

**Breaking
boundaries
for future
careers**



**Thematic
University-Business
Forum**

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**Input paper for the Thematic
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**DANISH
TECHNOLOGICAL
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1. Introduction

The European Commission provides support to universities and businesses in strengthening the knowledge triangle (education, research, innovation) through initiatives at the European level such as University-Business Forums (UBForum). UBForums facilitate the communication of good practices, encourage networking and mutual exchange of experience, and provide an environment for the creation of partnerships between higher education and business. The activities aim to:

- *“Encourage the transfer and sharing of knowledge;*
- *Create long-term partnerships and opportunities;*
- *Drive innovation, entrepreneurship and creativity”.*¹

Starting in 2008, 19 University-Business Forums have taken place, and the most recent was in March 2016 in Vienna. Six high-level UBForums were organised in Brussels, with 12 thematic events taking place in Member States. In addition, the higher education sector is supported by HEInnovate,² the self-assessment tool developed in cooperation with the OECD for institutions to both measure and develop their innovative capabilities, and also to ‘bench-learn’ through case study resources and training material.

This forthcoming UBForum is hosted by Finland, and is organised by Haaga-Helia University of Applied Sciences, with the support of the European Commission Directorate General for Education and Culture, Enterprise Europe Network,³ Universities Finland,⁴ ARENE (Rectors' Conference of Finnish Universities of Applied Sciences⁵), and the City of Helsinki.⁶

The focus of the UBForum is ‘**breaking boundaries for future careers**’. It will examine two major enablers that will equip future learners to effectively identify and secure career opportunities:

- The first enabler is the **innovation ecosystem**. In the Finnish context the government seeks to build a strong and resilient ‘infrastructure’ that links key national stakeholders through a common vision;
- The second enabler is to make learning ever more flexible and relevant to prepare learners for the future jobs. Here the UBForum will look at **innovation pedagogies**, at the **innovative learning** that underpins

¹ http://ec.europa.eu/education/tools/university-business_en.htm

² <https://heinnovate.eu/>

³ <http://een.ec.europa.eu/>

⁴ <http://www.helsinki.fi/halvi/srno/english/index.html>

⁵ <http://arene.fi/en>

⁶ <http://www.hel.fi/www/helsinki/en>

them, and then how they both enable the development of **innovative and entrepreneurial learners**.

2. The Innovation Ecosystem in Finland

The 2015 EU Innovation Scoreboard shows that Finland remains an '**innovation leader**' in the EU.⁷ Finland has the best scores for: human resources for innovation; company investment into innovation; and intellectual assets (patent applications, licence and patent revenues, and international scientific co-publishing).

Weaker innovation performance concerns the ability to attract doctoral researchers from beyond the EU, expenditure in areas beyond research and development, and the export of knowledge-intensive services. Finland also scores lower than the EU average on the collaboration between innovative SMEs and the wider community of SMEs.⁸

Beyond the borders of Finland, the European Union Strategy for the Baltic Sea Region (EUSBSR - Sweden, Denmark, Estonia, Finland, Germany, Latvia, Lithuania and Poland), was approved by Council in 2009. The European Commission facilitates partners in the region in developing trans-border competitive markets and **common networks for research and innovation**.⁹ It promotes yearly flagship projects, such as the BSRCity Innofund. That project is developing models for funding innovation related to "Smart Sustainable Cities", co-led by the regions of Skåne (SE), and Tampere (FI).

The Government of Finland has a **focused innovation policy**: for example, on key areas of environment and energy (such as a strategic cleantech programme), mining, forestry, health, the service sector, and the bio economy. It provides tax incentives, targets research funding, and uses public procurement to stimulate innovation in these areas. The strategy currently looks ahead to 2020, and includes a 'radical' reform of the higher education (HE) system and public sector reform, thus re-orienting the innovation infrastructure for the future.¹⁰ This has been accompanied by strategic reviews of key areas such as health.¹¹

⁷ COMMISSION. 2015c. *Innovation Union Scoreboard 2015*. European Commission. Available: http://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards/files/ius-2015_en.pdf. [Accessed January 4 2016].

⁸ Ibid.

⁹ COMMISSION. 2016b. *EU Strategy for the Baltic Sea Region*. European Commission. Published March. Available: <http://www.balticsea-region-strategy.eu/>. [Accessed March 9 2016].

¹⁰ FINLAND. 2014b. *Reformative Finland: Research and innovation policy review 2015–2020*. Research and Innovation Policy Council, Finland. Available: http://www.minedu.fi/export/sites/default/OPM/Tiede/tutkimus-_ja_innovaationeuvoisto/julkaisut/liitteet/Review2015_2020.pdf. [Accessed March 9 2016].

¹¹ FINLAND. 2014a. *Health Sector Growth Strategy for Research and Innovation Activities*. Ministry of Employment and the Economy, Finland. Published May 26. Available: https://www.tem.fi/files/40138/TEMrap_16_2014_web_26052014.pdf. [Accessed March 9 2016].

The Finnish '**national innovation system**' acknowledges that independent players all engage in research and innovation, across education, research, knowledge-intensive business, and industry product development. Rather than categorise them by sector, the system acknowledges that contributions may vary according to circumstances. Some actors will be **creators** (producing innovation through research etc.), some will be **utilisers** (users of innovation), and others such as Government will be **facilitators** (providing resources, policy frameworks and administrative structures).¹²

The national Research and Innovation Council **coordinates the strategic development of the innovation ecosystem**, and is chaired by the Prime Minister.¹³ The Council has two key sub-committees, one on science and education subcommittee, and another on technology and innovation.¹⁴ An evaluation of the Council in 2014 identified needs such as stronger cross-sectoral collaboration in ministries, more use of foresight research and external expertise.¹⁵

The innovation ecosystem shows how to build support through the strengths of all players. It also ensures that the organisational support for innovation is comprehensive, and that it builds on a **culture of collaboration and common national goals**. Organisational infrastructure and support is provided through:

- Tekes,¹⁶ the national **funding** agency for innovation, provides innovation funding to actors across business, industry, public sector, and research organisations. Applications are invited in **specifically targeted areas** such as in 2016 for cleantech, smart cities, solar, new knowledge, and international collaboration. It is particularly focused on supporting SMEs that wish to internationalise, to help **fund young and innovative companies**, and to help **early-stage entrepreneurs** become more internationally focused.
- VTT, the Technical Research Centre of Finland¹⁷ is a private company, with a mandate to **support public and private sector innovation** across three major activity areas. These are knowledge intensive products and services,

¹² FINLAND. 2016b. *Research.fi: Education, Research and Innovation in Finland*. Federation of Finnish Learned Societies. Published March. Available: <http://research.fi/en>. [Accessed March 9 2016].

¹³ FINLAND. 2016a. *Research and Innovation Council*. Ministry of Employment and the Economy, Finland. Published March. Available: http://www.minedu.fi/OPM/Tiede/tutkimus-_ja_innovaationeuvosto/kokoonpano/neuvosto.html?lang=en. [Accessed March 9 2016].

¹⁴ COMMISSION. 2016a. *Country Report Finland 2016: Including an In-Depth Review on the prevention and correction of macroeconomic imbalances*. European Commission. Published February 26. Available: http://ec.europa.eu/europe2020/pdf/csr2016/cr2016_finland_en.pdf. [Accessed March 9 2016].

¹⁵ PELKONEN, A., NIEMINEN, M. & LEHENKAR, J. 2014. Evaluation of the Research and Innovation Council of Finland. Ministry of Education and Culture, Finland. Published March. Available: http://www.minedu.fi/OPM/Julkaisut/2014/TIN_arviointi.html?lang=fi&extra_locale=en. [Accessed March 9 2016].

¹⁶ <https://www.tekes.fi/en/>

¹⁷ <http://www.vttresearch.com/>

smart industry and energy systems, and solutions for natural resources and the environment.

VTT is an impartial strategic facilitator,¹⁸ being **independent** from business and industry. Following reforms in 2013, VTT **diversified its funding base**, and when transformed into a government owned company in 2015 it was obtaining 65% of its revenue from non-government sources.

- The Academy of Finland¹⁹ funds scientific research and also is responsible for positioning science and research strongly in the policy context.²⁰ With a 2016 budget of 418 million euros, it provides support to researchers for **ground-breaking research** that spans sector and interdisciplinary boundaries, also supporting researcher training and career development.²¹
- The Finnish Council of University Rectors includes all 21 HE institutions,²² and advances **cooperation within and without the university system**. That acknowledges the mandate in the Finnish Universities Act for universities to co-operate across the sector “**with a view to a viable division of work**”.²³ Universities must therefore compete for students, researchers and external funding, but must do so within the framework of national goals.
- The Nordic Business Forum²⁴ is a commercial enterprise that has developed seminars, and an Annual Forum which in 2016 will be held in Finland during October, offering wider access to the event at a much reduced rate through online access. They have also allocated finance from the Forum into **entrepreneurship education**.
- The Team Finland network²⁵ links three Ministries (Employment and Economy, Foreign Affairs, and Education and culture) to work at the international level, and includes a role to build the **internationalisation of Finnish companies**.

Running across these players in the innovation landscape is an atmosphere of ‘**collaborative competition**’. While universities will compete for the best students, the best researchers, and for global reputation, there is a clear higher

¹⁸ <http://www.vttresearch.com/about-us/co-operation-with-vtt/values-and-principles>

¹⁹ <http://www.aka.fi/en>

²⁰ <http://www.aka.fi/en/about-us/>

²¹ <http://www.aka.fi/en/about-us/our-research-councils/> Funding is provided through four research councils which make up the Academy: Research Council for Biosciences and Environment; Research Council for Culture and Society; Research Council for Natural Sciences and Engineering; and, Research Council for Health.

²² The 14 universities plus what are called ‘university centres’ and ‘university networks’ in areas which do not have a main university http://www.hup.fi/rexit/english/organisation_and_activities/member_universities.html

²³ FCUR. 2016. *University Co-operation in Progress*. Finnish Council of University Rectors. Published March. Available: <http://www.hup.fi/rexit/english/index.html>. [Accessed March 18 2016].

²⁴ NBF. 2016. *Nordic Business Forum*. Nordic Business Forum. Published March. Available: <http://www.nbforum.com/>. [Accessed March 18 2016].

²⁵ <http://team.finland.fi/en/frontpage>

sense of 'common purpose' through a policy framework for innovation which mandates collaboration towards achieving national goals.

3. The Higher Education System in Finland

The 2015 Education and Training Monitor²⁶ describes the Finnish education system as equitable, graduating students with very good learning outcomes, and with high levels of skills. Tertiary attainment remains strong at 45.3% in 2014, well above the EU average of 37.9%, and this is particularly the case for women (52.6%) with men being 38.2%.

The education system has been challenged by events such as migration (with performance gaps between native-born learners and first-generation migrants), and relatively low levels of "*apprenticeship type placements*".

The HE Sector in Finland has two complementary components: 14 universities and 24 universities of applied sciences (UAS, also termed polytechnics). Out of the 14 universities in Finland²⁷, two are 'foundation universities' (Aalto University and Tampere University of Technology), and others are public corporations (Universities of Helsinki, Eastern Finland, the Arts Helsinki, Jyväskylä, Lapland, Oulu, Tampere, Turku, Vaasa, Hanken School of Economics, Lappeenranta University of Technology, and Åbo Akademi University).

The higher education system as a whole is mandated to be flexible in response to national and regional requirements, and to help provide Finland with international competitiveness.²⁸ The 2009 Universities Act requires universities to develop a **strong interaction with their surrounding society**. They must also ensure that their research has direct **impact** for the benefit of society.

As well as the universities being required to undertake world-class scientific research and provide postgraduate education, the 24 UAS have a mandate to focus more on regional development and labour market needs. This is undertaken through the training of professionals, and research and development that is more directly targeted to regional development.²⁹

²⁶ COMMISSION. 2015b. *Education and Training Monitor 2015: Finland*. European Commission. Published September. Available: http://ec.europa.eu/education/tools/docs/2015/monitor2015-finland_en.pdf. [Accessed March 9 2016].

²⁷ <http://www.okm.fi/OPM/Koulutus/yliopistokoulutus/yliopistot/?lang=en>

²⁸ FINLAND. 2016c. *University reform*. Ministry of Education and Culture, Finland. Published March. Available: http://www.minedu.fi/OPM/Koulutus/koulutuspolitiikka/Hankkeet/Yliopistolaitoksen_uudistaminen/index.html?lang=en. [Accessed March 9 2016].

²⁹ <http://www.okm.fi/OPM/Koulutus/ammattikorkeakoulutus/ammattikorkeakoulut/index.html?lang=en>

The 2009 Universities Act sought to modernise the higher education sector through a number of actions. Universities became independent legal entities,³⁰ academics were no longer civil service employees, a University Board must contain at least 40% of members from outside the HE sector and the Chair and Vice-Chair must be from those external members.

A working party was established by the Ministry of Education and Culture in November 2014 and was tasked to propose a new funding model for Universities from 2017.³¹ In 2015 the results of an international panel commissioned by the Ministry was published. The Panel recommended radical modernisation involving stronger internationalisation, and more effective knowledge transfer across the knowledge triangle.³²

Panel recommendations also included a focus on scientific quality and financial viability, removing many of the previous boundaries between universities and UAS, considering institutional mergers, and enhancing internationalisation.

While it was stated that the Government would ensure that sufficient core funding is available for universities, the sector was encouraged to **diversify its funding base**,³³ and this includes the implementation from August 2017 of tuition fees for students from outside the EU and the European Economic Area.³⁴

Emphasis was also placed on **entrepreneurship education**. In 2009 it was required that HE institutions should develop operational mechanisms to ensure that graduates have entrepreneurial skills and innovative potential, so that businesses could grow more readily.³⁵ A 2014 report recommended that research should explore how entrepreneurship education was being undertaken. The response was a 2015 survey, support by the Federation of Finnish Enterprises,³⁶ and also encouraging the use of HEInnovate.

³⁰ http://www.minedu.fi/OPM/Koulutus/koulutuspolitiikka/Hankkeet/Yliopistolaitoksen_uudistaminen/?lang=en

³¹ FINLAND. 2012. *Proposal for the funding model of universities as of 2017* Ministry of Education and Culture, Finland. Published December 7. Available: <http://www.minedu.fi/OPM/Julkaisut/2015/yluopistot.html?lang=en>. [Accessed March 9 2016].

³² FINLAND. 2015b. *Towards a future proof system for higher education and research in Finland*. Ministry of Education and Culture, Finland. Available: http://www.minedu.fi/OPM/Julkaisut/2015/higher_education.html?lang=en. [Accessed March 9 2016].

³³ FINLAND. 2016c. *University reform*. Ministry of Education and Culture, Finland. Published March. Available: http://www.minedu.fi/OPM/Koulutus/koulutuspolitiikka/Hankkeet/Yliopistolaitoksen_uudistaminen/index.html?lang=en. [Accessed March 9 2016].

³⁴ SMITH, B. 2016. *Finnish universities to charge non-EU fees*. The Pie News. Published January 5. Available: <http://thepienews.com/news/finnish-universities-to-charge-non-eu-fees/>. [Accessed January 13 2016], VABØ, A. & WIERS-JENSSEN, J. 2015. *Different approaches to fees for international students*. University World News. Published April 3. Available: <http://www.universityworldnews.com/article.php?story=20150331054410125>. [Accessed April 7 2015].

³⁵ FINLAND. 2015a. *Supporting entrepreneurship and entrepreneurial attitude in Finnish higher education institutions*. Ministry of Education and Culture, Finland. Published October 10. Available: <http://www.minedu.fi/OPM/Julkaisut/2015/yrittajyyys.html?lang=en>. [Accessed March 9 2016].

³⁶ <http://www.yrittajat.fi/en-GB/>

In 2014, the Ministry of Education and Culture published its findings on how cooperation could be deepened between higher education and other research institutions regarding career pathways for researchers.³⁷ Finland was facing challenging economic conditions, and research results from public funding needed to be more visible, with more flexible career paths for researchers, and a stronger focus on internationalisation.

The Government announced a programme of structural readjustments in May 2015. It aims to maintain the high levels of quality and performance that helped Finland to score highly in innovation, and also addresses structural challenges in higher education.

Changes had been made in 2013 to the HE funding model to enhance completion rates and better enable the transition into jobs. Importantly, the Government strongly emphasised the need for **increasing HE-business cooperation** to accelerate research results into the market.³⁸

A national centre (Finnish Education Evaluation Centre³⁹) was also established to provide centralised evaluation of **quality**. In order to facilitate this, respective roles of higher education institutions and research centres have to be clarified in order to enhance cooperation between all players.

4. University-Business Cooperation in Europe – Key messages from the past University-Business Forums

Over the years University-Business Forums have built a network of collaboration, knowledge and experience sharing. UBForums helped to provide a focus across the knowledge triangle, highlighting how the components of the innovation ecosystem interact.

UBForums provide essential European 'added value' to national debates, showing how different Member States build their ecosystems, and build flexibility and resilience into them. The reports of previous UBForums provide high-level lessons,⁴⁰ many of which are addressed by the Finnish Innovation Ecosystem, and which also will provide the basis for mutual learning in Helsinki:

³⁷ FINLAND. 2014c. *The situational picture of research careers. The final report of the working group for research careers*. Ministry of Education and Culture, Finland. Published February 12. Available: <http://www.minedu.fi/OPM/Julkaisut/2016/tutkijanura.html?lang=en>. [Accessed May 9 2016].

³⁸ COMMISSION. 2015b. *Education and Training Monitor 2015: Finland*. European Commission. Published September. Available: http://ec.europa.eu/education/tools/docs/2015/monitor2015-finland_en.pdf. [Accessed March 9 2016].

³⁹ <http://karvi.fi/en/>

⁴⁰ http://ec.europa.eu/education/tools/university-business_en.htm

- **Engage all actors** in a national innovation policy, also understanding that each player may 'innovate' to different timescales (for example university research and publishing versus immediate demands of business for research outputs);
- **Provide a clear framework** within which cooperation and competition can work effectively to drive forward innovation;
- **Ensure that there is institutional 'buy-in'** to innovation and entrepreneurship, through the commitment and involvement of senior staff. Provide enabling mechanisms that reward innovation and entrepreneurship as well as research excellence to all members of the institution, from students to academics, and from support staff to alumni;
- **Learn from other models and practices**, but then adapt and fine-tune the learning lessons to build a **resilient innovation ecosystem** – each Member State and its regions has particular characteristics.

The Vienna UBForum showed clearly how '**alliances for innovation**' provided the organisational groundwork for a resilient ecosystem. Helsinki will focus on '**breaking boundaries for future careers**'. This moves the debate from the organisational focus of Vienna, to the people who 'populate' the innovation ecosystems of European Member States.

The Helsinki UBForum offers opportunities for universities, companies, countries, regions and cities to present innovative ways in which they collaborate and promote entrepreneurship and new ways of operating in a dynamic digital global business environment. Sessions will cover:

- 'Seed' through **Innovation Pedagogy** – develop pedagogies that explicitly and effectively create innovators and entrepreneurs, as well as researchers;
- 'Sprout' **Innovative Learning** - use modern teaching and learning methods and environments to maximise the impact and value of learning;
- 'Grow' **Innovative Ecosystems** – build a collaborative infrastructure and strong network for a resilient ecosystem;
- 'Harvest' the benefits through **Entrepreneurial Learning** – for example, provide learning-by-action opportunities for students.

5. Key Themes of the Helsinki Thematic UBForum

5.1. Session I: Innovation Pedagogy

Innovation pedagogy generally relates to learning that is strongly focused on the process of innovation.

It aims to ensure that learners develop skills and competences, build knowledge about innovation, understand how the knowledge is translated into innovations that can be taken forward by business and industry.

In the university context this is undertaken through teaching and learning content and organisational practice.

Innovation transcends disciplinary frameworks that have prevailed in universities for decades. Pedagogy needs to break out of disciplinary silos (arts, humanities, social science, engineering etc.), administrative silos (faculties that often reflect disciplines), and organisational practice (for example, a university delivering its own courses in a particular subject area and competing with others doing the same).

Questions that the audience can consider include:

- How can innovation pedagogy be developed in a **multidisciplinary** way across all academic sectors?
- How are universities dealing with **greater openness in learning** to enhance the innovative potential of learners? For example, using open education resources alongside conventional resources, MOOCs, blended learning, and the recognition of open learning.⁴¹
- How are universities defining the **innovation skill-sets** and attitudes that need to be embedded in pedagogy? And, how are all the university 'actors' (academics, support staff, library staff etc.) being provided with the **skills and competencies** to develop and support the innovative potential of learners?

⁴¹ For example, EFMD has launched a MOOC recognition system for business courses in the Online Course Certification System (EOCCS). MANOT, M. 2016a. *EFMD Launch EOCCS - EFMD Online Course Certification System*. European Foundation for Management Development. Published February 24. Available: <http://www.efmd.org/blog/view/989-efmd-launch-eoccs-efmd-online-course-certification-system>. [Accessed March 22 2016].

5.2. Session II: Innovative Learning

The need to develop innovative learning was set out in the Commission Communication 'Opening up Education' in 2013.

The Communication emphasises the need for more personalisation of learning, more collaborative learning, stronger linkages between formal and informal learning, and learning that is enhanced by digital tools and resources.⁴²

The UBForum can review a range of challenges in ensuring that learning environments are truly innovative:

- How are universities **encouraging, investing in, and rewarding** those who are developing innovation pedagogy?⁴³ For example, how are they balancing bottom-up innovation by individual educators with more strategic approaches?⁴⁴
- How are European initiatives in building and sharing **open education resources** being used in innovative learning environments that help to enrich university-business collaboration?
- How are **social and collaborative learning** processes (for example understanding how learners 'learn' across multiple opportunities) being used in innovative learning environments that help to enrich university-business collaboration? How are **ICT tools and resources** efficiently and effectively supporting these developments?

⁴² COMMISSION. 2013. *Opening up Education: Innovative teaching and learning for all through new Technologies and Open Educational Resources*. European Commission. Published September 25. Available: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2013:0654:FIN:EN:PDF>. [Accessed September 26 2013].

⁴³ MUÑOZ, J. C., PUNIE, Y., DOS SANTOS, A. I., et al. 2016. *How are Higher Education Institutions Dealing with Openness? A Survey of Practices, Beliefs, and Strategies in Five European Countries*. Joint Research Centre (European Commission). Available: <https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/how-are-higher-education-institutions-dealing-openness-survey-practices-beliefs-and>. [Accessed March 1 2016].

⁴⁴ HAYWOOD, J., CONNELLY, L., HENDERIKX, P., et al. 2014. *The changing pedagogical landscape: New ways of teaching and learning and their implications for higher education policy* European Commission. Available: http://bookshop.europa.eu/en/the-changing-pedagogical-landscape-pbNC0415435/;pgid=Iq1Ekni0.1ISR00OK4MycO9B0000bqo_NAei;sid=GvFkMD5kGSBkMWirGo_6l1xBV5J6QnMHBIM=?CatalogCategoryID=QN4KABste0YAAAEJFZEY4e5L. [Accessed October 12 2015].

5.3. Session III: Innovative Ecosystems – Building a Collaborative Infrastructure for a Resilient Ecosystem

This can involve a **clear national vision** about what the innovation landscape will cover, from international competitiveness, to innovation performance (as measured on the EU Regional Innovation Scoreboard⁴⁵), and to national thematic priorities.

A **national framework of working together** can help to progress towards a common goal. For example a mandate given to HE to both compete in research, but overall to provide coherent support for the innovation ecosystem (research outputs, graduates, regional and local collaboration etc.).

Modernisation of key components of the ecosystem is important, in particular the higher education systems, but also the government structures and their ways of working.

Planning resilience and foresight into the ecosystem enables it to deal with economic and social challenges externally (for example the global economic crisis), at the European Level (contributing to meeting the Europe 2020 goals⁴⁶), and internally (for example demographic change, ageing, and industrial restructuring at the national level).

Questions for the Forum to consider in the context of University-Business include:

- Given the diversity of economies across the EU what can we learn from the **strategies for development of innovation ecosystems** across Member States and beyond? And, what are the key roles for universities in the strategies? For example, how are universities reflecting the **needs of their national, regional** (and European) innovation ecosystems in their teaching and learning strategies?
- **How can** HE institutions more effectively **modernised**,⁴⁷ changing the ways they work,⁴⁸ such as in terms of rewarding excellent teaching as well as excellent research?⁴⁹ How can they embed **state-of-the-art research**

⁴⁵ http://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards/index_en.htm

⁴⁶ http://ec.europa.eu/europe2020/index_en.htm

⁴⁷ Further reading is at: COMMISSION. 2015d. *A renewed Modernisation Agenda for Higher Education in the European Union*. European Commission. Published November 27. Available: http://ec.europa.eu/dgs/education_culture/more_info/consultations/new-modernisation-agenda_en.htm. [Accessed December 15 2015].

⁴⁸ Further reading is at: NMC. 2016. *The NMC Horizon Report: 2016 Higher Education Edition*. New Media Consortium. Available: <http://cdn.nmc.org/media/2016-nmc-horizon-report-he-EN.pdf>. [Accessed March 10 2016].

⁴⁹ "Education institutions must revisit their organisational models to become more innovation driven and increase their level of e-maturity". See: COMMISSION. 2015a. *Commission Staff Working Document. Draft 2015 Joint Report of the Council and the Commission on the implementation of the Strategic Framework for European cooperation in education and training (ET 2020): New priorities for European cooperation in education and training. {COM(2015) 408 final}*. European Commission. Published August 26. Available: http://ec.europa.eu/education/documents/et-2020-swd-161-2015_en.pdf. [Accessed September 2 2015].

into teaching and learning both to the benefit of the students and of business and industry, provide mobility-enriched innovation and entrepreneurial experience to all students and early stage researchers? How can **SMEs** in the 'catchment' of a university both 'absorb' the potential number students needing mobility experience, and also become an **active** part of the teaching and learning process?

- What **EU and other tools** are helping actors in innovation systems to assess and develop their capabilities, learn from good practice, and plan modernisation and improvement?

5.4. Session IV: Entrepreneurial Learning

This session will look at how learners acquire new knowledge about taking initiatives, entrepreneurial behaviour, and possibly becoming entrepreneurs. It specifically looks at the ways in which learners (whether they are students in a university, or staff in a business) can become entrepreneurial in their thinking and their actions. For example, it could consider how to develop a strong university-business culture where students, teachers, researchers, and business work closely together.⁵⁰

Becoming entrepreneurial can require students to undertake business start-up activities, or similar projects that are subject to risks and have no controlled pathway in terms of how they will unfold. Learning cultures of this nature need to have 'evaluative thinking' at their core, providing evidence of progress success, failures and roadblocks. In that context, learning becomes a mutual journey, an exploration that may have a goal (in learning outcomes etc.) but no fixed pathway to achieving it.⁵¹ Entrepreneurial learning therefore expects mistakes, failures, and above all learning lessons by exposure and experience.

The audience could consider questions related to entrepreneurial learning:

- How are the new types of entrepreneurial learning being provided and recognised? What organisational models have universities used in mainstreaming entrepreneurial learning across their teaching and learning environment?
- How can open entrepreneurial learning can be integrated with strategies for the mobility of learners?
- How are universities and businesses collaborating in the provision of flexible and innovative learning for entrepreneurs, as well as providing

⁵⁰ NMC. 2016. *The NMC Horizon Report: 2016 Higher Education Edition*. New Media Consortium. Available: <http://cdn.nmc.org/media/2016-nmc-horizon-report-he-EN.pdf>. [Accessed March 10 2016].

⁵¹ EARL, L. & TIMPERLEY, H. 2015. *Evaluative thinking for successful educational innovation*. OECD. Published July 3. Available: http://www.oecd-ilibrary.org/education/evaluative-thinking-for-successful-educational-innovation_5jrxtk1jtdwf-en. [Accessed July 16 2015].

learning for future entrepreneurs? How are SMEs being brought more fully into the entrepreneurial learning environment?⁵²

5.5. HEInnovate

Complementing the UBForum, a workshop of higher education representatives will highlight the value of the HEInnovate⁵³ self-assessment tool, which helps universities maximize their entrepreneurial capabilities and potential. Developed jointly by the European Commission and the OECD, HEInnovate is now into its third year of use by over 600 HE institutions across the World.

The tool provides assessment across a range of innovation-related areas:

- Leadership and Governance;
- Organisational Capacity: Funding, People and Incentives;
- Entrepreneurial Teaching and Learning;
- Preparing and Supporting Entrepreneurs;
- Knowledge Exchange and Collaboration;
- The Internationalised Institution;
- Measuring Impact.

HEInnovate is not a benchmarking tool, but is a bench-learning resource. It can be used by many different people or groups in a single institution to compare how they see the innovation level of the institution. That can lead to a discussion on priority areas for improvement and enhancement. Later, they can re-run the self-assessment and see the extent to which they see those areas as having improved.

⁵² COUNCIL. 2014. *Council conclusions on entrepreneurship in education and training*. Council of The European Union. Published December 12. Available: http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/educ/146196.pdf. [Accessed December 12 2014].

⁵³ <https://heinnovate.eu/>