

**Bangladesh Hi-Tech Park Authority (BHTPA)
Information and Communication Technology Division
Ministry of Posts, Telecommunications and Information Technology**

**Digital Entrepreneurship and Innovation Eco-System Development Project
(DEIEDP)
Bangladesh Hi-Tech Park Authority (BHTPA)**

**Terms of Reference (TOR)
for
Selection and Employment of a Consulting Firm
For Management of
Training for Scaling of It Skill
as a part of the Digital Entrepreneurship and Innovation Eco-system
Development Project under the
Private Investment and Digital Entrepreneurship Project (PRIDE)**

Package No: DEIEDP-BHTPA-S-23

March 2023

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Selection and Employment of a Consulting Firm
for Management of Training for Scaling of IT Skill

1. Introduction

- 1.1 The Government of Bangladesh has set objectives to maximize the potential direct and indirect impacts through a more modern, generalized regime for Economic Zones (EZs) and Hi-Tech Parks.
- 1.2 The now completed Private Sector Development Support Project (PSDSP) supported establishment of HTP under BHTPA. The new Bangladesh Private Investment & Digital Entrepreneurship (PRIDE) Project will build upon the foundation laid by PSDSP and strengthened capacity to start delivery by BEZA and BHTPA on their mandates.

2. Objectives of the project

- 2.1 **The objective of PRIDE** is to promote private investment, job creation, and environmental sustainability in participating economic zones (EZs) and software technology parks (STPs) in Bangladesh. It will achieve this through four components.
- 2.2 BHTPA will implement the component **4: Strengthening the Digital Entrepreneurship and Innovation Ecosystem Development (DEIEDP-BHTPA)**.
- 2.3 **The DEIEDP-BHTPA:** The component 4 is implemented by the BHTPA which is aimed to strengthen the foundation of the digital entrepreneurship and innovation ecosystem in Bangladesh and take advantage of the increasing global and domestic demand for digital services further ramped up by the Covid-19 pandemic. Estimates of the size of the digital economy range from 5 percent to 15 percent of GDP and information, communication and technology (ICT)-related exports are estimated at US\$1 billion in 2019. Nearly 300,000 Bangladeshi professionals code software, design software applications and serve clients at home and abroad through peer-to-peer digital marketplaces compared to less than 10,000 five years ago. The digital economy is increasingly affecting traditional industries. But, there are relatively few Information Technology Services (ITS) and Information Technology Enables Services (ITES) companies that have grown large, and there is a disconnect between universities and industries which means that graduates are often unprepared for the world of work. More traditional businesses are adapting to digital platforms and use ITS and ITES to improve operations. There is an increasing demand for facilities offering connectivity, funding, market access, and physical and virtual workspaces for digital entrepreneurs. Estimates suggest that four out of five ITS and ITES businesses operate from non-commercial or residential areas. The sector has the potential to create a lot of jobs for educated women. The share of female employees varies across Software Technology Parks (STPs) with an average of 33 percent. STPs provide a unique opportunity to promote female employment and entrepreneurship in the ITS and ITES sector, which is generally lower than in some other sectors.
- 2.4 The BHTPA is planning to establish incubation centers within the STPs and select technical universities to strengthen the entrepreneurship ecosystem and encourage digital entrepreneurship.
- 2.5 PRIDE's DEIEDP-BHTPA will create the country's largest agglomeration of ITS and ITES Small to Medium Sized Enterprises (SMEs) in Dhaka's Vision 2021 Tower Software Technology Park (STP)

that will be turned into a green building; and promote digital entrepreneurship more broadly among young professionals and women. Digital entrepreneurship will be supported at three levels. First, it will establish modern and professional start-up and scale-up facilities and services in STPs licensed by the BHTPA. Second, it will pilot entrepreneurship and innovation hubs in some leading technological universities and business schools. This will also offer accredited and rapid training programs to budding entrepreneurs and managers in the ITS and ITES field. Third, it will offer a media-based challenge program with prizes to help change attitudes and attract more youth, women, and young professionals to consider becoming entrepreneurs. The goals are to create entrepreneurship hubs, to increase market entry and growth rates of digital startups and SMEs, and to create a gender-inclusive culture. The component has two sub-components:

2.5.1 Establishing Dhaka's first digital entrepreneurship hub in Vision 2021 Tower STP (Former Janata STP)

2.5.2 Digital Entrepreneurship, training and innovation support program

3. Skills Development in the DEIEDP-BHTPA: Training for Scaling of IT Skill

3.1 The DEIEDP-BHTPA success is dependent on entrepreneurs and firm employees having, or having access to, the right skills and so the project includes support for skills development. The skills development work supports the overall PRIDE component 4 objectives:

- a) More people in better jobs - 4000 new high skill, graduate, jobs will be facilitated by PRIDE. Employment opportunities in STPs generated by these new jobs, and by natural churn in existing jobs, are more skilled and more likely to be formal than in the wider labour market. This generates opportunities for nationals, but only if they have the right skills. Skills development will provide pathways into the STPs and High-Tech Parks (HTPs), including into the new jobs created, by offering skills development opportunities to 3000 beneficiaries which leads to a graduate job.
- b) More investment-ready SMEs - by offering technical, management and leadership skills required for business scale-up to management and employees of SME firms and their potential hires.
- c) More youth, women and professionals attracted to becoming digital entrepreneurs - by providing entrepreneurial training and support for people who wish to start new businesses in BHTPA-supported STPs and HTPs.
- d) Women participating in ICT and ITes industries – by improving pathways into ICT jobs. At least 40% of the new jobs facilitated by BHTPA's PRIDE should be taken by females. The specific Component 4.2 objective is that 40% of the beneficiaries of training linked to employment in STPs and HTPs will be women.

3.2 The expected beneficiaries of the skills development program are the IT ITes companies specially Tenants of the HTPs and STPs, potential firm who will be Tenants, and the firms, entrepreneurs and employees who are in Tenant Supply chains. Beneficiaries also include female graduate job-seekers who are seeking employment or self-employed work in the HTPs, STPs or their supply chains.

3.3 BHTPA is interested to create skilled resource pools in IT/ITES and Hi-Tech Sector through scaling up their skills to face the challenges and innovations of 4th Industrial Revolution. BHTPA is also keen to create world class human resources in emerging and upcoming technology.

- 3.4 Firms in the HTPs and STPs are expected to include those which are offering services to customers and clients overseas, and to be operating as a part of global value chains. BHTPA will also target support for firms which are investing into high value business models based on trading intellectual assets, digital transformation and the fourth industrial revolution, and semi-conductors. These priorities are linked to the PRIDE objectives of providing higher value jobs by moving on from business models based on low costs of labour.
- 3.5 BHTPA has conducted a Training Needs Analysis which gives clear guidance on technical skills development requirements for the IT and ITeS sector, but also highlights a substantial need for on-the-job learning to ensure that skills are developed in the work environment, and for broader workplace skills such as soft skills. It also reiterates existing information on a disconnect between universities and industry, necessitating better approaches to education-to-employment pathways.
- 3.6 The scope of this Terms of Reference is limited to providing skills development services, in other words, the skills gap will be addressed through skills development programs.

4. Objectives of the assignment

- 4.1 Increase the skill of professionals working in graduate positions in the HTPs and STPs or who are new graduates or existing workers and improving their access to jobs and careers through information, training, and support tailored to their needs. The detailed objectives are as follows:
- a) Create a readily employable workforce to be absorbed in the IT/ITES sector by the industry, particularly for the firms located in HTP/STPs;
 - b) Increase self-employment opportunities for the youth of Bangladesh in the IT/ITES industries
 - c) Upgrade skills of employees working in the IT/ITES industries, enabling its growth with better-qualified human resources
 - d) Provide globally recognized vendor specific certification and training programs covering IT/ITES industry needs
 - e) Develop increased freelancing community to participate in microwork on crowdsourcing platforms

5. Scope of Services

BHTPA will hire a skills development Consulting Firm to address the needs of Tenant firms in HTP/STP and their employees or potential employees. BHTPA may hire more than one Consulting Firm if needed. The Consulting Firm shall:

5.1 Develop and operate a process for acquiring client firms, reaching and on-boarding learners, and supporting learning and learner progression in work which delivers on pre-agreed outcomes for firms, trainees and BHTPA.

5.2 Target a prioritized list of firms as clients of the services through appropriate channels and work with BHTPA to ensure participation of high priority firms. The list of Target Firms will include:

- a) Firms that are investing into high value business models (defined in section 3 above), which will be considered highest priority firms.
- b) Firms that are tenants of HTPs or STPs or are prospective tenants which are a part of active BHTPA business development activity.
- c) SMEs that have potential for business scale-up and investment.

- d) Suppliers of ICT and ITeS services to tenants which are nominated by tenants for inclusion in the programme.
- 5.3 Provide client support to firms:
- a) Understanding clients' training and recruitment needs and ensuring the skills development offer meets their needs
 - b) Meet clients regularly to take feedback and check programme effectiveness
- 5.4 Work together with the Tenant firms in HTP/STP to understand the potential employees career paths and enroll them in courses that are appropriate for their careers.
- 5.5 Find or develop channels into reach graduate job-seekers or potential self-employed workers in order to inform them of skills development opportunities under Training for IT Scaling.
- 5.6 Target learners for recruitment onto Training for IT Scaling or take referrals and run a process for checking their eligibility, understanding learning needs, and registering them onto courses with appropriate training plans.
- 5.7 Develop and operate specific tactics for improving participation by women and people with disabilities.
- 5.8 Provide training in the technical subjects listed in the section below which has the following features:
- a) Select trainees as per qualification and eligibility criteria detailed in sections below
 - b) appropriately qualified trainers/experts to conduct quality training program which will enhance better employability skills of the candidates for the IT/ITES sector;
 - c) A work-based element of training and assessment such as project work or teamwork.
 - d) Trainer trainee ratio in any classroom for this program could not exceed 1:20;
 - e) Need to conduct prescribed duration of courses;
 - f) Refresher courses/re-training of candidates not passing the assessment test without claiming any additional cost.
- 5.9 Soft Skills Training and assessment against standards provided by BHTPA
- 5.10 Provide support and guidance to learners through their learning process:
- a) Careers advice and guidance for new joiners based on information about the labour market supplied by BHTPA or other sources, and specific opportunities found through work with client firms.
 - b) Initial assessments of their needs to ensure appropriateness of skills development program.
 - c) Guidance and support during programs aimed at helping them achieve their personal aims.
 - d) Job-placement support through job-matching or job-search training and support, or equivalent support for people finding self-employed opportunities.
- 5.11 Assessment of competence in a final assessment, and a certificate that can be cited in resumes and on-line profiles. In some cases there is an external vendor certification and the Consulting Firm will facilitate the assessment and certification process for learners. Where there is no external vendor certification, the Consulting Firm will issue a certificate with the logos of their company and BHTPA and signed by an appropriate representative of both organizations.
- 5.12 Reporting to BHTPA to support performance management as outlined in the sections below

A. Training Details

Total target no of trainees: 360 (108 of whom must be women)

Total course to be conducted: 15

No of vendor certification exams: 13 certification exams (280 persons)

Sl. No.	Course Name	Hours	Class schedule	External Assessment	No of Trainee	Location	Number of Batch	Possible completion time (in Months)
1	Full Stack Development (Node js)	160	(3days x 3hours) per week	Presentation	40	Dhaka	1	18
						Khulna	1	
2	Python	160	(3days x 3hours) per week	PCAP™ – Certified Associate in Python	40	Rajshahi	1	
						Khulna	1	
3	Amazon Web Services (AWS)	160	(3days x 3hours) per week	AWS Certified Solution Architect	20	Chattogram	1	
4	Linux	160	(3days x 3hours) per week	RedHat Certified System Administration (RHCSA)	20	Dhaka	1	
5	Agile with JIRA	160	(3days x 3hours) per week	Cisco Certified DevNet Associate	20	Dhaka	1	
6	Software Testing and Debugging	160	(3days x 3hours) per week	ISTQB Foundation Level	20	Chattogram	1	
7	Microsoft Azure	160	(3days x 3hours) per week	Exam AZ-305: Microsoft Azure Expert	20	Rajshahi	1	
8	Oracle, PL/SQL, SQL Server	160	(3days x 3hours) per week	Oracle Data Base Administration II 1Z0-083	20	Rajshahi	1	
9	Web3 Programming	160	(3days x 3hours) per week	Presentation	40	Chattogram	1	
						Khulna	1	
10	Java	160	(3days x 3hours) per week	Java EE 7 Application Developer 1Z0-900	20	Khulna	1	
11	DevOps	160	(3days x 3hours) per week	Certified Kubernetes Administrator (CKA)	20	Dhaka	1	
12	DevNet	160	(3days x 3hours) per week	Cisco Certified DevNet Associate	20	Chattogram	1	
13	CyberOps	160	(3days x 3hours) per week	200-201 CBROPS exam	20	Khulna	1	

Sl. No.	Course Name	Hours	Class schedule	External Assessment	No of Trainee	Location	Number of Batch	Possible completion time (in Months)
14	CCNA	160	(3days x 3hours) per week	Cisco Certified Network Associate	20	Chattogram	1	
15	Penetration testing	160	(3days x 3hours) per week	C/PTE: CERTIFIED Penetration Testing Engineer	20	Dhaka	1	

**Location may change based on demand (Possible locations- Chattogram, Dhaka, Rajshahi, Jashore, Sylhet, Khulna)

****All trainees will also receive training and certification in Soft Skills against standards that will be supplied by BHTPA.**

B. Expected outcome

- I. 80% Target Firms (refer to the Scope of Services section above) engaged as beneficiaries
- II. 40% female participation with course completion and successful certification performance no lower than the average of the whole group
- III. Completions/assessments/certifications against agreed learning outcomes
 - o Number of learner course completions is 100% of the numbers listed in the Number of Trainees column in the table A above.
 - o Number of learner course completions is 100% of the number registered through the learner recruitment and registration process.
 - o Number of successful assessments and certifications is no less than 85% of the number of course completions.
- IV. Create gainful training leading to employment, self-employment for the youth through the program in the IT/ ITES industry and sector. The expected outcome is no less than 80% of registered learners gain successful employment outcomes. An employment outcomes may be proof of:
 - o In-work progression for learners who were employees when they were registered. This may be movement to a new post or project consistent with their learning programme, or a pay increase if they remain in the same post.
 - o A job for learners that were job-seekers when they were registered, which they hold for no fewer than 3 months (the statutory probationary period)
 - o A freelance position for those who registered on the learning programme in order to be self-employed.
- V. Increase participation from freelancers in Microwork on Crowdsourcing platforms measured by proven participation in the platforms by those who were trained under Training for IT Scaling
- VI. Establish special linkages with the local and international IT/ITES companies (the Target Firms detailed in sections above) in facilitating placement of trained candidates
- VII. Support current tenants of STPs and HTPs and their supply chain in improving female participation, and encourage IT/ITES companies to set up their operations at the STPs and HTPs in Bangladesh. This should be measured through Employer Satisfaction Survey.
- VIII. Create awareness on the IT/ITES sector opportunities among trainees, parents and teachers measured through survey.

C. Performance Monitoring

- I. **Management:** The Project authority and the Consulting Firm shall meet at the management level at least once every month or as often as necessary to review the performance of the services provided with a view to ensuring quality standard in the services.
- II. **Work Progress Record and Reports:** The Consulting Firm needs to deliver records of following documents on timely basis:
 - Trainee database (before starting class)
 - Lab facility details with picture (before starting class)
 - Picture (CCTV screen-shoot) of class (regularly- at the mid of the class)
 - Live tracking of class through CCTV and social media page (regularly)
 - Daily attendance (within 1hour of class)
 - Course progress (soft copy-daily & hard copy Monthly)
 - Assignment (after 70% of class completion) & assessments (at the end of the course based on the assignment)
 - Certification exam
 - Trainee & Trainer feedback (monthly)
 - Job placement record (at the end of the course)
 - Vendor certification record (at the end of the exam)
 - Employer satisfaction survey results
 - Tracking of trainee's career growth (1 year after completion of job placement).
- III. **The following recorded documents should be submitted to the Project office:**
 - Inception report: The Consulting Firm will submit the inception report within 20 days of agreement signing including finalized trainers list, lab details, marketing & trainee acquisition plan, detailed program plan in prescribed format.
 - Pre-assessment report: The Consulting Firm will submit the pre-assessment report before starting every batch in prescribed format including selected candidates present skill level, convenient class schedule, modified syllabus and training plan.
 - Quarterly work progress report: The Consulting Firm will submit work-progress report on quarter basis in prescribed format including the batches and date details.
 - Monthly work progress report: The Consulting Firm will submit work-progress report on month basis in prescribed format including the batches and date details.
 - Batch completion report: The Consulting Firm will submit batch completion report in prescribed format including port training assessment and the batches details.
 - Job placement report
 - before starting batch the current job condition of the trainees
 - immediate after completing training, if any improvement
 - Complete placement report within 6 month of batch completion
 - End-of-Contracts Reports: The Consulting Firm will submit contract completion report in prescribed format including the batches and date details.
 - Follow up report: The Consulting Firm will submit the follow up report quarterly after assignment/ contract completion
 - Other documents if required.
 - The Consulting Firm must keep all this information in a learning management system and BHTP shall access to it to verify records.

IV. **Progress Monitoring**

- The Project Authority will designate consultant(s) from the Project office who is involved in monitoring progress, reviewing major shortcomings and corrective action taken by the Consulting Firm, assessing the arrangements made by the Consulting Firm and attending to other matters related to contractual obligations of the Consulting Firm for the successful implementation of the project.
 - Progress meetings are meant to review on the services provided by the organization as a whole and they are not meant to substitute the regular consultations and meetings that are usually held at ground level for day-to-day matters.
 - Appropriate records of the Progress Meetings shall be kept by the officer Performance of the Consulting Firm will be certified by this officer which shall be the basis for phase-by-phase payment to the Consulting Firm.
 - BHTPA will have the right to make short-notice or surprise visits to the installations where training services are being delivered, with the purpose to validate quality of learning and quality of record keeping.
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6. Key Experts

Sl. No	Expert position	Educational qualification & experiences	Total person-month	Indicative Number of positions
1	Team Leader	Educational Qualification: Minimum master's degree in any IT/ITES related discipline. Experience: Minimum 10 (ten) years of experience in similar type of project management, at least 2 Years as team leader	18	1 (Full time)
2	Coordinator	Educational Qualification: Minimum Bachelor's degree in any IT/ITES related discipline. Experience: Minimum 5 (five) years of experience in Training Management. at least 2 Years as training coordinator.	$(5*18) = 90$	5 (Full time)
3	Trainer	Educational Qualification: Minimum bachelor's degree in any IT/ITES relevant subject. Experience: Minimum 5 years of relevant experience. Must have related vendor certified for respective course.	$(2*15*12) = 360$	2 trainers in each course
4	Mentor-1	Educational Qualification: Minimum bachelor's degree in any relevant subject. Experience: Minimum 3 years of relevant experience. Must have proven track record as top-rated freelancer.	$(1*12) = 12$	1 (Full time)
5	Mentor-2	Educational Qualification: Minimum bachelor's degree in any IT/ITES or relevant subject. Experience: Minimum 3 years of relevant experience. Must have proven experience as soft skill trainer.	$(2*12) = 24$	2 (Full time)
6	Lab Expert	Educational Qualification: Fresh Graduate/Student of final year of IT/ITES related subject. Experience: Diploma of IT/ITES related subjects in IT labs/Assign lab; expert having minimum 1 (one) year of experience in IT/ITES lab	$(4*12) = 48$	4 (Full time)
Total Person-Months			552	

6.2 Short listed consulting firms' proposed key experts will be interviewed by the PIU.

7. Classroom Infrastructure and training tools/equipment required:

7.1 At least one Training room in each location with necessary training equipment (projectors, white board, chairs, tables) to accommodate at least 25 trainees.

7.2 At least three computer lab in each with

- 350-400 sft lab space
- minimum 25 computers with all required licensed software

- emergency power backup
- internet connection
- headphone and microphone
- AC
- CCTV
- Projector and white board

7.3 Short listed consulting firms' proposed lab and infrastructure will be visited by PIU

8. Eligibility Criteria of the Trainees:

The trainees would be selected by the training service providing firm in collaboration with the project office. The following criteria should be followed to select the trainees:

- a. All trainees are fresh graduates of relevant Higher Education programmes.
- b. Trainees should be employees, potential employees or freelance workers of IT/ITES firms located in HTP/STP, or of organizations in the supply chains of IT/ITES firms located in HTP/STP
- c. Trainees have to pass an entry-level selection process to attend the program as a part of the Participant Selection Process outlined below;
- d. 40% of total trainees must be female
- e. BHTPA always encourages participation of people with disabilities, transgender and third gender or from ethnic group;
- f. For vendor certified course, candidate must fulfill eligibility requirements set by the Exam Vendor.

9. Facilities, Data, Information, Support: The BHTPA will provide the following support:

- a. Ninety percent (90%) tuition fees will be borne from DEIEDP-BHTPA and rest (10%) will be borne by the participants;
- b. Tuition fee will be disbursed to the Consulting Firm by the project authority subject to the fulfillment of every milestone based on the number of graduate candidates enrolled for undergoing training under this project.
- c. Vendor certification fees will be reimbursed after successfully completion of the examination.

10. Participant Selection processes

- a. All trainees must be either:
 - i. currently employed at a Tenant firm in HTP/STP or an organisation in their supply chain, or
 - ii. A graduate job-seeker who is seeking employment in known positions in tenant firms or their downstream supply chain, or
 - iii. A graduate who intends to become self-employed offering services for which there is a known demand in tenant firms or their downstream supply chain.
- b. The employee of Tenant firms in HTP/STP will get preference. The Tenant firm proposes the list of participants to the Consulting Firm, including both current and potential employees.
- c. The Consultant Firm must offer career guidance to trainees and an initial assessment to confirm that the trainee can benefit from the selected course.

11. Consulting Firm Training activities:

Consulting Firm will offer career counseling as part of an onboarding process. Consulting Firm will initiate the process of a topic only after getting written permission from the project office.

12. Code of Conduct

- a. During the service provision period, all experts and support staff of the Consulting Firm must comply with applicable laws, rules, and regulations of Bangladesh.
- b. All the documents and information produced by or during the consultancy services will be the sole property of the BHTPA. No information or document is permitted to transfer or share or disseminate elsewhere without the permission of project director will be treated as fraudulent activities and measures will be taken if so happen.
- c. The project may have the copy right of all documents developed under this assignment.

