

## TERMS OF REFERENCE

### Robotics Training Content Development and ToT

**Organization:**

Digital Opportunity Trust (DOT [www.lebanon.dotrust.org](http://www.lebanon.dotrust.org)) is a Local NGO, member of the DOT networks in countries throughout Africa, the Middle East, Asia and the Americas.

DOT is an innovator in enabling people to access and apply information and communications technologies (ICT) to create education, economic and entrepreneurial opportunities. DOT’s vision is to make these opportunities available to marginalized people, especially women and youth, as a strategy to eradicate poverty, vulnerability and gender inequality. DOT’s signature entrepreneurship programs, ReachUp! and StartUp!, integrate ICT, life skills, and micro-enterprise development and are delivered in a cost-effective manner, using university graduates to train and build capacity of youth in their communities. DOT transforms and supports young women and men, as they become leaders of economic and education change in their societies.

Section	Content
<b>Objectives</b>	DOT Lebanon in partnership with UNICEF Lebanon’s Generation of Innovation Leaders (GIL) programme that aims to educate marginalized Lebanese and non-Lebanese youth aged between 15-24 in the areas of technology and innovation, increasing their access to digital economy opportunities. As part of this effort, UNICEF in partnership with local NGOs, has been offering Social Entrepreneurship, Digital Skills and Business Development Training courses since May 2016. UNICEF is looking to add a Robotics training course to the GIL programme content offering.
<b>Scope of work</b>	<p>The consultancy’s main objective is to develop Robotics training material and deliver ToT sessions to DOT digital trainers. <b>NB:</b> UNICEF’s GIL programme will be the sole owner of the intellectual property of the curriculum and all of it’s documents.</p> <p><b>Phase 1: Inception Report</b></p> <ul style="list-style-type: none"> <li>i- Draw up a plan of action and timetable for accomplishing all tasks of the project;</li> <li>ii- Identify the participants for the interviews and focus groups;</li> </ul>

**Deliverables:** Inception Report and Desk Research

**Phase 2: Understand the GIL programme, Youth Needs and Link to the Job Market**

- i- The firm will run interviews with main GIL stakeholders (Nawaya, INJAZ, LLWB...) to understand how the Robotics component can complement the rest of the trainings based on the needs of the other programmes (trainers, staff and youth)
- ii- The firm will run focus group discussions with youth in all GIL operation areas to understand what in Robotics they would most want to learn
- iii- The firm will carry out a desk review and research to better understand how this training course could be directly linked to employment and income generation opportunities

**Deliverables:** Report on the quantitative and qualitative main findings of the focus groups and interviews. The report should include infographic data representation with text analysis of the findings

**Phase 3: Develop a preliminary Robotics curriculum**

Based on a full life cycle approach (business opportunities) list the potential jobs/opportunities that this training will (identify material needed for the course) target.

The course learning objectives are:

- Learn about the most used electronic components
- Learn about the Arduino microcontroller
- Learn the basics of hardware programming using an Integrated Development Environment (IDE)
- Learn how to code microcontrollers and read data or command motors or outputs
- Learn how to control sensors and actuators
- Learn the basic programming skills
- Be able to apply and demonstrate the learned knowledge and skills in practical robotics through a final project

The Curriculum should have:

- Outline and overview
- Trainer guide
- Trainee booklet (including handouts, activities and assignments)
- Trainers profile (narrative) and TOR
- Slide decks
- Media (Videos, tutorials/demos and schemas)
- Scenarios (applied ex: for identified robotics themes, i.e. agriculture,

	<p>environment, security, etc..)</p> <p><b>Deliverable 3:</b> The firm must deliver a preliminary draft training package for the Robotics (trainings that include but are not restricted to: hardware and software requirements, Models, specifications, pricing and list of local suppliers of required devices, Minimum required specifications of computers, List of required software, pricing if applicable and download links, Dos and Don'ts list for storing, handling, maintaining and operating the devices, Recommended learning environment including required desktop space per trainee, recommended power configuration for the training room and required training stationary and tools (projectors, additional power extensions, screens, etc ...) learning curricula toolkits (includes videos, case studies, exercises), student sheets, and trainers' manuals.</p> <p><b>Phase 4: Delivering Training of Trainers' sessions</b> The firm will host training sessions for 40 DOT trainers. Once the training is completed, the firm will then revise the ToT material based on the trainers' feedback.</p> <p><b>Deliverable 4:</b> Deliver the ToT sessions in each region for all 40 trainers based on the ToT manuals (TOT design, guide and agenda) that were developed for both tracks. The firm is expected to develop a feedback methodology and collection tool.</p> <p><b>Phase 5: Compiling Feedback and submitting revised content material and tool-kits</b> <b>Description:</b> The firm is expected to incorporate the feedback of the test groups (from the DOT digital trainers) into the material and revise the drafts to submit the final versions of all the documents</p> <p><b>Deliverable 5:</b> Revised tool-kits, methodologies, youth manuals, trainer manuals, training slides.</p>
<p><b>Team Requirements</b></p>	<p>This team should lead the development of the methodology and materials needed for all phases of the assignment.</p> <p>The composition of the team would need to combine the following expected profiles and experience:</p> <ul style="list-style-type: none"> <li>- At least 3 years of experience with Robotics</li> <li>- Experience with humanitarian and/or development projects</li> <li>- Has previously worked on at least one training of trainer's project</li> <li>- Advanced knowledge and experience in data gathering</li> <li>- Has worked on at least 2 or more educational projects such as curriculum revision and creation, teaching methods research and</li> </ul>

	<p>trainings</p> <ul style="list-style-type: none"> <li>- Proven ability in managing multi-sector projects and multi-cultural teams</li> <li>- Strong writing and communication skills in English and Arabic</li> <li>- Access to international startup and design ecosystems</li> <li>- Access to digital skills academies or relevant internal talent</li> </ul>
<b>Budget*</b>	<p>Payment will be made as follows:</p> <ul style="list-style-type: none"> <li>● 25% of the total fee upon the submission of the inception report outlining the implementation plan</li> <li>● 25% of the total fee upon the submission of the draft training packages (Phase 3 Deliverable)</li> <li>● 50% of the total fee upon the submission and approval of the final training packages and training of trainers workshop</li> </ul>

**Position type:** Consultancy Training

To apply, please send your CV to [lebanon-careers@dotrust.org](mailto:lebanon-careers@dotrust.org) with the subject: Applying to Robotics consultancy.

**Deadline for Applications:** June 25, 2018

**Starting Date:** July 5, 2018