

**Term of Reference**  
Individual Contractor

**1. Assignment Information**

<b>Assignment Title:</b>	Local Consultant to on youth engagement in Industry 4.0 technologies and expansion of startups' prototype services of the ITC's Center of Excellence
<b>Project Title</b>	Promoting Decent Youth Employment in Cambodia
<b>Unit</b>	Programme and Result Unit
<b>Contract Type</b>	Individual Consultant
<b>Assignment Location</b>	Based at Institute of Technology of Cambodia with occasional visits to UNDP Office, Phnom Penh, Cambodia.
<b>Assignment Duration</b>	110 days (01 May 2021 to 30 November 2021)

**2. Background**

Cambodia remains a young and growing nation; people under the age of 30 represent two-thirds of its population, which continues to grow at around 1.6% per year. Youth also constitute about 43% of the total working-age population. Whether Cambodia can unleash the potential of its youth, however, is dependent on youth's access to decent and higher value jobs and their ability to start and sustain their enterprises, as well as to successfully respond to rapid technological change driven by the digital economy and the Industry 4.0.

Entrepreneurship development has increasingly become a critical solution to addressing rising unemployment in many economies; however, the sector remains underdeveloped in Cambodia. According to the IDP 2015-2025, Cambodia's entrepreneurship is mainly based in urban areas and approximately 42% of enterprises were just established since 2008. At the individual level, young Cambodians lack access to entrepreneurship capacity development and have limited access to market information, production, business matching, capital, and credit markets. Technically gifted youth entrepreneurs are not equipped with innovative entrepreneurship skills and necessary support that are vital for establishing and running viable businesses. Startups that involves advanced technologies to produce harder challenges especially getting prototyping support. Additionally, the presence of the digital economy and Industry 4.0 even puts more pressure on young entrepreneurs to timely adjust their skills, products, and services if they are to survive and continue growth.

The Dynamics and Control Laboratory (DCLab) under research unit of Mechatronics and Information Technology, Research and Innovation Center, Institute of Technology of Cambodia (ITC) was created in 2015. It is one of many laboratories supporting lab-based education. The DCLab has a vision to be a Center of Excellent in Intelligent Mechatronics. It is a place where students can study, do researches, build prototype of robots and mechatronics devices, create small software application, conduct capacity building for members, and engage other activities to leverage youth's awareness of emerging technologies in the 4<sup>th</sup> Industrial Revolution (4IR) paradigm. To support those activities especially building prototype, the UNDP has supported equipment such as 3D printers, laser cutter, and other tools for making electronic circuit. Because of these supports, the Center has the means to build a

prototype of [mechanical ventilator](#) within 4 months. Prior to this development, several other [projects](#) implemented to develop solar tracker, robot arm, mobile robot, legged robot, drone, object detection in image, and unmanned aerial vehicle (UAV) (see the [video](#) of the progress of these projects). Currently the members of the laboratory includes 6 lecturer-researchers, 5 Ph.D. students, 5 master students, 9 final year bachelor of engineering students, and 15 junior students (see members [here](#)). With experience and the team members, it proves that the Center possesses the capacity to integrate existing technologies and create new technologies for making robots and mechatronics devices. In order to move these achievements further, the centre is seeking for ways to expand its impact beyond laboratory level which include providing support to start-ups that need technology support and commercializing high tech products that could be prototyped in the Center of Excellence.

As a part of its ongoing work on youth employment and industry 4.0, UNDP Cambodia recently has supported and partnered with the Institute of Technology of Cambodia in effort to increase Cambodia socio-economic growth and solve socio-economic issues by using the joint research centre or The Center of Excellence to build and share knowledge/skills on various socio-economic and other development related topics which can be accessed by the general public and stakeholder alike, engage youths and assist the developing of the country's human resource; and organize policy advocacy and learning events on key topics, in cooperation with Royal Government and other relevant stakeholders.

In 2021, the collaboration particularly aims to increase the visibility of ITC's Center of Excellence (CE) and its roles in raising awareness of emerging technologies and show activity models to students, faculty staffs in different universities, NGOs and other institutions; to connect youths and university students as well as increase their interests in the application of mathematics in daily life and developing technologies, STEM education and related career choices, and to build support platform for tech start-ups related to development of product prototype using I4.0 and high technologies.

### **3. Scope of Work**

The consultant will be tasked to support overall operation of the centre of excellence throughout the contract period and produce specific output as outlined in the following table of deliverables. The consultant is expected to perform and achieve the following tasks and outputs:

- Lead the development of management structure and relevant guidelines to support future operation of CE. Specifically, the incumbent will conduct research, identify, and adopt co-working space operational manual and propose a viable incubation model for CE to support start-ups needing prototyping services. The consultant will work collaboratively with the CE and UNDP youth employment team to design each stage of incubation program, key activities, stakeholder identification for each activity of the program.
- Implement the proposed incubation/prototyping model to test its practicality with start-ups to receive support to be provided by CE. To ensure that this work is feasible, the consultant will at least have developed detail curriculum, organized workshops, and provided supports to participating entrepreneurs and start-ups.
- Work in close collaboration with head of CE to develop practical work plan in the covid19 context and coordinate to ensure that the workplan is timely implemented to raise awareness

and attract and inspire youth to grow their interest in I4.0 technologies. The work includes managing website content, run social media plan and draft technology shows agenda and schedule for approval from CE management.

- Identify and liaise with stakeholders and speakers including CE management, UNDP program team, start-ups, private companies, and NGOs to be engaged in technology shows and start-ups support process.
- Organise a week-long technology shows while adopting covid19 preventive measures. The shows shall be organised based on the features and schedule in consultation with and approved by the head of CE.
- Organise a minimum of 6 workshops, training sessions, or events required in the incubation services to support with technical and logistical support from CE team and UNDP Cambodia. This includes inviting participants and liaising with workshop trainers and speakers.
- Ensure mentors, advisors, and Entrepreneurs in Residence are actively engaging with participating start-ups/entrepreneurs in a respective role and manner.
- Produce a summary of an engagement and result report on quarterly basis which highlights key activities, results, and recommendations for next interventions.

#### 4. Target Audience

In alignment to UNDP's Youth Employment project and ITC's missions, the program and events will be targeted towards Cambodian youth ages 18-30 with big dreams and an entrepreneurial mindset to develop relevant tech interest, skills and establish an impactful career/business. However, the incumbent is expected to connect diverse group of stakeholders and engage them in the services of Centre of Excellence.

#### 5. Expected Outputs and Deliverables

#	Deliverables	Estimated Duration to complete	Target due date (Approximately)	Review and Approval Requires
1	<b>Output 1:</b> <ul style="list-style-type: none"> <li>Submission of detailed workplan which include methodologies and timeline for each output.</li> </ul>	5 days	10 May 2021	Youth Employment Coordinator, Program Analyst, and ARR Programme and Results Unit
2	<b>Output 2:</b> <ul style="list-style-type: none"> <li>Development of CE's management structures: <ul style="list-style-type: none"> <li>Revise and adopt co-working space operation manual</li> <li>Identify and develop an incubation model for CE to support startups needing prototyping services</li> </ul> </li> </ul>	25 days	15 Jun 2021	

3	<b>Output 3:</b> <ul style="list-style-type: none"> <li>Submission of detail programme of technology shows and math competition, website content, social media plan including detail media contents, and list of stakeholders to be engaged.</li> </ul>	15 days	10-July-2021	
5	<b>Output 4:</b> <ul style="list-style-type: none"> <li>Submission of detailed steps and activity of incubation programme including relevant curricular workshops.</li> <li>List of youth startups connected to and/or supported by CE's services.</li> </ul>	15 days	15 Aug 2021	
	<b>Output 5:</b> <ul style="list-style-type: none"> <li>A minimum of 6 Planned workshops and training sessions organized for identified startups and youth entrepreneurs.</li> </ul>	30 days	15-Oct-2021	
6	<b>Output 6:</b> <ul style="list-style-type: none"> <li>Technology shows (at least 6days x 6 shows/day) are organized based on agreed plan, features, and target participants.</li> </ul>	15 days	01-Nov-2021	
7	<b>Output 7:</b> <ul style="list-style-type: none"> <li>Submission of progress report on quarterly basis (end of Jun, Sep and Nov) briefing implemented workplan/activities, curriculum workshop organized, results, number of direct and indirect beneficiaries, and relevant recommendations.</li> </ul>	5 days	15-Nov-2021	
<b>Total number of days</b>		110 days		

## 6. Institutional Arrangements

The consultant will be working under the direct supervision and technical guidance from both the UNDP's Youth Employment Coordinator and the head of Center of Excellence at the Institute of Technology of Cambodia in close consultation with Programme Analyst of UNDP Cambodia. UNDP Cambodia reserves the right to maintain regular communication with the consultant and to engage/visit/monitor the implementing activities where needed. The deliverables will be reviewed by the Youth Employment Coordinator, the head of Center of Excellence at the Institute of Technology of Cambodia and Programme Analyst and subsequently approved by the Head of Programme Unit of UNDP based on confirmation of satisfactory outputs from the reviewers.

## 7. Duration of Work

The consultant is expected to work within a duration of about 7 months between 01 May 2021 and 30 November 2021. The timeline of each deliverable output is clearly stated, yet, the flexibility could be accommodated with a subject to approval from ARR-Program.

## 8. Duty of Station:

The duty station of the consultant is based mainly at the Institute of Technology of Cambodia, in Phnom Penh, Cambodia. During the assignment period, the consultant may be asked by the project manager to travel to provinces. The Daily Substantive Allowance (DSA) and transportation cost for visits to the provinces shall be covered and arranged by and based on UNDP's policies.

## 9. Minimum Qualifications of the Individual Contractor

<b>Education</b>	<ul style="list-style-type: none"><li>• Master's degree in Business Administration, Project Management; Strategic management, Entrepreneurship Development, Industrial Engineering, or Development Studies with relevant work experience.</li></ul>
<b>Experiences</b>	<ul style="list-style-type: none"><li>• Minimum 2 years of experience in working with both national and international organizations, governments, and private companies.</li><li>• Relevant experience in incubation programme or product prototyping service to support tech startups.</li><li>• Proven experience in project management, coordinating entrepreneurship programs, events/communications, and building partnerships with stakeholders.</li><li>• Strong experience in working with young entrepreneurs and startups.</li><li>• Demonstrated experience in building and managing partnerships with different groups of stakeholders and resource mobilization.</li></ul>
<b>Competencies</b>	<ul style="list-style-type: none"><li>• Ability to perform rapid assessment and analysis, draft project report, curriculum development, knowledge product, and project documents.</li><li>• Sound understanding of the digital economy, concept of industry 4.0, and digital skills. Some understanding of product design, prototypes, and marketing.</li><li>• Knowledge of entrepreneurship ecosystem and tech startups, youth's situation in Cambodia, including youth's roles in realizing SDGs, skills development, employment, and youth entrepreneurship.</li><li>• A highly organized person, sets priorities, produces quality outputs, meets deadlines, and manages time efficiently.</li><li>• Ability to present complex issues in a simple and clear manner.</li><li>• Ability to facilitate workshops/meetings with diverse groups of participants and through virtual means and tools.</li><li>• Ability to think out-of-the-box and works toward creative solutions by analyzing problems carefully.</li><li>• Projects a positive image and is ready to take on a wide range of tasks.</li><li>• Shares knowledge and is willing to provide support to others who request advice or help.</li></ul>

	<ul style="list-style-type: none"> <li>• Works well in a team to advance the priorities of this project and UNDP.</li> <li>• Displays cultural, gender, religion, race, nationality, age sensitivity and adaptability, and is committed to UNDP gender equality strategy; and</li> <li>• Fulfills all obligations to gender sensitivity and zero tolerance for sexual harassment.</li> </ul>
<b>Language Requirements</b>	<ul style="list-style-type: none"> <li>• Fluency in English</li> </ul>

## 10. Criteria for Evaluation and Selection

The interested candidates shall state why they are the best suited to carry out the above assignment. This should include a brief personal profile, an outline of the consultant's strengths and expertise by highlighting the direct and relevant experiences.

<b>Technical Evaluation Criteria</b>	<b>Obtainable Score</b>
<ul style="list-style-type: none"> <li>• Master's degree in Business Administration, Project Management; Strategic management, Entrepreneurship Development, Industrial Engineering, or Development Studies with relevant work experience.</li> </ul>	20
<ul style="list-style-type: none"> <li>• Minimum 2 years of experience in working with both national and international organizations, governments, and private companies. Proven experience records in project management, coordinating entrepreneurship programs, building partnerships with stakeholders and resource mobilization.</li> </ul>	20
<ul style="list-style-type: none"> <li>• Sound understanding of the digital economy, concept of industry 4.0, and digital skills. Some understanding of product design, prototypes, manufacturing process, and marketing.</li> </ul>	20
<ul style="list-style-type: none"> <li>• Ability to perform rapid assessment and analysis, draft project report, curriculum development, knowledge product, and project documents.</li> </ul>	20
<ul style="list-style-type: none"> <li>• Proven experience in managing/facilitating national events, communication management (physical and virtual), and building partnerships with stakeholders in employment sector, entrepreneurship ecosystem with strong network with existing youth startup, SMEs, support network, relevant training institutions, government counterpart and private companies.</li> </ul>	20
<b>Total Obtainable Score:</b>	<b>100</b>

### • Payment Milestone

The consultant will be paid on a lump sum basis under the following installments:

<b>Deliverables</b>	<b>Date of Payment</b>	<b>Payment Percentage</b>
<ul style="list-style-type: none"> <li>• Upon satisfactory completion of output #1 &amp; 2</li> </ul>	20-Jun-2021	10%
<ul style="list-style-type: none"> <li>• Upon satisfactory completion of output #3</li> </ul>	15 Jul 2021	20%
<ul style="list-style-type: none"> <li>• Upon satisfactory completion of output #4</li> </ul>	20-Aug-2021	20%

• Upon satisfactory completion of output #5	15-Oct-2021	20%
• Upon satisfactory completion of output #6	05-Nov-2021	20%
• Upon satisfactory completion of output #7	30-Nov-2020	10%
<b>TOTAL</b>		<b>100%</b>