About the Technology Infusion Grand Challenge

The Technology Infusion Grand Challenge sets out to stimulate students to leverage new technologies and solve today’s pressing problems. We are looking for students who have the insight, drive and tech ability to bring their innovations to life.

This competition is a collaboration of La Trobe’s Centre of Technology Infusion and the La Trobe Accelerator Program in Melbourne who will work hand in hand to provide guidance, and – for the winning team – a two week all-expense* paid mentorship stay.

2018 Theme: Smart City Innovation

No region in the world is urbanising faster than Asia and Asian cities have their own unique challenges, which are different from European cities. India alone will have 5 cities with a GDP greater than entire counties such as Vietnam and Philippines and Malaysia.

With urban growth also come challenges of economic growth, sustainability, efficiency and live-ability.

This year we are inviting students to use technology to help solve their own city’s challenges.

How does the competition work?

Final year students from either of Science, Technology, Engineering and Mathematics (STEM) students need to form teams of up-to 5 and submit their high level concept or area of interest to their lecturer and upload it to the Technology Infusion Grand Challenge website and complete the registration form.

During the semester students work to validate and refine their concept. Online material will be available from La Trobe Accelerator program to help guide students. Towards the end of the semester teams upload a video presenting their concept and design. The winner will be decided by popular vote and TIGC’s panel of judges.

Up to ten teams will be given a small investment between $500 and $1000 to make a final prototype. This does not exclude the other teams from winning the competition in the end!

The second part of the challenge is foremost about making a working prototype, but this part is also about fleshing out the business case; it’s about validating of the problem with first hand insight and refining the solution. At the end of the year, teams will present their working concept before an international jury in Mumbai or New Delhi.

* Expenses will include travel, accommodation and allowances for drinks and meals, according to La Trobe’s Policies. Registration will open on 1 August 2018. A full set of the terms and conditions of the competition will be available with the registration form. La Trobe University reserves the right to change the terms and conditions at any time in its absolute discretion.

Supported by Victorian Government Trade and Investment, State Government of Victoria, Australia
WHO CAN PARTICIPATE?

Teams must consist of a maximum of 5 students and preferably with gender diversity. Students must:

- Be in their final year of studies (Science, Technology, Engineering and Mathematics).
- Have demonstrated technical, entrepreneurial, or leadership qualities in academic and/or extra-curricular activities.
- Have approval from their Head of Department to participate in this Challenge.

PRIZE

The winning team will receive an all-expenses paid 2 week mentorship stay in Melbourne.

During their stay, they will have a chance to work with academic and business experts at the Centre for Technology Infusion the La Trobe Accelerator.

The winning team will gain valuable experience and visibility on a global stage.

WHAT WE ARE LOOKING FOR?

Participants must:

- Demonstrate strategic insight.
- Solve a concrete city problem using one or more of core technologies, for example: Wireless Connectivity, Artificial Intelligence, Sensors, Data Analytics and Software.
- Demonstrate the ability to build a working prototype.
FAQs and proceedings

For the full terms and conditions, please see:
latrobe.edu.au/grandchallenge

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<td>How can I participate?</td>
<td>Form a team and fill in the form, have it signed by your Head of Department and upload a picture of it on the website. Participation is free.</td>
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| Can you give me some examples of problems you think can be addressed? | Some smart city cases studies for inspiration:  
- A Korean City implemented smart water meters, which today double functions as a social health alert: family of people who haven’t used water in two days, are send an alert  
- When Mexico tested smart pre-clearance for border passing, it not only reduced waiting times – which were caused by stricter border controls – but it also created entirely new service models for transport companies.  
- The blood bank in Amsterdam uses smart heat exchange systems to ‘store’ the cold from their water system in the winter, in order to keep blood cool in summer.  
- Melbourne can get hot in summer and its tree health sensors measure the water needs and CO₂ conversion of the trees, helping the city council maintain the foliage that protects the city.  
- A hamburger chain implemented smart gas meters, to warn them when a bottle was about to go empty, but they also found that they hadn’t been receiving full gas tanks all the while, generating significant savings. |
| How can I win?  
What are the judgement criteria? | The final judgement criteria will be:  
Validity of the problem being solved (25%)  
- How well is the problem defined and supported?  
- Have the risks and opportunities of the concept been identified and assessed?  
Originality and impact of the solution (25%)  
- How unique is the solution?  
- Impact: Is it an incremental improvement or transformative solution?  
Engineering/IT excellence of the prototype (25%)  
- Degree of technical difficulty in building the solution  
- It’s functional excellence for the end-user(s)  
Commercialisation potential of the solution (25%)  
- Commercialisation potential demonstrated by clarity of an exist strategy if this was a start-up initiative. |
| What are the key dates and deadlines? | Sign up: Registration will open on 1 August 2018 and close on 31 August 2018  
End of Semester 1 YouTube submission: 15 November 2018  
Announcement of top 10 team: who will get an investment at half way point  
Submission of final project: 31 May 2019  
Final event: To be announced: Mid June/ end June 2019 |
La Trobe’s top tier R&D Centre

The Centre for Technology Infusion’s core expertise is in the design and development of Sensor systems, Micro Chips, Wired/Wireless Systems, System Integration and Complex Data Analytics.

Our clients come to us to apply new technologies to existing problems, which usually starts with a feasibility verification and can consequently result in prototype development, field trials, market ready development and integration with legacy systems.

Blue Chip standards
CTI has established industry standard R&D infrastructure to support research and technology development in these areas, including an eco-system of the world’s best delivery partners.

De-risking investment
The Centre has a strong track-record of delivering field ready solutions with our Proven Risk Elimination Methodology. Our current clients are with us for 4 or more years.
All CTI’s projects are in collaboration with industry partners and our teams are predominantly externally funded. In selected cases we even take equity in start-ups.
As an R&D Centre we know that the creation of new products is a journey which can take unexpected turns. We take responsibility to alert our clients of alternate routes and have the flexibility accommodate redirections.

CTI Awards 2017
From left to right: Scott McKenzie (CEO, SensaData P/L), Hon Philip Dalidakis (Minister for Trade and Investment / Minister for Innovation and the Digital Economy / Minister for Small Business), and Professor Aniruddha Desai (CTI Director, School of Engineering and Mathematical Science, La Trobe University.

Autonobus
Victoria’s first autonomous shuttle bus at La Trobe University.
The La Trobe Accelerator Program

A new approach to supporting regional innovation

The La Trobe Accelerator Program (LTAP) is a university-led accelerator program that helps in transforming good ideas into viable businesses. LTAP promotes and supports the development of start-ups arising from within the broader regional community of Victoria and La Trobe University i.e. students, staff and alumni groups. It offers resources such as equity free funding, business acumen and tailored, dedicated support to help entrepreneurs, tech-innovators and start-ups to pursue their goals and ventures. By engaging regional businesses, Victorian communities, students and researchers, into a single network, LTAP strengthened its commitment to outstanding entrepreneurship, research and innovation in 2017.

Our program structure is unique:

- We select the top founders from across all La Trobe campuses, and anyone who has previously been associated with La Trobe University
- Each team receives 1:1 coaching from mentors dedicated to individual teams
- Start-up teams can receive up to $20,000 funding (no equity taken)
- We have a strong program of investor preparation and can introduce you to venture capital firms
- Start-ups benefit from: Workshops, Coaching, Mentoring, Office Resources, Intellectual Property and Business advice from our program partners
- The La Trobe Accelerator Program concludes with a Graduation; an exciting platform for our start-ups to gain recognition and potentially secure investment at the end of the incubation period. The start-ups pitch their businesses to an expected audience of 150 stakeholders, including investors.

Successful start-up teams are expected to:

- Devote a significant amount of time to their start-up over the incubation period
- Work at our dedicated co-working spaces on campuses
- Utilise the mentoring and coaching available through the program

Partnerships

Through our partnership with Deakin University and Federation University, the La Trobe Accelerator Program is uniquely positioned to unlock the innovation within Victoria’s regional communities. LTAP’s governance model and source of funding allows LTAP to attract the best and brightest into the program regardless of where the ideas originate.

LTAP’s collaborative model enables a range of initiatives, including:

- Joint pitching forums, joint public forums and close interaction and collaboration between LTAP and other accelerators
- The ability to grow the entrepreneurial ecosystem across regional Victoria
- Establishing strategic alliances with key commercial partners
WE'RE IN THE TOP 1.5% OF 27,000 UNIVERSITIES WORLDWIDE\textsuperscript{1}

OUR GRADUATES HAVE AN EMPLOYER SATISFACTION RATING OF 86.6% PLACING LA TROBE SECOND AMONG VICTORIAN UNIVERSITIES\textsuperscript{2}

WE'RE TOP RATED NATIONALLY AND WELL ABOVE WORLD STANDARD IN 19 FIELDS OF RESEARCH\textsuperscript{3}

WE OFFER A LEADING CAREER READY PROGRAM THAT DEVELOPS PROFESSIONAL SKILLS

LA TROBE IS THE FIRST UNIVERSITY IN AUSTRALIA TO RECEIVE A SIX-STAR RATING FOR SUSTAINABLE LARGE-SCALE DEVELOPMENTS\textsuperscript{4}

1. QS World University Rankings 2019; Webometrics Ranking Web of Universities 2018
2. Employer Satisfaction Survey (ESS) 2017
3. Excellence in Research for Australia Report 2015
4. Green Star – Communities accreditation, measured against five impact categories: governance, liveability, economic prosperity, environment and innovation

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