



Universidad  
Carlos III de Madrid



Grupo de Tecnologías  
Apropriadas



GDEE

GLOBAL  
DIMENSION IN  
ENGINEERING  
EDUCATION

## II International Award for Appropriate Technologies, Carlos III University of Madrid / 2016

### Context:

The Carlos III University (UC3M) develops a wide activity in the field of [University Development Cooperation](#) with, among others, a strong approach to the design of appropriate technologies for impoverished environments.

The [Appropriate Technologies Group](#) (GTA) is formed by UC3M professors working in this area and involved in teaching, technical assistance and research activities. The GTA encompasses the Group of Appropriate Technologies for Sustainable Development (GTADS), which is an established research group at UC3M, and the cooperation group Engineering for Human Development (IDH), which is included in the catalog of UC3M Cooperation Groups. One of the hallmarks of this group is its experimental Appropriate Technologies Laboratory (LTA).

In the *VII Call for Aid for Development Cooperation Actions* (UC3M 2015), the IDH group obtained a grant for their project "Strengthening of the Appropriate Technology Laboratory (LTA) of the UC3M through the acquisition of new materials and dissemination of e-learning technologies ". Within this project, the organization of this international award was foreseen, with the dual purpose of rewarding local innovative ideas with strong potential for change and spreading the need for research in technologies focused on the real and pressing problems the most disadvantaged.

Finally, the [Global Dimension in Engineering Education](#) (GDEE), contributed by a number of European universities (including the UC3M), is an initiative that aims to introduce education for development and related issues in the teaching of engineering in European universities.

### Purpose of the award:

The award aims to support and promote innovative technological proposals (ideas, designs and/or prototypes) arising out of the local training centers and seeking to improve access to basic services for the inhabitants of the poorest areas of the planet.

Therefore the intention is twofold:

- To display and add value to local technological proposals devoted to solve local problems. Students of technical training centers in impoverished regions should play a major role in such issues.
- To promote the search for technological solutions to basic needs of the most disadvantaged (e.g. equipment for water and/or energy supply, but also other electromechanical technologies).

**Applicants:**

Proposals will be submitted by a student or recent graduate (less than three years since graduation) at a technical training center (e.g. engineering schools, professional centers, technical centers or similar). The proposal must be endorsed by a professor of the center that will act as tutor.

The proposal shall be applicable in the region where this center is located.

The student must be of full legal age.

**Amount and conditions of the award:**

The award includes a cash prize, a proposal for technological cooperation (through a research stay of the awarded student at the UC3M) and a commitment to disseminate the awarded technology.

The prize amounts to 2,800 Euros (before taxes). Applicable taxes will depend on each individual situation and the official rate applicable on this income, according to the Spanish Fiscal Legislation

With the acceptance of the award the winner commits him/herself to conduct a research stay in the Appropriate Technologies Laboratory (LTA) of UC3M for a period between 2 and 3 months and between September and December 2016. Air travel tickets fare will be covered by Universidad Carlos III de Madrid.

The prize will be paid into the bank account the winner shall open in a brunch of any Spanish bank on arrival.

During the stay at the Carlos III University of Madrid, the winner will have access to technical resources and support from professors of various departments of the University, for the development or improvement of his/her idea, design or prototype.

A certificate of appreciation to the members of the winning team (student and tutor) and up to three special mentions of the jury to the finalists will be given.

The awarded proposal will be disseminated through the website of the UC3M and GDEE networks and partners.

**Contents of the proposal:**

Proposals must include the following documentation:

- Motivation letter of the candidate.
- CV of the candidate (student or recent graduate of a technical training center).
- Brief report of the proposal by the tutor.
- Technological Proposal (estimated space 5-10 pages), detailing at least:
  - The objectives of the proposal and the target population.
  - The technical characteristics of the proposal.

- The possibilities of implementation and the impact of technology on the target population.
- Manufacturing budget.
- Outline of a plan of distribution and sale.
- Other noteworthy aspects.

Proposals should be submitted either in Spanish or English and will not be accepted in other languages.

**Presentation format and deadlines:**

Proposals should be submitted between May 30<sup>th</sup> and July 1st 2016 through the electronic form available on the website of the [University Development Cooperation Office](#) at UC3M.

Proposals that are not submitted in a timely manner will be excluded.

**Evaluation criteria:**

The proposals selected will be judged by a jury of six members:

- the Project Director (or member thereof appointed by him)
- the IDH Director (or member thereof appointed by him)
- two experts (one from UC3M and another from an external collaborator)
- an institutional representative of the UC3M and
- a member of GDEE.

In its decision the jury will consider first the adequacy of the proposal to the objectives of the prize. After confirming this, the jury will assess the following aspects (allowing a maximum total assessment of 100 points):

- • Technological Proposal. **[85 points]**
  - Adaptation of the proposal to its objectives and to the target population. [15 p.]
  - Originality of the proposal. [10 p.]
  - Technical evaluation of the proposal. Viability and sustainability. [35 p.]
  - Options for short-term implementation and impact on target population. [10 p.]
  - Economic sustainability and distribution possibilities. [15 p.]
- • CV of the candidate. **[5 points]**
- • Report of the tutor. **[5 points]**
- • Other aspects to be considered by the jury. **[5 points]**

The results of the jury will be announced in the website of the [University Development Cooperation Office](#) at UC3M before July 15<sup>th</sup> 2016.

**Publication:**

All participants accept the conditions of the call, including the open publication of the awarded project. If there are special mentions of the jury, a specific permission will be sought from the applicants for open publication of those proposals too.

If the proposal results in any future publications, an explicit mention should be included indicating that the project has been funded by the Carlos III University of Madrid.

Intellectual and/or Industrial Property that may arise from the implementation of the technology proposal correspond to their authors.

The awarded student is committed to collaborate with Carlos III University in the open access dissemination of the results of its technological proposal, without prejudice to the rights on the results of the proposal that are eligible for protection.

The awarded student must give consent to display its name on the website and/or any other publication of Carlos III University of Madrid.

#### **Other conditions**

The presentation of the technological proposal implies acceptance and compliance without reserve nor exception to all the terms and conditions included in this call.

#### **Information (links):**

- [University Development Cooperation Office](#)
- [Appropriate Technologies Group](#)
- [Global Dimension in Engineering Education](#)
- [Carlos III University of Madrid](#)