

Maldives Monetary Authority

Request for Information

Reference No: IL-PRC/2019/09

Instant Payments for the Maldives

Maldives Payment System Development Project

31st January 2019

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1. Introduction

Maldives Monetary Authority (MMA) as the central bank is responsible for the development of the national payment infrastructure for the smooth functioning of the financial markets and economy as a whole. Hence, MMA has initiated Maldives Payment System Development (MPSD) Project with the aim to implement an inclusive, safe, efficient and robust account based real-time retail payment infrastructure to enable innovative and integrated payment solutions to facilitate fast, convenient, secure and affordable means of making payments across the nation. The primary objective of this initiative is to reduce the reliance on cash and cheques and encourage the usage of electronic payments throughout country through a fully integrated and inclusive platform.

This document sets out the vision for a real-time retail payments infrastructure in Maldives and its purpose is to obtain information about prospective vendors' capabilities, potential solutions and the costs involved to fulfil the vision and meet Maldives' payment objectives as set out below. The information received in response to this document will be used by MMA, to establish the way forward for Maldives' retail payments infrastructure.

MMA may request full quotations for services as a result of this Request for Information (RFI), but reserves the right not to select any of the vendors or to request prospective vendors to work together to provide a comprehensive solution.

2. Objectives

Primary objectives in pursuing MPSD project are as follows:

- 2.1. Promote the usage of electronic payments in the Maldives
 - a) Enable innovative and flexible means of payment which will promote the level of acceptance and encourage the usage of electronic payments
 - b) Introduce easy to use and cost effective digital and integrated payments solutions to reduce the use of conventional payment methods (use of cash and cheques)
 - c) Provide electronic means to cater the payment needs of all the economic sectors including government, business and individuals
- 2.2. Enhance access to payment and financial services across the country
 - a) Enable banked and unbanked Maldivians to send and receive money instantly regardless of the geographical location or payment service provider they use.
 - b) Provide instant access to funds for the payee
 - c) Provide accurate and timely financial information for both payer and payee
- 2.3. Establish interoperability across networks to improve performance and cost effectiveness
 - a) Enable interoperable efficient and cost effective digital integrated payment methods through various channels
 - b) Introduce API based connectors for safe and secure interconnection options to enable real-time payment solutions
 - c) Ensure payment systems and services are available 24/7/365
- 2.4. Enhance security levels and risk management
 - a) Ensure that fraud monitoring and risk mitigation measures are in place
 - b) Ensure compliance with the financial and regulatory standards
 - c) Ensure the payment infrastructure complies with industry security standards

3. Background Information

3.1. Maldives

The Maldives is an archipelago consisting of around 1200 islands strewn across the Indian Ocean, best known for its white beaches and pristine waters. Just under 200 of these islands are inhabited by a population of around 400,000. The economy is heavily reliant on cash due to geographical distribution of the population and limited access to financial services in the outer islands.

Fishing was traditionally the key sector, and although it still provides a livelihood for a significant share of the people in outer islands, tourism is by far the dominant sector in the Maldivian economy today. The country's GDP stood at US\$5.35 billion with a per capita of US\$10,449 in 2018. The tourism industry directly accounts for about a quarter of the country's GDP.

3.2. Financial Sector

The financial sector of the Maldives is dominated by the commercial banking sector. Currently, there are eight banks in the Maldives, of which four are locally incorporated. A single bank dominates the retail banking segment, with approximately 75 percent of bank account holdings and over 80 percent of the retail payment transactions along with key payments infrastructure. The rest of the financial sector is comprised of five insurance companies, two other financial institutions which cater to the leasing and housing finance markets and the stock exchange. The lack of an ideal level of competition and the shallowness of financial markets are challenges to the development of both the financial sector and the payments ecosystem.

3.3. Current Payment Ecosystem

Interbank Transactions: Currently, all inter-bank transactions are executed via the Maldives Real Time Gross Settlement (MRTGS) system and the Automated Clearing House (ACH) system, which are both operated by the MMA. The MRTGS system processes and settles urgent, high value inter-bank transactions, and is based on SWIFT MT standard. Meanwhile, the ACH system is a session based clearing system for low value batch transactions consisting of direct credits and cheque imaging and truncation.

The participants of the MRTGS and ACH systems are currently the banks operating in the Maldives, and the services are only available through them during banking hours, and mostly by visiting the banks in person. These systems are not fully integrated with some of the participating banks' internal core banking systems, straight-through processing has still not been achieved, which leads to inefficiencies and delays even with the MRTGS system.

Card Transactions: Card payments are the dominant electronic means of payment in the Maldives. In the absence of local payment schemes, international schemes are used for domestic transactions as well. At present there banks as well as non-bank entities who provide card payment acquiring services in the country. In the absence of a local card payment switch, there is no interoperability of card payment in the Maldives.

Mobile Payments: The existing two Mobile Network Operators (MNOs) in the country is licensed to provide m-wallet based mobile payment services in the Maldives. This was implemented under the broad objective of enhancing access to finance to the people living in the outer atolls through digital payment services by leveraging the mobile telecommunication network. Currently, mobile operators

are faced with challenges in linking their services with the banks due to an absence of a common platform that connects the banks and mobile payment service providers.

Key Challenges in existing Payment Systems:

Following are the key challenges in the Maldivian payment ecosystem:

- Lack of interoperability or interconnectivity between service providers
- Lack of availability of funds in real-time
- Limited access to the systems and services
- Lack of innovative electronic payment solutions

3.4. Legal and Regulatory Framework

A strong regulatory framework is essential to ensure financial stability through regulating and overseeing the payment systems. In the absence of a Payment System Law, currently payment systems and services are regulated by MMA Act. However, MMA has drafted a Payment System Bill which is expected to enact in a near future. The relevant laws and regulations, which are available on MMA's websites include:

- Maldives Monetary Authority Act
- Banking Act
- Regulation on Payment Systems
- Mobile Payment Services Regulation

MMA plans to strengthen the regulatory framework concurrently with this project to ensure the smooth operation of the payment systems and to provide a conducive environment for innovation and competition.

4. Maldives Payment System Development Project

This project is an initiative by the MMA to address key needs of the Maldivian economy. Increasing the end-to-end speed of payments while ensuring the efficiency and safety of the payments system is given primary importance. With the future of payments in mind, the system will be open and flexible to accommodate and foster innovation and competition in the Maldivian payments domain.

4.1. Key deliverables

After consideration of various use-cases, the primary needs of the Maldivian economy were identified. The main focus of the project is set on addressing these needs.

- Fast payments: The system should enable real-time payments for end users
- Easy payments: The process of making payments should become simpler irrespective of the users' location. Identifiers such as email addresses, phone numbers, biometrics and social media handles should be alternatives for users to execute payments.
- Safe payments: Payments should remain secure, with multiple-factor authentications required for large value payments and certain types of other payments.
- Open, but risk-evaluated access: Interested payment service providers should have risk-based access to the system. They can utilise the payments infrastructure to provide innovative overlay services of their choosing.
- Globally accepted messaging standards: The ISO20022 messaging standard should be used, which is the gold standard of current global electronic data interchange.
- Ubiquity: The system should allow all entities to make and receive payments irrespective of where they bank or live and be available 24x7x365

4.2. Infrastructure

The core of the infrastructure; *Unified Payment Gateway (UPG)* will be an open API based modular system that comprise of an account-based, real-time payments system augmented with the functionality of smart addressing. All banks in the Maldives will be directly linked to the system and it will facilitate Account Information Service Providers to provide account information through the UPG to Payment Service Providers (PSPs) to offer innovative payment services to the customers. It will support seamless integrated solutions combining the payment process and provide convenient, and value added solutions.

Smart addressing will allow customers to make payments using easy to remember tokens and identifiers such as national identification numbers, mobile numbers, email addresses and social media handles. The sharing of bank account numbers and other sensitive information may no longer be required.

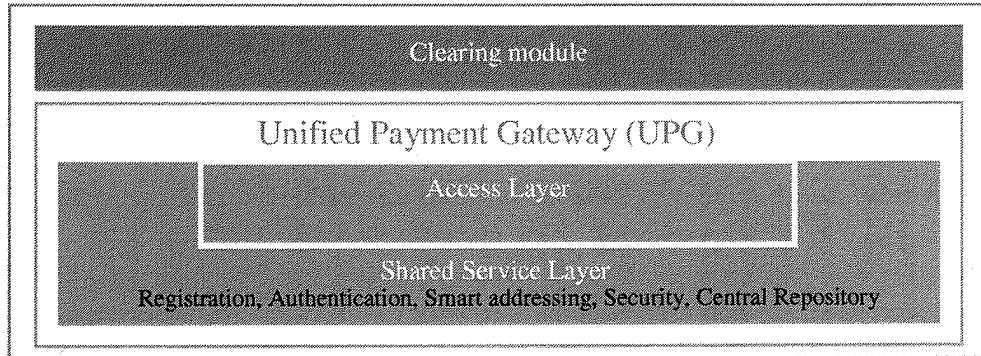
5. Documents

The following sources will provide additional information and guidelines that may clarify the contents of the RFI.

1. Instant Payment for the Maldives Brochure (www.payments.mv/booklet.pdf)
2. Maldives Payment System Development Project website (www.payments.mv)

6. Scope of Work

6.1. The potential system architecture



6.2. Unified Payment Gateway (UPG)

UPG facilitates Account Information Service Providers (AISPs) to provide account information through the gateway to Payment Service Providers (PSPs) enabling its customers to view and manage multiple bank accounts through a single interface, consolidating various banking features including seamless fund routing & merchant payments. The UPG will include an access layer and a shared service layer.

a) Access Layer:

- Allowing PISPs to access to accounts in AISPs network (Banks, MNOs) to make payments on behalf of customers.
- AISPs will connect to UPG through stateless APIs
- UPG will allow KYC verification for new customers during the registration process and update proxy DB in the shared service layer
- Allow access through USSD and SMS for transactions

b) Shared Service Layer:

- Allows PSPs to access account information of AISPs
- Allows PSPs and AISPs to do KYC verification by accessing the respective National Registration databases
- Allows multi-factor customer authentication (i.e. password, PIN, tokens, biometrics, OTP)

6.3. Smart Addressing

- This module will collect the customer information during the customer registration process
- Allows customers to use simple, easy to remember addresses to direct payments. (eg: identifiers such as ID card, email, phone numbers)
- Allows AISPs and PSPs to access identification information to provide various services (i.e. customer registration, verification, and authentication) using any identification.

6.4. Clearing

- Clearing service allows real-time multilateral clearing of transaction between Account Information Service Providers.

6.5. Fraud Detection and Prevention

- This module will enable fraud detection and prevention but not limited to the following:
 - detect possible fraud behavior patterns
 - immediately block attempts by recognized fraudster
 - protect against specific risks by enabling necessary limits
 - define and apply fully customized security policies

6.6. Security

- This module includes, but not limited to:
 - Threat protection
 - API security
 - Data security

6.7. Use Cases

- Digital Solutions
 - Account to Account transfer: The solution should enable users to make and receive payments instantly irrespective of where they hold bank accounts in Maldives. The accounts of the users will be linked to their respective bank accounts and allow fund transfers through various means.
 - Payment Gateway: Allows to introduce local scheme to make online payments)
 - Business to Business payments (i.e. solution for corporate payments with segregated payment approval levels, which would facilitate to eliminate cheques)
- Integrated Solutions
 - The solution should support introduction of various integrated payment services combined with value added services. This may include but not limited to the following:
 - Scheduled payments (i.e. utility bills, insurance premium, rent and other fees)

6.8. System Capability and Design Principles

The system should be:

- Scalable to cater the increasing demands
- Transparent, secure, reliable and have high availability
- Based on global messaging standards and international best practices.

7. Instruction to Vendors

This is a RFI only and does not constitute a commitment, implied or otherwise, that MMA will take procurement action in this matter. MMA shall not be responsible for any cost incurred in furnishing the requested information and visit for the vendor presentations. Submission of a response constitutes acknowledgement that the vendor accept these terms. Responding vendors may be individual organization or joint ventures.

After all responses have been submitted, MMA will issue an RFO with the finalized requirements. Vendors shall submit the offer to MMA their offer in writing no later than the submission date stated in section 8.5 of this RFI. Submission of response to RFO is limited to the vendors registered through the response to this RFI.

The vendors must provide the following information:

- a. Provide the vendor information requested in section 7.1
- b. Describe their solution by answering the questions in the section 7.2 with high-level costing

The main objectives of the project is set out in this document and our website; www.payments.mv. The RFI responses should address all key deliverables. Our target is to deploy an all-inclusive real-time payments infrastructure before end of 2019.

8. Information request

8.1. Vendor Information

We request the following information, and structured as below;

- 1- Provide general company background information
 - a. Company profile
 - b. Ownership and organizational structure, management, sponsors and beneficial owners, country of origin
 - c. Headquarter and location of all offices/branches
 - d. Year of incorporation/registration and details of registration
 - e. Audited financial statements of last three years
 - f. Outstanding legal matters (if any)
- 2- Vendor's experience
 - a. List of current and previous projects of similar types and countries involved
 - b. Number of years working in the stated projects
 - c. Project scale (in USD)
- 3- Vendor's resources that is expected to be deployed for the project
 - a. Names, nationality, knowledge and experience of:
 - i. Project Manager
 - ii. Technical Engineers
- 4- Primary contact details

8.2. Solution proposal

The vendor shall describe the solution and demonstrate how it would fulfil the objectives and key deliverables of MMA as stated above.

1. What is your proposed solution?
2. What is your preferred structure of a commercial contractual arrangement?
3. What is the anticipated duration that will take for the design and implementation of the project, and what would be your approach (please provide an indicative timeline)?
4. What is the proposed business and technical architecture with diagrams, showing the roles of stakeholders and interconnections?
5. How would your solution meet the primary objectives?
6. What would be the challenges to achieve the above?
7. Describe how your solution will ensure that it delivers a high-level performance and security.
8. Please indicate key lessons you have learned in previous similar projects that you feel might be beneficial to this project.
9. Please provide high level costing for:
 - 9.1. Implementation of each component according to the following format:

Indicative Costs	Price in USD
a) Unified Payment Gateway	
b) Smart Addressing	
c) Clearing	
d) Digital Solutions	
i. Account to account transfer	
ii. Wholesale payments	
iii. Payment gateway	
e) Integrated Solutions	
i. Regular payments	
Grand Total	

9.2. Annual maintenance support service

9. Expected Timeline

The tentative timeline for selection is as follows:

No.	Key Dates	Actions
9.1	31 st January 2019	Publication of Request for Information (RFI)
9.2	1 st February 2019 to 4 th March 2019	<p><u>Registration for information and vendor presentation sessions</u> 4th March 2019, 1600 hours, Maldives time</p> <p>Interested vendors shall register for vendor presentations by submitting the following contact details to procurement@mma.gov.mv:</p> <ul style="list-style-type: none"> • <i>Company name</i> • <i>Name of the contact person</i> • <i>Designation</i> • <i>Email Address</i> • <i>Company Website</i> <p>Registered vendors are requested to visit MMA and present their proposed solution.</p> <p>Vendors may obtain further clarifications regarding the RFI via email during this period.</p>
9.3	7 th March 2019	<p><u>Deadline for RFI response submission</u> 7th March 2019, 1600 hours, Maldives time</p> <p>Only registered vendors can respond to RFI.</p>
9.4	Second week of March 2019	<p><u>Publication of Request for Offer (RFO)</u> Submission of offer is limited to the vendors registered through the response to this RFI</p>
9.5	Third week of March 2019	<p><u>Clarification</u> Registered vendors may also obtain further clarifications regarding the RFO</p>
9.6	First week of April 2019	Submission of final proposals for RFO
9.7	Third week of April 2019	Review and evaluate proposals
9.8	Fourth week of April 2019	Award the project
9.9	Third week of May 2019	Expected period of contract negotiation
9.10	Fourth week of May 2019	Signing of contract with selected vendor

10. Submission of Responses

Please email your completed proposals to procurement@mma.gov.mv. Supplementary materials may be provided.

11. Selection Process

- Potential vendors shall submit response to the RFI demonstrating the ability to meet the criteria stated in the section 7.2
- Potential vendors should provide necessary supporting documents along with response to this RFI
- All the vendors that submit a response to the RFI are welcome to visit MMA and present their proposed solution.
- Responses received to this RFI after the specified deadline (7th March 2019, 16:00hrs) will be rejected.
- Following the RFI process, an RFO will be issued to the registered vendors
- The offer that scores highest will be selected to deliver the solution for the project.

12. Communication

During the vendor selection process MMA will treat all vendors equally. To this end, no vendor will be allowed to make individual approaches of any kind to the MMA unless specifically requested to do so. Any such request by the MMA will also be extended to all vendors taking part in the selection process. All information distributed by the MMA will be distributed equally to all vendors. Questions posed by vendors, and the MMA's responses, will also be copied to all vendors.

MMA will respond to queries received to this RFI until 4th March 2019. The official working hours of MMA is Sunday to Thursday from 0800hrs to 1600hrs (Time zone: GMT+5).

13. Confidentiality

Any information of confidentiality or proprietary nature contained in a vendor response should be clearly marked 'CONFIDENTIAL' by item or at the top of the page. Reasonable precautions will be taken to safeguard any part of the response identified by a vendor as being confidential or proprietary.

All responses, once delivered, becomes a property of MMA.

14. Point of Contact

All questions and queries regarding this RFI should be directed to:

Procurement Section
Maldives Monetary Authority
Boduthakurufaanu Magu, Male'
Maldives
Email: procurement@mma.gov.mv