

Visa Direct-Mojaloop Cross Border Remittance Proof of Concept

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Monetary Authority of Singapore
Financial Sector Technology & Innovation (FSTI) Scheme
Proof-of-concepts



Inclusive Cross-Border Remittances
Making remittance cheaper and faster for the
Singapore-to-Philippines and Singapore-to-Myanmar corridors



MODUSBOX

mojaloop
foundation

VISA

Rapyd

LUCY

Project Scope

Project Scope



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Goals



- To connect small financial institutions to real time payment networks to enable fast, convenient, and ubiquitous cross-border remittances.
- To create a replicable, scalable model for regional payment networks that can be taken to other markets, leveraging Singapore's position as a regional innovation and financial hub.
- To explore opportunities to make remittance cheaper and faster for the Singapore-to-Philippines and Singapore-to-Myanmar corridors.

Requirements



Activity	Lead
Component 1 - Deploy, configure, and operate a Mojaloop for the specific cross-border and PISP use cases	
Deploy Mojaloop	ModusBox
Build alias repository	ModusBox
Build alias repository registration tool (or pre-register clients)	ModusBox
Build Mojaloop and Visa Direct connections	ModusBox / Visa
Host and operate Mojaloop	TW / ModusBox
Deliverable: Mojaloop setup and configured with Visa Direct	ModusBox
Component 2 - Implement initial compliance check process	
Consult with regulators, originating financial institution, and receiving financial institution	Visa / ModusBox
Map dataflows, API linkages, and business processes	Visa / ModusBox
Configure extension lists for required KYC information/ Design and document KYC	ModusBox / TW
Configure Payment Manager OSS to pass required KYC information	ModusBox / TW
Deliverable: Core systems configured to communicate necessary compliance information	All

Requirements



Activity	Lead
Component 3 - Onboard one Singapore-based financial institution, two PISPs, three Philippines-based financial institutions, and one AISP	
Build onboarding guides	ThitsaWorks
Assess participant architecture and infrastructure	ThitsaWorks
Deploy Payment Manager OSS into AWS or local hosts	ModusBox
Develop Payment Manager OSS core connectors and onboard rural banks	ModusBox / TW
Onboard PISP / AISP providers (e.g., GPay, Diskartech)	ModusBox
Deliverable: Participants onboarded and ready to participate in transactions	ModusBox / TW
Component 4 - Validate end-to-end financial flows settlement options with stakeholders	
Onboard Settlement bank core	ModusBox / Visa
Perform end-to-end testing	All
Deliverable: End-to-end testing complete	All
Demonstration and Knowledge Sharing	
Compile lessons learned across all project components	TW / ModusBox
Hold public demonstration and share results	TW / ModusBox
Deliverable: Public presentation of lessons learned	All

Major deliverables



1. **[Major]** Publish white paper that can be accessed by the general public, that includes:
 - a. Challenges that FIs face when looking to remit money across the Singapore-to-Philippines and Singapore-to-Myanmar corridors.
 - b. Overview of the platform and solution.
 - c. Overview of the POC, and how it was conducted.
 - d. Highlight the challenges faced that have been overcome/worked-around/accepted over the course of the POC (if applicable).
 - e. Any other relevant learning points worth sharing.

2. **[Major; Only required in the event of project failure or inability to continue with project]** If the Applicant is not able to complete the project, a white paper or project report must be submitted, including:
 - a. Description of project and accomplishments to date
 - b. Key challenges faced
 - c. Why the project failed
 - d. Suggested solutions to challenges, and why the solutions were not carried out

Outcome



1. Prototype of end-to-end architecture

- The POC team will develop an end-to-end solution including a Mojaloop Hub that is both FX and PISP capable integrated into RCBC's Synerfi and enabling Visa Direct forex transactions across its platform.

2. Lessons Learned

- The POC team will document and share lessons learned in 3 areas:
 1. Onboarding different types of financial institutions
 2. Compliance check operations
 3. On the end-to-end financial flow
- The POC team will publish a lessons learned document and hold a knowledge-sharing session with interested stakeholders

3. Open-source enhancements

- All Mojaloop code developed by TW and MBX under this POC will be contributed to open-source repositories managed by the Mojaloop Foundation.
- All Payment Manager OSS code will be contributed to the open-source.

Assumptions



Risk	Severity	Mitigation
<p>Stakeholder participation</p> <p>SynerFi is a newly launched initiative from RCBC, supported by the BSP and Rural Bankers Association. While aligned on a strategic level, the stakeholders are a diverse group that has yet to implement. Inclusive payments schemes, as a shared resource, require active collaboration from all participants.</p> <p>WynePay could face participation challenges due to political uncertainty in Myanmar.</p>	Medium	<p>ThitsaWorks, Visa, ModusBox, and RCBC will develop and share a detailed scope with rural banks including resource commitment requests.</p> <p>The POC team will form a steering committee, composed of representatives of all participating financial institutions, for communication and planning purposes.</p> <p>WynePay participants understand that the POC will not involve real funding and have agreed to participate. With over 30 WynePay participants, others can be chosen if the initial three decide against participation. CB Bank already has a functional direct corridor open to Singapore.</p>

Assumptions



Risk	Severity	Mitigation
Unknown technology constraints in sending, receiving, and settlement institutions Visa and ModusBox have done preliminary testing in a lab but have not deployed the intended solution with all financial institutions. There are a series of unanswered technical questions that will be explored during the pilot - see project scope.	Medium	Visa and ModusBox will use an iterative approach to designing and implementing the solution. As in any technical implementation, there is near 100% certainty that technical issues will be identified. The team will categorize and solve these issues through the iterative development process which emphasizes regular delivery of value in 10-week increments.
Unknown technology hurdles with Mojaloop Mojaloop is a relatively new entrant in the real-time payment space. Not all features have been developed and the international remittance use case has not been extensively used or tested.	Medium	Similar to the above, the team will use an interactive development process. In addition, ModusBox is a member of the Mojaloop Foundation with membership on the Board of Directors. Warren Carew (Vice President Payment Solutions) and the Technical Governing Board. Many ModusBox personnel serve on technical working groups that prioritize developments for the open-source code. Technical hurdles identified in the POC can be prioritized through ModusBox's Mojaloop Foundation engagement.

Constraints



1. **Cost** – Project Team will coordinate with stakeholders in the project to accurately estimate the project budget. Project resources such as labor, materials and equipment, will need to be covered by the approved project budget.
2. **Time** – Project needs to be executed according to the proposed project duration: 1 April 2022 to 31 January 2023. Project Team will propose a project schedule to define the resources that are needed for each particular project activity.
3. **Scope** – Project Team needs to document all of the work to be performed in this project including activities, deliverables and milestones, and out-of-scope activities to set clear expectations with stakeholders.
4. **Quality** – Project Team needs to define the specific desired outcome of the project.
5. **Risk** – Project Team needs to estimate the probability that a risk registered in the risk registry will have an impact on the project.
6. **Resources** – Project Team needs to plan for the availability of resources that may restrict achieving the desired outcome.



Thank you!