impulse for tech innovators

WHERE CHANCE ENCOUNTERS HAPPEN

25 April - 14 July 2023

www.maxwell.cam.ac.uk/programmes/impulse
About impulse

冲动（impulse）是一个促进创业和内部创业的催化剂。该计划使高潜力技术创新发展为商业提案，适用于个人和公司。这是一个具有全球意义的既定行动学习计划，重点是优先考虑和开发“高潜力”业务案例。冲动（impulse）的核心方法是一个由热情的导师和有经验的创业者组成的网络，他们作为榜样，并提供有价值的指导，来自这个备受尊敬的独特的剑桥创新集群。

冲动（impulse）具有挑战性、鼓舞人心、全球、教育性，并在任何时候都是有趣的。该课程的长度旨在提供宝贵的时间进行反思，同时保持速度，将想法引导到正确的道路上。

“我相信我们需要鼓励最聪明的人拥有大想法，并创造一个真正鼓舞人心的环境，并提供正确的支持。我完全支持冲动（impulse），这将使研究人员和创新者能够测试他们聪明的想法并成功地执行它们。”

— Dr Hermann Hauser，连续创业者，风险资本家

冲动（impulse）顾问委员会

Matthew Bullock  Dr David Cleevely  Prof Anne Ferguson-Smith  Prof Sir Richard Friend  Dr Deborah Harland

Dr Hermann Hauser  Dr Elaine Loukes  Prof Chris Lowe  Prof Florin Udrea  Prof Sir Mark Welland
About the University of Cambridge and the Maxwell Centre

The University of Cambridge was established in 1209 and comprises of 100 departments, faculties and schools, and 31 Colleges. The annual student intake is 24,270 (2020-21) (Undergraduates 12,940, Postgraduates 11,300) with 40% from overseas representing 146 countries. To date, there have been 121 Nobel laureates (2020), making it the 2nd largest recipient worldwide with 80% from Physics, Chemistry, Medicine/Physiology.

The University of Cambridge is consistently listed in the Top 10 Universities in the World in Times Higher Education (currently fifth - 2022) and is third in The QS World University Rankings 2022.

The impulse programme is based at the Maxwell Centre, the hub for industry and research on the West Cambridge Science and Technology Campus.

Operating since 2016, The Maxwell Centre forms part of the world-renowned Cavendish Laboratory and provides a centrepiece for industrial partnership with the physical sciences and engineering.

The Centre was funded from UK Government (£21m UKRPIF scheme), the University of Cambridge (£4.6m) and with match funding of £42m from industry partners Winton Programme, Hitachi Ltd., Toshiba Ltd., the Wellcome Trust, the Raymond and Beverly Sackler Foundation, Tata Steel and many other industrial supporters.

To date the Maxwell Centre has invested £63m into academia-industry collaborations.

**impulse is perfectly aligned to the Maxwell Centre’s strategic vision of a Zero Carbon future and supporting Sci-Tech-Med initiatives.**

“impulse provides a totally different learning environment for researchers, scientists and intrapreneurs, enabling them to reach their full potential and develop their ideas. The involvement of real business practitioners with industry knowledge and experience, together with the Cambridge community, sets this programme apart.”

– Prof Sir Richard Friend, Founding Director of the Maxwell Centre
Cambridge innovation in numbers

The University of Cambridge sits at the heart of one of the world’s most successful innovation and technology clusters

- 23 billion-dollar businesses based in Cambridge
- 3,000+ IT and telecoms companies
- £18bn in total annual turnover generated by knowledge-intensive firms
- 800+ high-tech manufacturing companies
- 800 knowledge-intensive services companies
- 67,800+ people work for knowledge-intensive firms
- 5,300+ knowledge-intensive firms
- 600+ life sciences companies
- 308.7 patent applications per 100,000 residents – highest in the UK and more than twice the rate of any other UK city
- 6.4% year-on-year increase in knowledge-intensive jobs in Cambridge city region over the last six years

https://www.cam.ac.uk/sites/www.cam.ac.uk/files/innovation_in_numbers_december_2021_2.pdf
Cambridge’s unique entrepreneurial ecosystem

Cambridge is much more than the University of Cambridge. In fact, the majority of high technology companies that have shaped the success of the Cambridge cluster are connected to a handful of serial entrepreneurs, business angels and venture capitalists.

“impulse provides researchers and scientists with the ideal environment for those all-important chance encounters, sparking and inspiring fresh generations of science and technology entrepreneurs as has clearly been evidenced. It is here that the cross-pollination of ideas, technologies and industry knowledge of like-minded individuals, from both entrepreneur and business worlds, enables the participants to reach their full potential and, importantly, transform their research into a viable business.”

– Prof Sir Mark Welland, Director of the Maxwell Centre

**impulse participants and alumni have ongoing access to:**

- Entrepreneurs
- University of Cambridge
- Legal framework
- Funding
- Research labs
- Tech consultancies
- Networking and meeting places
- Business parks / research parks / innovation centres
- Service organisations
- Rich networks
- Tech investor community
- Accelerators and incubators
**About the programme**

*impulse* is a hybrid programme with flexible learning schedules that run over 12 weeks.

The programme is comprised of three modules. Two residential modules and one online module in between. Programme details are subject to change.

**Module A**
25-28 April, 2-4 May
- Opening and welcome reception
- Value propositions
- Marketing strategy & planning
- Market research
- Business models
- Funding sources
- Clarifying financial needs
- Intrapreneuring & stakeholder analysis
**Mentoring:** preparing projects

**Module B**
May-July
- **IP basics**
- **Legal issues in starting a business**
- **Presentation skills**
- **Networking**
- **One-on-one discussions with business experts**
- **Individual work: market research, customer validation, talking to investors, team building**
- **Building business partnerships**
- **Selling & negotiation skills**
**Mentoring:** refining projects

**Module C**
11-14 July
- **Future of innovation for entrepreneurs**
- **Building a great team**
- **Leading a diverse team**
- **Fundraising**
- **Pitch practice and training**
- **Pitch to investors and innovators**
**Mentoring:** validating projects

**Follow-up support**
Oct-Feb
- **Business meets ideas**
  (Jan)
- **impulse alumni showcase their innovative ideas and ventures to business leaders and corporate innovators**
- **Master classes**
  (Oct - Jan)
- **Alumni mentoring**
  (Jan-Feb)

In addition to the modules, participants network and build one-on-one relationship with 120+ mentors, investors and top-tier experienced entrepreneurs pertinent to their tech innovation.

After three months, our alumni take away:

- deep relationship with key connections in the world-renowned Cambridge Cluster
- a high-potential business case after intensive review and refinement
- a technology mindset towards a broader business perspective
- new skills and frameworks to accelerate the success of the business idea/venture
- experience in pitching with invaluable feedback from experienced investors.
“impulse is an inclusive programme for both entrepreneurs and intrapreneurs. We foster collaborations between innovators from a range of diverse disciplines, industries, perspectives and backgrounds. We are passionate about helping the next generation of science and technology entrepreneurs succeed.”

– Yupar Myint, Head of impulse

Among 42 participants

- 60% Cambridge University members
- 41% life science/healthcare
- 59% tech
- 29% women

- 1 Surgeon
- 1 Professor
- 2 Intrapreneurs
- 4 Bachelor/Masters degree level
- 7 startups
- 13 PhD students
- 17 PostDocs

24+ HOURS Mentoring per participant
70.5+ HOURS Feedback from pitch panel members
190+ HOURS Private discussions with business experts
An insight into our alumni

Since 2017, 49% of our alumni have raised £101 million of funding and have created 392 jobs*. Hear about some of their experiences.

“As a female entrepreneur, I have found the whole ecosystem created by the impulse programme highly inclusive and motivating, both for one’s own growth and for the growth of an idea and its transformation into a startup business. It has also been an invaluable opportunity to get to know like-minded people and to receive mentorship and guidance from high-stake entrepreneurs.”

– Mariam Makramalla, RENEWED MIND

“impulse has been instrumental to the creation of Tenyks! It is the blend of invaluable knowledge, exchanging ideas with peers and growing a network of astonishing mentors, advisors and experts that makes the impulse experience unforgettable. The programme helps you look at your business idea from different perspectives and discover the blindspots that you would have never seen alone.”

– Botty Dimanov, Dmitry Kazhdan

“Not only does impulse provide direct access to market and world-leading experts covering the full breadth of entrepreneurial needs, it does so with inspirational individuals who passionately provide open, clear and transparent advice to the entrepreneurs. The knowledge, network and information provided by the lecturers and mentors are matched by the community ethos and spirit the course instills. It has helped to super-charge multiple aspects of our business and I look forward to future interactions.”

– Dr Rob Simpson

“impulse was a fantastic opportunity to open doors into the world of business and grow as an entrepreneur. The mentors, business experts and facilitators were extremely approachable, honest, and inspirational people who gave their support and expert advice for my business case. Combined with the workshops and course material, I now feel I have the tools required to take the next big leap with my business idea. I could not recommend this programme highly enough.”

– Elena Watts, Department of Materials

*Source: Alumni Survey 2021; funding announcements
Who should **attend?**

**impulse** participants come from a range of areas including:

- PhDs, PostDocs and researchers across different fields of Physical Sciences, Technology and Life Sciences
- Early-stage entrepreneurs
- Researchers/engineers/managers from large corporates and organisations.

We naturally welcome participation locally from the University of Cambridge and businesses within the science and innovation cluster. But our alumni reach all corners of the world – from China, to America, India to Spain representing PostDocs from other universities and public and private sector organisations.

**Areas of research**

- AgriTech
- Artificial Intelligence
- Biotechnology
- Clean Energy/Material Sciences
- Education
- Fintech
- Graphene
- Graphics
- Health and Wellbeing
- Machine Learning
- Med Tech/Healthcare/Therapeutics
- Sensors
- Software
- Water Tech
- Quantum Technologies
- IoT
**Benefits of participating**

*impulse* is an intense but time-limited, high-learning curve experience. It is specifically designed to simultaneously host both entrepreneurs and intrapreneurs with the newest ideas, or ideas that will challenge or evolve out of a corporate environment.

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<thead>
<tr>
<th>For researchers and entrepreneurs:</th>
<th>For research organisations:</th>
<th>For corporates encouraging intrapreneurship:</th>
<th>For inhouse researchers, engineers, managers and employees:</th>
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<td>Determine the best business models and marketing strategies for your idea</td>
<td>Effective support in developing research-based businesses</td>
<td>Empower your employees to generate future business opportunities</td>
<td>Develop key commercial skills and tools in opportunity evaluation</td>
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<td>Develop business skills within an objective but safe environment</td>
<td>Encourage researchers to generate impact on society with their research-based projects</td>
<td>Cultivate innovative minds and entrepreneurial thinking among your employees, supported by mentors</td>
<td>Participate in mentoring sessions with business experts who are used to evaluating new business opportunities</td>
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<td>Identify sources of help and advice for the early stages of business development</td>
<td>Cultivate innovative thinking – personal development with a &quot;mini-MBA&quot; experience which can be applied to future work</td>
<td>Provide an opportunity for personal development with an affordable “mini-MBA” experience which can be applied to your employees’ daily work</td>
<td>Learn directly from experts, experienced entrepreneurs, innovators, venture capitalists, business angels and other professionals.</td>
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<td>Test and validate ideas with experienced entrepreneurs and innovators</td>
<td>Gain high value contacts, develop networks and receive exceptional feedback</td>
<td>Get advice and feedback directly from 100+ successful entrepreneurs, innovators and investors</td>
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<td>High visibility of your contribution towards the entrepreneurial community.</td>
<td>Improve pitching skills and build your network of contacts with the business community and other like-minded entrepreneurs.</td>
<td>Increase communication and teamwork among multidisciplinary innovation teams (technical and business)</td>
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impulse Partners

Our partners take many forms. In addition to our inhouse partners who introduce PhD students, Postdocs and research professors, we have a varied range of external corporate partners who send their own employees or provide sponsored support in specific technology areas.

“I have been delighted to sponsor NPL’s participation in impulse. It has provided huge benefits to our entrepreneurial team - with engaging people, great content and access to expert guidance and networks. This world-class support has provided a real boost to our commitment to accelerate impact from our science and to support our scientists. Even the challenges of operating during the lockdown years did not diminish impulse’s warm welcome and invaluable benefits!”

- Lucy Caffery, Head of Product Management,

Internal partners

Cambridge University researchers (PhD students, Postdocs, Professors)

External partners

Organisations send their own employees

Organisations support researchers/startups in a specific area

Organisations send their selected fellows/participants

Cambridge University - Nanjing Centre of Technology and Innovation
How to apply

The next impulse programme runs from 25 April to 14 July 2023 at the Maxwell Centre, University of Cambridge, and is available online and in-person.

All candidates need to complete an application form to apply for the impulse programme at: https://www.maxwell.cam.ac.uk/impulse-2023-application. Applicants will be interviewed before being accepted on to the programme.

Programme fees

Cambridge University members £1,250
External partners £3,000
Corporate participants £5,000

We also have partner-sponsored places available for certain technology and research areas.

The fees cover the programme and catering. Accommodation, travel costs and daily allowance are not included. If you are self-funded (a researcher at another university or an entrepreneur) please get in touch to discuss details.

Get in touch

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