

**Enhancing Digital Government & Economy Project  
Bangladesh Computer Council (BCC)  
Information and Communication Technology Division  
Ministry of Posts, Telecommunications and Information Technology  
ICT Tower, Plot # E-14/X, Agargaon, Dhaka-1207,  
Bangladesh**

**Terms of Reference**

**For**

**Consulting Services for Digital Economy Training for Hire and Train Program  
(Package No. EDGE- EDGE-S6)**

**April 2023**



**Terms of Reference (ToR) for  
Consulting Services for Digital Economy Training for Hire and Train Program  
(Package No. EDGE- EDGE-S6)**

**1. Background:**

The People's Republic of Bangladesh has received Credit from the International Development Association (IDA) – a member of the World Bank Group – for financing the cost of the Enhancing Digital Government and Economy (EDGE) Project, being implemented by the Bangladesh Computer Council (BCC). BCC intends to apply a portion of mentioned credit to hire a competent, qualified, and experienced firm (the Consulting firm) to provide implementation support for digital economy training and related activities of the EDGE Project.

The project's overall objective is to improve the efficiency and cybersecurity of the digital economy and increase digitally enabled employment and raise revenues of the IT industry.

The Project consists of four (4) major components to be implemented by BCC:

**Component 1:** Enabling Environment for Digital Economy. The key tasks under this component are:

- ICT Governance and Sustainability;
- Change and Stakeholder Management; and
- Digital Leadership Academy (DLA).

**Component 2:** Public Sector Support for Digital Economy. The key tasks under this component are:

- Cloud Platform (CP) for Digital Economy;
- Public Sector Capacity Building; and
- Mainstreaming Bangladesh National Digital Architecture (BNDA).

**Component 3:** Private Sector Support for Digital Economy. The key tasks under this component are:

- Digital Economy Coordination;
- Hire and Train Program for 20,000 Youth and Women;
- Strengthening and Promoting the IT / Digital Economy-Enabling Industry;
- Digitalization of Small and Medium-Enterprises (SMEs); and
- Establish Research and Innovation Centers.

**Component 4:** Project Management Support. This component will support BCC to manage and implement the EDGE project effectively and efficiently.

Digital Bangladesh 2021 created the foundation for a digital government and the country has progressed a lot toward achieving e-governance through the digitalization of services. Digitalization of services is helping the government adapt to the changing needs of citizens and expand the delivery of services throughout the country, ultimately benefiting the citizens of Bangladesh. Bangladesh is now eyeing to become a smart country with innovation and a knowledge-based economy by 2041.

Enhancing employment opportunities for people is one of the main concerns of the government of Bangladesh. Many job seekers have the necessary knowledge and skills for government jobs, but they are not able to get jobs in the absence of proper industry standard training. To mitigate that issue, a 'Hire & train' model has been designed, and a user-friendly, common, and centralized platform is needed that will cover the 'Hire & train' training program supervision, monitoring, and management.



## 2. Objectives of the Assignment

The objective of this assignment is to recruit a consulting firm to get implementation support for the 'Hire & Train' program, training program management system development, enhancement, and operations of existing training portals, development of software/applications for EDGE PIU operations.

## 3. Scope of Services

The scope of services to be provided includes but is not limited to the following:

- 3.1 Providing implementation support for the 'Hire & Train' program.
- 3.2 Providing technical support in developing the training management portal(s) to supervise the 'Hire and Train' program of the EDGE Project.
- 3.3 Providing technical support in enhancement and maintenance of existing BD IT Connect Portals, BDSkills portals (training, assessment & exam), EDGE website, Durbar platform, etc.
- 3.4 Providing technical support in developing and maintenance of PIU operations-related portals, such as an event registration system, registration for national-level competitions, etc.
- 3.5 Providing support for the 'Hire and Train' program including content reviewing and field visits.
- 3.6 Assisting the PIU in day-to-day training management and coordination with the respective agency
- 3.7 Ensuring onsite required key and non-key human resources at PIU, EDGE office for smooth implementation of the scope of service for this assignment.
- 3.8 Assist in organizing seminars, workshops and events for 'Hire & Train' program.
- 3.9 Assist in the development of documents for 'Hire & Train' program.
- 3.10
- 3.11 Assist in coordinating Government, Academia, Industry in the R&D and innovation initiatives.
- 3.12 .
- 3.13 Assisting the PIU in managing stakeholders, vendors and partners communications.

### General requirements:

1. A non-disclosure agreement (NDA) will be signed between the client and the consulting firm whereas human resources will follow all the clauses mentioned in the NDA.
2. IPR (Intellectual Property Rights) will be owned by the client.
3. BNDA standards must be followed for software development. Standards are available at [www.bnada.gov.bd/standards](http://www.bnada.gov.bd/standards) or from the BNDA team at BCC.
4. Secure Coding standards must be followed. Standards are available at [bcc.gov.bd](http://bcc.gov.bd) or from the BNDA team at BCC.



#### 4. Functional & Technical Requirements

##### 'Hire & Train' Training management system:

SL	Feature/Functionalities	Tools/ Technologies (To be used)
1. 11	<b>Admin Dashboard</b> <ul style="list-style-type: none"> <li>Add and manage a new user</li> <li>Archive users</li> <li>Browse the list of users</li> <li>Bulk User Actions</li> <li>Custom/Mandatory User profile fields</li> <li>Upload bulk users via CSV, SQL, etc.</li> </ul>	Backend: Node JS Frontend: React JS Database: MongoDB
2.	<b>User Authentication</b> <ul style="list-style-type: none"> <li>Active Directory</li> <li>Custom User login page</li> <li>Manual Accounts</li> <li>Self-Registration (with Admin Confirmation)</li> </ul>	Backend: Node JS Frontend: React JS Database: MongoDB Method (Use any of them as the best practice): <ol style="list-style-type: none"> <li>Open Authentication (OAuth)</li> <li>Token-Based authentication</li> <li>OpenId</li> <li>SAML</li> </ol>
3.	<b>Roles</b> <ul style="list-style-type: none"> <li>Define roles</li> <li>Role Assignment</li> <li>System Permissions per role</li> <li>Teams and Team Hierarchies</li> </ul>	Backend: Node JS Frontend: React JS Database: MongoDB
4.	<b>Grading</b> <ul style="list-style-type: none"> <li>Gradebook</li> <li>Gradebook audit trail</li> <li>Gradebook comments</li> <li>Manual Grading ("Marking")</li> <li>Multiple grading scales</li> </ul>	Backend: Node JS Frontend: React JS Database: MongoDB
5.	<b>Training Categories</b> <ul style="list-style-type: none"> <li>Assign training to categories</li> <li>Create new Categories</li> <li>Manage Categories</li> </ul>	Backend: Node JS Frontend: React JS Database: MongoDB
6.	<b>Enrollment</b> <ul style="list-style-type: none"> <li>Automated Enrollment (based on User data)</li> <li>Guest Access Settings</li> <li>Manual Enrollment</li> <li>Progress Tracking</li> <li>See-at-a-glance timeline</li> <li>Self-enrollment (with/without a PIN #)</li> <li>Survey enrollment (based on a response)</li> </ul>	Backend: Node JS Frontend: React JS Database: MongoDB
7.	<b>Monitoring &amp; Control</b> <ul style="list-style-type: none"> <li>Trainee Tracking (via GPS)</li> <li>Call, SMS, and Email integration-based monitoring</li> <li>Automated notification</li> <li>Bulk action</li> </ul>	Backend: Node JS Frontend: React JS Database: MongoDB Map: Google Map API

SL	Feature/Functionalities	Tools/ Technologies (To be used)
8.	<b>Certificate management</b> <ul style="list-style-type: none"> <li>• Manage certification templates</li> <li>• Predefined certification templates</li> <li>• Unique Certificate by Course</li> <li>• Unique Certification by Curriculum</li> <li>• Certificate verification via QR, link, etc.</li> </ul>	Backend: Node JS Frontend: React JS Database: MongoDB
9.	<b>Compliance management</b> <ul style="list-style-type: none"> <li>• Certification Expiration Management</li> <li>• Certificate Expiration Notifications</li> <li>• Due Date notifications (For certification and training)</li> <li>• Soft/Hard Stop Due Dates (For certification and training)</li> </ul>	Backend: Node JS Frontend: React JS Database: MongoDB
10.	<b>Customizable Format</b> <ul style="list-style-type: none"> <li>• Course Discussions</li> <li>• Learner Upload</li> <li>• LIVE Chat Option</li> <li>• Social Format</li> <li>• Topics Format</li> <li>• Video Conferencing Integration</li> <li>• Weekly Format</li> </ul>	Backend: Node JS Frontend: React JS Database: MongoDB
11.	<b>Forum &amp; Survey</b> <ul style="list-style-type: none"> <li>• User forum interaction</li> <li>• Forum management</li> <li>• Survey Engine</li> </ul>	Backend: Node JS Frontend: React JS Database: MongoDB Forum: nodebb Survey: SurveyJS, google forms, SurveyMonkey
12.	<b>Gamification</b> <ul style="list-style-type: none"> <li>• Badges</li> <li>• Customize Badges</li> <li>• Customize Gamification mechanics</li> <li>• Leaderboards (Levels, Points, Rewards)</li> </ul>	Backend: Node JS Frontend: React JS Database: MongoDB
13.	<b>Interface options</b> <ul style="list-style-type: none"> <li>• Additional external pages</li> <li>• UI-related Block Management</li> <li>• Configuration/Settings:               <ul style="list-style-type: none"> <li>○ Language settings</li> <li>○ Calendar Settings</li> <li>○ Location Settings</li> <li>○ Media embedding settings</li> <li>○ Email notification settings</li> <li>○ Automatic Report-related Settings</li> <li>○ Training Record Maintenance Settings</li> <li>○ Queue Management for bulk Email sending</li> </ul> </li> <li>• Multi-Language Support (Bangla &amp; English)</li> <li>• Ready-made Themes</li> </ul>	Backend: Node JS Frontend: React JS Database: MongoDB



SL	Feature/Functionalities	Tools/ Technologies (To be used)
14.	<b>Reports</b> <ul style="list-style-type: none"> <li>• Personalized reporting dashboards with data visualizations and data analysis <ul style="list-style-type: none"> <li>○ Final Assessment Report</li> <li>○ Training Time Management Report</li> <li>○ Survey Report</li> <li>○ Overview statistics</li> <li>○ Rating scores</li> <li>○ Company-wise training report</li> <li>○ Live Logs</li> </ul> </li> <li>• Ad-Hoc reports (5 Reports during AMC as when needed)</li> <li>• Exporting Reports in a variety of formats (PDF, Excel, etc.)</li> <li>• Automatic email reports in predefined customizable intervals</li> <li>• Automated Report Scheduling</li> <li>• Custom reports generator (Using SQL queries, etc.)</li> </ul>	Backend: Node JS Frontend: React JS Database: MongoDB Reporting: JSreport/Jasper/fluentreports and Google Analytics Visualization: D3.js
15.	<b>Integration</b> <ul style="list-style-type: none"> <li>• Connect other systems and applications that communicate using web services, APIs, plugins, etc. For example- BDskills training, exams, assessment, etc.</li> </ul>	Backend: Node JS Frontend: React JS Database: MongoDB Documentation: Swagger
16.	<b>Security</b> <ul style="list-style-type: none"> <li>• Anti-spam</li> <li>• Anti-virus</li> <li>• IP Blocker</li> <li>• Restrict registration to specific domains</li> </ul>	Backend: Node JS Frontend: React JS Database: MongoDB SSL Certificate: LetsEncrypt

#### BD IT Connect Portals

SL	Feature/Functionalities	Tools/ Technologies (To be used)
1.	<b>Enhancement of -</b> <ul style="list-style-type: none"> <li>• Admin Dashboard</li> <li>• Reporting and analytics</li> <li>• Company Tracking</li> <li>• Chat</li> <li>• Notifications</li> </ul>	Backend: Java EE Frontend: Bootstrap JavaScript Libraries: JQuery Widgets: Google font reCAPTCHA etc. Content Management System: Scully
2.	<b>Reporting and analytics</b> <ul style="list-style-type: none"> <li>• Automated Report Scheduling</li> <li>• Canned Reports</li> <li>• Email Delivery of Reports</li> </ul>	Google Analytics StatCounter
3.	<b>Industry Promotion Module</b> <ul style="list-style-type: none"> <li>• B2B Matchmaking</li> <li>• Regular updates of Startups to investors</li> </ul>	Backend: Java EE Frontend: Bootstrap JavaScript Libraries: JQuery

4.	<b>Communication and feedback</b> <ul style="list-style-type: none"> <li>• Surveys and assessments</li> </ul>	Backend: Java EE Frontend: Bootstrap JavaScript Libraries: JQuery
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#### BDSkills Training Portal & Certification/Assessment Portal

SL	Feature/Functionalities	Tools/ Technologies (To be used)
1.	<b>Enhancement of -</b> <ul style="list-style-type: none"> <li>• Admin Dashboard</li> <li>• CMS <ul style="list-style-type: none"> <li>○ Courses</li> <li>○ Quiz</li> <li>○ Question</li> <li>○ Students</li> <li>○ Instructors/Trainers</li> <li>○ Organizations</li> <li>○ Certification</li> <li>○ etc</li> </ul> </li> <li>• Reporting and analytics</li> <li>• Notifications (System, Email, etc.)</li> <li>• Accounting/Payment/invoice management</li> </ul>	Backend: Java/ ASP.NET, PHP (Moodle) JavaScript Libraries and Functions: Webpack, Angular JS, Clipboard.js Widgets: Google Font API, Font Awesome, CrUX Dataset
2.	<b>Communication and feedback</b> <ul style="list-style-type: none"> <li>• Chat</li> <li>• Surveys and assessments</li> </ul>	Backend: Java/ ASP.NET, PHP (Moodle) JavaScript Libraries and Functions: Webpack, Angular JS, Clipboard.js Widgets: Google Font API, Font Awesome, CrUX Dataset

#### Other PIU Tools

SL	Feature/Functionalities	Tools/ Technologies (To be used)
1.	<ul style="list-style-type: none"> <li>• <b>Development of -</b> <ul style="list-style-type: none"> <li>○ Front-end</li> <li>○ Backend</li> </ul> </li> <li>• <b>Operation &amp; Maintenance</b></li> </ul>	Backend: Node JS Frontend: React JS Database: MongoDB

#### Miscellaneous (This features/functionality will be applicable for all systems and portals)

SL	Feature/Functionalities	Tools/ Technologies (To be used)
1.	<b>System Backup</b> <ul style="list-style-type: none"> <li>• DB search, DB Replace, DB transfer,</li> <li>• Site backup, caching, etc.</li> </ul>	Java/Node js/PHP
2.	<b>Admin management</b> <ul style="list-style-type: none"> <li>• UI &amp; content management</li> </ul>	Java/Node js/PHP

SL	Feature/Functionalities	Tools/ Technologies (To be used)
3.	<b>UI/UX Design &amp; Enhancement</b> <ul style="list-style-type: none"> <li>Responsive UI (adapt to any possible screen size)</li> <li>Upgrading obsolete UI to a modern, easy-to-use, responsive interface</li> <li>UX design (Prototyping, wireframing, etc.)</li> </ul>	Prototyping: Figma/Adobe XD Wireframing: Balsamiq
4.	<b>Data security</b> <ul style="list-style-type: none"> <li>Encryption</li> <li>Authentication</li> <li>Access control</li> <li>Vulnerability scanning</li> <li>Intrusion detection and prevention</li> <li>Logging and monitoring</li> <li>Incident response</li> <li>Compliance</li> </ul>	Java/Node js/PHP
5.	<b>Operation and Maintenance</b> <ul style="list-style-type: none"> <li>Manned telephone support for any major issue.</li> <li>Monitored email support.</li> <li>Planned and Emergency assistance.</li> <li>Ensure availability and uptime</li> </ul>	As required

## 5. Consultant Team Composition

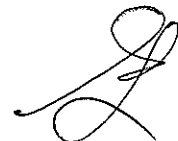
### 4.1 Key Experts

The broad qualifications of the Key Experts are given below. The responsibilities shall be assigned by the Consulting firm to complete all the deliverables in a professional manner:

Sl.	Designation	Qualification	No. of Staff
1	UI/UX Designer	<ul style="list-style-type: none"> <li>Bachelor's degree in Computer Science and Engineering/Fine Arts or other related fields.</li> <li>Five (5) years of hands-on experience in UI/UX design for digital products or services.</li> <li>Proven working experience with digital platforms and e-Services for Government agencies and/or large corporations.</li> <li>Working knowledge of the following technologies and software: Visio, HTML, CSS (SCSS), iOS, Android, Design Systems, and Adobe Creative Suite.</li> <li>Extensive knowledge of UI/UX trends and current design strategies and technologies</li> <li>A portfolio including a minimum of 30 professional UI/UX design work for both web and mobile platforms.</li> <li>Strong communication skills in presenting, discussing, and resolving difficult issues.</li> <li>Ability to work efficiently and effectively in a multidisciplinary team.</li> </ul>	1
2	Developers (Mobile App)	<ul style="list-style-type: none"> <li>Bachelor's degree in Computer Science and Engineering or other related fields.</li> </ul>	1



Sl.	Designation	Qualification	No. of Staff
		<ul style="list-style-type: none"> <li>• Five (5) years of working experience as a Mobile Application Developer as well as demonstrated experience in Android Apps &amp; iOS applications.</li> <li>• Having 3 years of experience in using Cross Platform (iOS and Android, preferably in IONIC framework) app development.</li> <li>• Proven Experience with third-party libraries as well as developing API's and web services.</li> <li>• Associate Android Developer Certification will be preferred.</li> <li>• Released a minimum of 5 applications on the App store (Android and iOS).</li> <li>• In-depth knowledge of the services and concepts of the application architecture.</li> <li>• Having excellent coding skills</li> <li>• Remain up to date with the terminology, concepts, and best practices for coding mobile apps.</li> <li>• Familiar with Mobile app frameworks/SDKs or native mobile programming.</li> <li>• Strong communication skills in presenting, discussing, and resolving difficult issues.</li> <li>• Ability to work efficiently and effectively in a multidisciplinary team.</li> </ul>	
3	<p><b>Developer (Laravel)</b></p>	<ul style="list-style-type: none"> <li>• Bachelor's degree in computer science, information science, or similar.</li> <li>• Seven (7) years of experience as a PHP/ Laravel developer.</li> <li>• In-depth knowledge of object-oriented PHP and Laravel PHP Framework.</li> <li>• PHP certifications will be preferred.</li> <li>• Hands-on experience with SQL schema design, SOLID principles, and API design with proper documentation.</li> <li>• Software testing (PHPUnit, PHPSpec, Behat)</li> <li>• MySQL profiling and query optimization</li> <li>• Creative and efficient problem solver</li> <li>• Strong communication skills in presenting, discussing, and resolving difficult issues.</li> <li>• Ability to work efficiently and effectively in a multidisciplinary team.</li> </ul>	1
4	<p><b>Developer (Node JS)</b></p>	<ul style="list-style-type: none"> <li>• Bachelor's degree in computer science, information science, or similar.</li> <li>• Five (5) years of experience as a Node.js developer.</li> <li>• Extensive knowledge of JavaScript, web stacks, libraries, and frameworks.</li> <li>• Knowledge of front-end technologies such as HTML5 and CSS3.</li> <li>• Hands-on experience with SQL/No-SQL schema design, SOLID principles, and API design with proper documentation.</li> </ul>	1



Sl.	Designation	Qualification	No. of Staff
		<ul style="list-style-type: none"> <li>• Excellent interpersonal, communication, and collaboration skills.</li> <li>• Excellent analytical and problem-solving aptitude.</li> <li>• Availability to resolve urgent web application issues outside of business hours.</li> <li>• Strong communication skills in presenting, discussing, and resolving difficult issues.</li> <li>• Ability to work efficiently and effectively in a multidisciplinary team.</li> </ul>	
5	Developer (Java)	<ul style="list-style-type: none"> <li>• Bachelor's degree in Computer Science and Engineering or other related fields.</li> <li>• Five (5) years of professional work experience in a similar role.</li> <li>• Proven 3 years of experience with digital platforms and e-Services for Government agencies and/or large corporations.</li> <li>• In-depth knowledge of designing scalable and highly available cloud database solutions.</li> <li>• Hands-on experience with SQL schema design, SOLID principles, and API design with proper documentation.</li> <li>• Demonstrated large-scale robust enterprise-level project development skills.</li> <li>• Ability to manage a solution that can span multiple database solutions.</li> <li>• Ability to test high availability and disaster recovery strategies periodically.</li> <li>• Strong communication skills in presenting, discussing, and resolving difficult issues.</li> <li>• Ability to work efficiently and effectively in a multidisciplinary team.</li> </ul>	1
6	Developer Front end	<ul style="list-style-type: none"> <li>• Bachelor's degree in Computer Science and Engineering or other related fields.</li> <li>• Five (5) years of professional work experience in a similar role.</li> <li>• Working knowledge of HTML, Tailwind CSS/ CSS and CSS framework, JavaScript, TypeScript, etc.</li> <li>• Experience in working with React/Angular framework, Redux, and supporting middleware.</li> <li>• Work portfolio (applications, code samples) that demonstrates systematic and creative development thinking as well as a deep understanding of UI development best practices.</li> <li>• Experience with debugging and browser performance optimization</li> <li>• Experience using GIT and source control workflows (i.e. Gitflow, Pull Requests) with multiple contributors</li> <li>• Strong communication skills in presenting, discussing, and resolving difficult issues.</li> </ul>	1

Sl.	Designation	Qualification	No. of Staff
		<ul style="list-style-type: none"> <li>Ability to work efficiently and effectively in a multidisciplinary team.</li> </ul>	
7	Software Quality Assurance Engineers	<ul style="list-style-type: none"> <li>Bachelor's degree in Computer Science and Engineering or other related fields.</li> <li>Five (5) years of professional work experience in the role, or in a similar one.</li> <li>Proven 3 years of experience with digital platforms and e-Services for Government agencies and/or large corporations.</li> <li>In-depth knowledge of developing Test Cases for Unit, Integration, and System Level Testing.</li> <li>Experience with automated testing and direct hands-on experience with automated testing tools required.</li> <li>ISTQB Certification will be preferred.</li> <li>Experience with Software Development Life Cycle (SDLC)</li> <li>Experience with Web Services/API testing using SOAP UI/Postman.</li> <li>Experience with test management and defect tracking tools.</li> <li>Experience with test design, creation, execution, and reporting of manual test cases.</li> <li>In-depth knowledge of developing Test Cases for Unit, Integration, and System Level Testing.</li> <li>Strong communication skills in presenting, discussing, and resolving difficult issues.</li> <li>Ability to work efficiently and effectively in a multidisciplinary team.</li> </ul>	1
8	Curriculum and Content Reviewer	<ul style="list-style-type: none"> <li>Bachelor's degree in CSE, IT or Engineering;</li> <li>Instructional design and curriculum development experience;</li> <li>Proven experience in developing training content specially in the area of emerging technology;</li> <li>Proven experience on evaluating and validating curriculum and content;</li> <li>Capable of collaborating with engineers and technical SMEs in order to turn technical information into effective learning content;</li> <li>Support the effort to transform training delivery and execution methods;</li> <li>3 (three) years' Experience using content management systems (CMS);</li> <li>3 (three) years in Curriculum Development/Instructional Design in a technical environment;</li> <li>3 (three) years' Experience storyboarding for eLearning or multimedia content;</li> <li>3 (three) years' Experience developing high quality interactive assessment modules.</li> </ul>	2
9	Training Manager	<ul style="list-style-type: none"> <li>Bachelor's degree in any discipline.</li> <li>Degree in CSE/IT/Engineering will get preference.</li> </ul>	3

Sl.	Designation	Qualification	No. of Staff
		<ul style="list-style-type: none"> <li>• At least 3 (three) years of experience in training management with one year of supervisory experience required.</li> <li>• Proven track record of success creating and delivering training in an operations or transportation environment.</li> <li>• Expert in operating within a Learning Management System, including content creation and management</li> <li>• Awareness of current best practices, processes, and tools in the areas of the training management system, onboarding, and retention.</li> <li>• Excellent interpersonal and communication skills (verbal and written); the ability to interact and collaborate effectively with people of diverse cultural and professional backgrounds.</li> <li>• Experience in all aspects of training, including design, development, and evaluation.</li> <li>• Experience in implementing a nationwide training program will get preference.</li> <li>• Experience in managing emerging technology-based training programs will get preference.</li> </ul>	
10	Coordinator	<ul style="list-style-type: none"> <li>• Bachelor's degree in CSE/EEE or any IT related technical field.</li> <li>• 5(five) years of experience in the ICT sector in different technological initiatives.</li> <li>• Experience in working with the Government sector / Development partner organizations will be given preference.</li> <li>• Experience in innovation project monitoring and mentoring.</li> <li>• Experience in coordinating technical workshops, challenge competitions and training.</li> <li>• Experience in all aspects of training, including design, development, and evaluation.</li> <li>• Proven experience in developing training content specially in the area of emerging technology;</li> <li>• Proven working experience in project management</li> <li>• Excellent ICT &amp; computer skills.</li> <li>• Strong communication skills in presenting, discussing, and resolving difficult issues.</li> <li>• Ability to work efficiently and effectively in a multidisciplinary team.</li> </ul>	1
11	Associate	<ul style="list-style-type: none"> <li>• Bachelor's degree in science or relevant.</li> <li>• 2 (two) years of experience in the ICT sector in different technological initiatives.</li> <li>• Experience in innovation project monitoring and mentoring.</li> <li>• Experience of providing assistance in technical workshops, challenge competitions and training.</li> </ul>	2



Sl.	Designation	Qualification	No. of Staff
		<ul style="list-style-type: none"> <li>Working experience as a team member of a project management team</li> <li>Excellent ICT &amp; computer skills.</li> <li>Strong communication skills in presenting, discussing, and resolving difficult issues.</li> <li>Ability to work efficiently and effectively in a multidisciplinary team.</li> <li>Ability to write note/technical documents.</li> </ul>	
12	Executive	<ul style="list-style-type: none"> <li>Bachelor's degree in CSE/EEE or any IT related technical field or 4 years Diploma in any technical field.</li> <li>Good communication skills in presenting, discussing, and resolving different issues.</li> <li>Ability to write note/technical documents.</li> <li>Good ICT &amp; computer skills.</li> </ul>	2

#### 4.2 Non-Key Experts

In addition to key experts, the following non-key experts/staff may be required to deliver the service mainly for Maintenance Support in accordance with the TOR. Indicative non-key staff is a guideline for the firm. However, the consulting firm is free to make its own estimate to propose non-key staff.

Sl.	Designation	Qualification	No. of Staff
1	Training Team Associate	<ul style="list-style-type: none"> <li>Bachelor's degree in any discipline.</li> <li>2 (two) years of experience in training management with 1 (one) year of government project experience required.</li> <li>Proficiency with Microsoft Office and other productivity applications is an asset.</li> <li>Excellent interpersonal and communication skills (verbal and written); the ability to interact and collaborate effectively with people of diverse cultural and professional backgrounds.</li> <li>Experience in operations that support the management and maintenance of training and enablement tools, including an LMS.</li> <li>Facilitate online training, and support the scaling of nation-wide training processes.</li> </ul>	4

CVs of the proposed non-key expert staff must be provided.

**Note:** Only the **Key Experts'** positions listed above will be scored in the technical evaluation. However, individual staff must be proposed by the consulting firm for all the positions (Key Experts and non-Key Experts/other experts) listed in the TOR are required to meet the minimum qualification requirements specified for each position in the TOR. If any proposed staff does not meet the specified qualification requirements, and if the proposing consulting firm still ends up achieving the overall highest combined technical and financial score, then the firm will be required during contract negotiations and prior to Contract signing to replace the unqualified individual with another individual who fully meets the qualification requirements for that position as specified in the TOR. CV must be signed by the experts.



#### 4.3 Time Inputs of Key and Non-Key Experts

The indicative staff inputs are tabulated below:

S.N.	Key Experts (CVs shall be evaluated)	Inputs in month		
		No	Man-month	Total (mm)
1	UI/UX Designer	1	18	18
2	Developers (Mobile App)	1	18	18
3	Developer (Laravel)	1	18	18
4	Developer (Node JS)	1	18	18
5	Developer (Java)	1	18	18
6	Developer Front end	1	18	18
7	Software Quality Assurance Engineers	1	24	24
8	Curriculum and Content Reviewer	2	30	60
9	Training Manager	3	36	108
10	Coordinator	1	36	36
11	Associate	2	24	48
12	Executive	2	24	48
	<b>Total Technical -Staff Inputs</b>			<b>432</b>
	<b>Non-Key Experts</b>			
1	Training Team Associate	4	36	144
	<b>Total Non-Technical -Staff Inputs</b>			<b>144</b>
	<b>Total Staff Inputs (Technical + non-Technical)</b>			<b>576</b>

The total estimated technical experts' input is 432-man months and the estimated non-technical experts' input is 144-man months. The total staff inputs will be 576 man-months.

Note:

- a) The Consulting firm is responsible to review the required services and may propose own requirements for the key experts and other support staff required to complete the proposed services in a satisfactory manner.
- b) The financial proposal should include all the direct and indirect costs necessary to execute the services.
- c) The number of experts proposed for different positions shall match with the Consulting Firm's Technical Proposal.

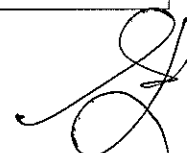
## 6. Duration

The entire consultancy work including submission of reports, documentation, deliverables, etc. shall be completed within 37 (thirty-seven) months in the following time span from the commencement date of the contract.

## 7. Deliverables

The following table describes the deliverables of this assignment, which are the outputs of the activities specified under the Scope of Services.

<b>Key Activities</b>	<b>Timing</b>	<b>Report</b>	<b>Delivery Conditions</b> (Will be accepted after necessary corrections upon comments from PIU)
Summarization of monthly activities	1 <sup>st</sup> week of each consecutive month	Monthly Progress Report	3 hard copies, 1 soft copy; PPT presentations.
Completion report on the training management portal(s) to supervise the 'Hire and Train' program	7 <sup>th</sup> month of the contract	Completion Report	3 hard copies, 1 soft copy, PPT presentations, source code of the portal(s)
Reports on reviewing, monitoring, quality assurance, field visiting, etc. for the 'Hire and Train' Portal	1 <sup>st</sup> week of each consecutive month	Monthly Progress Report	3 hard copies, 1 soft copy, PPT presentations
Completion report on the enhancement of the BD IT Connect Portals, BDSkills portals (training, assessment & exam), EDGE website, Durbar platform, etc.	11 <sup>th</sup> month of the contract	Completion Report	3 hard copies, 1 soft copy, PPT presentations, updated source code of the portal(s)
Completion report on the development of the PIU operations-related portals (event registration system, registration for national-level competitions, etc.) as when required	13 <sup>th</sup> month of the contract	Completion Report	3 hard copies, 1 soft copy, PPT presentations, source code of the portal(s)
Maintenance report of digital platforms and platforms and portals under the scope	Quarterly	Maintenance Report	3 hard copies, 1 soft copy



<b>Key Activities</b>	<b>Timing</b>	<b>Report</b>	<b>Delivery Conditions</b> (Will be accepted after necessary corrections upon comments from PIU)
Final Completion Report	37 <sup>th</sup> month of the contract	Final Completion Report	3 hard copies, 1 soft copy

## **8. Management of the Assignment**

The Client for the assignment will be the Project Implementation Unit (PIU) of Enhancing Digital Government and Economy (EDGE) of Bangladesh Computer Council (BCC) under the ICT Division, who will also issue the contract. The assignment focal points will be the Project Director, Enhancing Digital Government and Economy (EDGE) Project. The general obligations are as follows:

### **To be provided by the Consulting Firm**

During the assignment, the Consulting firm shall provide all the facilities for their staff and other logistical requirements like computers, printers, and facilities for the production and binding of reports, etc. on their own to fulfill their obligations. These will also include support staff and office facilities, office equipment and supplies, required equipment and materials for the assignment, and communications as required.

### **To be provided by the Client**

The client will provide appropriate data, information, etc. as well as make seating arrangements for the human resources necessary to carry out the assignment.

### **Administrative Arrangements**

The consulting firm will work in close consultation with the project director under the general supervision and guidance of the respective team leaders and supervisors. The consulting firm will assist in arranging all meetings with other government departments, communities, universities, and stakeholders.

