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Oamk LABs

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1. Title, mandate and targeted young entrepreneurs

Oamk LABs is a pre-incubator and incubator program managed by the Oulu University of Applied Sciences (Oamk) in Finland (1). This program is located in the city of Oulu which has and continues to be driven economically by a world-class ICT industry. Oamk LABs has evolved during a time of transition in this region of Finland which experienced an economic downturn between the years 2012-2014 coinciding with the downsizing of Nokia capacity leading to roughly 3500 unemployed ICT-professionals. In large part as a response to this situation, Oamk established its first incubator program in 2012 called Oulu Game LAB (OGL) as a training program for students and ICT-professionals focusing on the global games industry. Today, OGL has grown into a permanent pre-incubator and incubator program and has been joined by two additional LABs based on the same model: Oulu EduLAB focusing on the global EdTech industry; and Oulu DevLAB focusing on the health, energy and environment industries. Together these three programs have come to form an expanding and innovative entrepreneurship education program run by the Oulu University of Applied Sciences - Oamk LABs.

The **mandate of Oamk LABs** is to train new professionals, self-directed teams and support the creation of new businesses within an industry focus. Oamk LABs utilize the LAB studio model (LSM) (2), which is a pedagogical model created at the university with grounding in studio based learning (3). Studio based learning can be defined as an instructional strategy that provides students with opportunities to engage in relevant and authentic work life learning in a school setting. (4)(5) Additionally, this model integrates experienced professionals and coaches from the industry; includes problems or ideas directly from targeted industries; and builds interdisciplinary project teams that cross professional and higher

education faculty boundaries. Overall, it aims to foster an entrepreneurial mindset and engage creative ways of solving problems and creating innovations.

Currently, three LAB studios are operational with each focusing on a certain industry, chosen based on local business development and employment needs as well as the strategic development areas of the university. Thus, Oamk LABs provide a bridge between academic and business communities and is unique by supporting students' skills in a full-time and interdisciplinary environment that works very similar to the professional context of a small company. Ultimately, Oamk LABs support a triple-helix vision for innovation development in the Oulu region with business, government and university partners working closely together.

The **targeted young entrepreneurs** who apply to the program are university students at either the Bachelor's or Master's degree levels at both the Oulu University of Applied Sciences and any of its partner universities around the world. As a result of its unique structure, students from any degree program can be accepted to the program (e.g. computer sciences, nursing, teacher education, graphic design, business, etc.). Additionally, unemployed ICT professionals can also apply to the program through the local employment office making for a rich intergenerational experience as well. During one or two semesters of full-time Oamk LAB studies, students are involved in an inquiry-based practice, challenging the status quo and making their own decisions and directions in a team using aspects of Lean Development (6) and Design Thinking (7) at its core. The process takes place in an environment tolerant of the mistakes that come with rapid prototyping processes and, assisted by coaches, students are learning positive attitudes, practical skills and processes towards everyday creativity - essential for future professionals to develop work-life practices and create new solutions.

2. Criteria used to screen applicants

Oamk LABs studies are open to a wide range of students with two key criteria used to screen individual applicants. This screening takes place through an application process that involves every applicant being interviewed either face-to-face or through an online interview. The first criteria is that all university students must be at least a 3rd year Bachelor student. This criteria exists in order to ensure that all participants have

basic skills in their particular field. For example, graphic design participants are expected to know the basics of computer design skills, while business students are expected to know how to draft a business plan. This requirement exists in order to ensure that all participants can "bring something to the table" when working together in a team. The second criteria is that all participants must have a strong working ability in English since all Oamk LABs studies are in English. While English is in most cases not the mother tongue for participants, it is expected that all participants will improve their English skills.

3. Strategies to encourage inclusion of diverse candidates

Student teams in LAB studios are diverse since they are interdisciplinary, intercultural and intergenerational. Teams usually have members from three to four different professions, two to four countries with English as the common language and the ages between 18-50 with expertise not only in solution development, but also industry specializations and business development. A third institutional criteria is used to screen participants such that only a certain number of students are accepted each semester based on their professional field. This is the case since each LAB cohort must have a workable mixture of students with different skills. In this way, each LAB cohort has a strong diversity to allow for each team to include students with backgrounds such as business, programming, design and other content areas such as health, gaming, or education. This model is quite different from other incubator models which may only work with groups of students from one specific discipline or domain (e.g. asking a group of business students to create a company or product). In contrast, Oamk LABs can regularly build teams that have all the skills necessary for developing viable companies and products. In this way, Oamk LABs can have a team working full-time for five months made up of students from fields as diverse as programming and nursing or graphic design and physiotherapy.

Oamk LABs also encourage inclusion of a diverse collection of students by remaining open to a wide range of students at different levels of academic achievement. This is done in order to recognize that some students may learn better in a learning environment that prioritizes team work in contrast to traditional university teaching styles that focus individualism and lectures. Furthermore, Oamk LABs are run more like a business

environment which in turn can support students to learn skills complementary to their academic training but more associated with work-life.



Figure 1: A LAB participant and his coach working together.

4. Infrastructure/support provided by the institution

Studying in Oamk LABs is completely based on working in an interdisciplinary team with the development process taking place in two week cycles. The suitable size of a LAB cohort is between 30 to 40 students. Since the students own their intellectual property, this kind of program also allows for the establishment of a new startup enterprise based on their work. After their studies in Oamk LABs, teams have a chance to be selected to partner business accelerator programs nationally and internationally. These accelerators act to support the business internationalization and growth of startup enterprises.

In Oamk LABs, student teams arrange the premises, including the seating structure and space usage, according to their needs and organize their work independently with assistance from the coaches. Project teams gain 24/7 access to the premises and have full control of the equipment and aesthetics of their space. The working space consists of rooms of different sizes for the project teams and individuals, enabling sharing in formal and informal ways. By keeping the LAB studio doors open, opportunities are

encouraged to meet and respond to unexpected visitors and supports an open development environment.



Figure 2: A LAB student team from spring 2016. Countries represented: Italy, Finland, Iraq, Russia, Netherlands and Thailand.

As of the start of 2017, the three Oamk LABs premises are located in two separate facilities. Oulu EduLAB and DevLAB are located at the university's campus building associated with media, performing arts and ICT studies. Oulu Game LAB is located in the city's new downtown 'Game campus' which houses both the Game LAB and the offices of a number of local game companies. This new facility is expected to support the expansion of game industry activities and growth.

In many cases, the coaches working in Oamk LABs are responsible for preparing the initial ideas for the teams together with the industry professionals and ensure that the challenges driving projects are enabling professional learning. An industry connection is also maintained during the concept development and prototype development phases and also at the end of a LAB as a final 'pitch' when teams introduce their solutions and business plans to industry professionals. Informal connections with work-life are emphasized by organizing common events, seminars and happenings when social interaction, networking, informal peer-coaching and critique or constructive feedback is promoted. Industry support also

takes place during frequent visits by professionals to the LAB studios. These visits are often used for industry feedback opportunities, which in many cases lead to team mentoring by the industry professionals.



Figure 3: External industry experts listening to presentations and giving critique to student teams.

5. Links to other entrepreneurship activities within the institution

Oamk LABs is one of the key entrepreneurship programs at the Oulu University of Applied Sciences. These LABs have been strongly connected to another key activity at the university called Business Kitchen (15) which has acted as an entrepreneurship hub space in the downtown core of the city of Oulu. This facility supports the development of entrepreneurial activities from the two local universities, student entrepreneurship organizations, several startup companies, as well as public offices supporting business development in the region.

As a part of the mechanisms for collaboration and feedback, Oamk LABs has an internal steering group (SG). The role of the internal SG is for the development of interdisciplinary practices within the university and connections with other programs associated with entrepreneurship at the university such as the business school and other part-time entrepreneurship studies for first and second year students. This SG allows for the model to closely align with the industries and Oamk internal practices and structures.

Along with connections to other activities internally at the university, Oamk LABs also regularly works with a wide range of other local, national and international organizations such as the Oulu Innovation Alliance (9), the public business development agency Business Oulu (10), the university's Centre for Environment and Energy (11) and the Oulu Center for Health and Technology (12). In addition, industry representatives from over 20 different companies offer regular coaching.

6. Performance of the Incubator/Initiative so far, including any ratings by participants

Based on the Oamk internal statistics (24) between the years 2012-2016, Oamk LABs has resulted in:

- Over 600 new trained professionals, and over 15000 ECTS credits
- 152 new concepts, 59 prototype demonstrations
- 14 new startup enterprises.

These promising figures have offered strong evidence for the effectiveness of Oamk LABs and has pointed to LABs playing a continuing role for training in the region. Specifically, five out of 14 startup companies mentioned above have been selected to private business accelerator services, (13) (14), and have received funding for their business growth.

Internally at the Oulu University of Applied Sciences, six externally funded projects have also been established since the year 2014, granting 1.6 million euros in total for Oamk LABs development, staff education and expansion of the LAB studios. Additionally, five formal LAB studios have been established outside the city of Oulu since 2013 to form a national and international network of LABs. These LAB studios are listed below in order of their establishment:

- Global LAB Sendai in the City of Sendai, Japan
- Jyväskylä Game LAB in the City of Jyväskylä, Finland
- Groningen LAB in the City of Groningen, Netherlands
- Centria Game LAB in the City of Ylivieska, Finland
- Timisoara Game LAB in the City of Timisoara, Romania.



Figure 4: LAB Masters from Japan, Romania and Finland meeting each other, spring 2016.

Based on ongoing student feedback (15), Oamk LABs can be concluded as an effective place to learn. The feedback suggested that the LABs offer a new way of learning for students which, once experienced, they are highly positive as demonstrated by the following quotation from a participant:

"Another effect of the LAB Studio Model was that teachers act in the role of coaches. For me this was a new way of studying... I totally support this equality between teacher and student because in my experience the learning effect was higher. Sometimes I wished that the coaches just tell me what was the right thing to do, which decision we should make, what direction we need to go with the project, but they just asked questions to push ourselves through it in our own individual way. This was frustrating, interesting, annoying, challenging, helpful and very efficient" (Participant, 2016).

7. Challenges that were encountered

During the four-year development of the LAB, there have been challenges to overcome. One such challenge has been the LAB suitability for supporting prototype design of products other than digital products and services since few individual projects during the LABs have focused on

producing concrete demos (e.g. hardware / machine production). A number of upcoming prototypes for development during 2017 will pilot the development of concrete products and related business models for industries such as green sustainability and the recycling industry which will attempt to address this challenge.

Challenges have also been seen in the expansion of the LABs within the larger university in terms of ensuring student numbers and internal funding. Due to the recent economic challenges in Finland and Europe, financial cuts in higher education have represented a hurdle and led to difficulties piloting and developing new innovations. To overcome this challenge, external funding has been secured for the development of Oamk LABs since the beginning of the LAB development to supplement the internal core funding provided by the Oulu University of Applied Sciences for managing the program. Also, the increase of an awareness of the LABs inside the university has been essential for an increase in staff acceptance.



Figure 5: A LAB participant giving a pitch during a Gate 2 event.

8. Plans to further develop/improve the initiative

The development of Oamk LABs at the Oulu University of Applied Sciences will continue to expand as outlined in a strategic plan. At the core of this plan is the desire to better understand the needs of local industries, and the development of methods and contents for inspirational learning. By broadening its national and international learning networks, Oamk LABs

will enhance entrepreneurship education and continue to incubate new startup companies.

At the practical level, the development of Oamk LABs is expected to expand in the following ways between 2017 and 2019:

- increased cooperation with the other entrepreneurship education programs in Oamk;
- formalizing a LAB research group to conduct studies around the LAB model;
- piloting new LAB studios within new industries nationally and internationally;
- helping to set up new LAB studios abroad in countries such as Nepal, Bangladesh, the United States, Brazil and Malaysia; and
- continuing collaboration with private startup accelerators globally.

Overall, Oamk LABs will continue to bring together students, coaches, startups and established companies to support professional growth of individuals and business development in Oulu and partner regions. This program represents a practical example of a university's ability to respond in a successful and innovative way to work-life needs and entrepreneurial skills education.

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