

engage

ANNUAL REPORT

2017

ENGAGE

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ABSTRACT

Engage – Centre for Engaged Education through Entrepreneurship is turning one year. We have been busy recruiting excellent people, project managers, researchers and a good bunch of student assistants. The vision of Engage is to increase the number of students in Norway and around the world with entrepreneurial skills and the mindset to become change agents in all contexts. Engage develops education for students from all disciplines and professions who will constantly challenge accepted truths and innovate for the better, in both the private and public sectors.

Engage is a consortium consisting of the NTNU School of Entrepreneurship, Nord University Business School, NTNU Experts in Teamwork, TrollLABS and Spark NTNU. The centre is organized in 5 Work Packages, where WP1, WP2 and WP3 provide content based on collaborative skills, rapid prototyping and venture creation. In WP4 Engage develops tools for testing and transforming teaching in various types of contexts towards a more action-based approach. WP5 documents and evaluate the activities in Engage, and assemble the knowledge to create and disseminate a reliable and comprehensive knowledge base

In 2017, we have engaged students, teachers and stakeholders inside and outside Norway through a broad range of settings and activities: summer school, conferences, hackathons, courses, workshops and seminar series. We have been spreading the word of entrepreneurial skills and mindset towards EU commissioner, ministers, universities teachers, students, teen-agers, industry actors, local municipalities, and more.

Engage is building a strong research group connected to the centre. The centre has recruited seven new PhDs and we now have 10 PhD candidates on board. The PhDs will contribute with long term research on core areas for Engage in a wide range of contexts like engineering, health, professional arts, venture creation programs and more, focusing on various aspects of entrepreneurship education.

Student engagement is a key for developing a centre of excellence in education. Engage involves students at all levels (steering group, management group and project level). The students are involved in designing and testing new methods in various contexts, and they form their own projects within these contexts. Therefore, when forming our own media team it was natural to recruit students and let them have the key role when it comes to dissemination on various platforms.

Engage has in 2017 spent 9.2 million NOK. This is significantly lower than the original budget. This could be explained by the fact that this was a start up year for the centre. In 2018 we expect that the centre will have an activity level in line with the original budget. The centre will in 2018 by and large follow the original project plan, supplemented with new projects relevant to the vision of the centre.

We look forward to engage students and stakeholders in the years to come.



ENGAGE AT A GLANCE

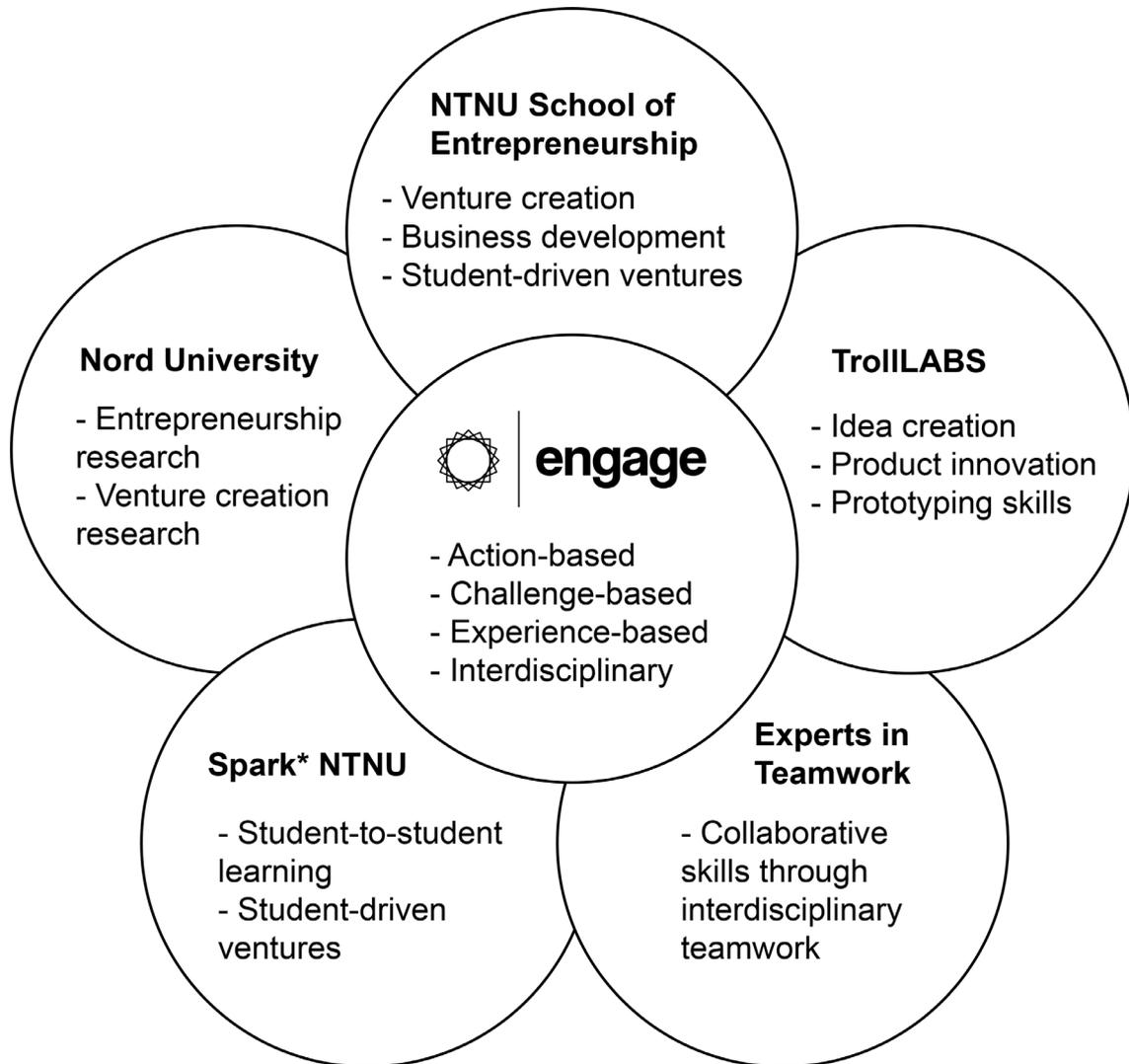
The world is constantly changing, with increasing pace and intensity. These changes have profound consequences for human life—for the climate and environment, technological opportunities, business practices, public policy, safety, education, and society as a whole. This complex environment calls for citizens who have the ability to identify challenges, the will to act upon these challenges, the knowledge to acquire the resources and skills needed and the confidence to be the driving force for change, regardless of resistance. These people are the agents of change, the entrepreneurs, willing and able to make changes, engaging challenges with creativity and fearlessness. The vision of Engage is to increase the number of students in Norway and around the world with entrepreneurial skills and the mindset to become change agents in all contexts.

Through its vision, Engage will contribute to the generation of self-aware students who have the ability to diagnose their own need for skills and knowledge throughout their professional lives, who knows how to use their expertise to meet the needs around them, and who have the willingness to be an agent of change, regardless of context. As such, Engage call for a change in how universities educate students across

all disciplines and professions in entrepreneurial skills that can prepare them for important roles as change agents in business and society. Particularly, Engage will seek to (1) develop a world-class entrepreneurial training program, (2) provide entrepreneurial insights via action-based learning methods to students independent of discipline or profession, (3) develop and test new learning models to develop entrepreneurial skills and mindset, (4) document effects of using entrepreneurial learning methods in various contexts, and (5) disseminate these insights inside and outside of Norway.

Engage is a consortium consisting of the NTNU School of Entrepreneurship, Nord University Business School, NTNU Experts in Teamwork (EiT), TrollLABS and Spark NTNU. As shown in figure 1, this consortium contributes with variations in action-based, challenge-based and experience-based learning models as a basis for interdisciplinary interactions and complementary skills and approaches. This is a strong foundation for developing entrepreneurial skills and mindset among students in all types of study programs. The centre host is NTNU faculty of economics and management.

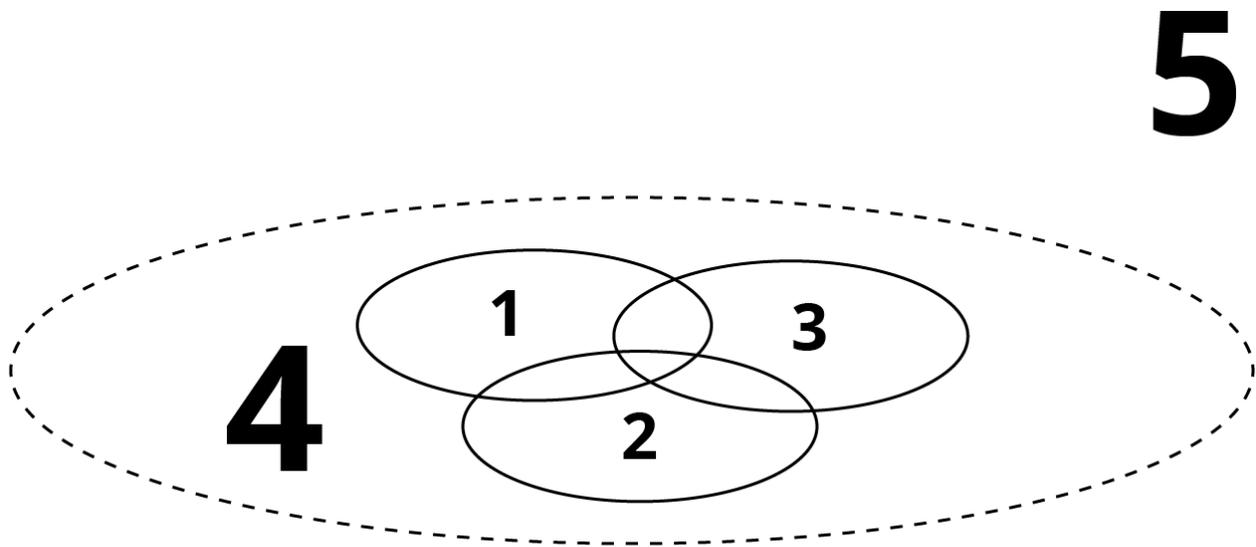
Figure 1. Engage consortium



Further, as shown in figure 2, the Centre is organized in five working projects (WP). WPs 1, 2 and 3 provide content based on collaborative skills, rapid prototyping and venture creation. These WPs are deeply rooted in the current activities of the consortium of the center. The Centre will enable, and benefit from, the coordination gains based on the interactions between these three WPs. WP4 develops tools for transforming teaching in

various types of contexts towards a more action-based approach. WP5 documents and evaluates the activities in Engage, and assemble the knowledge to create and disseminate a reliable and comprehensive knowledge base. The plan is to spread the entrepreneurial mindset broadly during the first five years and then use the following five years to anchor the transformed practices in the different contexts.

Figure 2. The organization of Engage



The Centre has a management group consisting of centre leader, Roger Sørheim, centre coordinator, Frode Halvorsen, student, Synne M. Sollie, PhD student, Torgeir Aadland, leader WP1, Ela Sjølie, leader WP2, Martin Steinert, leader WP3, Øystein Widding, leader WP4, Gry Agnete Alsos, and leader

WP5, Kari Djupdal. The Centre has a steering committee with representatives from the partner institutions, including 2 students. The leader of the steering committee is Monica Rolfsen dean faculty of economics and management.

WORK PACKAGES

WP1 - DEVELOPING COLLABORATIVE SKILLS IN INTERDISCIPLINARY TEAMS

Teamwork is about being creative and efficient together. Individuals must learn to understand their own unique contribution to a group to further develop their collaborative skills. Collaborative skills are a pivotal feature of innovative interdisciplinary teams (Sawyer, 2007) and are part of the general skills required by all Norwegian students (Ministry of Education and Research, 2012). WP1 explores in depth the elements that characterize collaborative skills in interdisciplinary teams, methods for acquiring collaborative skills in an experience-based context, and ways of assessing these skills among students. It is known that group learning fosters higher-order skills and shared knowledge construction and contributes to students' engagement in learning, but there is still little knowledge on how such activities should be designed (de Hei et al., 2016).

The main objectives of WP1 are to develop methods and approaches to develop students' interdisciplinary teamwork skills, and also challenge students to develop their entrepreneurial skills and engage in entrepreneurial behaviour. Furthermore, to reach more than 3000 NTNU students annually with new team and entrepreneurship educational methods, and spread and develop EiT at Nordic campuses. Key activities are related to improving the centre's understanding of teamwork, and developing new methods for student collaboration as a general foundation in project work. Thus, more widely introduce facilitation as a tool to develop students' collaborative skills in teamwork, both inside the centre and at other campuses inside and outside Norway.

EXAMPLES OF ACTIVITIES

2017

- Workshop in facilitation for academic staff at Erhvervsakademi i Aarhus (EAAA)
- Seminar for academic staff at Nord University on student active learning
- Workshop on co-creation for teaching staff in EiT villages and Engage.
- Preparing "pilot villages" on new methods related to collaboration with external partners, entrepreneurial skills and competence for sustainable development
- Further development on methods for student assessment of entrepreneurial skills
- Contributed to establishing a subject similar to EiT at the University of Banja Luka in Bosnia Herzegovina (part of QIMSEE, a project that aimed to contribute to economic growth and social development in Western Balkans).
- Presentation of EiT for Interact, «Tverrprofesjonell samhandling om og med barn og unge» at Høgskolen i Oslo og Akershus (HiOA)

- Establishing contacts and collaborations with new external industry partners, NHO and unions (Tekna, LO).
- Recruited faculty and PhD student
- Developed new strategy for the EiT course «Change agents in teams based on teamwork skills» that will affect all master students at NTNU
- First step of an expansion of EiT as a result of the merger between NTNU and university colleges in Gjøvik, Ålesund and Sør-Trøndelag.

KEY ACTIVITIES

2018

ENTREPRENEURSHIP IN ALL EIT VILLAGES.

EiT aims to educate change agents in teams based on cooperation skills. To reach this goal, the main activities will be to add a more project oriented focus in the education of the teachers (supervisors) in EiT. Action based research through piloting will be used to develop methods and practice that will be implemented stepwise. Specific activities in 2018 will be:

- Identify how entrepreneurial skills and competences for sustainable development are integrated in EiT today
- Pilot projects (in the form of “pilot villages”) on

new methods related to collaboration with external partners, entrepreneurial skills and competence for sustainable development

- Develop train-the-trainer (TtT) modules with focus on entrepreneurial skills
- Develop course material for teachers in EiT
- Develop structures for supporting students who want to bring their ideas further

INTERNATIONAL AND NATIONAL COLLABORATION AND NETWORKING

Engage aims to be a leading centre for implementing interdisciplinary teamwork skills and entrepreneurial skills in higher education. Specific activities for 2018 will be:

Its21 - 4th conference on interdisciplinary teamwork skills for the 21st century will be arranged in Trondheim June 20-21 2018. The conference is part of a Nordic collaboration. The main objective of the conference is to create a meeting place where researchers and practitioners from universities and workplaces can

discuss key issues related to how skills in interdisciplinary teamwork and innovation can be developed
- Collaboration within and outside NTNU to create “village themes” that are more aligned with NTNU’s Strategic Research Areas.

Other activities. Second step of an expansion of EiT as a result of the merger between NTNU and university colleges in Gjøvik, Ålesund and Sør-Trøndelag. The number of students will increase from 2300 to 3000 a year.



Entrepreneurial methods and action-based project learning to achieve UN Sustainability Goals

This spring semester through Experts in Team, Engage has supervised and taught an interdisciplinary group of 30 students on how they can use entrepreneurial methods and action-based project learning to achieve UN Sustainability Goals here in Trøndelag. With a goal of promoting interdisciplinary learning experiences and self-awareness in teams, our students have displayed enthusiasm, passion, and creativity in their

engagements with local partners whose operations have various impacts on sustainability. As the result of our village, students have laid the groundwork for innovative products such as:

- a food recipe app (SpisD) which reduces household food waste and maximises food use for Trondheim Renholdsverk
- a strategic overhaul and re-positioning of the user value propositions for a local Trondheim startup which has an app to promote sustainable behaviour, Ducky.

WP2 - VENTURE CREATION METHODS IN A RESEARCH SETTING

WP2 's core idea is to research and foster, experimental product development with a mixed disciplinary approach. Its aim is to enhance understanding and application of early-stage tangible and intangible learning principles, particularly related to creating, ideating, testing and learning from human-human, human-object and object-object interactions in engineering.

Its main objective is to develop interactive methods for students to develop products for venture creation, e.g. through design thinking or rapid prototyping and solving real problems with business potential. Encourage students to more quickly test their ideas for commercial activity and potentially become entrepreneurs. Provide the foundation for educators to teach such a project/problem based approach in STEM.

EXAMPLES OF ACTIVITIES

2017

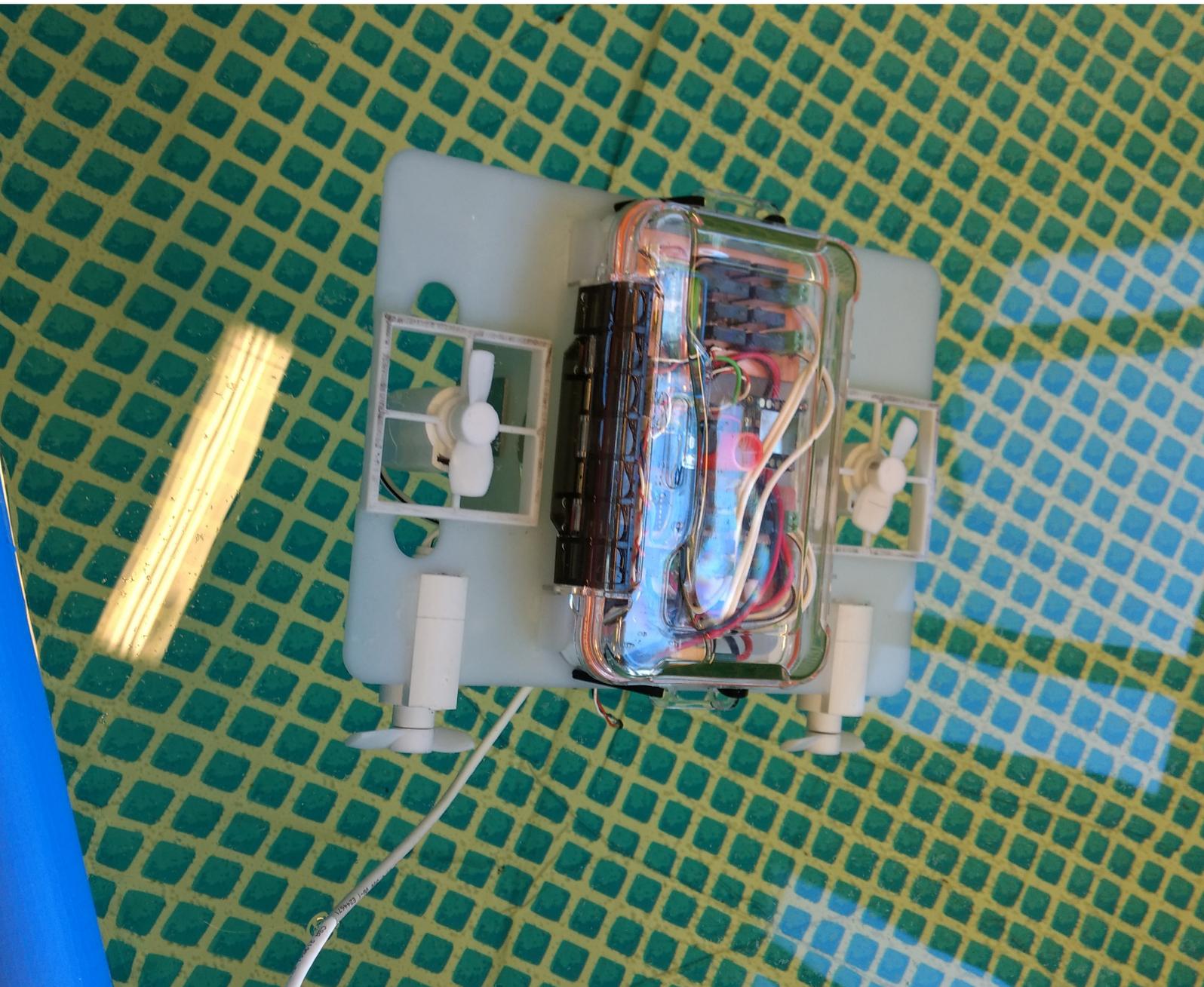
- SFU ENgage workshop on experiments in research (TrollLABS, October)
- NORDtek keynote presentation (SFU Engage)
- Rosenborg School, MAKER pilot
- eduROV, QBot and MAKERBOX websites development, pilots online
- DT and prototyping workshop for educators (profs) NORD University
- Design Factory Aalto visit
- Keynote opening tourism living lab Frederikstad
- Keynote NAPIC opening NTNU
- Various industry and academic presentations on TrollLABS and SFU Engage

KEY ACTIVITIES

2018

- Obtain SO financing for an ENgage WP2 PhD, hiring and commencing basic research education
- Travel to CERN and prepare project TechPush-CERN
- Run first CERN test cohort
- Connect with WP4 to prepare administrative inclusion of Entrepreneurship students in TMM4245 and TMM4220
- Run first test cohort
- Setup and prototype MAKER experiments (QBOT, eduROV, Makerbox)
- Continuous exchange with Design Arena Bergen in preparation for project DT-MOOC
- Meeting with new IV dean, fall 2017, TBD
- Pilot the first cross program IV minor course, Innovation Minor at IV
- Continuous support (Masters, Workshop, etc.) for WP3 Ventures, e.g. ALVA, Helical Gardens
- Preparation and running of MAKER summer school 2018





eduROV - an open source ROV for educational use

eduROV is an open-source project with the goal of creating a submersible vehicle for under 3000 NOK (~300€). The project is aimed at middle/high-school children with an interest in technology, in addition to hobbyists and other enthusiasts. Our overall vision is to inspire and teach technology to children of all ages and types.

Utilizing some plastic cutting boards, DC-motors from low cost bilge pumps as well as other open-source and low cost technology platforms such as Arduino and Raspberry Pi, eduROV v03 is currently alive and kicking. Summer 2018 we want to start spreading the joy by inviting interested high-school pupils to a techy summer school experience

WP 3 VENTURE CREATION PROGRAMS

Engage will identify, map and describe leading venture creation programs using an action-based approach, i.e. teaching “through” entrepreneurship as opposed to “about” entrepreneurship or “for” entrepreneurship. The mapping of best practices will be related to organization, content, student engagement and output. Even though the focus is on specialized entrepreneurship education and sharing of methods with other programs seeking venture creation as

an output, a key issue will be how these programs can contribute to a permanent change of mindset in broader groups of students. The main objective for WP3, and the role within Engage is to: “Increase the quality and efficiency of venture creation programs. Position the VCP at NTNU as world leading program. Develop the VCPs role as an enabler for broader student engagement”.

EXAMPLES OF ACTIVITIES

2017

- Recruited 10+ student assistants engaged in different projects.
- Sent 4 VCP-students on inter-university desk surfing.
- 120+ VCP alumni’s participated in different arrangements at NTNU.
- Established a Alumni Incubator on campus at NTNU.
- Established research project on VCP alumins in collaboration with Chalmers

KEY ACTIVITIES

2018

- VCP Documentation – Documentation of activities in a VCP, all year around
- Inter-university Desk Surfing - VCP students learning from interaction with international peers
- VCP Best Practice Forum - Identification- and establishment of a global state-of-the art of VCPs
- Research Gateway – Database of entrepreneurship research conducted by VCP students
- Alumni Talk – Talk from VCP alumni’s to current VCP students (and other engaged in entrepreneurship)
- Alumni’s and VCP students - Facilitated co-work between
- VCP alumni’s and students at a VCP, to increase learning and expanding on networks
- Alumni Research – Learning outcome as described by VCP Alumni’s
- Alumni Incubator – Expand the entrepreneurial society and knowledge base
- Venture Creation Cases – Case bank on real cases at VCPs
- VCPs as enablers – entrepreneurship in different contexts



VCP Alumni research

NTNUs School of entrepreneurship is a venture creation program where students learn entrepreneurship through starting their own company. Engage is conducting research on the 309 graduated alumni students from NTNUs school of entrepreneurship. The goal of the research can be divided into two:

1. To identify where students of a venture creation program end up after graduation.
2. To identify what the students learned and how they learned it.

The outcome of the research will be used to develop and recommend the content and teaching methodology of venture creation programs.

WP4 – INCREASE STUDENTS’ ENTREPRENEURIAL MINDSET AND SKILLS IN HIGHER EDUCATION

WP4 develops new methods and approaches to stimulate students’ entrepreneurial skills and mindsets. The aim of WP4 is to create new teaching methods in entrepreneurship education, with a focus on action-based, challenge-based education where the students learn from their own entrepreneurial experiences and thereby develop the entrepreneurial skills and mindset to become change agents in the context where they will develop their careers. The projects in WP4 focus on entrepreneurship in different contexts and finding appropriate approaches for introducing action components in different disciplines and professions. We emphasize that approaches and tools should be context-sensitive and utilize the theories of that particular field of study. In WP4, Engage develops tools for transforming teaching in all disciplines and professions towards a more action- and practice-based approach to engage students in their own education and develop their entrepreneurial

skills. WP4 base its activities on the combined activities from WPs 1, 2 and 3, but the activities in WP4 will be completely enabled and developed by the centre and therefore represent a large portion of the additional capacity provided for the SFU.

A part of the activity in WP4 focuses on developing and introducing action-based entrepreneurship education at Nord University, utilizing this context as a living lab to develop and test new tools and methods in a variety of disciplines and study programs. Building on developments in WP 1, 2, and 3 mainly based at NTNU, this context represents a unique living lab to test transferability of approaches, methods and tools into new settings. This will need further development to facilitate this specific context.

WP1, WP2 and WP3 will interact with WP5, and over time, Engage aims to expand its work to several other

KEY ELEMENTS OF WP4

1

IDENTIFY INNOVATIVE BEST PRACTICES FOR ENTREPRENEURSHIP EDUCATION

- Research on entrepreneurship education and action-based methods
- Identification and further development of best practices from WP1, WP2 and WP3
- Identification and further development of best practices from other institutions worldwide

2

DEVELOP AND INTRODUCE NEW METHODS/TOOLS FOR ACTION-BASED LEARNING

- Utilize Nord University as living lab for development and testing of methods/tools
- Train-the-trainer workshops and seminars on tools and approaches
- Gather experiences from methods/tools developed in other work packages and synthesize learning

EXAMPLES OF ACTIVITIES

2017

ENGAGE OPENING EVENT

Engage was introduced at Nord University with an opening event on 23 March 2017. The seminar included presentations from Salt (entrepreneurial firm on sustainability issues), Bodø's large innovation initiative "ny by-ny flyplass", an pitches from student start-ups. Further, a bunch of video greetings from national and local stakeholders were shown.

"Train the trainer" workshops for teaching faculty

Training teaching faculty is a key activity for Engage. Engage invites faculty from different disciplines to various workshops and seminars on teaching methods relevant to developing entrepreneurial skills and mindsets among students. We thereby seek to engage university teachers to try out action-based teaching methods where students learn through an experiential learning pedagogy.

During 2017, we have organized several focused workshops for university lecturers. The response has been good, and the workshops have engaged participants from different disciplines and levels. The workshops have dealt with a variety of relevant topics such as student-active learning methods and learning in groups, case-based teaching of entrepreneurship and

DESIGN THINKING

- Student active education seminar 8 September 2017
- Breakfast workshop: How to teach an entrepreneurship case. With Candida Brush, Babson College 20 September 2017

- Seminar: How to create a positive first impression in the classroom. With Candida Brush, Babson College 19 September 2017
- Workshop: Design thinking 28 September 2017. With Martin Steinert
- Seminar: ADHD and entrepreneurship education. 21 November 2017. With Johan Wiklund

FACILITIES FOR STUDENT ENTREPRENEURSHIP ACTIVITIES AT NORD UNIVERSITY, SPIR IDÉLAB

SPIR Idélab is the new space for student entrepreneurship at Nord University. Located in immediate proximity to the entrepreneurship faculty, SPIR is an arena for student entrepreneurs to hang out, organize smaller events, work from, and where they also can receive advice from faculty on their entrepreneurial projects. Engage contributes to the development of SPIR, and organizes activities in the facilities and elsewhere at the university campuses like the HHN Challenge.

OUTREACH ACTIVITIES

With regard to Engage ambitions to disseminate action-based learning outside the university context, WP4 organized a workshop on entrepreneurial skills for secondary school pupils from Skjerstad/Misværm, a workshop on Entrepreneurial thought and action for entrepreneurs and students with Andrew Corbett as the main speaker and a mini workshop on teaching entrepreneurship to upper secondary school teachers.

DEVELOPMENT OF NEW AND EXISTING COURSES

Engage has contributed to the development of new and existing courses at HHN. The process of developing a new mandatory course at the MSc in Business program on Innovation and Entrepreneurial thinking has started. Further, Engage has contributed to developing two courses in Business Development (BSc and MSc levels).

Moreover, Engage has contributed to various courses with elements related to entrepreneurship, teamwork and other Engage-related topics, including courses at Bachelor and Master level at HHN. We also gave a lecture at the Young entrepreneurship program, an initiative taken by the Norwegian-Ukraine Chamber of Commerce to educate youth in Norway and Ukraine in entrepreneurship.

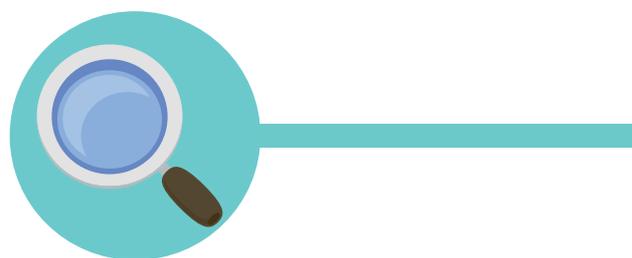
INNOVATION THINK THANK 2017 BODØ

The city of Bodø established in autumn 2017 an Innovation forum. This forum acted as a think tank with the aim to come up with ideas for strategic initiatives and actions that will contribute to building of a stronger culture for innovation and stimulate to increased innovation activity in public and private sector, as well as in society more broadly – locally and in the region. The forum had their first meeting on 29 August. On 8 December, they presented their recommendations for members of Bodø City Council.

Engage was contracted as part of the secretariat, where Iselin Mauseth works together with the director for business policy in Bodø Heidi Thommesen to facilitate the meetings in the Innovation Forum and to summarize and present its discussions and suggestions. Gry Agnete Alsos from Engage leads the Forum, appointed by the City Council of Bodø. The forum had eight members, mainly from the business sector.

THE JOURNEY SUMMER SCHOOL

Hosted The Journey July for 40 international students who worked on sustainable business projects. The Journey Trondheim got ranked the third best The Journey among 20 locations in Europe.



KEY ACTIVITIES

2018

RESEARCH ON ENTREPRENEURSHIP EDUCATION

- PhD course: Entrepreneurial learning and entrepreneurship education with international leading scholars. Collaboration with the Norwegian Research School of innovation (NORSI)
- PhD projects on entrepreneurship education
- Initiation of research projects on entrepreneurship education
- Develop edited book, Research handbook on action based teaching in entrepreneurship – collaboration Babson, NTNU and Nord

IDENTIFICATION AND FURTHER DEVELOPMENT OF BEST PRACTICES FROM WP1, WP2 AND WP3

Internal workshop in extended management team with focus on the innovative practices that can be transferred beyond each of WP1, WP2 and WP3 and developed into new methods and tools to be used in other domains

IDENTIFICATION AND FURTHER DEVELOPMENT OF BEST PRACTICES FROM OTHER INSTITUTIONS WORLDWIDE

Study trip to Babson College, the leading higher education institution on entrepreneurship education. The study trip will focus on research (collaboration between Engage and Babson College), education approaches and methods, and co• curriculum activities to mobilize student entrepreneurship.

Actively use membership in Babson Collaborative to exchange course material and find potential collaborators on course development

TRAIN-THE-TRAINER WORKSHOPS AND SEMINARS ON TOOLS AND APPROACHES

Open seminars/workshops (lunch, half day) on specific topics on entrepreneurship education, action• based education and related topics

Develop course in action based teaching, developing entrepreneurial thinking for university level teachers, all disciplines

UTILIZE NORD UNIVERSITY AS LIVING LAB FOR DEVELOPMENT AND TESTING OF METHODS/TOOLS

- Develop new and existing action- based courses at HHN, such as new mandatory course in innovation and entrepreneurial thinking, new major courses in innovation and entrepreneurship, and develop existing course in business development
- Work together with different study programs at Nord university to introduce activities and methods, such as the nursing education and bachelor programs in aquaculture

PARTICULAR FOCUS ON ENTREPRENEURSHIP EDUCATION IN TOURISM AND EXPERIENCES

- Develop innovation lab for tourism and experience innovations where students work together with tourism and experience businesses on their innovation projects, using a design thinking inspired approach
- Sustainable tourism hackathon in Lofoten with students and local businesses

DEVELOP AND EXPAND SPARK ACTIVITIES

- Introduce Spark activity at Nord University
- Further develop Spark NTNU, develop training modules, etc.
- Introduce Spark to NTNU campuses Ålesund and Gjøvik
- Help starting up Spark activity at UiA, UiS, UiO and potentially other universities

DEVELOP FACILITIES FOR STUDENT ENTREPRENEURSHIP ACTIVITIES

- Develop Spir Idélab – environment for student entrepreneurship at Nord
- Develop student incubator in Mørkvedgården, Nord University
- Initiate Ispir project in collaboration with Bodø Knowledge Park

A CREATIVE SPACE FOR INNOVATIONAL THINKING

Incubators, social events and proximity to faculty teachers makes SPIR Idélab a great place for students engaged in innovation and entrepreneurship.

In September the new SPIR Idélab officially opened at Nord University in Bodø. According to Bjørg Riibe Ramskjell, project leader in Engage, the aim is for it to become a natural meeting place for all students who are curious about or interested in innovation and entrepreneurship. They've made a creative space for students to meet up, organize events or just hang out.

– We hope the SPIR-room will be used by the students, not only for planned events. We also want it to be a low key place to hang out and meet other people with common interests, Ramskjell says.

Events will be posted on the SPIR Facebook page, but as Ramskjell says; feel free to drop in.

A WIDE RANGE OF POSSIBILITIES

The SPIR-room is fairly new, but there's already a lot of ideas circulating for the usage of the room.

– Right now we're working on furnishing the room, making it inspiring and encouraging for innovational thinking. We want to get some regular events going for students to attend on a regular basis, like the upcoming workshop on health and care the 18th october, Ramskjell says.

Socializing is important, and low-key is a recurring expression when talking about SPIR Idélab's future development. There's a wide range of event possibilities: from low-key events like movie nights, just for socializing and meeting new people sharing your interests for innovation, to bigger events supported by the industry.

Project leader for Inspir project, Tom Steffensen, from Kunnskapsparken Bodø (Bodø Science Park), also emphasizes a low key approach.

– SPIR Idélab and the activities hosted here are low key and without obligations. We want to make it easier to start your own business, and motivate students to think about entrepreneurship.

STUDENTS, STARTUPS AND SUBJECT TEACHERS GATHERED

SPIR Idélab is located in Mørkvedgården in Bodø, with the student organization START Nord and Engage. There could not have been a better location for it.

– Everyone from the entrepreneurship and innovation division at Nord University is located in Mørkvedgården. SPIR Idélab is in the same hallway as the faculty and teachers, so it's a short way for the students to get support and guidance, Ramskjell says.

Not only is SPIR Idélab a meeting place; it will also be possible for startups to rent office space at the loft, which is meant to be a student incubator. A great opportunity for students with a startup business.

– It's low-threshold, and we would love to have more startups moving in to "Loftet" (the Loft). There's a startup planning to moving in, and other student startups in need of office spaces should not hesitate to get in touch.

To get in touch with Engage about SPIR, the student incubator "Loftet" or other things regarding startup activities, please contact Cecilie Haukland or Bjørg Riibe Ramskjell

WP5 - DOCUMENTATION OF RESEARCH AND DISSEMINATION OF KNOWLEDGE

WP5 will orchestrate the resources and projects in Engage and create a common ground by gathering, combining and accumulating knowledge, and identifying the needs for additional knowledge. The main objective of WP5 is therefore to document and evaluate the activities in Engage, but also to assemble the knowledge to create and disseminate a reliable and comprehensive knowledge base. Particularly WP 5 seek to document and evaluate the activities, including

assessing the various action-based learning methods, create a common research database, assemble the knowledge, identify research gaps and disseminate knowledge internally and externally. The latter includes spreading the entrepreneurial mindset broadly, particularly during the first five years, but also to anchor the transformed practices in different contexts in the following years.

EXAMPLES OF ACTIVITIES

2017

- Nordtek Entrepreneurship Education Conference at NTNU, October 26
- Activities on social media platforms
- Dissimination towards policy makers, teachers, universities, student, industry actors and more
- Established media team
- Development of documentation routines

KEY ACTIVITIES

2018

- Develop routines for documentation and assessment of Engage and its activities
- Establish a baseline to assess the effectiveness of Engage
- Develop structures for a knowledge base
- Develop structures for a knowledge base
- Establish project on sustainability and entrepreneurship
- Cooperation with industry clusters

THE UNIQUENESS OF THE MEDIA TEAM

With a limited set of guidelines, the students are free to make the strategic planning and actions required to meet the audience.

As of now, the group consist of six students with a wide disciplinary schooling. We work together regardless of faculty and campus. It's both demanding and fun. It's a challenge to work towards a common goal; to spread the knowledge about innovation and entrepreneurship.

How we work can be compared to Exsperts in Teamwork (EiT) and Spark NTNU, two of the partners within the consortium. With a limited set of guidelines from project leader Frode Halvorsen, we are free to make the strategic planning and actions required to meet the audience.

WORK STRUCTURE WITHIN THE GROUP

To explain how we actually work, we have to look at how we interpret ourselves in the landscape of communication services. Our common understanding is that we are somewhere between a news agency, advertising agency and communication agency.

As explained above, we have little intervention from the employees at Engage on how we should work. What we do get are cases that need to be communicated to a broad audience. This makes us to the latter agency.

We've also been given the mandate within reason to communicate cases of our own choice regarding innovation and entrepreneurship. Cases like this can be different startups, happenings or research without the boundaries of Engage.

Most of those cases, either spread through social media or our blog, consist of a certain progress of work; meetings, interviews and photos. That put us in a delicate situation between a news agency and advertising agency, with the following ethical guidelines to follow.

To make sure that we meet the expectations as a communication agency at Engage, and still follow the ethical guidelines regarding interviews and advertising, the students within the editorial group has different work assignments with the given responsibility that follows.

ENGAGED STUDENTS HAS MOTIVATION

Although we come from different faculty and campuses, we can all agree on the relevance our work have on our own field of study. One of the reimbursement we get as a student is the opportunity to participate in different workshops and lectures given by Engage and other partners within both the public and private business sector.

Our work is meant to affect the whole educational system towards innovational thinking. By that we are affecting our own academic discipline. This is giving us motivation and engagement, and a willingness to push the limits on our journey to become change agents.

We hope that in the future, work in the editorial student group will give ECTS credits as it has proven to be discipline-related. A dialogue between the most relevant studies regarding communication studies at NTNU has already been started.

The experience we gain through our work is unique. Our theoretical expertise is being used in practice, and we are grateful that students has been given the trust to run the editorial office. By speaking the same language as the students, we hope to give positive results by engaging more students and connect them to the professors and market labour of 2018.

FACTS

- The editorial group consist of students from a wide disciplinary schooling.
- The structure is based on one responsible editor, three copywriters, one graphic designer and one video- and photo editor.
- We use communication platforms as social media, website and radio.
- The editorial group follow ethical rules within journalism and advertising.

PARTNERS

EXPERTS IN TEAMWORK

Experts in teamwork (EiT) is a compulsory course in which students apply their academic competence in interdisciplinary project work to learn collaborative skills that can be transferred to the work place. Students work in teams with participants from diverse programmes of study. Relevant problem areas from civic and working life form the basis for teamwork, and the results achieved by the teams are used to benefit internal and external partners. Currently, 2300 students take the course annually, taught by 85 teaching staff members and 160 learning assistants (students) from all disciplines and professions.

The section for EiT is located at the Department of Industrial Economics and Technology Management (IØT) at Faculty of Economics and Management. However, since EiT is part of most master programmes at NTNU, the section for EiT collaborates across all faculties at the university. It is responsible for the professional foundation for facilitation as a core pedagogical method for learning collaborative skills, and also for training academic staff and learning assistants.

NTNU SCHOOL OF ENTREPRENEURSHIP

NTNU School of Entrepreneurship (NSE) is a two-year master degree program offered by the Department of Industrial Economics and Technology Management at NTNU, with a focus on business development and technology-based entrepreneurship.

NSE's vision is to educate the best business developers in the world, and the purpose is twofold:

- **To provide a state-of-the-art educational program to students seeking a career within entrepreneurship and commercialization of technology.**
- **To contribute to the commercialization of ideas from the technology community at NTNU and other innovation communities.**

NSE have adopted an unofficial slogan, "Not because it's easy". The culture and environment at NSE are designed to challenge the students by providing new experiences that take them outside their comfort zone, and push

their limits, to reach higher levels of performance.

NSE offers their students a strong infrastructure and range of resources that enable them to successfully launch their businesses. All students have their workspace in the incubator at NTNU, and all projects are supported by a dedicated mentor with senior management or entrepreneurial experience. In addition, projects take advantage of contacts and relationships through NSE's extensive network. Through our strategic location at NTNU, students have access to pre-seed funding and prototype facilities in NTNU workshops and laboratories.

The majority of the projects do succeed, with 50 percent of the graduates working at their own startup after graduation.

The program is highly competitive and selective, and NSE receives hundreds of applicants every year. Annually, approximately 35 students are accepted based on an overall evaluation of academic results, motivation and work experience.

TROLLLABS

The research lab TrollLABS, originally founded by Prof. Martin Steinert and through aspects of intelligent product development such as need finding, conception, simulations, prototyping, testing and preproduction and production automatization. The lab which is part of the Mechanical and Industrial Engineering (MTP) department at Engineering Sciences faculty at NTNU concentrates especially on creating critical human system interactions. Its particular focus and contribution lies in fast mechatronics and mechanics prototyping and testing of both sensors and UIs in situ. TrollLABS research focus on

high ecological valid experiments with a broad method mix and strong international collaboration. Currently the lab has a publication output of 20-30 papers per year and teaches in the following master course, in addition to one PhD course.

TrollLABS intend to serve as a pilot for NTNU on how to push the boundaries of engineering creativity and ideation, and concept generation and innovation at NTNU, in Norway and beyond. NTNU, in Norway and beyond.

NORD UNIVERSITY BUSINESS SCHOOL

Nord University has about 12000 students and a staff of 1200, distributed on nine campuses. One of the five faculties is Nord University Business School (HHN), which was established in 1985 and has become the leading educator of management personnel to the business community in Northern Norway.

At Nord University, Engage is situated in HHN's Division of Innovation and Entrepreneurship. The division has 40 faculty members, including 4 full professors and 12 PhD students. These members offer entrepreneurship and innovation courses at bachelor, master and PhD levels at three campuses, including a 60 credit major in entrepreneurship and innovation in the MSc in Business program.

The division has formal collaboration with internationally leading universities such as Babson College and Syracuse University. These institutions are well recognized for their highly competent entrepreneurship research groups and educators specialized in practical entrepreneurship teaching. The fact that the division hosted the European research conference on entrepreneurship (RENT) in 2011, the Nordic Conference on Small Business Research (NCSB) in 2014, the leading international entrepreneurship conference, BCERC in 2016, demonstrates the international well connectedness of the research team.

The Business School has strong track record in entrepreneurship and innovation research. In 2011, HHN was ranked as no. 1 in Norway in entrepreneurship research (Damvad, 2011) and was in 2017, as the only university in Norway, ranked among the world's top 100 institutions for impact in entrepreneurship research (Xu et al., 2018).

Engage involves eight of the division faculty members in various position shares, in addition to two administrative staff members (in total about 5 man years). Other division members take part of Engage activities when relevant. The centre also engage several student assistants involved in various projects. Located in Mørkvedgården, Engage is creating a physical space for student entrepreneurship and related activities.



SPARK* NTNU

Spark* NTNU is a mentoring service by and for students with a business idea. It is a free service for all students at NTNU where they can register their idea and get appointed a student mentor that will help them reach the next step to try to help bring the idea to life. The goal is not necessarily to make every idea become a registered company that the students can begin working in as full time employees after their finished education, but the main goal is to introduce as many students as possible to the idea that this is possible.

All mentors and employees are students, and Spark* is student run with help from one faculty member at NTNU. All mentors have been involved with some sort of real life startup experience to make sure that the guidance they provide for other students who are just starting out with practical and entrepreneurial advice as an addition to their theoretical education at NTNU.

Every employee is also in fact an employee as they receive a student assistant salary to make sure to incentivize them to be professionals as well as full time students.

TrønderEnergi is the main sponsor of Spark* NTNU, providing the funding to employ each mentor as well as funding the inhouse startup-teams.

As of January 2018, Spark* NTNU has achieved great outcomes after five years of operation:

- 311 student projects have received support during the first three years, which means that around 900-1000 students have so far been through the initiative.
- We have 89 active projects
- 48 limited companies have been established based on the projects
- Over 250 000 Euro has been given out in funding by the student projects provided by TrønderEnergi

Spark* is still growing and is now planning to take this initiative to other campuses in Norway with the help from Engage (CEE).

APPENDICIES

WORKSHOPS

Engage lunch workshop with VCP students at NTNU. Project development and acquisition.

Innovation camp for nurse education at NTNU, August.

Hosting international VCP research workshop at NTNU, October 27. Outcome – four research tracks that will be followed up at a work shop at Chalmers February 2018.

SFU ENgage workshop on experiments in research (TrollLABS, October)

Design thinking and prototyping workshop (teachers, SMEs, academics) FABLAB Oulu University

Design thinking and prototyping workshop (PhD students) at NTNU Ocean Innovation School

Living:Lab BIM + IoT Hackathon at NTNU together with Statsbygg

Design thinking and prototyping workshop (Exec MBA) at IØT MBA

Design thinking and prototyping workshop (Exec MBA) at DT Bergen MBA prototyping keynote IDI (students), NTNU

JOURNAL PUBLICATIONS

Aadland, T. and Aaboen, T. 2018. Systematising higher education: a typology of entrepreneurship education, in Hytti, U., Blackburn, R. and Laveren, E. (Eds) *Entrepreneurship, Innovation and Education: Frontiers in European Entrepreneurship Research*, Edward Elgar, Cheltenham. UK. In Press.

Gerstenberg, A., & Steinert, M. 2017. Large-scale engineering prototyping-Approaching complex engineering problems CERN-style. In DS 87-2 Proceedings of the 21st International Conference on Engineering Design (ICED 17) Vol 2: Design Processes, Design Organisation and Management, Vancouver, Canada, 21-25.08. 2017.

Haneberg, D.H., Brandshaug, S. and Aadland, T. 2018. «Eierskap og Teamprosess i Aksjonsbasert Entreprenørskapsutdanning», Uniped 41(1), in press

Jensen, M. B., Utriainen, T. M., & Steinert, M. 2017. Mapping remote and multidisciplinary learning barriers: lessons from challenge-based innovation at CERN. *European Journal of Engineering Education*, 1-15.

Kardaš D., Janjić G., Gvero P., Novaković V., Anderson M.M.K., Beleslin T.P. 2017. Teamwork as experience based learning at university of banja luka: a long and winding road, *Journal of International Scientific Publications*, Volume 15

Lynch, M., Slåttsveen, K., Lozano, F., Steinert, M., & Andersson, G. 2017. Examining entrepreneurial motivations in an education context. In DS 87-9 Proceedings of the 21st International Conference on Engineering Design (ICED 17) Vol 9: Design Education, Vancouver, Canada, 21-25.08. 2017.

Mauseth, I. K. and Alsos, G. A. 2017. Er coworking space et godt tilbud for gründere? *Magma - Tidsskrift for økonomi og ledelse* 8 (6): 61-70

Shih T and Aaboen L. 2018. "The network mediation of an incubator: How does it enable or constrain the development of incubator firms' business networks?". *Industrial Marketing Management*. Article in press, special issue on start-ups.

Slåttsveen, K., Nygaard, T., Seviour, G., Steinert, M., and Aasland, K. E. 2017. Makerbox: Introducing a low threshold maker experience for everyone—An online facilitation platform for problem based projects. In DS 87-9 Proceedings of the 21st International Conference on Engineering Design (ICED 17) Vol 9: Design Education, Vancouver, Canada, 21-25.08. 2017.

Veine S., Anderson M. M. K., Andersen N.H., Espenes T.C., Bredesen T., Wallin P., Reams J. 2017. Refleksjon som studentaktiv læringsform, *Læring om læring*, vol. 1 (1). Proceedings from Læringsfestivalen May 8-9 2017, NTNU

CONFERENCE CONTRIBUTIONS

Aaboen, L and Aarikka-Stenroos L. 2017. "Start-ups initiating business relationships: process and asymmetry". *IMP Journal*. 11 (2): 230-250.

Aadland, T. and Aaboen, L. 2017. "How do we know what we assess? A taxonomy of science and technology entrepreneurship education". Presented at International Research Conference on Science and Technology Entrepreneurship Education, Toulouse, France April 27-28.

Aadland, T. and Aaboen, L. 2017. "Nordic Designs for Reaching the Entrepreneurial Mind-Set in Education". Presented at 3E ECSB Entrepreneurship Education Conference, Cork, Ireland, May 10-12.

Aadland, T. and Jónnson, Ari. 2017. "Sum-up: Nordtek entrepreneurship network" Nordtek-conference "Engineers for the future Society: Do we educate game changers for the grand challenges?", in Helsinki den 16. Juni.

Bjørnåli, E., Aadland, T., Fedorova, E. and Mohammadi, A. 2017. «Activating High-tech Board's Contribution Through Network Capabilities and Behavioral Integration of the Top Management Team Members», Babson Conference, June 7. -10.

Bolzani, D., Munari, F., Rasmussen, E. and Toschi, L. (2017) Technology Transfer Offices as Providers of Science and Technology Entrepreneurship Education. International Research Conference on Science and Technology Entrepreneurship Education. 27-28 April, Toulouse. France.

Dahle, Y., Steinert, M., Duc, A. N., & Abrahamsson, P. (2017). Building an Entrepreneurship Data Warehouse. arXiv preprint arXiv:1711.07078.

Duc, A. N., Dahle, Y., Steinert, M., & Abrahamsson, P. (2017, June). Towards understanding startup product development as effectual entrepreneurial behaviors. In International Conference of Software Business (pp. 199-204). Springer, Cham.

Lynch, Matthew; Tuema, Ludovic; Andersson, Gunnar; Steinert, Martin. Entrepreneurial Mindset: an Empirical Starting Point ISPIIM Innovation Symposium; Manchester : 1-12. Manchester: The International Society for Professional Innovation Management (ISPIIM). (Dec 2017)

Wallin P., Lyng R., Sortland B. and Veine S. Experts in teamwork - A large scale course for interdisciplinary learning and collaboration. Presented at CDIO conference, Calgary, June 2017

OTHER PUBLICATIONS AND RESEARCH

Bjørnåli, E., Aadland, T., Fedorova, E, Mohammadi, A. and Aune, T.B. 2017. Nettverkskapabiliteter og integrerende adferd hos lederteam og styrer. Bred og spiss! NTNU Handelshøyskolen 50 år: En vitenskapelig jubileumsantologi.

Brandshaug S.W., Aadland T. and Haneberg D.H. Oppstartsbedrifter og utvikling av samarbeidskompetanse. Presented at Læringsfestivalen May 8-9 2017, NTNU

Helgesen H.C., Espenes T.C., Brandshaug S.W. and Veine S. Utløs potensialet i studentgruppa. Workshop at Læringsfestivalen May 8-9 2017, NTNU

Holen A. and Sortland B. NTNU Teamwork Indicator - An exercise for better team performance. Presented at Its21 June 13-14 2017, Uppsala universitet

Isern, V.E. 2017. A New Perspective on Technology Transfer at CERN: A Case Study in Extreme Tech Push Application Identification. (Master thesis)

Reams J., Wallin P., Veine S.,; Anderson M.K. Exploring Ways to Build and Evaluate Reflective Capacity in Students. Presented at Læringsfestivalen May 8-9 2017, NTNU

Sjølie E., Strømme A. and Boks-Vlemmix J. 'Teachers in Team' - a case study of group work in teacher education. Poster at Its21 June 13-14 2017, Uppsala universitet

Solheim, M.T. and Solheim O.K.T. 2017. Launching a Two-sided Platform. (Master thesis)

Sortland B. «Kreativ hjernestorm - samarbeid og teambygging», contribution at "Innovasjonscamp for sykepleie", NTNU, 23. august 2017

Strøm, R. 2018. Identification of applications to technology in the CERN Knowledge Transfer group. (Master thesis)

Van den Burgt. G., Engebretsen M. and Nordahl M. 2017. Supplier Selection: Supplier Selection in New Ventures. (Master thesis)

Veine S. and Helgesen H.C. Experts in Teams - Facilitation for enhanced learning. Workshop at Its21 June 13-14 2017, Uppsala universitet

Wallin P., Reams J., Veine S. and Anderson M. M. K. Creating intelligent learning environments to develop students' reflective capacity, Innovative Higher Education (in review)

25 interviews of Norwegian VCP alumni's. Research project in collaboration with Chalmers (SE) and McMaster (CA).

Submitted project to NRCs Norfund in collaboration with Indian partners.

PRESENTATION OF ENGAGE IN OTHER CONTEXTS

Presentation of Spark at Spark labs, New York, USA, January
Presentation of Spark at Innovation Norway, New York, USA, January

Presentation of Spark at Tapad, New York, USA, January
Presentation of Spark for NHO and LO management group, Fram NTNU, January

Presentation of Spark for Experts in Teamwork, NTNU, February

Presentation of Spark at Venture Cup, NTNU, February
Presentation of Spark at University of Oslo, Oslo, March
Presentation of Spark for NTNU Accel, Fram NTNU, March
Presentation of Spark for Telenor, April

Presentation of Spark for Work Work and Digs, April
Presentation of Spark at "Econa gründerkveld", Trondheim, May

Presentation of Spark at NTNU Ålesund, Ålesund, May
Presentation of Spark for NRK radio (p3), August
Presentation of Spark for a group of Japanese students visiting NTNU (collaboration with TTO), August

Presentation of Spark for the Conservative Party, August
Presentation of Spark for students at the technology management course, NTNU, September

Presentation of Spark for students at the technology management course, NTNU, September

Presentation of Spark for SiT (the student welfare

organization), Trondheim, September
 Presentation of Spark for visitors from KTH Royal Institute of Technology, Sweden, Fram NTNU, September
 Presentation of Spark for KIC InnoEnergy, Fram NTNU, September
 Presentation of Spark for LEN Nyskaping, October
 Presentation of Spark for Samspillkonferansen 2017, Trondheim, October
 Presentation of Spark for visitors from Statoil, Fram NTNU, October
 Presentation of Spark at the Nordtek Conference, Trondheim, October
 Presentation of Spark for visitors from Abelia, Fram NTNU, November
 Presentation of Spark for visitors from the Ministry of Finance, Fram NTNU, November
 Presentation of Spark at StartIT, organized by Start NTNU, NTNU, November
 Presentation of Spark for DNB, Trondheim, December
 Presentation of Engage at TU Berlin, 5 January
 Presentation of Engage at FRAM, 6 January for NHO
 Presentation of Engage in Oslo at Skaperkraft in Oslo, 12 January
 Presentation of Engage in general, and WP3 in special at Nordic 5 Tech at KTH, Stockholm, 25.-26. January
 Presentation of Engage at NTNU during the opening of Engage, 1 February
 Presentation of Engage at KTH during av Nordic 5 tech meeting 02 February
 Presentation of Engage at ScAIEM conference 08 February
 Presentation of Engage for the Nord University Education Committee, Nord University, 23 February
 Presentation of Engage for the Indian Ambassador at NTNU, 21 March
 Presentation of Engage at Nord University during the opening of Engage, 23 March
 Presentation of Engage for the US Embassy at Digs, 24 March
 Presentation of Engage in general, and WP3 in special at the UHR MNT conference, 31 March.
 Presentation of Engage at Department of Psychology at NTNU, 10 April
 Presentation of Engage and initiatives to include entrepreneurship elements in various courses in business education, KOPSS seminar (course responsible faculty at Nord University Business School), Stjørdal, 29 May
 Presentation of Engage at the Executive management meeting at Statoil, 7 June
 Presentation of Engage in a meeting with Wolfgang Burtscher, Deputy Director-General of the European Commission's Directorate-General for Research and Innovation, 10 June
 Presentation of Engage at the Design Factory, Aalto University, 16 June
 Presentation of Engage at NTNU in a meeting with Carlos Moedas, EU Commissioner for Research, Science and Innovation, 19 June
 Presentation of Engage for The Journey summer school students at NTNU, 16 July
 Presentation of Engage for the TTO project at Nord University, Nord University, 18 August
 Presentation of Engage for Sør-Trøndelag Høyre at NTNU, 23 August
 Presentation of Engage at faculty meeting, Nord University Business School, 28 August
 Presentation of status for Engage for the Dean and the management group of Nord University Business School, Nord University, 6 September
 Presentation of Engage at the reopening of Spir Idélab (student entrepreneurship lab), Nord University, 12 September
 Presentation of Engage and WP3 during Aaboen and Aadlands data collection tour at Arctic University Tromsø, University of Reykjavik, University of Iceland, Aalto, Tampere, Aalborg, Aarhus, Lund, Chalmers.
 Presentation of Engage at Stanford University for the Stanford Technology Venture Program, 12 September
 Presentation of Engage, the need to implement education that contributes to development of entrepreneurial skills and mindsets, at meeting for all study program responsible faculty at Nord University, Mosjøen, 14 September
 Presentation of Engage in a meeting with Prof. Cuthbert Z. M. Kimambo, Deputy Vice Chancellor for the University of Dar es Salaam, 15 September
 Presentation of Engage at MIT Sloan Executive in a meeting with Pierre Asoulay, 15 September
 Presentation of Engage in general, and WP3 in special at Nordic 5 Tech at DTU, Copenhagen, 21.-22. September
 Presentation of Engage in a meeting with the Minister of Education and Research Henrik Asheim, 25 September
 Presentation of Engage and Spir Idélab for Innovation Think Thank Bodø, Spir, 2 Oktober
 Presentation of Engage for students at bachelor program in journalism (2nd year), Nord University, 10 October
 Presentation of Engage for the minister of environment and climate Vidar Helgesen, 12 October
 Presentation of Engage for Statsbygg during a Hackathon at NTNU, 13 October
 Presentation of Engage at the Nordtek Conference at NTNU, 26 October
 Presentation of Engage at Brohodekonferansen at Frøya 01 November
 Presentation of Engage in a meeting with Morgen Berg from the ministry of trade, industry and fisheries, 6 November
 Presentation of Engage for the faculty at the journalism education, Nord University, 8 November
 Presentation of Engage for the NCE Aquatech Cluster in Trondheim, 15 November
 Presentation of Engage at Chalmers School of Entrepreneurship 20 year, 17.-18. November
 Presentation of Engage for faculty at the nursing education, Nord University, 24 november
 Presentation of Engage, including WP3 at ScAIEM, 29. November
 Presentation of Engage for associate dean and study program responsible, Faculty of Bioscience and Aquaculture, Nord University, 30 November
 Presentation of Engage for KOLT (centre for learning and technology), Nord University, 18 December 2017

ACCOUNTING 2017

BUDGET 2017

Staff costs	kr	12 873 653
Operating expenses	kr	5 387 772
Total	kr	18 261 425

COSTS 2017

Staff costs	kr	7 427 676
Operating expenses	kr	1 734 086
Total	kr	9 161 762

COMMENTS FINANCIALS 2017

The Engage centre was officially opened February 1st 2017, and has during its first operating year focused on establishing normal operations through its planned projects and positions. The differences in the centre's cost compared with its initial budget is related to timelag between the start of centre and recruitment of staff. In the original plans when the application was handed in, most of the positions and projects were planned with full activity

from January 1st 2017, but the majority of positions were filled in the third and fourth quarter of 2017, and some in first quarter of 2018. This also affected the initiation and activities of planned projects. The centre has still strived to engage students in its activities, and had a total cost of almost 370 000 NOK in student assistants, which almost equals one year full-time equivalent. Engage's management team expects the centre to reach normal operations in 2018.

EXTERNALLY FUNDED PROJECTS

GRANTED BY	TITLE	PROJECT PERIOD	FUNDING	PL
Climate KIC	The Journey 2017	Summer 2017	750KNOK	Frode Halvorsen
Statsbygg, Novelda, BNL	LivingLab : IoT + BIM Hackathon	Oct 2017	105KNOK	Frode Halvorsen

ENGAGE PERSONNEL

AT NTNU

Roger Sørheim (100%), Centre manager
Frode Halvorsen, (100%), Centre coordinator
Ela Sjølie (25%), WP1 Manager
Martin Steinert (25%), WP2 Manager
Øystein Widding (25%), WP3 Manager
Kari Djupdal (100%), PhD, WP5 Manager, Analyst
Even Haug Larsen (50%), Assistant Professor
Charlotte Sørensen (50%), Assistant Professor
Diamanto Politis (20%), Professor II
Marte Konstad, (100%), Assistant Professor
Heikki Sjöman (100%), Scientific assistant
Kristoffer Slåttsveen, PhD Student
Benjamin Toscher, PhD Student
Oleksandra Bieliei, PhD Student
Gunn-Berit Sæter, PhD Student
Karolina Lesniak, PhD Student
Sigrid W. Brandshaug, PhD Student
Dag Håkon Haneberg, PhD Student
Torgeir Aadland, PhD Student

+ other at EiT, TrollLabs and the research group for strategy and management

AT NORD UNIVERSITY

Financed by the SFU
Björg Ramskjell (100%), project manager
Sølvi Solvoll (100%), project manager
Lisbeth Bjerva (60%), project manager
Inger Wassmo (20%), administrative coordinator

Financed by Nord University
Gry Agnete Alsos (25%), professor/WP4 manager and responsible at Nord
Iselin Mausest, PhD Student
Associate Professor –TBA

Associated, not financed
Cecilie Haukland, PhD Student
Hanne Stokvik, Assistant Professor
Marianne Arntzen, Assistant Professor
Einar Rasmussen, Professor

+ other from the research group innovation and entrepreneurship at Nord University



DISSEMINATION AND OUTREACH - ENGAGE IN THE MEDIA

ENGAGE WEB PAGES
FACEBOOK
INSTAGRAM
YOUTUBE
ITUNES

www.engage-centre.no // <https://www.ntnu.edu/engage>
www.facebook.com/engagesfu/
www.instagram.com/engage_sfu/
<https://www.youtube.com/channel/UCEjr5MzqZdNN-laMomkhfg>
itunes.apple.com/no/podcast/engage-podcast

ENGAGE IN THE MEDIA

(In norwegian)

Date	Title	Theme	Media
1/2/2017	Åpnet to nye sentre for fremragende utdanning	Åpning av SFU-er	Kunnskapsdepartementet
1/10/2017	Snoren er klippet, nå starter jobben	Jensen ble begeistret etter et møte med ES sist vinter	Universitetsavisa
1/13/2017	800 flyktninger deler 10 toaletter, halvparten av dem er tette	ES-studenter øker interessen for flyktningeproblematikk bland ungdom	KRS.by
1/16/2017	800 flyktninger deler 10 toaletter, halvparten av dem er tette	ES-studenter øker interessen for flyktningeproblematikk bland ungdom	Trd.by
1/24/2017	Fikk ideen til ny kamera-teknologi i sitt eget bryllup	Wiral Technologies	Teknisk Ukeblad
1/25/2017	Disse tolv trønderske selskapene vil du høre mer om	Spennende startups fra ES	Adresseavisen Pluss
1/25/2017	Disse tolv trønderske selskapene vil du høre mer om	Spennende startups fra ES	Adresseavisen
2/1/2017	NTNU fikk ros for satsningen på utdanning og innovasjon	Åpning av SFU-er	Universitetsavisa
2/1/2017	NTNUs verksted for fremragende utdanning	Åpning av SFU-er	Adresseavisen Pluss
2/2/2017	Vi vil lage ting som kan brukes, ikke sitte og lytte	Åpning av SFU-er	Adresseavisen
2/6/2017	Tilfredshet med studieprogrammene	NOKUT Studiebarometer	Universitetet i Nordland
2/13/2017	På NTNU rusler studentene til gründerutdanning	ES: Økning på 186% de siste fem årene	Shifter
2/22/2017	Feil å legge senter for innvasjon til Nyhavna	Kronikk: innovasjonssenter krever samspill med teknologi og forskning	Adresseavisen
2/22/2017	Feil å legge senter for innvasjon til Nyhavna	Kronikk: innovasjonssenter krever samspill med teknologi og forskning	Adresseavisen
3/8/2017	Leker seg til millioner	ES-student om økte muligheter for nyskaping i arbeidsfellesskap	Adresseavisen Pluss
3/8/2017	Kun unntaket når en teknologibedrift ledes av en kvinne	Få kvinnelige teknologiledere - men på ES tar jentene like naturlige lederroller som guttene	Adresseavisen Pluss
3/9/2017	JodaCare til topps på Technoport med dement-tech	Es-student hjelper pårørende og demente med dagens minner	Shifter
3/10/2017	Skal ta havbruksnæringa ett steg videre	Brohodeprosjektet	Frøya
3/10/2017	NTNUs Brohode-satsning utvides	Brohodeprosjektet	iLaks
3/10/2017	NTNU satser mer på havbruk	Brohodeprosjektet	Hitra-Frøya
3/11/2017	Leker seg til millioner	ES-student om økte muligheter for nyskaping i arbeidsfellesskap	Adresseavisen
3/20/2017	Lønnsomt samarbeid	Kronikk om konkurransefortrinn ved samarbeid med kunnskapsinstitusjoner	LO
3/20/2017	Lønnsomt samarbeid	Kronikk om konkurransefortrinn ved samarbeid med kunnskapsinstitusjoner	Dagsavisen

3/28/2017	Engage skal engasjere studentene	Åpning av SFU-er	Universitetet i Nordland
4/1/2017	Slik skjedde den største nedturen	Verdande Technology - største konkurs bland trønderske oppstartsbedrifter	Adresseavisen
4/10/2017	16 spørsmål med Nina Hoddø Bakås	Leder i Start Norge ville heller ha studert ved ES	Shifter
4/12/2017	Podcast med Flowmotion-Didrik	Portrett av ES-student	Shifter
4/18/2017	Alliance investerer i NTNU-startup	Lette etter gründere som kan noe ingen andre kan	Shifter
4/19/2017	Vil skape for å redde verden	Studenter ved NTNUs entreprenørskole jakter den gode gjerningen. Å tjene penger er ikke drivkraften.	Adresseavisen Pluss
4/22/2017	Vil skape for å redde verden	Studenter ved NTNUs entreprenørskole jakter den gode gjerningen. Å tjene penger er ikke drivkraften.	Adresseavisen
4/25/2017	Dette kan enten ta av med en gang, eller ikke ta av di det hele tatt	Lansering av Grabster	Universitetsavisa
5/9/2017	Det er et misbruk av arkitekters tid	Campusdebatt - ES eksempel på suksesshistorier	Universitetsavisa
5/9/2017	Outtt har vært på rekrutterignstur	Ansatt kom inn via ES ved NTNU	Shifter
5/30/2017	Fra catwalken i Milano til skolebenken i Trondheim	Portrett av ES-student	Trd.by
6/2/2017	Oppstart for nye sentre for fremragende utdanning	Åpning av SFU-er	NOKUT
6/9/2017	Samarbeid om innovasjon skal sikre fremtidig velferd	Innovasjonstalen 2017	Innovasjon Norge
6/14/2017	Skal bygge nettverk på dagtid og studere på kvelden	ES-studenter på Gründerskolen	Universitetsavisa
7/11/2017	Mesterhjerner møtte fosenvinden	Start vekker innovasjonsspiren i studentene	Fosna-Folket Pluss
7/27/2017	Slik vil toppstudentene lære deg om klimakrisen		Adresseavisen Pluss
7/28/2017	Slik vil studentene lære deg om klimakrisen		Adresseavisen
8/10/2017	Pitchet seg til seier i årets Emax	Vinnerlaget på gründercamp - starter på ES til høsten	iNNOMAG
8/10/2017	Unge, lovende og vil starte eget selskap	Vinnerlaget på gründercamp - starter på ES til høsten	VVS Aktuelt
8/10/2017	Unge, lovende og vil starte eget selskap	Vinnerlaget på gründercamp - starter på ES til høsten	NTB Info
8/22/2017	Mjøndøling på vinnerlaget - reiser til Toronto	Vinnerlaget på gründercamp - starter på ES til høsten	Eikernytt
8/23/2017	En kul ide i San Fransisco ble til gründerhjelp i Trondheim	Åpning av F3	Adresseavisen Pluss
8/28/2017	Sykepleierstudenter lærer å se etter feil i helsevesenet	Sykepleierstudenter lærer entreprenørskap fra Engage	Adresseavisen Pluss
8/29/2017	Sykepleierstudenter lærer å se etter feil i helsevesenet	Sykepleierstudenter lærer entreprenørskap fra Engage	Adresseavisen
9/7/2017	Studentgründere fra NTNU vant 250 000	ES-studenter utvikler kjelke for personer med nedsatt funksjonsevne	Adresseavisen Pluss
9/8/2017	NTNU-entreprenører vant en kvart million	ES-studenter utvikler kjelke for personer med nedsatt funksjonsevne	Universitetsavisa

9/18/2017	Norsk-kenyansk samarbeid skal få flyktninger i arbeid	Engage i Kakuta	Gemini
9/22/2017	Lager senter for entreprenører i Kenyas største flyktningsleir	Engage i Kakuta	Universitetsavisa
9/23/2017	NTNU lager senter for entreprenørskap i flyktningsleir i Kenya	Engage i Kakuta	Adresseavisen
9/25/2017	Slik vil regjeringen ha nye læringsarealer	Nye læringsarealer og ES gjør at NTNU vil sette spor etter seg i samfunnet	Universitetsavisa
9/26/2017	Slik vil regjeringen ha nye læringsarealer	Nye læringsarealer og ES gjør at NTNU vil sette spor etter seg i samfunnet	På Høyden
10/3/2017	Går fra Schibsted for å bruke penger på gründerselskaper	Ny leder i New Mark med bakgrunn fra ES	Kampanje
10/3/2017	Går fra Schibsted for å bruke penger på gründerselskaper	Ny leder i New Mark med bakgrunn fra ES	Shifter
10/10/2017	Fremtiden er i havets hender	Brohodekonferansen	Frøya
10/11/2017	Mesterhjerner møtte fosenvinden	Start vekker innovasjonsspiren i studentene	Fosna-Folket
10/12/2017	Vil bli internasjonale dekkinnovatører	Nominert til årets gründer - kom ikke inn på ES	Nordstrand Blad Pluss
10/20/2017	Forhånds solgt for over to millioner	Wiral Technologies	Dusken.no
10/21/2017	Solgte for 1 mill på halvannen time	Wiral Technologies	Nordnesrepublikket
10/23/2017	Stor interesse for kabelkamera	Wiral Technologies	Energibransjen
11/12/2017	Er coworking Space et god tilbud for Gründere	Bedrift fra ES nevnt - Gry Alsos forfatter	Magma
11/12/2017	Vil bli internasjonale dekkinnovatører	Nominert til årets gründer - kom ikke inn på ES	Østlandets Blad
11/17/2017	Kabelkamera-gründere nedrent på Kickstarter	De tre første fra NTNUs Entreprenørskole	Shifter
11/21/2017	Gründere fra Trondheim tar et oppgjør med landeplage	Øystein Widding om hvor viktig det er å være innovativ som startup	Trd.by
12/12/2017	Så enkelt får sykkelhjulene pigger	Nominert til årets gründer - kom ikke inn på ES	Akershus Amtstidende Pluss
12/12/2017	Vil revolusjonere sykkeldekket	Nominert til årets gründer - kom ikke inn på ES	Rix
12/12/2017	Er coworking Space et god tilbud for Gründere	Bedrift fra ES nevnt - Gry Alsos forfatter	Magma
12/14/2017	Vil bli internasjonale dekkinnovatører	Nominert til årets gründer - kom ikke inn på ES	Nordstrand Blad
12/25/2017	Ranveig har fått lederjobb i CERN	Tidligere student om utdanningen	Lofotposten Pluss
12/27/2017	Ranveig har fått lederjobb i CERN	Tidligere student om utdanningen	Lofotposten
12/30/2017	Året det norske tech-toget fikk opp dampen	Shifter-kavalkaden 2017	Shifter
12/30/2017	Solveig ønsker å gjøre livet enklere for rullestolbrukere	Generasjon 2018	Adresseavisen Pluss
12/30/2017	Det er for få kvinnelige gründere	Generasjon 2018	Adresseavisen
12/25/2107	Ranveig har fått lederjobb i CERN	Tidligere student om utdanningen	Nordlys Pluss
12/26/2107	Ranveig har fått lederjobb i CERN	Tidligere student om utdanningen	Avisa Nordland Pluss

EXAMPLE OF COLLABORATIONS

BROHODEKONFERANSEN

SFU Engage established a partnership related to the conference Brohodekonferansen in autumn 2017. The conference is a part of the NTNU Brohode Havbruk program, which is based on a partnership between NTNU and Guri Kunna videregående skole. The program aims to develop a regional knowledge platform to stimulate a lasting and dynamic cooperation between academia and the seafood industry. The interaction between the sectors will contribute to increase the industrial relevance in higher education, strengthen the recruitment to the marine sector and build research based competence. Brohodekonferansen typically include company visits, professional entries and interactive workshops. It was particularly in the planning of workshops that SFU Engage played an important role. SFU Engage developed the methodology to facilitate that ideas from the group work become tangible concepts that can be continued by the end user, which are supervisors from NTNU and NMBU, leaders from professional fora by NCE Aquatech Cluster, project owners from SINTEF or other companies with an interest in student cooperation. SFU Engage was also in charge of the introduction and the completion of the group work, and facilitated a simple summary of the results afterwards. A report was made and distributed to all participants of the conference.

The contribution by SFU Engage proved to be valuable in Brohodekonferansen, in which the biggest challenge was to concretize the suggestions that came forward during the conference. Therefore, a similar model is planned to be used at Brohodekonferansen spring 2018, which will find place at Fosen 7-8th of March.

In December 2017, the Brohode Havbruk 2050 project was approved by The Research Council of Norway as a part of the Research-based Regional Innovation (FORREGION) program for a period of three years, with the possibility of an extension of another three years. The project will further develop the platform for education and knowledge of aquaculture. Brohode Havbruk 2050 is lead by NTNU Ocean, a consortium consisting of NCE Aquatech Cluster, Blått Kompetansesenter AS, SINTEF Ocean og Trøndelag Fylkeskommune. It has already been identified multiple activities in which SFU Engage can be a partner. SFU Engage can contribute when including industry representatives in the teaching, stimulate cooperation between the industry and students in their student projects, making sure that project results are utilized, and facilitate a more efficient utilization of PhDs in the industry. These activities will be performed in cooperation with multiple production and provider companies, organizations, the public sector and research institutes.

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