Welcome

ETECH Projects accelerates entrepreneurship and diffusion of innovations based on early stage and potentially disruptive technologies coming from the University of Cambridge. It can support inventors in validating and understanding the commercial potential of ideas, enabling the transformation from the laboratory to reality.
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Welcome

It is with our delight that you are considering to join the University of Cambridge Judge Business School Entrepreneurship Centre for ETECH Projects.

This brief document outlines the objectives, process and output of ETECH Projects in order to showcase the essence and flow of this programme. At the end of the document you can find the Project Proposal template that you will need if you choose to submit a project for review.

We look forward to welcoming you to ETECH and helping you explore the commercial potential of your technology.

Programme Team

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The Entrepreneurship Centre, previously known as the Centre for Entrepreneurial Learning (CIEL), is an entity within the University of Cambridge Judge Business School whose foremost aim is to spread the spirit of enterprise to the Cambridge community and to the wider national and international audiences through a range of educational activities that inspire and build skills in the practice of Entrepreneurship. One of Centre’s key teaching values is that the best people to teach potential entrepreneurs are established entrepreneurs themselves. This philosophy has led the Centre to collaborate with a network of over 300 experienced entrepreneurs, innovators and other practitioners to provide relevant, credible and practical training and insights.

The Centre has developed an enviable track record in the field of entrepreneurship education with a number of flagship programmes designed to provide skills for students, graduates, researchers and aspiring entrepreneurs from different backgrounds and at different stages of their entrepreneurial journey. Programmes include but are not limited to: Accelerate Cambridge, EnterpriseWISE, Enterprise Tuesday, ETECH Projects, Ignite, the Postgraduate Diploma in Entrepreneurship and the SME Growth Challenge.

We provide:

- A core portfolio of open programmes offering specific learning for individuals at different stages of the entrepreneurial journey
- Opportunities for corporate customers to book places for individuals (employees and students) to participate in one of the existing academic programmes from the Centre’s portfolio
- Customised programmes developed and designed with client organisations to meet their specific entrepreneurship, innovation and skills objectives
- A range of resources for entrepreneurs including a large number of videos and podcasts with high profile entrepreneurs and experts on specific themes made freely available via our website, iTunesU and YouTube.
- Access to the Cambridge entrepreneurial network, business angels, investors, consultants and other industry experts
- Links to organisations, groups and faculty across the University of Cambridge involved in innovation and enterprise
- A track record in developing and delivering successful entrepreneurship programmes

Achievements (1999 – 2015):

- Over 200 programmes and events have been completed
- More than 16,000 people have participated in the Centre’s programmes and events
- Over 350 entrepreneurs and practitioners have contributed to the Centre’s activities
- 200+ business ventures have been created by alumni of the Entrepreneurship Centre
- Over 60 University of Cambridge Undergraduate and Postgraduate entrepreneurial courses have been delivered
- 20+ business plan competitions have been run in conjunction with the Cambridge University Entrepreneurs (CUE)
ETECH Projects Overview

‘ETECH Projects’ are run by the Entrepreneurship Centre at Judge Business School and they aim to assess the commercial viability of novel technologies coming out of the different departments within the University of Cambridge as well as local companies. ‘ETECH Projects’ are performed by teams of students from the University of Cambridge. These students either see themselves as would-be entrepreneurs, or plan to pursue careers that would involve assessing the commercial viability of business ideas and novel technologies, or anticipate to produce commercially valuable research themselves.

The key objectives behind ETECH Projects are:

- To assess concepts related to market potential and the viability of novel technologies within an educational context
- To build essential skills to carry out commercial due diligence on novel technologies
- To provide an extra resource to Inventors to help guide their ideas to market

ETECH Project structure

ETECH Projects are run in conjunction with courses in Entrepreneurship that the Centre offers for undergraduates within the University of Cambridge. Students participating in these courses will work on ETECH Projects in teams of 3 – 5 as part of their coursework and will prepare a project report that will be assessed by the Centre’s faculty. The project work is supported by lectures, supervisions and mentoring sessions by entrepreneurs and practitioners with experience in building novel technology-based businesses.

Each ‘ETECH Project’ team will perform a commercial feasibility study on the potential of the novel technology by evaluating it across a number of applications. Initially, the students will brainstorm various possible applications for the technology prior to performing market research and evaluation. Once an informed decision is made regarding the most promising application for the technology, the intellectual property (IP) landscape as well as competing technologies, applications and products will be assessed. Naturally, the process culminates in a coherent commercialization strategy for the technology at hand.

ETECH Project outputs

At the end of their course, ETECH Project teams will deliver a 15 min presentation in order to communicate their findings to a panel of the Centre’s faculty, and to an audience consisting of Inventors and mentors. During this presentation, the Inventors will have the opportunity to question the students regarding their feasibility work.

The project teams will also prepare a commercial feasibility study report that delves deeper into their findings. The following topics must be covered in this report:

<table>
<thead>
<tr>
<th>Commercialisation aspect</th>
<th>Key topics</th>
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<tbody>
<tr>
<td>Technology</td>
<td>Attributes, IP position</td>
</tr>
<tr>
<td>Application</td>
<td>Viability, linking technical and commercial advantages</td>
</tr>
<tr>
<td>Market and Industry</td>
<td>Target markets, size and growth rates</td>
</tr>
<tr>
<td>Competitors/Partners</td>
<td>Current/future competition, potential partners</td>
</tr>
<tr>
<td>Business Model</td>
<td>Potential business models, pros and cons</td>
</tr>
<tr>
<td>Recommendations</td>
<td>Target market, most suitable business model</td>
</tr>
<tr>
<td>Next Steps</td>
<td>Immediate next steps to commercialisation</td>
</tr>
</tbody>
</table>
The due diligence report prepared by the students will be shared with the Inventors to help in their commercialization efforts.

*Please be advised that, while revenue streams and certain commercialisation costs will be investigated, the students are not expected to perform thorough financial modelling and valuation of the business.*

**ETECH Project timing**

ETECH Projects runs to a similar timetable each year with a cycle starting with project proposals, then undertaking projects and ending with the project presentations. Indicative dates are chosen below. Exact dates differ each year. Similarly, exact dates of the project start and end dates are communicated closer to the term but the project duration is 6 weeks.

<table>
<thead>
<tr>
<th>Project stage</th>
<th>Timings every year</th>
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<tr>
<td>Project proposals collected</td>
<td>Deadline: 20th December 2016</td>
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<tr>
<td>Projects reviewed</td>
<td>January</td>
</tr>
<tr>
<td>Accepted projects presented to students</td>
<td>3rd week of January</td>
</tr>
<tr>
<td>Students choose projects and communicate with</td>
<td>By the 1st week of February</td>
</tr>
<tr>
<td>Inventors</td>
<td></td>
</tr>
<tr>
<td>Students meet Inventors</td>
<td>1st week of February</td>
</tr>
<tr>
<td>Students undertake project</td>
<td>February and March</td>
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<tr>
<td>Final Presentations</td>
<td>8th March 2017</td>
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<tr>
<td>Reports Due</td>
<td>17th March 2017</td>
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*Please note that the key dates that require attention for Inventors are:*

1. December deadline for project submission
2. Meeting students in the first week of February if project is chosen
3. Attending the final presentation on the 8th March 2017

Several groups of students may take ETECH Projects each year as a minor option or elective. The UG ETECH elective runs for students across the schools of Physical Sciences and Biological Sciences.

**Confidentiality**

Considering the early stage of the technologies we typically work with, a high level of confidentiality is required to ensure that the IP is adequately protected. The work performed by the students is covered by strict Non-Disclosure Agreements (NDA) as set out by the University of Cambridge. A sample of this NDA is included at the end of this document on page 12.
Why Participate and How?

If you are working on a novel technology that you believe has a potential for commercialisation, ETECH Projects are designed to assist you. Inventors submitting a novel technology for commercial assessment will be the clients for the ETECH Project teams. Each technology proposed can result in several projects if the technology has several potential application areas.

Engaging with ETECH Projects is beneficial for both the Inventor and the students. While the students get the opportunity to hone their entrepreneurial skills through performing market research and commercial evaluation, ETECH Projects help the Inventors establish:

- A better understanding of commercial potential of their invention/science-based idea including applications, market size and routes to market
- A feasibility report and presentation that enable taking the idea forward (whether by finding commercial partners, raising capital, putting a team together or applying for a patent)

The students work in groups and undertake approximately 50 hours (as a group) of market research on behalf of each project accepted. In return, the Inventor must commit to meeting (or arranging for a senior member of their team to meet) the student group for up to 2 hours in the last week of January/first week of February, answer related questions by email (minimal in most past cases) and attend the final presentation in March. In effect, a total commitment of around 5 hours is expected from the Inventors’ side between the end of January and the middle of March.

Inventors (or their associate team partner) must be willing to commit this time to support the students’ work in order for a fruitful collaboration and meaningful project to be undertaken. Inventors have in the past negatively impacted the quality of the project and students’ morale by being unreachable and uncommunicative. Please ensure that you or a member of your team is available for the initial meeting and presentations if you choose to submit a project proposal. This year’s presentations will take place on the 8th March 2017.

If you wish to participate in ETECH Projects and feel able to commit the appropriate time for it, please apply before the 20th of December 2016 by registering on the ETECH Projects website https://www.jbs.cam.ac.uk/entrepreneurship/programmes/etech-projects/opportunities-for-inventors/ as well as completing a one-page overview of the technology, its background, your expectations on the students’ work and any special requirements that you may have in terms of student skills and experience. A template for this one page overview is included on page 11 of this document - entitled ‘Project Proposal’. Please complete this template and email it to etechprojects@jbs.cam.ac.uk.

Additional information about ETECH Projects and other programmes offered by the Entrepreneurship Centre can be found at https://www.jbs.cam.ac.uk/entrepreneurship/programmes/ Alternatively, you can also contact the director of ETECH Projects, Dr. Shima Barakat, at s.barakat@jbs.cam.ac.uk.
Programme Agenda

The projects are supported by a lecture series which is made up of practitioner-delivered guest lectures supplementing the coursework to be led by the faculty. The sessions will cover the following key elements of successful commercialisation of novel emerging technologies:

1. **Conducting due diligence on the science and technology** – the successful commercialisation of a scientific idea rests upon carrying out the necessary due diligence to validate the underpinning science and scientific team.

2. **Applying Creativity in commercialising novel technologies** – Once the decision to commercialise the novel technology is taken, principles of creativity should be applied to plan and identify the next course of action, including identifying potential applications, business models and delivery models.

3. **Stepping stones for Commercialisation** – Establishing the technology and commercial advantages that yield the core propositions of the innovation provides a firm foundation for success. Standard frameworks such as the MARKETS approach are introduced to help evaluate and establish a platform for commercialising innovation.

4. **Market and industry assessment** – Emerging technologies are at stages that are far removed from the markets/industries of today. As such, the role of the entrepreneurial Inventor is to find, identify and articulate future market opportunities for his/her innovation and to see how they fit into the current and evolving industry structure.

5. **Routes to market** – This lecture answers key commercialisation questions including: How to identify the best routes to market for innovations arising out of early stage technologies? What are the challenges that any high-tech based business needs to face before the idea can be exploited? How to tackle these challenges and achieve success?

6. **Leadership and management of emerging technologies** – To take the invention from the labs into the market, leadership status needs to be addressed. Decisions must be made regarding when to introduce professional management and how to reward and deal with the transfer of ownership of the business vision from the “Inventor” to the entrepreneur.
Dr. Shima Barakat is an entrepreneur, director and academic obsessed with making the world a better place. While she is the director of two enterprises, she also directs the Entrepreneurship Programme at the University of Cambridge which supports the development of technology entrepreneurs and aids the commercialisation of technology from within the university and its partners. Moreover, she is the Director of EnterpriseWISE and ETECH Projects at the Cambridge Entrepreneurship Centre. Shima has grown ETECH Projects from being delivered to 25 students to almost 200 each year.

An Engineer by training to postgraduate level, she also has an MBA and a PhD in Management. She has spent two decades helping companies, governments and international funding agencies improve their performance in an environmentally and socially sensitive manner. As an entrepreneur, Shima is one of the founders and a Director of Value in Enterprise, the UK responsible business consultancy company. She was also one the founders of Nahdet El Mahrousa (the most successful social enterprise incubator in the Middle East) and the Egyptian Junior Business Association (EJB) in Egypt and the Global Communities Initiative (GCI) in the US for which she chaired the board for a number of years. Shima is interested in critically studying entrepreneurship practice to explore the implications on people and the planet. Currently, she has a particular interest in gender influences.

Dr. Jenny Versnel - photo and bio to come
Project Proposal

Please register your details at https://www.jbs.cam.ac.uk/entrepreneurship/programmes/etech-projects/opportunities-for-inventors/ and fill out this proposal form with as much pertinent details as possible to submit a project(s) to ETECH Projects.

Novel technology name: ________________________________

Introduction
Please provide a brief background about the technology, the context and other relevant info.

The Novel Technology/Science
Please provide a brief description of the novel technology, with an emphasis on “What it is?” rather than the “How”

Applications Identified
What are the potential applications that you would like to explore?

Project Scope
Please answer as many, and in as much detail, as appropriate to your technology and stage of development the following questions:

- Are you already aware of potential markets and their size? If yes please specify.
- How does the technology compare with other competing technologies?
- What is the IP position? Are there many other similar technologies patented?
- Nature of barriers and challenges in addressing the market
- Identify competitors doing similar work or targeting the same market

Other requirements/expectations
Please state if you feel the project team needs to have specific characteristics to undertake a project for you.

Contact
Please provide email and telephone contact information for all members of your team that students may contact if they have questions about this project. Please ensure that your team is aware that students may contact them and that they are working to a tight timeline. Please indicate who will be attending the presentation on the 8th of March 2017 if your project is chosen.
Confidentiality Agreement

All students must sign a confidentiality agreement before undertaking their projects. Sample NDA below.

CONFIDENTIALITY AND NON-DISCLOSURE AGREEMENT

Ladies and Gentlemen:

I would like to participate in the Undergraduate Entrepreneurship course 2017.

One purpose of the course(s) is to assess the feasibility of an idea submitted by a member of staff of the University of Cambridge or a local organisation.

I understand that in the course of my participation I may have access to executive summaries of business plans and other scientific knowledge of commercial value, whether in hard copy or electronic form. These Plans/documents and information may contain ideas, inventions and concepts (collectively "Ideas"). I understand that all intellectual and other property rights of all staff submissions will remain unaltered as a result of this course. I also understand that some of these Ideas or Plans may constitute trade secrets and that staff may not have yet taken appropriate steps to patent or otherwise protect their Plans or Ideas. In consideration of my being accepted by the University of Cambridge to participate in the course(s), I agree for the benefit of the University and the individual staff involved in the course(s) I will hold Plans and Ideas which I may receive in the course of the course(s) in strict confidence and will not copy, reveal, or disclose such Plans or Ideas to others and that I will not use any such Plans or Ideas for any purpose other than evaluating them with a view to submission of a report. In particular I will not use them for my own benefit (other than through a report with the staff concerned) or the benefit of any organisation with which I am affiliated.

The above restrictions shall not apply to any Plans or Ideas which are in the public domain at the time of disclosure or become publicly known through no wrongful act of mine, are known to me at the time of disclosure or are independently developed by me, are used or disclosed in breach of such restrictions with the approval of the staff involved, are furnished to a third party by the staff without similar restrictions on the third party's rights, are received by me from a third party who has a lawful right to disclose them to me, or are to be disclosed pursuant to the requirement or request of a governmental agency provided that in such event I shall inform you of the nature and extent of any disclosure so required. I also waive all proprietary right, title and interest in and to any Plans or Ideas and any improvements thereof.

The above restrictions will apply during the time that the course(s) is occurring and for a period of twelve (12) calendar months after the course end date.

I am pleased to support the course(s) and during my involvement with it I agree to abide by such other rules and guidelines which the University of Cambridge may reasonably impose.

Very truly yours,

SIGNATURE ……………………………………

NAME (PLEASE PRINT OR TYPE)…………………………………….

DATE………………………………………….