

Request for Proposal (RFP) for Design, Development and Maintenance of Dhaka Metro App for Dhaka Mass Transit Company Limited (DMTCL)

RFP Number: JICADXL-DMTCL-20240716

Corrigendum #4

Date: 15th August 2024

The blue colored texts in the following stipulated sections are modified from the original RFP document.

Sr no	Addition / Deletion / Modification / Clarification	RFP Clause No. / Attachment No.	Old Requirement / Clause / Attachment / Corrigendum	New Requirement / Clause / Attachment
1	Addition	Section 5 Scope of work. Point #2	Online Recharge (Top-up server): The system enables commuters to conveniently top up their card balances, avoiding long queues. It integrates with the Central Clearing House system for card authentication and balance retrieval, a payment gateway to process transactions, and a server to securely store sensitive user information.	Online Recharge (Top-up server): The system enables commuters to conveniently top up their card balances, avoiding long queues. It integrates with the Central Clearing House system for card authentication and balance retrieval, a payment gateway to process transactions, and a server to securely store sensitive user information. <i>Please note that, as part of the scope of this RFP, only the online recharge functionality for cards needs to be developed, not online ticketing. The app is required to support both MRT and Rapid Pass systems which are NDEF formatted.</i>
2	Addition	Section 5.1 : Functional requirements 1 (b) Online Recharge (top up server)	Software development to enable (i) online recharge via integration with Central clearing house system (Card authentication, Balance update, Balance check, secure access key encryption/decryption for read & write on card) & payment gateway APIs. (ii) Card balance update via tap on NFC enabled mobile devices & Add value machines (“AVM”). The Orderer will facilitate 3 APIs namely Card authentication, Balance update and Balance check, for integration with CCHS which will be developed by DTCA’s erstwhile vendor working on the solution and this	Software development to enable (i) online recharge via integration with Central clearing house system (Card authentication, Balance update, Balance check, secure access key encryption/decryption for read & write on card) & payment gateway APIs. (ii) Card balance update via tap on NFC enabled mobile devices & Add value machines (“AVM”). The Orderer will facilitate 3 APIs namely Card authentication, Balance update and Balance check, for integration with CCHS which will be developed by DTCA’s erstwhile vendor working on the solution and this

			<p>shall be done separately and stays beyond the scope of the current RFP. However, the Digital Partner will be responsible for integrating these APIs with App/web developed. Proposed architecture for online recharge is as follows:</p> <p>(i) tap on NFC enabled mobile devices:</p> <p>(ii) tap on AVM machine as defined in section 5 description point no. 3:</p>	<p>shall be done separately and stays beyond the scope of the current RFP. However, the Digital Partner will be responsible for integrating these APIs with App/web developed. Proposed architecture for online recharge is as follows:</p> <p>(i) tap on NFC enabled mobile devices:</p> <p>Post online recharge via payment gateway, users need to open the app, select the card, and then tap it to update the balance.</p> <p>SCU (station control unit) & LCU (line control unit): Backend data transfer nodes across AFC system, from station infrastructure i.e. TVM/TOM, gates etc. with CCHS. Recharge functionality has no dependency on the same.</p> <p>(ii) tap on AVM machine as defined in section 5 description point no. 3:</p> <p>Please note that, in the event that an NFC-enabled device cannot support the MRT Pass/Rapid Pass card because of specification limitations, users will need to update their card balances through an AVM machine.</p>
3	Addition	Section 5.1 : Functional requirements (6) Server procurement	<p>The Digital Partner must specify the requirements for both main and backup servers for App and web hosting, as well as top up server required in the technical proposal. Furthermore, the Digital Partner is required to procure cloud hosting services in name of DMTCL for the App and web development, and DTCA for top up server, from government-owned service providers in Bangladesh such as Bangladesh Computer Council (“BCC”) and Bangladesh Data Center Company Limited (“BDCCL”). The latter being the preferred option.</p> <p>Any support and documentation required will be facilitated</p>	<p>The Digital Partner must specify the requirements for both main and backup servers for App and web hosting, as well as top up server required in the technical proposal. Furthermore, the Digital Partner is required to procure cloud hosting services in name of DMTCL for the App and web development, and DTCA for top up server, from government-owned service providers in Bangladesh such as Bangladesh Computer Council (“BCC”) and Bangladesh Data Center Company Limited (“BDCCL”). The latter being the preferred option. No on demand system scalability available, requirements to be planned by Digital</p>

			by the Orderer via support of DMTCL and DTCA. Any deviations in the scope of work requirements will be governed by clause defined in section 12.5.	Partner. Any support and documentation required will be facilitated by the Orderer via support of DMTCL and DTCA. Any deviations in the scope of work requirements will be governed by clause defined in section 12.5.
4	Addition	Section 5.1 : Functional requirements (7) AVM procurement & software configuration	<p>The Digital Partner is required to procure 75 AVMs enabled with Secure Access Modules (“SAM”), out of which 2 AVMs will be procured during the App development and testing phase, remainder (73) will be procured upon successful completion of testing. Of these, 72 AVMs will be installed, while 3 will be reserved as backups and stored under the physical custody of DTCA. These AVMs will be deployed across 17 stations (16 currently operational and Kamalapur, which is under construction). Each station will have 4 AVMs, except for the hub stations (Uttara and Motijheel), which will have 5 AVMs each.</p> <p>The user journey and specifications are detailed below. The Digital Partner must also undertake software development and configurations as specified in section 5.1.1 (b). Additionally, the Digital Partner will be responsible for the installation, operationalization (including electricity and internet connectivity), and maintenance of the AVMs, as specified in Attachment 6. This includes obtaining the necessary permissions and coordinating with the affiliate partner (i.e., DTCA & DMTCL), and their contractors. Additionally, the Digital Partner will collaborate with DMTCL and DTCA to ensure physical security and theft protection through mechanisms such as physical caging.</p> <p>AVM user journey.....</p>	<p>The Digital Partner is required to procure 75 AVMs enabled with Secure Access Modules (“SAM”), out of which 2 AVMs will be procured during the App development and testing phase, remainder (73) will be procured upon successful completion of testing. Of these, 72 AVMs will be installed, while 3 will be reserved as backups and stored under the physical custody of DTCA. These AVMs will be deployed across 17 stations (16 currently operational and Kamalapur, which is under construction). Each station will have 4 AVMs, except for the hub stations (Uttara and Motijheel), which will have 5 AVMs each.</p> <p>The user journey and specifications are detailed below. The Digital Partner must also undertake software development and configurations as specified in section 5.1.1 (b). Additionally, the Digital Partner will be responsible for the installation, operationalization (including electricity and internet connectivity), and maintenance of the AVMs, as specified in Attachment 6. This includes obtaining the necessary permissions and coordinating with the affiliate partner (i.e., DTCA & DMTCL), and their contractors. However, the costs for electricity and internet connectivity will be borne by DMTCL/DTCA. Furthermore, the Digital Partner will collaborate with DMTCL and DTCA to ensure physical security and theft protection through mechanisms such as physical caging.</p> <p>AVM user journey.....</p>

5	Deletion	Section 5.1: Functional requirements Table 1: Dhaka Metro App Feature requirements (Category: Profile mgmt., Sl. No. 1, App Use: Registration/Signu p)	<ul style="list-style-type: none"> • Sign-up and verify user identity with email/ mobile number • Set account password basis pre-determined password format rule • Consent from user to access and use personal data • Prompt to complete user profile after signup • Ability to temporarily deactivate/ permanently delete user account • Option to download user data before account deletion • Cancellation of any active subscription or booked services with account deletion 	<ul style="list-style-type: none"> • Sign-up and verify user identity with email/ mobile number • Set account password basis pre-determined password format rule • Consent from user to access and use personal data • Prompt to complete user profile after signup • Ability to temporarily deactivate/ permanently delete user account • Option to download user data before account deletion
6	Addition	Section 5.1 : Functional requirements Table 1: Dhaka Metro App Feature requirements (Category: Transactions, Sl. No. 9, App Use: Link existing card)	<ul style="list-style-type: none"> • Ability to link existing MRT/ rapid pass to the mobile user account • Prompt to link MRT/ Rapid pass to App • Confirmation of successful link of MRT/ Rapid pass with App 	<ul style="list-style-type: none"> • Ability to link multiple existing MRT/ rapid pass to the mobile user account • Prompt to link MRT/ Rapid pass to App • Each MRT / Rapid pass should be connected via a mobile number and authenticated through an OTP. • Confirmation of successful link of MRT/ Rapid pass with App • Info: Each card has unique identifier number
7	Deletion	Section 5.1 : Functional requirements Table 1: Dhaka Metro App Feature requirements (Category: Transactions ,Sl. No. 12, App Use: Journey Planner)	<ul style="list-style-type: none"> • Option for users to view route, stations, fare price, and travel duration based on selected – <ul style="list-style-type: none"> ○ source and destination stations from dropdown menu. ○ preferred time and date of departure or arrival (default: current time and date) ○ route recommendations basis cheapest fare, fastest travel time, and minimum transfers (default: fastest route) • Prompt to book ticket for the selected journey • Option to save selected journey route 	<ul style="list-style-type: none"> • Option for users to view route, stations, fare price, and travel duration based on selected – <ul style="list-style-type: none"> ○ source and destination stations from dropdown menu. ○ preferred time and date of departure or arrival (default: current time and date) ○ route recommendations basis cheapest fare, fastest travel time, and minimum transfers (default: fastest route) • Option to save selected journey route
8	Deletion	Section 5.1 : Functional requirements	Routing API, Maps integration API, Google Maps API, Station Information API, Ticket booking API	Routing API, Maps integration API, Google Maps API, Station Information API

		Table 2: Integration & API requirements feature wise (Category: Transactions, Sl. No. 12, App Use: Journey Planner; Column: APIs required)		
9	Deletion	Section 5.1 : Functional requirements Table 1: Dhaka Metro App Feature requirements (Category: Transactions, Sl. No. 14, App Use: Fare Calculator)	<ul style="list-style-type: none"> Automatically calculate fares based on the selected routes Include options for different routes and transit modes to provide comprehensive fare estimates Support various fare types such as adult, child, senior, student, and any special discounted fares (if any) Prompt to book ticket 	<ul style="list-style-type: none"> Automatically calculate fares based on the selected routes Include options for different routes and transit modes to provide comprehensive fare estimates Support various fare types such as adult, child, senior, student, and any special discounted fares (if any)
10	Addition	Section 5.1: Functional requirements Table 1: Dhaka Metro App Feature requirements (Category: Content Mgmt. – Station wide awareness., Sl. No. 21, App Use: Station map/info)	<ul style="list-style-type: none"> Map for selected station that allows users to zoom in and out Amenities Information – Information about amenities available at each station such as elevators, restrooms, parking, dining options, and shops Accessibility Features – Details on accessibility options for differently abled and senior citizens like wheelchair access, escalators, and lifts Safety information- Information about MRT police boxes and station controller office to report any incidents or request emergency support. Option to filter map by floor level. 	<ul style="list-style-type: none"> Map for selected station that allows users to zoom in and out. Please note, Digital Partner is required to develop static map independently in App leveraging the station layout pdf not google maps. Amenities Information – Information about amenities available at each station such as elevators, restrooms, parking, dining options, and shops Accessibility Features – Details on accessibility options for differently abled and senior citizens like wheelchair access, escalators, and lifts Safety information- Information about MRT police boxes and station controller office to report any incidents or request emergency support. Option to filter map by floor level.
11	Addition & modification	Section 5.1: Functional requirements	<ul style="list-style-type: none"> Automated chat system for- <ul style="list-style-type: none"> Providing feedback (e.g., dirty washroom, lack of 	<ul style="list-style-type: none"> FAQ based automated chatbot: <ul style="list-style-type: none"> Providing feedback (e.g., dirty washroom, lack of wheelchair support)

		Table 1: Dhaka Metro App Feature requirements. (Category: Customer support, Sl. no. 29, App use case: Customer service chat)	wheelchair support) ○ Claiming refund	○ Registration of complaint i.e. delay in refund processing on payment failure Digital Partner can consider third party chatbot as well. Open-source platform will be preferred.
12	Addition & modification	Section 5.1 : Functional requirements Table 1: Dhaka Metro App Feature requirements (Category: Admin portal, Sl. No. 35, App Use: Content Management)	<ul style="list-style-type: none"> Content creation and editing: Develop and modify content for the platform. Media library: Store and manage multimedia files and assets. Content scheduling: Plan and automate content publication. Version control: Track changes and revert to previous content versions. Content categorization: Organize content using tags and categories. User-generated content moderation: Review and approve content submitted by users 	<ul style="list-style-type: none"> Content Administration: The Digital Partner will develop functionality within the admin portal to enable content administration, including addition, deletion, and editing of content. Content creation is not within the scope of the Digital Partner. Media library: Store and manage multimedia files and assets. Content scheduling: Plan and automate content publication. Version control: Track changes and revert to previous content versions. Content categorization: Organize content using tags and categories. User-generated content moderation: Review and approve content submitted by users
13	Deletion	Section 5.1 : Functional requirements Table 1: Dhaka Metro App Feature requirements (Category: Admin portal, Sl. No. 37, App Use: Customer support)	<ul style="list-style-type: none"> Support ticket management: Track and resolve user support requests. Live chat support: Provide real-time assistance to users. Knowledge base i.e.; FAQs, guides etc. : Offer a repository of help articles and guides. FAQ management: Maintain and update frequently asked questions. Automated responses: Use prewritten replies for common issues. Customer feedback collection: Gather and analyze user feedback. 	<ul style="list-style-type: none"> Support ticket management: Track and resolve user support requests. Knowledge base i.e.; FAQs, guides etc. : Offer a repository of help articles and guides. FAQ management: Maintain and update frequently asked questions. Automated responses: Use prewritten replies for common issues. Customer feedback collection: Gather and analyze user feedback.

14	Addition & modification	Section 5.1 : Functional requirements Table 1: Dhaka Metro App Feature requirements (Category: Admin portal, Sl. No. 38, App Use: System configuration)	<ul style="list-style-type: none"> • General settings: Adjust overall system preferences and options. • Security configurations: Set up and manage security protocols and measures. • Integration management: Connect and manage third-party integrations. • API settings: Configure and monitor API access and usage. • Backup and restore: Create system backups and restore data when needed. • Audit logs: Record system activities and changes for auditing purposes. 	<ul style="list-style-type: none"> • General settings: Adjust overall system preferences and options. • Fare configuration: Fares data updation for fare calculation and chart • Security configurations: Set up and manage security protocols and measures. • Integration management: Connect and manage third-party integrations. • API settings: Configure and monitor API access and usage. • Backup and restore: Create system backups and restore data when needed. • Audit logs: Record system activities and changes for auditing purposes.
15	Addition	5.2 Technical requirements	<ol style="list-style-type: none"> (1) Bidders to provide following technical stack specifications in their Technical proposal: (2) Indicative security requirements are laid out in section 13, 14, & attachment 4, for guidance to the Bidders to plan their resource capacity, prepare their implementation plan and submit an effective response to the RFP. (3) The Bidders to ensure go live requirement, acceptance criteria & system availability laid out in Attachment 3 & 5 are duly fulfilled. These conditions are in no way exhaustive and minimum requirements. The Digital Partner to adhere to best global practices & standards to ensure smooth performance. (4) App and mobile responsive website should be tested and optimized thoroughly across multiple browsers (Safari, Chrome, Firefox, Opera, Edge), screen sizes (Desktop, Laptop, iPad, smartphone) and internet speed (2g,3g,4g) 	<ol style="list-style-type: none"> (1) Bidders to provide following technical stack specifications in their Technical proposal: (2) Indicative security requirements are laid out in section 13, 14, & attachment 4, for guidance to the Bidders to plan their resource capacity, prepare their implementation plan and submit an effective response to the RFP. (3) The Bidders to ensure go live requirement, acceptance criteria & system availability laid out in Attachment 3 & 5 are duly fulfilled. These conditions are in no way exhaustive and minimum requirements. The Digital Partner to adhere to best global practices & standards to ensure smooth performance. (4) App and mobile responsive website should be tested and optimized thoroughly across multiple browsers (Safari, Chrome, Firefox, Opera, Edge), screen sizes (Desktop, Laptop, iPad, smartphone) and internet speed (2g,3g,4g)

				(5) Digital Partner to ensure following mobile App compatibility with Android: Version 11 and above, and iOS: Version 12 and above
16	Modification	10.4.2 Development pricing schedule beyond this work (1 st March 25 onwards)	<p>For System Integrator (SI) Vendors: A Bidder is required to provide a pricing schedule for development services for an additional period of three (3) years as the Next Phase as per attached form 1.9. This should include:</p> <p>(i) Monthly Rates: For various development roles (e.g., project managers, developers, testers, UI/UX designers). For each category of service: App & web development, and online recharge development & infrastructure (Top -up server, AVMS & associated components, if any).</p> <p>(ii) Scope of Development Services: Description of the development services offered (e.g., new features, enhancements, integrations, etc.).</p> <p>For Platform Vendors: A Bidder is required to provide the following for an additional period of three (3) years as the Next Phase:</p> <p>(i) License Costs for the platform.</p> <p>(ii) Monthly Rates: For customization and development services (e.g., project managers, developers, testers, UI/UX designers). For each category of service: App & web development, and online recharge development & infrastructure (Top -up server, AVMS & associated components, if any).</p> <p>(iii) Scope of Development Services: Description of the development services offered (e.g., new features, enhancements, integrations, etc.)</p>	<p>For System Integrator (SI) Bidder: <i>“Bidder who will build the solution as defined in the scope of this RFP from grounds up.”</i> A Bidder is required to provide a pricing schedule for development services for an additional period of three (3) years as the Next Phase as per attached form 1.9. This should include:</p> <p>(i) Monthly Rates: For various development roles (e.g., project managers, developers, testers, UI/UX designers). For each category of service: App & web development, and online recharge development & infrastructure (Top -up server, AVMS & associated components, if any).</p> <p>(ii) Scope of Development Services: Description of the development services offered (e.g., new features, enhancements, integrations, etc.).</p> <p>For Platform Bidder: <i>“Bidder who will build the solution as defined in the scope of this RFP over the top of existing proprietary mobility platform.”</i> A Bidder is required to provide the following for an additional period of three (3) years as the Next Phase:</p> <p>(i) License Costs for the platform.</p> <p>(ii) Monthly Rates: For customization and development services (e.g., project managers, developers, testers, UI/UX designers). For each category of service: App & web development, and online recharge development & infrastructure (Top -up server, AVMS & associated components, if any).</p>

				(iii) Scope of Development Services: Description of the development services offered (e.g., new features, enhancements, integrations, etc.)
17	Modification	Section 11.3: Stage 2 - Technical bid evaluation, Table 4: Technical evaluation criteria and scoring guidelines	<p>Dimension: Team profiles – Quality & relevance for RFP scope execution (CV review and 1:1 interview) (15)</p> <p>Criteria: Project Lead /Manager – The Project Manager is responsible for planning, executing, and closing project, ensuring it is completed on time, within scope, and within budget using Agile methodologies and tools like JIRA and Trello.</p> <p>In case of Consortium, the employees from lead Bidder only will be accepted. The expert will be evaluated on:</p> <ul style="list-style-type: none"> • Years of experience • Relevant projects experience • Relevant certifications <p>System Architect: Design the overall architecture of the application, ensure system scalability and integration, and provide technical guidance.</p> <p>In case of Consortium, the employees from lead Bidder only will be accepted. The expert will be evaluated on:</p> <ul style="list-style-type: none"> • Years of experience • Relevant projects experience • Relevant certifications 	<p>Dimension: Team profiles – Quality & relevance for RFP scope execution (CV review and 1:1 interview) (15)</p> <p>Criteria: Project Lead /Manager – The Project Manager is responsible for planning, executing, and closing project, ensuring it is completed on time, within scope, and within budget using Agile methodologies and tools like JIRA and Trello.</p> <p>In case of Consortium, the employees can be from across the members of the consortium.</p> <p>The expert will be evaluated on:</p> <ul style="list-style-type: none"> • Years of experience • Relevant projects experience • Relevant certifications <p>System Architect: Design the overall architecture of the application, ensure system scalability and integration, and provide technical guidance.</p> <p>In case of Consortium, the employees can be from across the members of the consortium.</p> <p>The expert will be evaluated on:</p> <ul style="list-style-type: none"> • Years of experience • Relevant projects experience • Relevant certifications

			<p>Domain expert (including expertise in AVM Hardware & Software) Ensures the metro App and web development align with industry standards and user needs, providing specialized knowledge, technical guidance, and best practices throughout the project.</p> <p>In case of Consortium, the employees from lead Bidder only will be accepted. The expert will be evaluated on:</p> <ul style="list-style-type: none"> • Years of experience • Relevant projects experience • Relevant certifications 	<p>Domain expert (including expertise in AVM Hardware & Software) Ensures the metro App and web development align with industry standards and user needs, providing specialized knowledge, technical guidance, and best practices throughout the project.</p> <p><i>In case of Consortium, the employees can be from across the members of the Consortium.</i> The expert will be evaluated on:</p> <ul style="list-style-type: none"> • Years of experience • Relevant projects experience • Relevant certifications
			<p>Delivery Manager Delivery Manager oversees the successful delivery and post-deployment support, ensuring client satisfaction, managing resources, and optimizing operational efficiency.</p> <p>In case of Consortium, the employees from lead Bidder only will be accepted. The expert will be evaluated on:</p> <ul style="list-style-type: none"> • Years of experience • Relevant projects experience • Relevant certifications 	<p>Delivery Manager Delivery Manager oversees the successful delivery and post-deployment support, ensuring client satisfaction, managing resources, and optimizing operational efficiency.</p> <p><i>In case of Consortium, the employees can be from across the members of the consortium.</i> The expert will be evaluated on:</p> <ul style="list-style-type: none"> • Years of experience • Relevant projects experience • Relevant certifications
18	Addition	12.1 Payment terms	<p>(1) Contract Price, subject to any adjustment thereto in accordance with the Contract, shall be all inclusive (including all taxes, duties, royalties etc.)</p> <p>(2) Nothing extra shall be payable over the quoted rates, notwithstanding any provision to the contrary in any law for the time being in force, save and except what is specifically provided in Contract.</p>	<p>(1) Contract Price, subject to any adjustment thereto in accordance with the Contract, shall be all inclusive (including all taxes, duties, royalties etc.). <i>Payment will be settled in USD irrespective of Digital Partner location.</i></p> <p>(2) Nothing extra shall be payable over the quoted rates, notwithstanding any provision to the contrary in any law for the time being in force, save and except what is specifically provided in Contract.</p>
19	Modification	Attachment 1 Form 1.9 Development	<u>For System Integrator (SI) Vendors:</u>	<u>For System Integrator (SI) Bidder:</u>

		Pricing Schedule beyond this work (1 st March 2025 onwards)	<u>For Platform vendors:</u>	<u>For Platform Bidder:</u>
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Note: All other terms and conditions, forms of the RFP document remain unchanged in addition to Corrigendum#1, #2 and #3. In case of any ambiguity, the RFP document will stand.