

DFS  
LAB

## #Mojacamp

The DFS Lab Hackathon-ish, design sprint-y event we ran in April

# Agenda

- DFS Lab Intro
- The Hackathon
- Some “technical” briefs
- What’s next



# The DFS Lab in <280 Characters

The DFS Lab mission is to work with the best FinTech companies in Africa and South Asia and play a meaningful role in their success.

We invest in early-stage FinTech companies and work on ecosystem initiatives in the FinTech space.

# Everyone Has “Customers”

- Hub Operators → DFSPs
- DFSPs → Individuals, businesses
- FinTechs → Individuals, businesses, etc... (sometimes to fill an unmet need in DFSP services)
- Interoperability & Mojaloop will affect everyone's customers and we wanted to test how this community could engage and benefit from working with 3rd parties, i.e. Not a hub operator or implementing DFSP



# The Hackathon

## Participants



## Mentor Representatives

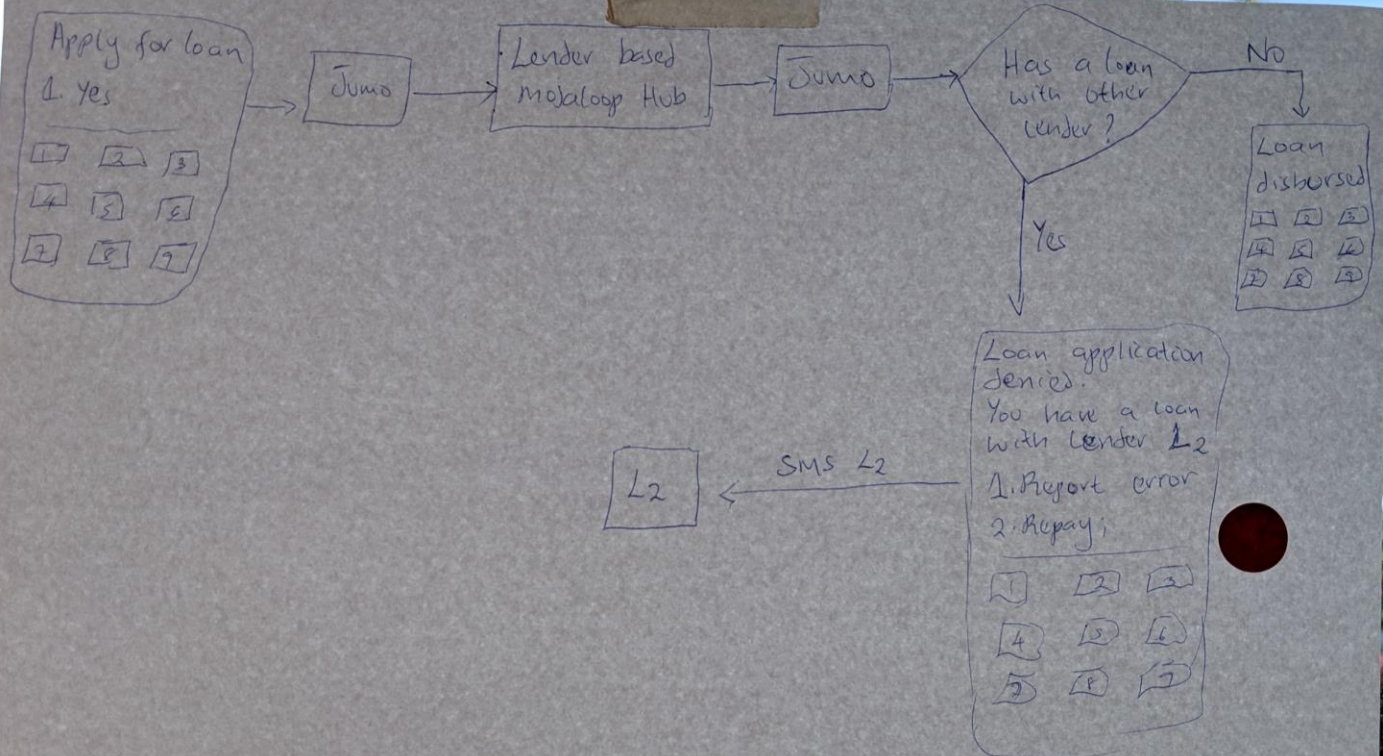












Still  
level  
w/s

Customer

# The Format (Days 1 & 2)

## Introduction to Mojaloop

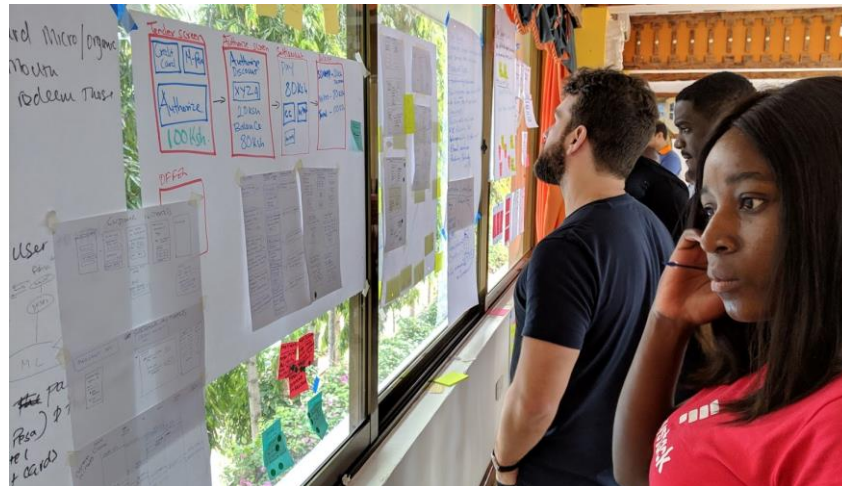
- Technical Intro

## Design Sprint

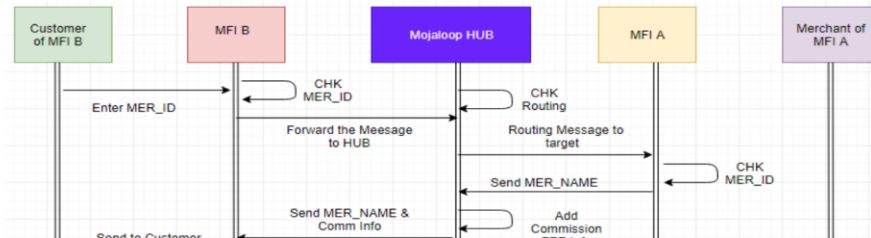
- Bring participants “to the users”

## Outputs:

- Storyboard (UI/UX)
- Process Maps



## Process Flow





# The Format (Days 3&4)

## Build



... and then demo!

# Outreach & Communications

Google search results for "mojaloop".

Results include:

- Mojaloop**  
<https://mojaloop.io/> ▾ Tafsiri ukurasa huu  
Mojaloop is open-source software for financial services companies, government ... Mojaloop makes it easier for financial providers to achieve interoperability.
- mojaloop/mojaloop: Starting point for on-boarding ... - GitHub**  
<https://github.com/mojaloop/mojaloop> ▾ Tafsiri ukurasa huu  
Starting point for on-boarding and contribution documentation for mojaloop - mojaloop/mojaloop
- Gates Foundation's Mojaloop Finance Code Gains in Africa**  
<https://www.forbes.com/.../gates-foundations-mojaloop-...> ▾ Tafsiri ukurasa huu  
22 Apr 2019 - Since the Bill and Melinda Gates Foundation launched an open source banking project, Mojaloop, at Swift's Sibos conference in Toronto ...
- Mojaloop: The Future of Financial Interoperability - Medium**  
<https://medium.com/.../mojaloop-the-future-of-financial...> ▾ Tafsiri ukurasa huu  
15 Jan 2019 - The project is called **Mojaloop**, from the Swahili moja, which means one. Basic project aims to connect people all over the world and ...
- Mojaloop Bootcamp Application - DFS Lab**  
<https://dfslab.net/apply/> ▾ Tafsiri ukurasa huu  
Mojaloop Bootcamp Application. Applications are now closed for participants. DFS Lab invite

DFS Lab article: **A primer on Mojaloop**

By Dan Kleinbaum in DFS Lab (Follow)  
Feb 12 · 5 min read

*With contribution from Jake Kendall and Stephen Deng*

We at the [DFS Lab](#) are running a bootcamp/hackathon to encourage FinTechs to engage with the Mojaloop community and explore the business models that wide-scale, interoperable payment systems like Mojaloop will enable. A question that we get often from the wider FinTech community is a simple one: What is Mojaloop? And what does it enable that is relevant to me? We are going to try to answer these related questions in this post.

First, let's start with the basics.

**Gates Foundation's Mojaloop Finance Code Gains in Africa And Asia**

2,490 views | Apr 22, 2019, 11:00am

By Tom Groenfeldt Contributor @Enterprise & Cloud  
I write about finance and technology.

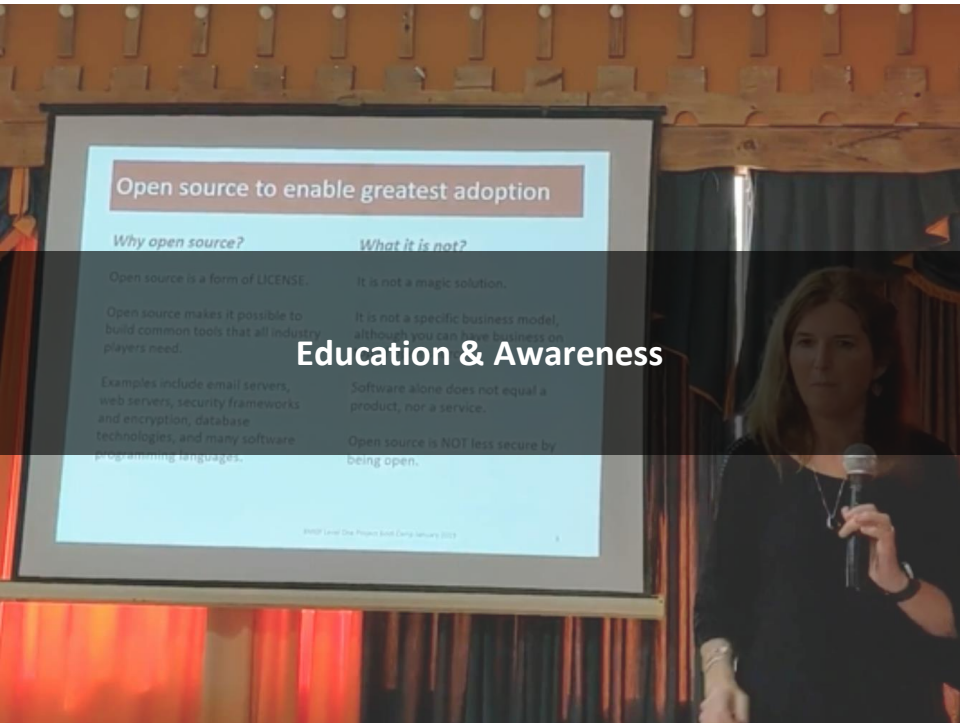
Since the Bill and Melinda Gates Foundation launched an open source banking code project, Mojaloop, at Swift's **Sibos conference** in Toronto in 2017, adoption has been rather slow. Orange Group, one of the world's

**The Man who Bought 'Sports Illustrated' for \$110 Million**

**GEP**

**THE ROADMAP TO PROCUREMENT STRATEGIC AI**

# Why run a hackathon?





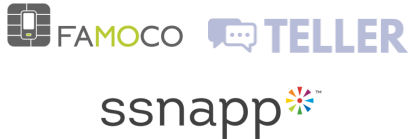
# Participants



- Interoperable 'agent' networks
  - Potential Hub Operators
  - “Will Mojaloop work for me?”
- 



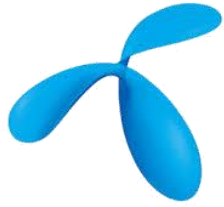
- Lending markets/credit reference bureau
  - 3<sup>rd</sup> party FinTechs
  - “How can Mojaloop/L1Ps be applied outside of payments?”
- 



- Consumer-facing products
- 3<sup>rd</sup> party Fintechs
- “[How] does Mojaloop change my life?”

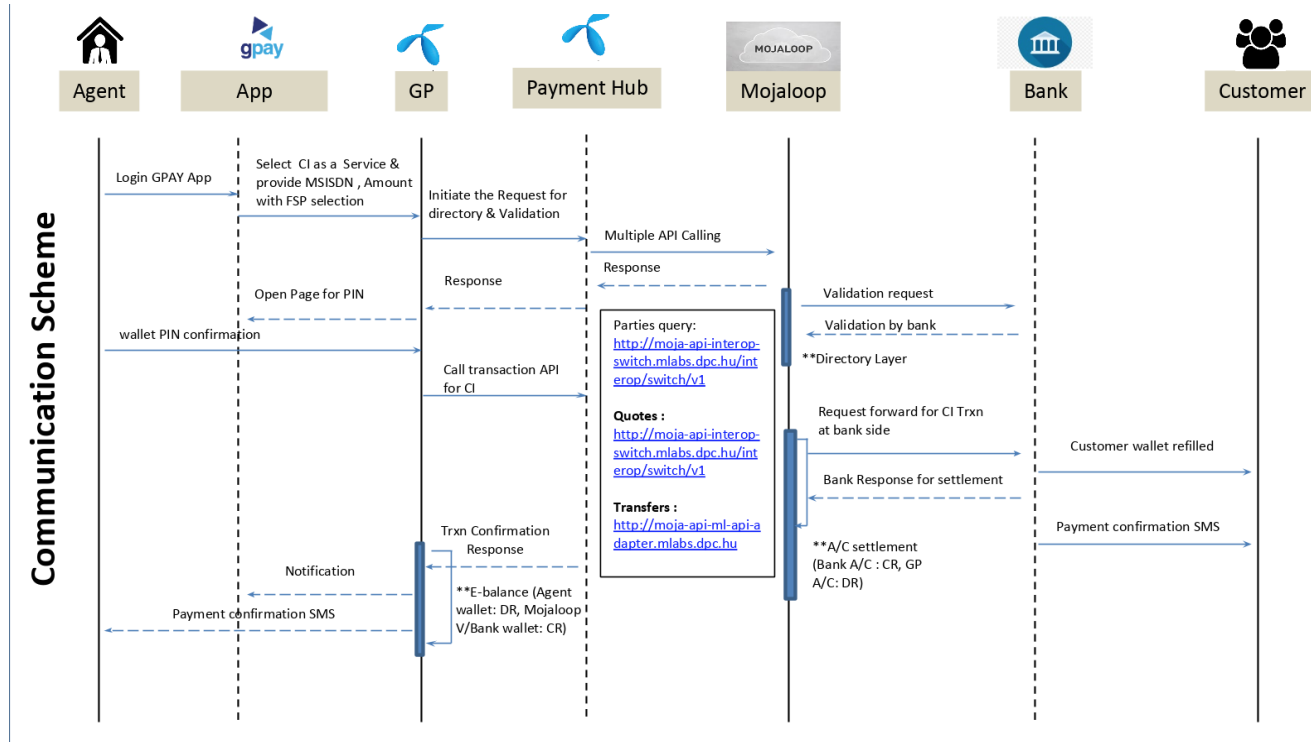


Hub Operator (kind of)



grameenphone

**Core Goal:** Connect the gap between 50mn bank accounts, 67m MFS wallets and 1m agents all in disparate systems. Currently, 6 large banks are on board, but the 53 remaining banks present a large logistical and technical hurdle to on-board.





grameenphone

### **Questions & Opportunities:**

- A lack of settlement API on the sandbox did not give them confidence that they could meet their performance requirements
- What do you do with a person with multiple accounts at different FIs all linked to one MSISDN?

**High Note:** There is an acute need to figure out how to integrate a large number of providers and build a switching platform and the GrameenPhone team is pursuing a pilot



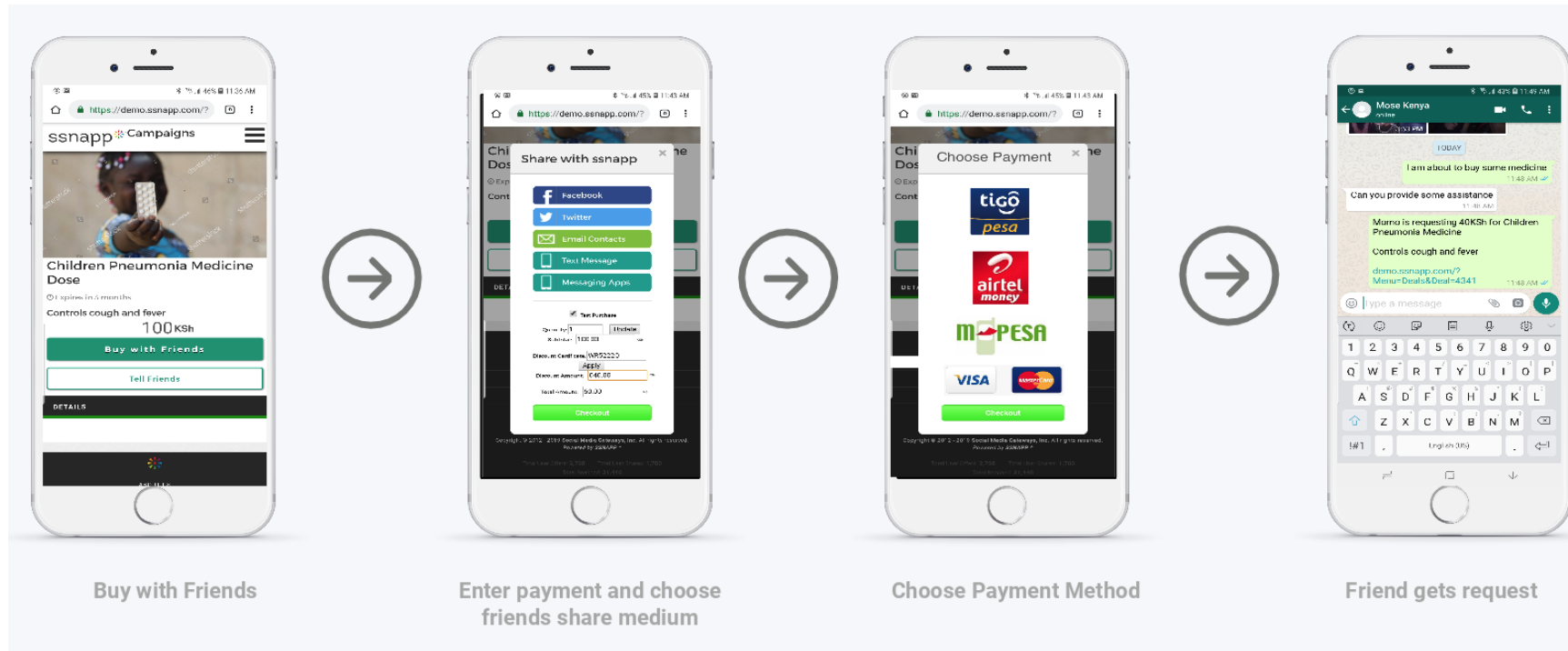
Mojaloop and  
e-commerce





**Core Goal:** Enable anyone to buy and sell anything, from anywhere

**Mojaloop Goal:** Merge multiple payments from payees on multiple DFSPs to a single merchant request.





### **Hurdles:**

The sale of any type of good under L1P would require the ability to do bilateral "interchange" between merchants and the producers of goods for commissions, and the buyer of a product to make a payment and have it split between the merchant and the buyer. This requires two things:

1. Split-payment from one payee to multiple recipients.
2. Multiple-quote combination

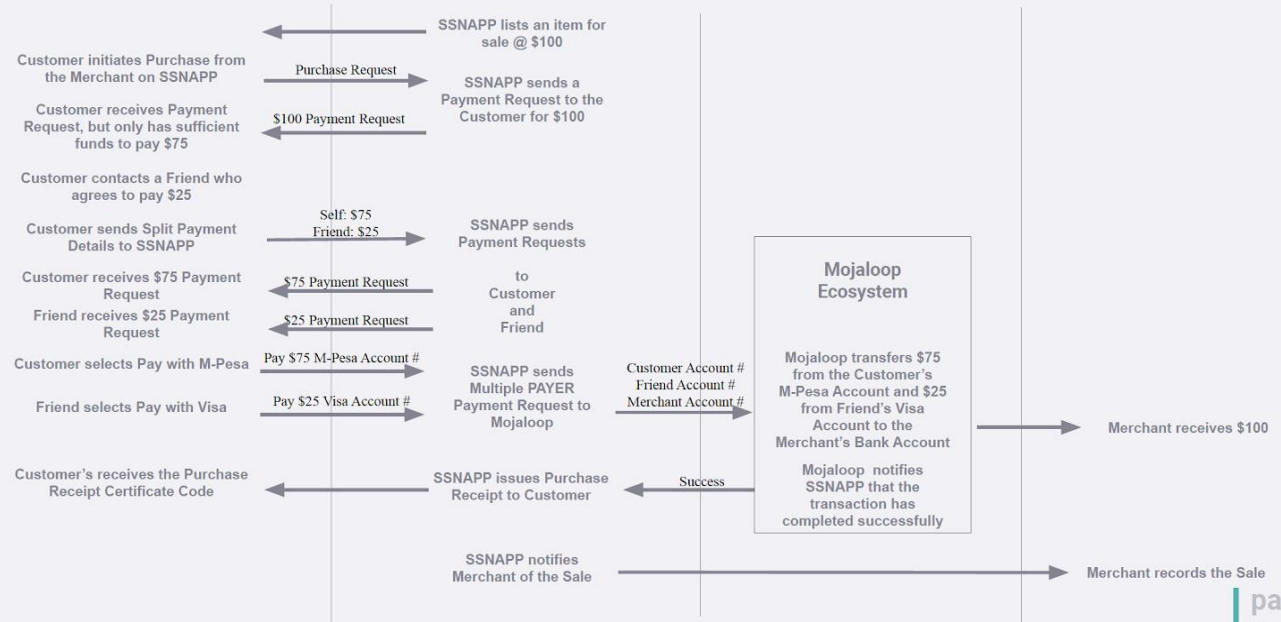


Get “buy” with a little help from a friend

(Note: This is not an API call)

## Mojaloop Use Case

### Purchase an Item with Help from a Friend - Multiple PAYER -

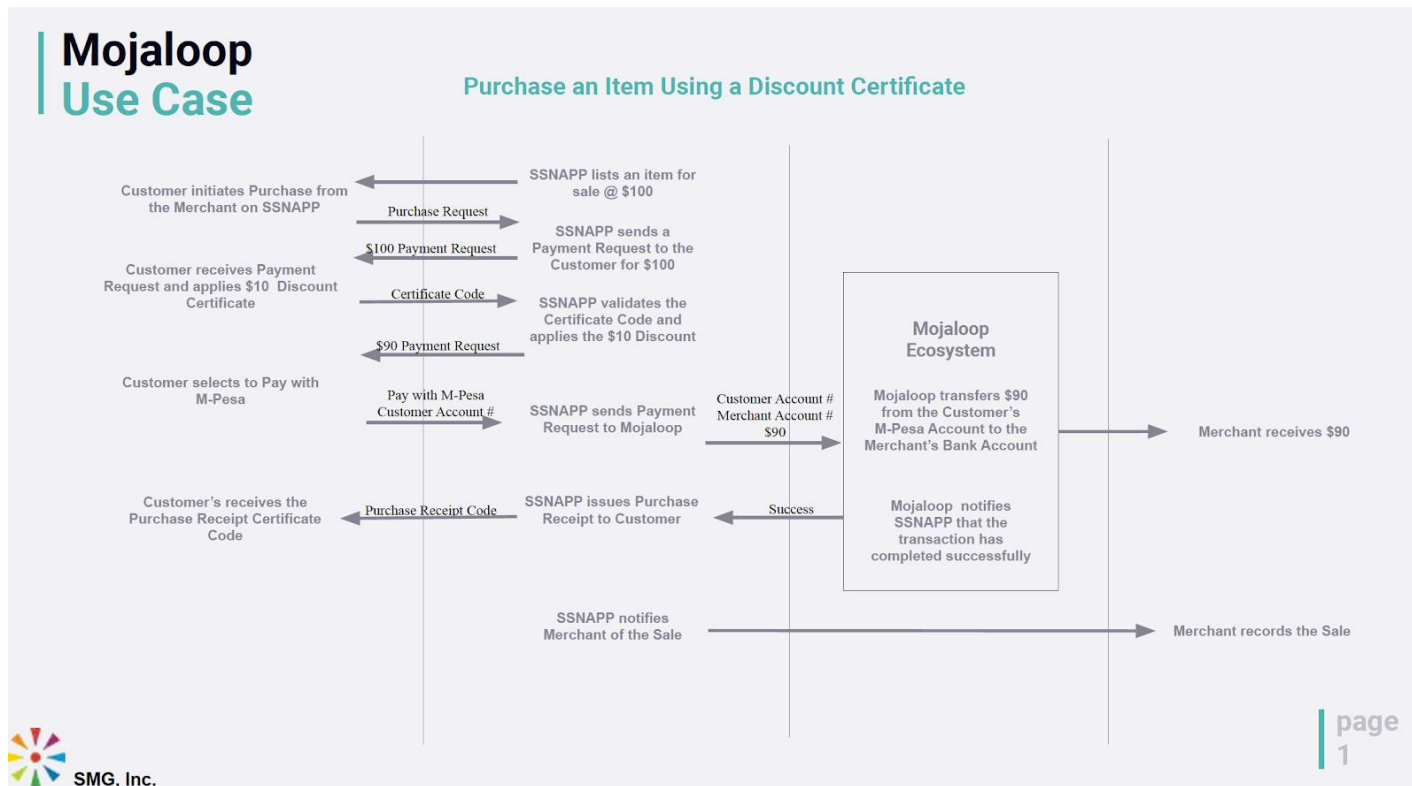


SSNAPP Inc



## Promotional Discounts:

**“Refer a friend to  
Mojaloop and get  
\$10 off!”**





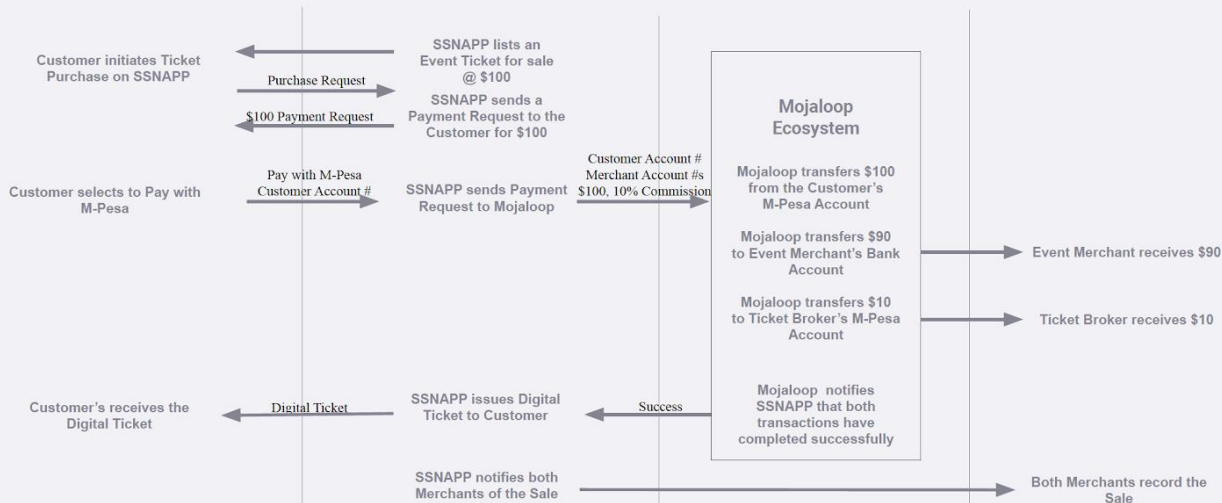
## Commission-based reseller model

**“Get 10% of  
whatever products  
you sell”**

**(Note: This is not an API  
call)**

### Mojaloop Use Case

#### Purchase an Event Ticket with Commission - Multiple PAYEE -



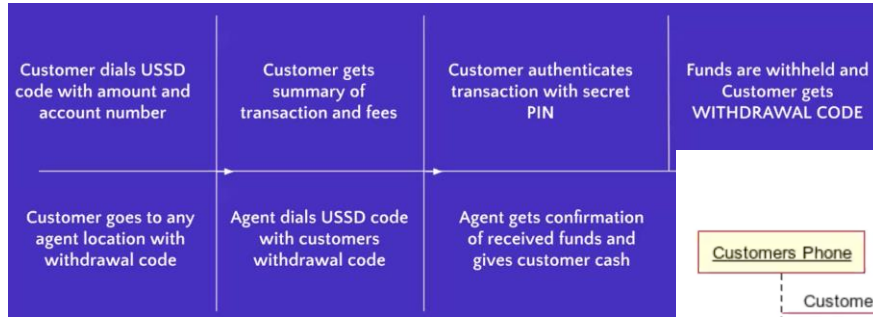
SMG, Inc.



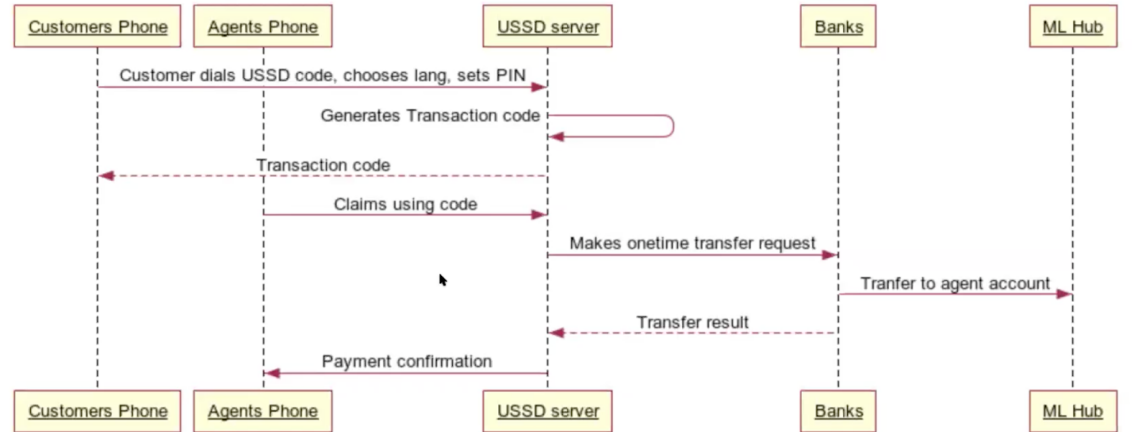


**Core Goal:** To provide DFS to the under-banked by expanding beyond digital loans.

**Mojaloop Goal:** Demonstrate how a customer can redeem a voucher from any agent on their network through a Mojaloop deployment



### USSD Cashout Service Request Money

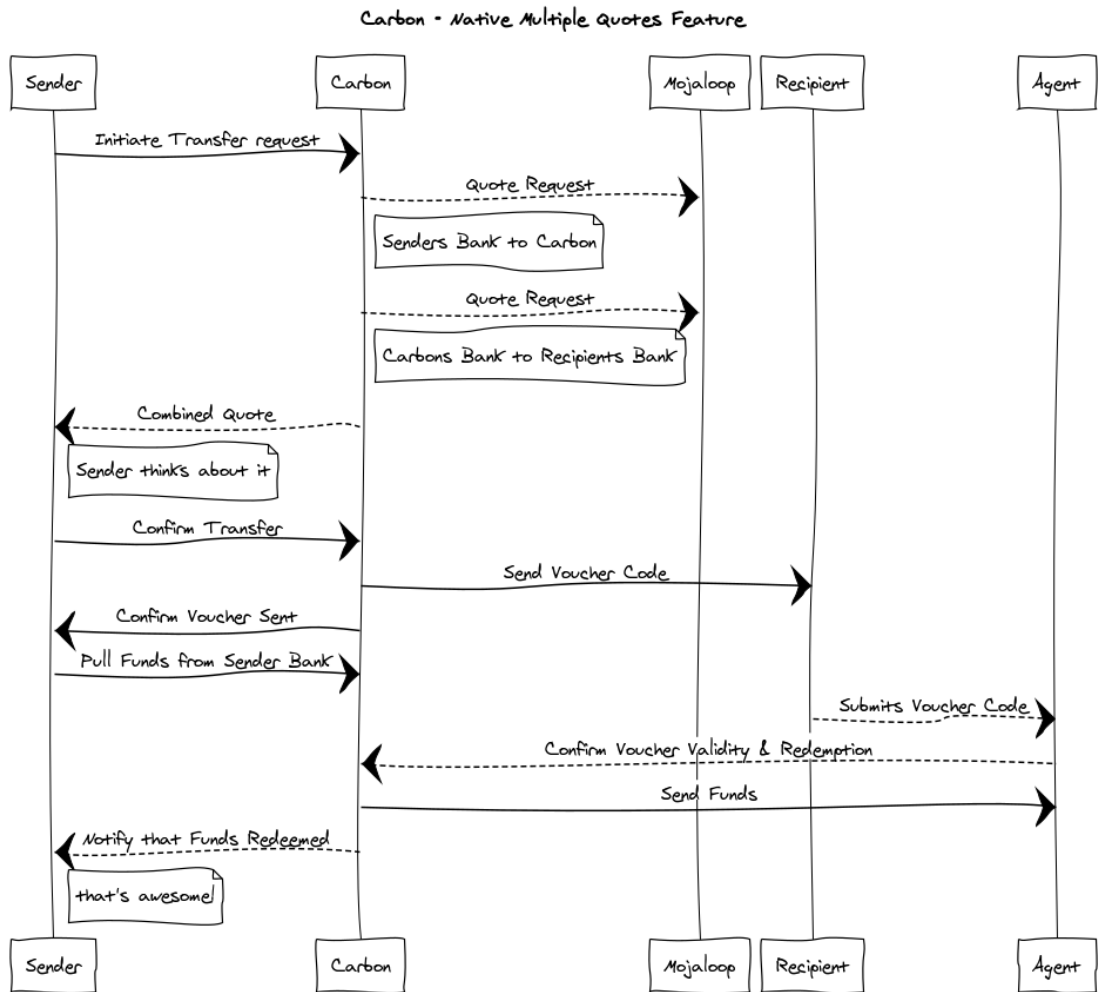


www.websequencediagrams.com



## What Carbon Wants:

- Multiple Quote Combination
- “Digital Scratch card” – for non-real time voucher redemption
- From the ATM Conversation, is a “really long timeout” the best solution for this?





How Mojaloopy can it  
get?



**Core Goal:** Offer equitable finance services to mobile-only customers

**Mojaloop Goal:** Build out a credit marketplace on top of a Mojaloop deployment

## 01: Loan Request | Credit-Check Policy

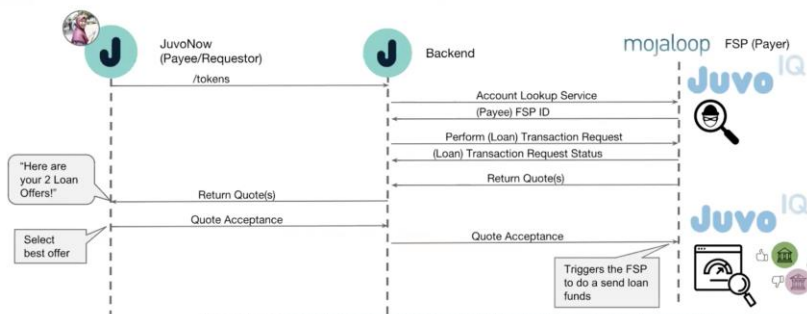
```
1 POST /v1/iq/policies HTTP/1.1
2 Host: iq.juvo.com
3 ApplicationId: mojaloop.tigo.policy.tz
4 Content-Type: application/json
5 Authorization: {reduced}
6 Cache-Control: no-cache
7
8 {
9   "name": "policy_mojaloop_credit",
10  "properties":
11  {
12    "score_min": 0,
13    "score_max": 100,
14    "decision_tiers": {
15      "approve": [41,100],
16      "deny": [0,20],
17      "manual_review": [21,40]
18    }
19  }
20 }
```

```
1 {
2   "custom_variables": {},
3   "decision_properties": {
4     "number_of_rules_evaluated": 3,
5     "policy_execution_terminated": "NO",
6     "policy_name": "policy_decision_example_1",
7     "reason_codes": [
8       {
9         "max_monthly_payment_150": 30
10      }
11    ],
12   "rules_not_evaluated": [
13     {
14       "max_monthly_payment_750"
15     }
16   ],
17   "decision_result": {
18     "decision": "review",
19     "score": 30
20   },
21   "request_timestamp": "2019-04-10 12:"
```

Juvo Mobile Inc. Confidential and Proprietary. Do not copy or distribute without express permission from Juvo Mobile.

## 03a: Loan request initiated | enhanced

Using Juvo's data-driven **policy engine** to address fraud & enable better FSP decisioning for offers & assess risk

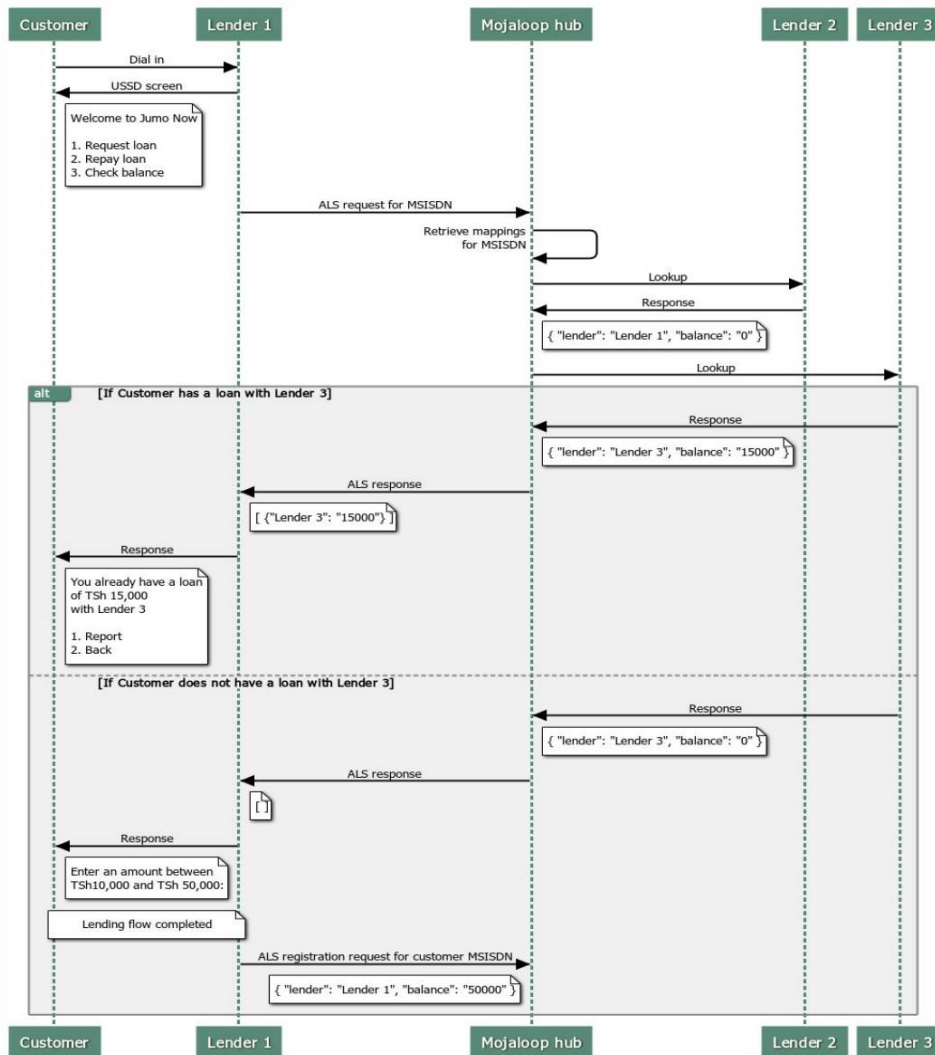


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## What Juvo would want:

- Currency utility for cross-border use-case
- Merchant directory for merchant-payments use case
- Enriched FSP directory where we have a list of services and products the FSP can provide.
- Metadata
- Ability to deploy a local instance of Mojaloop as part of the workshop requirements







## **Opportunities, Questions & Challenges:**

- What would the Level 1 Principles look like applied to lending?
- How do we want to allow metadata to be incorporated into “add-on” use cases like lending marketplaces?
- Why async vs. sync API requests?
- Zero-knowledge proof system to allow lenders to share and validate data without having to violate privacy agreements or give up proprietary data presents an opportunity to create a fairer, more open and affordable lending market.

# What else we kept hearing

## Testing is Hard

- Documentation is outdated
- Async vs. Sync APIs
- Deploying a standalone instance is not trivial

## Functional Requirements

- Settlement Performance Questions
- Security/Fraud Questions
- Regulatory Requirements Unfulfilled

## Business Cases

- The questions to ask are clear
- The answers were not

## New Use Cases

- Multiple Addressing
- Split Payments -> multiple recipients
- Combine multiple payments → single authorization

## “How does this work (or not) with L1P?”

- Push ↔ Pull Adaptation.

# What's next

- Full Technical Briefs → GitHub
- Another hackathon (likely)
- Test a workbench strategy
- Generally, ask: who are our current customers? Who *can be* our customers? How will we need to serve them?



Did someone say containers?

# Thanks!

More Info:

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