

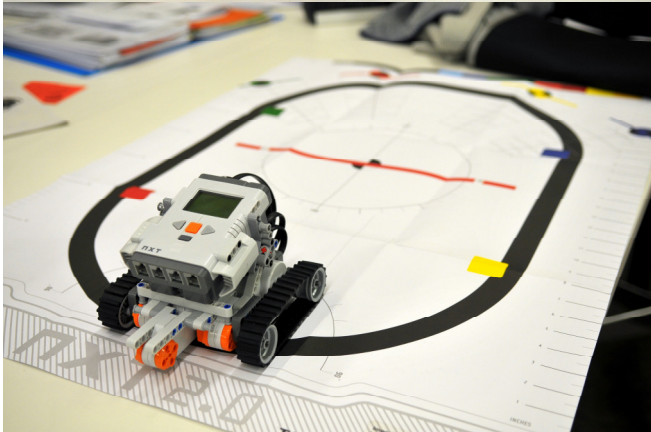
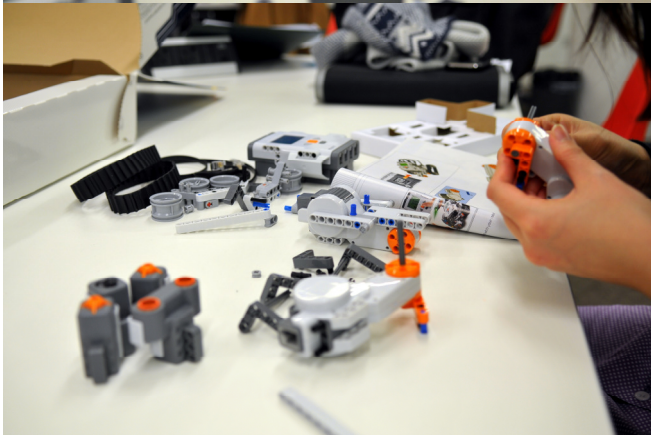
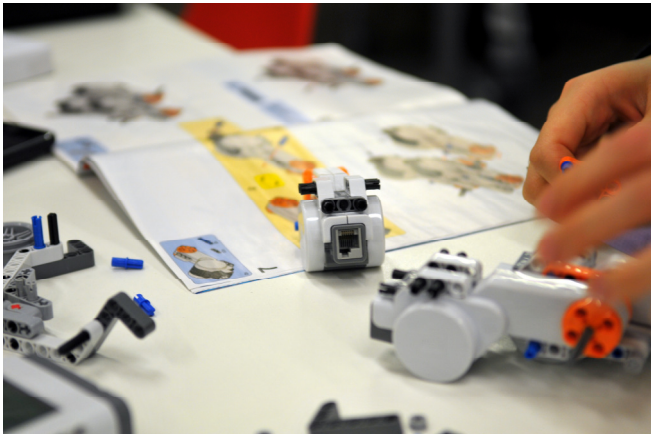


# Robogals UK

---

Inspiring young girls





## OVERVIEW

This document details the work of Robogals UK, a project hosted supported by the student society for Women in Science, Engineering and Technology (WSET).

Robogals UK, a unique student-led volunteering initiative, was set up at Imperial College London in February 2009 with the aim of increasing female enrolment in Science, Engineering and Technology (SET) courses at universities. The *Department of Electrical and Electronic Engineering* is one of the sponsors of this project.

Robogals UK allows Imperial College students to use skills learnt in their courses and the passion that they have for work to engage in community work, creating an opportunity for them to learn not only what they are taught in school, but to implement it in an activity that also encourages young girls in learning SET subjects and hence pass on their enthusiasm for their various fields.

The Imperial College Union would be an ideal sponsor for Robogals UK as we are promoting the holistic education of Imperial College students with the opportunity to learn soft skills such as effective interaction with other people, and also encourages future diversity in the population of students attending SET courses such as in Imperial.

The next sections of this document highlight the background, structure and goals of the project.

**Contact:**

Sonya Chan (President, Robogals UK)

[sonya@robogals.org.uk](mailto:sonya@robogals.org.uk)

**Website:**

[www.robogals.org.uk](http://www.robogals.org.uk)

# Robogals overview

---

## BACKGROUND

Robogals Inc. was first set up by undergraduate engineering students at the University of Melbourne, Australia. This not-for profit organisation has been very successful and has received acclaim from participating schools, university staff as well as student volunteers.

## ABOUT ROBOGALS UK

In February 2009, Robogals UK, a unique student-led volunteering initiative was set up at Imperial College London with the aim of increasing female enrolment in Science, Engineering and Technology (SET) courses at universities. The creative method adopted by Robogals UK is to get young schoolgirls excited about SET by teaching them lessons using LEGO Robotics.

In pursuit of this goal, Robogals' primary activity is arranging for primary/secondary students to visit Imperial College London, South Kensington campus for lessons by Imperial college student volunteers, or have the volunteers visit the schools. The volunteers will not only teach but also mentor teams in the FIRST LEGO League robotics competition. A study by Brandeis University of the *FIRST LEGO League* found that over 80% of the participants subsequently had increased interest in science and technology careers.<sup>1</sup>

Imperial College students are provided with the necessary training to undertake these tasks, and an important goal of the organization is not only to have a positive impact on the schools, but also to provide a rewarding experience for the dedicated students who volunteer their time and skills to the project.

Robogals UK now has 30 volunteers attending weekly training sessions to prepare for lessons in spring 2010.

## ROBO GOALS

With the official launch of Robogals UK in September 2009, our annual goals are as follows:

- To have over 50 university students involved
- To teach 100 girls
- To teach girls from 5 different schools
- To hold one major fundraising event reaching over 10,000 people
- To be in at least five major publications (with a readership of over 10,000)
- To branch out to 5 universities in the UK

## COLLABORATIONS

Robogals UK is keen to form mutually beneficial working relationships with other university groups and organisations actively promoting SET among school-going girls. These relationships will help Robogals UK expand its network as well as ensure sustainability and longevity of the initiative.

In August 2009, Robogals UK entered into a harmonious and symbiotic collaboration with Imperial College Women in Science Engineering and Technology (WSET) society and is officially registered with the Imperial College Union as a sub-committee of WSET. This collaboration was initiated and strongly supported by EnVision, the Teaching and Learning Developments and Teaching and Learning Support group for the Faculty of Engineering at Imperial College.

---

<sup>1</sup> [http://www.usfirst.org/uploadedFiles/Who/Impact/Brandeis\\_Studies/2004%20FLL%20Report.pdf](http://www.usfirst.org/uploadedFiles/Who/Impact/Brandeis_Studies/2004%20FLL%20Report.pdf)

# Project Content

---

There are 3 phases that make up the project

## Phase 1: Introduction and training

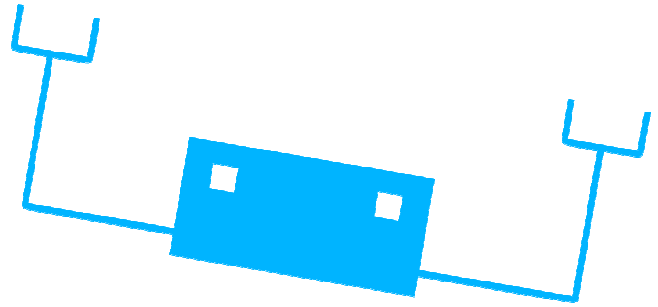
- Robogals will recruit volunteers, both male and female, from IC students
- This will be followed by extensive training so that the IC students understand the operation of the robots and are equipped with the necessary information to supervise the young schoolgirls in the lessons subsequently.

## Phase 2: Teaching and learning

- Robogals UK will teach young female students with the Lego Robokits; lessons will culminate in a competition for the students to understand what they have learnt and to implement it effectively in order to compete.
- IC volunteers will learn effective engagement with people, and how to communicate with individuals that do not have the same technical knowledge as they do while successfully transmitting information.

## Phase 3: Expansion and continued growth

- Robogals will continue recruitment in Imperial College, and increase the number of lessons and schools it reaches out to.
- Robogals UK will expand to other universities in London/UK using the project implemented in ICL as a springboard for success.



## Robogals and ICL

- Robogals UK serves to highlight the College's emphasis and excellence in SET, and increase the future diversity of students taking up SET courses
- Students from all academic levels are welcome to join Robogals UK and with the current mix of undergraduates and postgraduate students working together in training sessions, there are opportunities for students across disciplines and traditional hierarchical divisions to network and make friends
- Students are encouraged to engage in gender culture -development, and this will encourage discussions about gender divisions and barriers to women in SET
- Robogals UK builds on WSET's success in engaging women in SET disciplines by inspiring more young girls to take up education in these courses
- By engaging male and female IC students in this project, Robogals is better equipped to change the traditional mindset of SET as a male-dominated field and pave the way for further progress since contribution comes from both sides

# Budget

---

The budget for Robogals is as follows:

Budget Head	Units	Price/Unit	Total
Lego Mindstorm NXT 2.0 Robots	4	£200	£800
Netbooks	6	£80	£480
Batteries	32	£1	£32
Transport	1	£200	£200
<b>Total Budget</b>			<b>£1512</b>

\*Netbook cost is flexible depending on desired quality and performance. Netbooks will be stored safely in the Envision Office in the Bessemer Building, and this has already confirmed with EnVision.

