil a mission in ESD (education for sustainable development). Until now efforts in this direction are more the exception than the norm.

Schools should provide occasions to develop basic values and social competencies but also teach love and responsibility for nature and people, as an entrepreneur points out.

In higher school education students should get in contact with the different dimensions of sustainability and develop a kind of sustainability literacy. It is regarded as crucial that already pupils are prepared to interdisciplinary thinking and bridging theory with practical experiences. Internships, collaboration projects with companies, studies abroad, etc.

should be a compulsory element of higher school education.

It is obvious that expectations on schools and teachers are huge as they fulfil more and more education responsibilities, which were taken by families in former days. Therefore it is necessary to redefine the role of teachers and to rethink teacher education as well.

Working experiences are still regarded as most effective way to develop sustainability skills. The interviewed entrepreneurs feel responsible for providing a working environment, where ethical and sustainable behaviour is high appreciated.

That means sustainability-skills have to be high up in the priorities of the company and have to be lived in an authentic way. "For me crooked CVs are interesting, as they sometimes reveal more information about social, emotional, cultural and communicative skills as formal qualifications", one entrepreneur

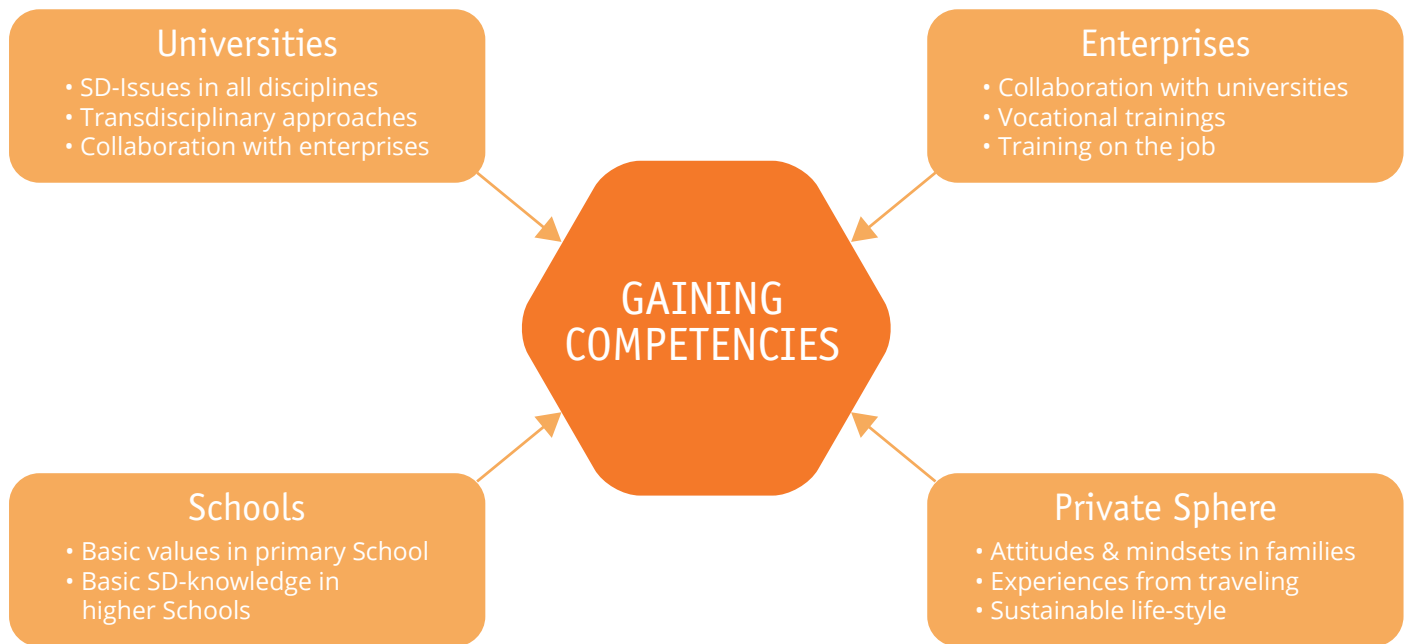
*"If we just add further skills, competencies and subjects to the current curricula, we don't achieve a transformation. It is necessary to radically change the education model towards a scenario, where children don't lose pleasure for learning and keep the natural curiosity for their environment"*

(Int. 13, companies, 2015).

points out (Int. 30, companies, 2015). The entrepreneur and the managerial staff have a specific responsibility to act as role models and give an example for the employees.

It is considered as crucial to foster an open culture of dialogue and collaboration in the company. All known measures of Human Resource Development can support in developing this kind of culture.

Most of the interview partners ascribe universities a central role in fostering sustainability-driven entrepreneurship, as universities educate the decision makers of tomorrow,



Graphic 4: Gaining competencies

who will overtake strategic positions in enterprises, politics and research in future.

Thus sustainability issues should tackle all disciplines – either as compulsory basic course for all students or integrated and adapted to the specific curricula of the single disciplines. “Every discipline should start a process of awareness building: Pedagogy could think about, how a new learning culture should look like; Business Administration should open the dialogue about sustainable entrepreneurship; Natural Sciences should extend efforts in sustainable solutions for resource efficiency and energy”, one interview-partner reveals her vision (Int. 17, companies, 2015).

At least in Economy or Business-studies sustainability should get more attention on both, a macro and micro level.

Also fostering entrepreneurial skills, not only in Business-studies, is regarded as important, as the future calls for innovative, self-responsible and entrepreneurial thinking graduates in every discipline.

### *Fostering Competencies in Higher Education Programs*

Universities have a central role in enhancing education for a sustainable socio-economic development in general and sustainability-driven entrepreneurship in particular.

As most of the interview partners from universities emphasize, students are entering a very different world from that encountered by previous generations: “Students are facing a harsh world, which is characterized not only by uncertainty, but also by complexity and rapid change” (Int. 21, universities, 2015), manifested through a bewildering array of global issues relating to economic instability, climate change, inequity, loss of biodiversity and migration, to name a few.

University partners stress the importance to adopt new knowledge and learning formats in order to foster competencies for sustainability-driven entrepreneurs.

In this context, transdisciplinary approaches are prerequisites and support “new collaboration among science and society able to emphasize joint problem definition, and knowledge integration” (Int. 8, universities, may 2015).

The interview partners underline the emergence of new modes of science (see Mode 2 science, Nowotny, et al., 2003), interlinked with the growing need to deal with sustainability problems.

They support transdisciplinary approaches (including and integrating also mono and interdisciplinary work) for sustainability research that deals with complex, ambiguous, real-world problems and aims at producing robust and practice-oriented knowledge. Apart from

the chance and new research potential of inter- and transdisciplinary approaches, interview partners emphasize on challenges concerning its implementation in daily life.

Here, the collaboration between faculties and different disciplines is perceived as provoking. The challenges are linked to the „power of definitions“ (...) and “different interests” (Int. 15, universities, 2015).

Consequently, the collaboration is often linked to (power) questions like: Who has more resources? Which faculty has a more powerful position in society? This challenges become crucial especially for interview partners, which represented social science, arts or philosophy.

Most of the interview partners emphasise the difficulty to integrate sustainability-driven entrepreneurship issues in already defined study programs. In most cases, themes and topics are fixed and there are fewer possibilities to introduce new ones.

Fewer difficulties are perceived in integrating new topics in MA or PhD programmes, where the transfer of content-based knowledge is not centre staged. Interview partners also underlined the difficulty that sustainability as a crosscutting issue is often hard to tackle and implement at universities.

In order to foster key competencies for sustainability-driven entrepreneurship there is

the general assumption, that simple knowledge transfer has less priority.

More important are the ways, how to teach, respectively, methods and teaching formats, which allow students to co-create knowledge, to practice theoretical knowledge and to develop competencies.

Furthermore, methods should allow students to learn in an introspective and reflexive perspective. It becomes crucial to create and promote learning settings, which foster the understanding of how the economic, social, cultural and political contexts, in which we live, shape our thinking and acting.

In such learning contexts the role of the teachers differs from traditional university learning settings. The teachers support, inspire and coach the students.

The students, on the other hand, become active co-creators of their own knowledge and their competencies. Together with different stakeholders, students work beyond traditional boundaries.

It requires that different institutions, organizations or activity systems collaborate and identify challenges and problems in a given context, whereby the participants through dialogue and negotiations come up with a common vision and transformative action.



*CASE Workshop - students and entrepreneurs*



## Learning in Multi-Stakeholder Networks

Both, companies and universities underline the importance and the outstanding opportunities for innovation.

Multi-stakeholder networks seem to provide the right learning environments for complex sustainability issues. As such, most of the interview partners have experiences in working within.

### *Role and Impact of Multi-Stakeholder Networks*

Networks are regarded as learning platforms for exchange of knowledge and experience. Confidential relations make it possible to get deeper insights in good practices, raise critical questions and shape a learning culture where failures and mistakes are valuable learning sources.

Through networks new perspectives are opened as a source for innovation.

Especially for sustainability-driven entrepreneurship it is of utmost importance to work in cross-sectorial networks to get impulses and views from different contexts.

In sharing resources and splitting complex tasks, networks multiply efficiency and effectiveness of singular efforts.

Smaller companies, organised as networks, achieve economies of scale, which go along with a certain power towards suppliers and customers. This

is an interesting aspect, as most of the sustainable enterprises, especially start-ups, are SME.

In the long run networks may even define and execute common sustainability standards. "It is easier to maintain a standard in cooperation, as it is with tailwinds", one interview partner says (Int. 29, companies, 2015).

Joined forces in a common topic may also reach the political level and influence political decisions.

It is the aim of some interviewees to create a kind of lobby for sustainability issues as counterpart to traditional industrial lobbies.

Sustainable development shouldn't be a business model only and not be reduced to a small group of pioneers but become a broad societal movement, involving various stakeholders from society, economy and politics.



*Excursion to an interview-partner*

## Opportunities and Challenges in Multi-Stakeholder Networks

In order to establish successful networks it is crucial that all partners share a common vision and common values. It is important to put societal relevant issues in the centre, which create long term meaning for all participants.

*“Only in networks you can meet the requirements of the complexity of sustainability and create corresponding synergies”*

(Int. 32, companies, 2015).

Multi-stakeholder networks should aim on integrating most different perspectives, critical and lateral thinking persons, in order to complement each other, not to repeat well-known points of view.

As such it is crucial to involve external, also international experts from time to time. Moreover it seems a success criterion, to create win-win situations and provide benefits for all.

The lack of clear aims and purposes of networks is regarded as obstacle. Especially if big plans and visions are defined and no or just weak actions follow.

It is considered as exhausting to spend plenty of time in meetings without concrete,

objective oriented actions. Also superficiality and fuzzy work destroy networks.

Diversity is regarded as advantage, but conflicting interests and too outstanding positions can create barriers, which can be hardly overcome.

Some also take into account that not all issues are predestined for networks and that it is essential to sort out the relevant ones.

A balance of give and take characterizes good collaboration. That calls for a careful search to find the right partner for each task. It also calls for common values like confidence, reliability and responsibility for the common.

Frequently personal contacts, transparency and openness in communication are regarded

### Challenges

- Lack of resources (time & money)
- Different languages, mind sets, interests and working routines
- Bridging the gap between theory and practice
- To pass from a communication to a cooperation level
  - Failure regarded as a break down

### Success Factors

- Common Understanding of objectives and interests
  - Clear defined roles
- Clear rules of collaboration
- A designated coordinator
  - Common language

as further key success factors.

If stakeholders with different backgrounds and “languages” collaborate, it is regarded as crucial to take enough time for defining meanings of terms and concepts and for developing a kind of translation competence.

Working in networks is to find a balance between individual and network-interests as well.

Competition thinking and pushing just own interests tear networks apart, as well as strong expectations of short-term economic success. A lack of discussion culture and the ability to dialogue lead to gaps, impossible to bridge.

*"Activities have to be centred in a focal point. That means you need a network coordinator, who manages the daily business and is paid for just doing this job"*

(Int. 10, companies, 2015).

A clear organisational-frame from beginning on is regarded as base of good networking. That means to have clear rules, shared duties and clear consequences, if duties are not fulfilled.

Well-defined evaluation and controlling processes help to comply with milestones, achieve goals and initiate changes, if necessary.

Furthermore the availability of resources is highlighted, meaning time as well as money. In this context the specific role of the network coordinator is pointed out.

Time is considered as most limiting factor. As sustainability issues are often not the core business of companies but a matter of heart, they are shifted to leisure time and affect the work life balance of entrepreneurs, what leads to exhaustion in the long run.

Also the lack of other resources, like money, endangers the long term existence of net-

works. "In sustainability networks we have a higher than average amount of volunteer work. But too much is contra productive, as it distorts priorities and real value of networks." (Int. 14, companies, 2015).

Networks also suffer from lacks of clarity in roles and obligations.

### Possible Formats of Science-Business Collaboration

- Co-creation of university courses
  - Lectures & seminars with external experts
- Research on regional best practices
  - Service Learning projects with regional companies
- Cooperative research-projects
- Guided internships for students
  - Events and conferences open to public
- Personal contacts

And last but not least, size of groups has an impact on the quality of the outcomes. If groups are too big and too heterogeneous it is hard to come to a common point.



# 5.

## Summary of Contents

The following matrix gives an overview of the thematic issues, which came out of the interviews and which serve as a thematic base in order to elaborate the content of the four modules of the master program which will be developed within the CASE project.

Furthermore it includes best practice models of master programs and other academic formats which already collected experiences in developing and teaching the contents of the four modules mainly in the five regions of the project.

Themes	Best Practice
<b>MODULE 1: SUSTAINABLE SOCIO- ECONOMIC DEVELOPMENT</b>	
<b>Sustainable socio-economic development</b> <ul style="list-style-type: none"> <li>• Concepts of sustainability (strong &amp; weak sustainability, three dimensions)</li> <li>• Concepts of sustainable &amp; green economy</li> <li>• Eco social transformation</li> <li>• Alternative economic strategies &amp; models: de-growth, post-growth, ECG</li> <li>• Sustainable humanities</li> <li>• Economic and social structures</li> </ul> <b>Global socio-economic development</b> <ul style="list-style-type: none"> <li>• Global sustainability challenges &amp; trends</li> <li>• Global differences in socio-cultural contexts</li> <li>• Global value chains</li> <li>• International trade, financing: backgrounds</li> <li>• Global competition – global cooperation</li> </ul> <b>Regional socio-economic development</b> <ul style="list-style-type: none"> <li>• Sustainable regional development</li> <li>• Urban development: smart citiesCommunity development</li> <li>• Local economic cycles, value chains</li> <li>• Globalisation – regionalisation</li> </ul> <b>Responsible economy</b> <ul style="list-style-type: none"> <li>• Ethics &amp; values: social justice and equity, freedom</li> <li>• Common welfare, prosperity, quality of live</li> <li>• Responsibility of consumers and producers</li> <li>• Resiliency</li> </ul>	<ul style="list-style-type: none"> <li>• The Doctoral School of Sustainable Development (dokNE) (BOKU Vienna)</li> <li>• Master in ECO- SOCIAL DESIGN (UNIBZ)</li> <li>• Eco-Venturing –Development of sustainable business concepts for “green” future markets (University Oldenburg, Germany)</li> <li>• Master in Community Development/ Interdisciplinary European Master’s degree course (Munich)</li> <li>• Master in Sustainability Science (Leuphana University of Lüneburg)</li> </ul>

Themes	Best Practice
<b>MODULE 2: SUSTAINABLE AND SOCIAL INNOVATION</b>	
<b>Innovation</b> <ul style="list-style-type: none"> <li>• Innovation and creativity</li> <li>• Co-creation and open source</li> <li>• Role models and pioneers</li> <li>• Social innovation</li> <li>• Eco innovation</li> </ul> <b>Future topics</b> <ul style="list-style-type: none"> <li>• Energy: renewables (water, wind, solar), energy efficiency, energy efficient building, hybrid mobility</li> <li>• Resource efficiency: re- and up cycling, cradle to cradle, waste management</li> <li>• Agriculture: organic food; food coops</li> <li>• Tourism: sustainable tourism &amp; travel</li> <li>• Mobility: intermodal mobility, smart urban logistics, health care logistics</li> <li>• Technology: Industry 4.0</li> <li>• Financing (eg crowd funding)</li> </ul>	<ul style="list-style-type: none"> <li>• E&amp;I Project: Social Entrepreneurship course (WU Vienna)</li> <li>• E&amp;I Project: Garage - Business Model Development course(WU Vienna)</li> <li>• Master in ECO- SOCIAL DESIGN (UNIBZ)</li> <li>• Social Entrepreneurship, Social Innovation and Sustainability (Malmö University)</li> </ul>

Themes	Best Practice
<b>MODULE 3: SUSTAINABILITY-DRIVEN ENTERPRISES</b>	
<b>Entrepreneurship and Management</b> <ul style="list-style-type: none"> <li>• Project- and process management</li> <li>• Change management</li> <li>• Leadership and governance</li> <li>• Corporative social responsibility</li> <li>• Sustainability controlling and benchmarking</li> <li>• Sustainability reporting ‘</li> <li>• Financing sustainability: crowd funding, hybrid financial models</li> <li>• Ethical and social marketing</li> </ul> <b>Communication</b> <ul style="list-style-type: none"> <li>• Relation building</li> <li>• Multi-stakeholder dialogue</li> <li>• Social discourse and communication with the public</li> <li>• Teambuilding and group dynamics</li> <li>• Rhetoric and communication</li> </ul> <b>Sustainable start ups</b> <ul style="list-style-type: none"> <li>• sustainable concepts</li> <li>• Opportunities &amp; challenges</li> <li>• Social &amp; sustainability-driven entrepreneurship</li> <li>• Sustainable business models</li> </ul>	<ul style="list-style-type: none"> <li>• E&amp;I Project: Garage - Business Model Development course(WU Vienna)</li> <li>• Sustainable Entrepreneurship. Planning and implementation of start-ups, associations, NGOs, initiatives and ideas (BOKU Vienna)</li> <li>• Course project management for sustainable development (University Gothenburg)</li> <li>• Sustainability challenge (WU Vienna)</li> <li>• Social Entrepreneurship, Social Innovation and Sustainability (Malmö University)</li> <li>• Master's Program in International Business with Specialization in Sustainable Entrepreneurship (Business School Lausanne)</li> <li>• Eco-Venturing –Development of sustainable business concepts for “green” future markets (University Oldenburg, Germany)</li> </ul>

Themes	Best Practice
MODULE 4: SUSTAINABILITY POLICIES AND MULTISTAKEHOLDER NETWORKS	
<b>Multi-stakeholder networks</b> <ul style="list-style-type: none"> <li>• Science-society interface</li> <li>• Transdisciplinary networks</li> <li>• Action research</li> <li>• Intersectoral cooperation</li> <li>• Circulatory and discourse learning</li> <li>• Stakeholders and actors</li> <li>• Relations and social networks</li> <li>• Challenges in multi-stakeholder networks</li> <li>• Translators to respond to different languages</li> </ul> <b>New institutional settings</b> <ul style="list-style-type: none"> <li>• Deliberative structures and participation processes</li> <li>• Spaces to facilitate interactions and relationships</li> <li>• Various spheres to be encountered and deconstructed: public, knowledge and market</li> <li>• History and development of institutional settings</li> </ul>	<ul style="list-style-type: none"> <li>• Sustainability Challenge (WU Vienna)</li> <li>• MASTER IN COMMUNITY DEVELOPMENT/ Interdisciplinary European Master's degree course (Munich)</li> </ul>

## 6. Conclusion

In summary, the needs analysis, conducted with a variety of entrepreneurs and university-teachers operating in five regional contexts, shows promising conditions for sustainability-driven entrepreneurship.

Especially the fields of renewable energies or resource-efficiency have been emphasised, which ask for innovative economic solutions.

Nevertheless entrepreneurs positively evaluate the rising awareness and critical consumer-behaviour, mind sets of entrepreneurs oriented towards profit-maximising are still controlling the entrepreneurial world and are therefore seen as the most limiting factor sustainability-driven entrepreneurship faces.

The analysis contributes to broaden the understanding of mind sets of sustainability-driven entrepreneurs and in particular their motivations to start such a career path.

As such it supports the aim of the knowledge alliance project CASE, which is to develop new learning environments based on transdisciplinary learning approaches.

In order to develop modules for a future master's

programme for sustainability-driven entrepreneurship, it is crucial to overcome a solely sustainable perspective as well as an exclusively economic perspective on the issue (Lans et al. 2014). Sustainability- and economic key competencies have to be developed together in the context of sustainability-driven entrepreneurship.

Concerning the universities of the Erasmus+ project, there are different teaching formats of developing such key competencies. On the one hand there are entire study programmes, which integrate issues of sus-



CASE Kick-off

tainable socio-economic development and on the other hand, single initiatives, events, conferences on sustainability-driven entrepreneurship, which represent curricular and extracurricular initiatives.

Nevertheless, implementing sustainability issues in both, entrepreneurial and academic contexts, still means to act as a pioneer in terms of realising ideas, dreams and projects beyond the mainstream.

Whereas the interviewed enterprises are not that much confronted with institutional barriers in implementing sustainable ideas, most universities are embedded in highly complex bureaucratic structures, caused by frames of curricula, study-programmes and formal institutional settings, which makes, especially implementation of transdisciplinary approaches, rather difficult.

In accordance with Wiek et al. (2011) and Lans et al. (2014), both, interview partners from universities and enterprises agree that sustainability-driven entrepreneurship calls for a specific bundle of competencies.

They highlight the need for holistic thinking that includes various levels and domains, in order to encounter the growing complexity. The need to deal with risk and uncertainty is emphasised mainly by enterprises, as they are affected from economic risks and crises more directly.

Also the need for normative competencies and the orientation along an axis of clear defined sustainability values is expressed mainly by enterprises, as they usually have clear structured normative concepts, obtaining for the whole organization.

Solution-oriented and innovative thinking in turn are regarded as strategic key competencies from both sides.

Gaining competencies for sustainability-driven entrepreneurship is considered as a

lifelong learning process, supported through appropriate learning settings and innovative methods, which provide pleasure, evoke curiosity and facilitate opportunities for competence development.

Beside formal learning settings, vocational trainings and training on the job are regarded as opportunities to practice competencies in sustainability-driven entrepreneurship.

New partnerships between entrepreneurs and universities are one possible way to encourage transformative education characterized by a quality shift in perception and meaning-making, which brings the learner to the crucial point of questioning and reframing his/her world views, assumptions, and habits.

Regarding the business-university cooperation, most of the interview-partners are actively engaged and point out the need to intensify this cooperation but also to put it on a more strategic level.

The biggest challenges are different mind sets, interests and working routines and thus the need to bridge the gap between theory and practice. Against this background three open questions can be formulated.

Firstly, how should new learning formats be developed, in order to be able to support on the one hand the self-efficacy and on the other hand the social aspiration of sustainability-driven entrepreneurs?

Secondly, how can the mind sets of sustainability-driven entrepreneurship be straightened, in order to act effectively in an environment, which is still dominated by profit-oriented and economic growth discourses?

And finally, how can inter- and transdisciplinary networks be supported, in order to become long-lasting and workable networks for the future?

# 7.

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