



Transforming the financial landscape

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MOWALI, General presentation

Mowali is a joint venture founded by Orange and MTN to enable interoperable mobile money services by adding interoperability rules on top of transaction mediation services

The scheme has defined a common business and technical framework ...

Business rules

- Business terms
- Business processes
- Compliance requirements
- Merchant acceptance label
- Interchange rules

Technical standards

- API/Transaction messages [mojaloop](#)
- Merchant payment
- Security standards

Transaction mediation

- Transaction routing [mojaloop](#)
- Clearing/Settlement
- Forex management



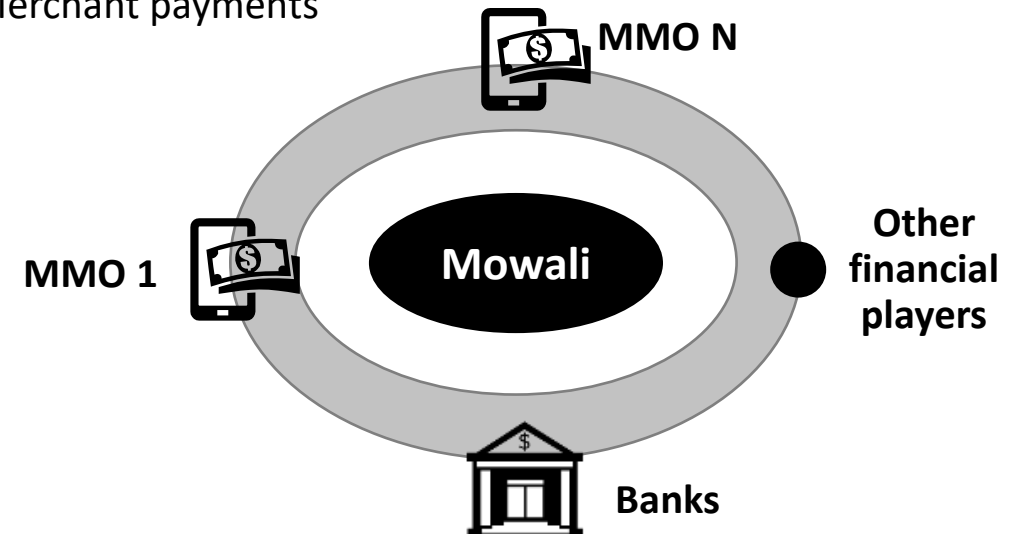
... to provide a full range of mobile money interoperability services for the whole ecosystem

First priorities (2019-2020):

- International and domestic Money Transfer
- E-commerce
- Forex
- Merchant payments

Extensions (2021):

- Bulk payments
- Bank-to-wallet
- Other verticals' specifics



Mowali update 1/2

- Company growing in Abidjan – hiring as a top priority (technical and operational team : 17 HC at Mowali HQ)
- Platform in production (FUT) with first Orange/MTN DFSPs :
 - FUT are done for 2 corridors scenario : Local Currency and Local Currency/Cross Border.
 - *Frozen due central bank veto*
 - FUT completed for one new corridor scenario : Cross Border/Cross Currency (FOREX)
 - Configuring the platform to manage more simultaneous corridors and settlement models

Commercial launch effective since 20 May 2020 – France Morocco

- Partner bank for settlement is Citibank
- Roadmap- following steps:
 - cross-currency transactions – expand Q3 2020 and beyond, ambitious DFSP onboarding roadmap
Inbound transfers (e.g. from Europe), intra Africa (e.g. East-Africa)
 - **How to perform DFSP Onboarding at scale** : Enhanced operational and onboarding tools to support more operators
 - **Onboard QA release function capability & Set up a Business Intelligence tool**
 - Enhanced flexibility on forex rate and settlement management
 - Refining Operational processes and optimizing infrastructure, GDPR tooling
 - Mowali is ready and open to collaborate with others schemes in Africa

How to perform DFSP Onboarding at scale

Too much time for Onboarding

- Shorten the workflow : Move from Sandbox to Production directly
- Improve simulator capabilities on Sandbox to allow qualification and certification,
- Recommend advanced connection tools to new DFSPs
- Set up GSMA-Mowali Partner Onboarding Platform to centralize place for Onboarding with API Schema, Business and Security Validation with a knowledge database for DFSP Onboarding integration

API misunderstanding may occur

- Keep refining documentation based on DFSP feedback
- require internal acceptance report after Mowali API development and implementation

Security configuration is complex

- MCM allows to make security configuration process more sustainable
- And may be SDK supplied by Modusbox
- Looking for balance between Security and Efficiency

Lesson learnt and confirmed:

Without proper tools and processes, onboarding is too complicated to scale.

Main challenges for Operations

Set up Performance and resilience tests environments

- Build Mojaloop e2e performance and resilience model
- Execute performance and resilience test strategy : Mowali setting up specific testing environment within Azure → Working with Microsoft Azure team to mitigate challenges of enabling adequate infrastructure resources to build the test and infrastructure optimisation.
- One SPOF is already identified with WSO2 : current WSO2 External Gateway configuration is not providing High Availability. (Want to remedy by using new OSS solution that removes the need for external gateway).

Backup policy

- As Mowali platform uses Azure Cloud Infrastructure, identify and improve backup policies for all layer of Mowali platform

Monitoring & QoS

- System monitoring → Promfana to cover all systems and ressources
- Service monitoring → Lack of real-time monitoring tool

Release process

- Set up separate Mowali QA release function to challenge pipeline deliveries
- Design and implement automated testing tool to save effort and time

Business Operations

- Set up tools to execute settlement outside the real-time Mowali Platform
- Design BI tool for settlement, billing, report analysis...

Security Operations

- GDPR (Data Protection) Tool Selections and Implementation effort.
- Implementation and operationalisation of security policies.

What we expect from OSS

A process to support the introduction of Enhanced Capabilities

New functionality leads to risk of breaking changes.

→ Mowali needs:

- Backward compatibility-conscious design for new features / enhancements
- Early visibility to allow for planning of proposed changes, **clearly highlighting breaking changes**
- Provision and support of an upgrade path
- Improve QA exhaustivity (including edge cases)

A stream to simplify operator onboarding

Some progress with SDK and MCM, but...

- Mojaloop remains complex for new DFSPs about integration and security architecture :
 - Working with community partners GSMA and ModusBox on process and tools
 - WSO2 automation for onboarding
 - looking forward to adopting the work from OSS labs (IaC v3+) that addresses this.

A stream to address some remaining forex-related challenges

- forex rate transition management without interrupting the service
- Edge cases of two-leg transactions
- liquidity management challenges: specific settlement constraints applying to different currency pairs
 - Staggered forex rate changes
 - Constraints on settlement flow structure
- A stream to support flexible categorisation and settlement on demand as presented in the OSS settlement workstream

Reiterated interest in the security stream

With a focus on compliance (financial + GDPR) & Secure and high quality code base in line with best practise standards

More involvement about Operations & Support

Performance and resilience testing, Test automation tool, Event tracing framework, Customer Care interface API