# Young Leaders Program: Inventing the Future 2019

# 15 January to 02 February 2019

# Sydney, Australia

### Application Form

**Eligibility**

Inventing the Future 2019 is open to both postgraduate and undergraduate students from the University of Sydney’s partner universities. We welcome students from a diverse academic background to apply, including but not limited to engineering and information technologies, science, health, social sciences, business and design.

**Application Process**

Interested students should complete and submit the Program Application Form to: manager.ilp@sydney.edu.au

Application closes on **16 October 2018**

Students will be informed of the decision on their application by **02 November 2018**

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| **Section 1: Personal Information**  |
| Name in Chinese |  |
| First Name (Pinying) |  |
| Surname (Pinying) |  |
| Date of Birth (DD-MM-YY) |  |
| Gender |  |
| Nationality |  |
| Phone Number |  |
| Email (important information will be sent to you via email, please ensure your email address is correct) |  |

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| **Section 2: Academic Background**  |
| University |  |
| Level of Study (undergraduate/postgraduate) |  |
| Major(s) |  |
| Year of Study |  |
| Other Qualifications and/or Awards |  |

**Project briefs**

1. Rapid DNA sequencing

Fourth Generation of DNA sequencers are small, and quite cheap. The Oxford Nanopore system can fit in your pocket, only costs ~ US$1000 and can be used for real time sequencing. It’s been used for applications from forensics to agriculture to metagenomics. Students in this team will be supplied with a minION sequencer, and will have to develop a viable product idea based on it.

1. Trust

Changes to our society and business have made trust more central than ever. Trust underpins, or perhaps undermines the sharing economy. It’s also key in new technologies that rely on data: the news, authentication, the use of data and privacy. Some of these aspects of trust have technical solutions (eg blockchain, or techniques of authentication,) while others may relate strongly to psychological or social factors, such as mechanisms to encourage better social integration or rates of vaccination. Students in this team will have to identify a problem where lack of trust is having a critical impact, and propose a solution.

1. Air quality

Poor air quality is one of the leading causes of death in the world, resulting in more than 4 million deaths each year. Greenhouse gas emission into the is central to climate change. These are some of the most critical global problems of our time. Students on this team will identify an aspect of this huge problem where they can have impact. Approaches could include monitoring, filtering, improved chemical processing, or facilitating environmental behavioural changes.

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| **Section 3: Short Answer**Please provide a short answer with **no more than 200 words** to the following questions. It can be in paragraph form, dot points, a table, graph or any other format you choose. |
| Why are you interested in participating in “Inventing the Future”? |  |
| Why are you interested in participating in “Inventing the Future”? |  |
| List the three project briefs in order of preference with a brief statement of reasoning for this order.* Rapid DNA sequencing
* Trust
* Air quality
 | **1** |
| **2** |
| **3** |
| **Reasoning:** |
| Invention, innovation experience and interest, entrepreneurial spirit and enthusiasm are keys to “Inventing the Future”. What are your relevant background, experiences and skills? What skills do you possess that will be most applicable to Inventing the Future? |  |
| What would you like to achieve and learn from the participating in Inventing the Future? |  |