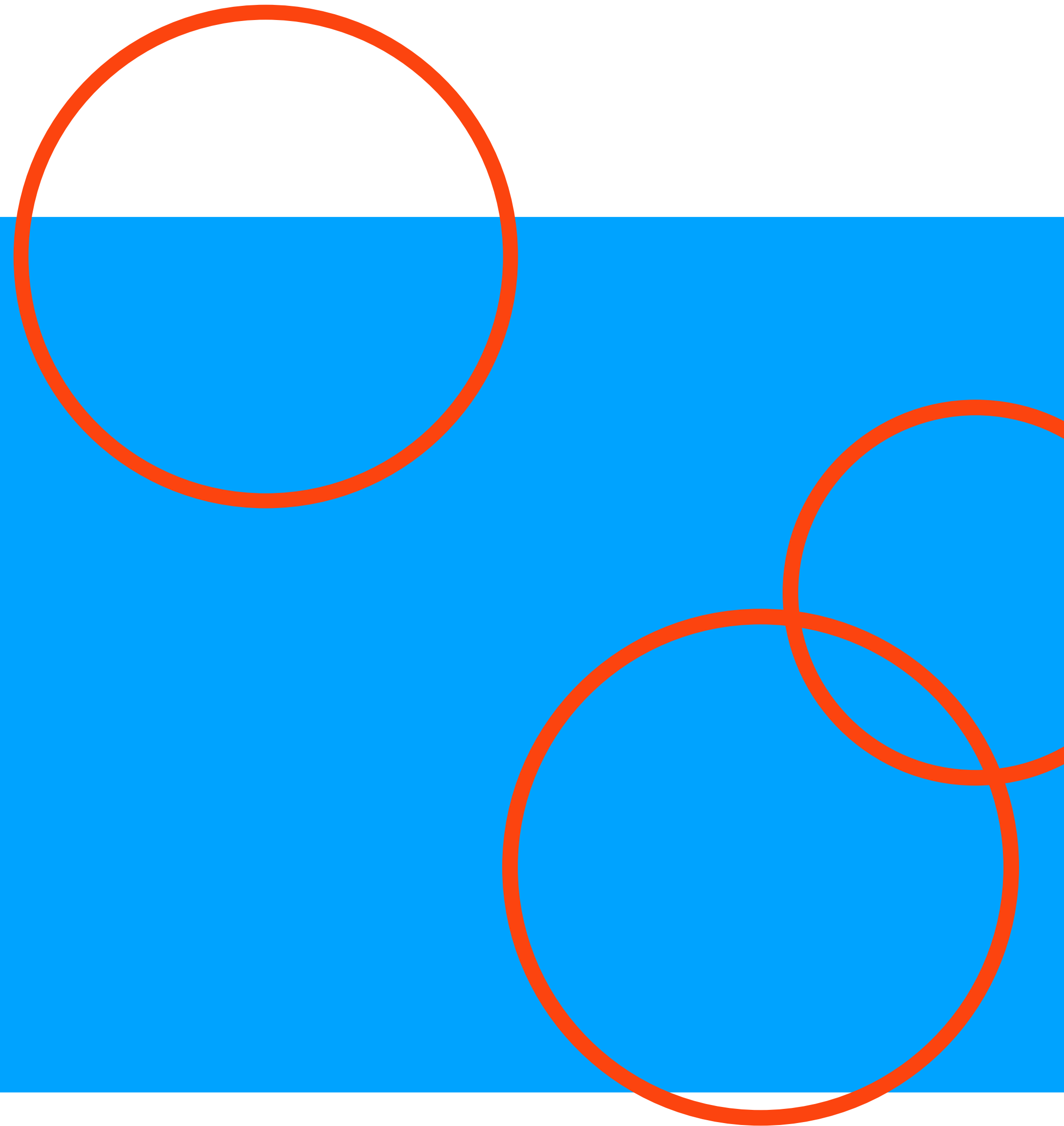




# Merchant Payment Workstream

PI-22 - 27<sup>th</sup> June 2023 (Online Meeting)





# Merchant Payments

PI-22 – June 27, 2023

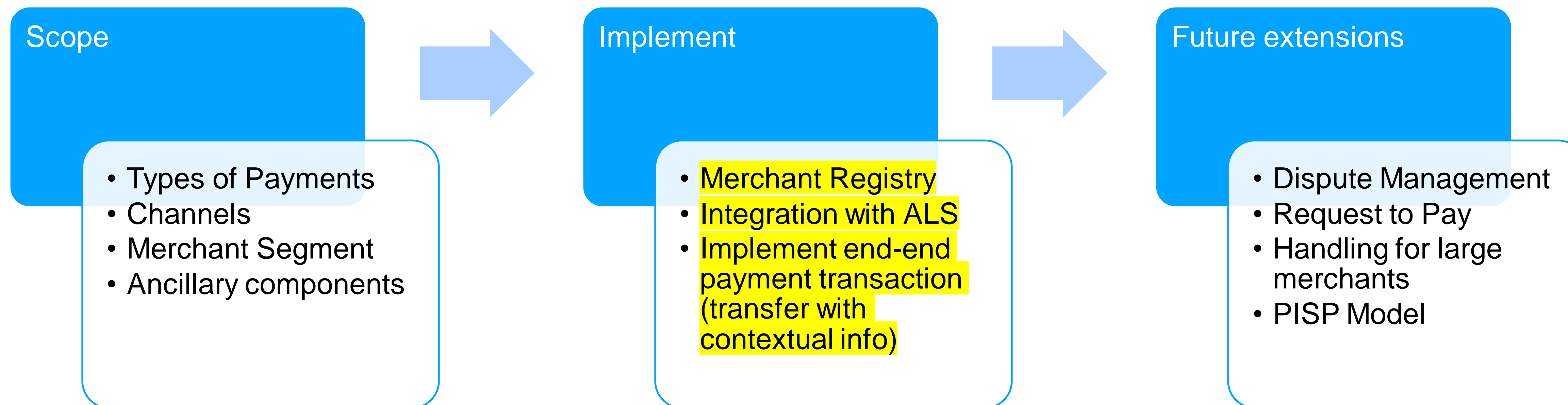


# Overarching objective

- . Mojaloop supports transfer of funds initiated both from a Payer DFSP and a PISP.
- . Identify what are the gaps between what Mojaloop supports now and what needs to be added to enable utilization of Mojaloop as a payment system that supports “Merchant Payments”
- . A Payment as opposed to Transfer will result in delivery of services or goods, thus contextual information needs to be captured and passed on to support ancillary process e.g. Fraud and Risk monitoring, Dispute resolution etc.



# Our focus right now



**Proximity Payment at a small merchant by a customer using either feature phone (USSD) or smart Phone (QR scan)**

# Merchant Payments - Scoping

Scoping Area	Focus Area for current PI	For Future PI
<b>Types of Payments</b> <ul style="list-style-type: none"><li>• Proximity Payments</li><li>• Online Payments</li><li>• Bill Payments</li></ul>	Proximity Payments	Online Payments Bill Payments
<b>Channel</b> <ul style="list-style-type: none"><li>• Feature Phone / USSD</li><li>• Smartphone / QR</li></ul>	USSD – using Till Number as Alias QR Code -	QR Code format to adopt / support
<b>Merchant Segment</b> <ul style="list-style-type: none"><li>• Small (small stall, hawker)</li><li>• Medium Size (e.g. individual shop)</li><li>• Large (Chain store)</li></ul>	Small Merchants	Medium Sized (single location, multiple checkout) Large Merchant (multi-location, Multi-checkout)



# Merchant Payments – Merchant Registry

This work is led by **Thitsaworks** team (Ei Nghoon Poo & team) with active support by **Rob Reeve**

**Merchant Registry** is envisaged as a

1. Central Hub component offered as an add-on service by the Hub operator
2. Serve as the Registration point for Merchants to either **self-register** or get registered by DFSP
3. Capture essential Merchant information which can be used in future by FRMS for fraud and risk management
4. Act as Oracle for an “Alias” which can be used as unique identifier to identify **discrete merchant** in Proximity Payments.
5. Designed to be flexible to support
  1. Simple Merchant - (a business with one location and one checkout)
  2. Somewhat complex – (a business with multiple checkout at a single location)
  3. Very complex – (a business with multiple locations and multiple checkouts)
  4. Online payments
6. Allow Merchant the flexibility to request switching from one DFSP to another (same alias, different DFSP account)



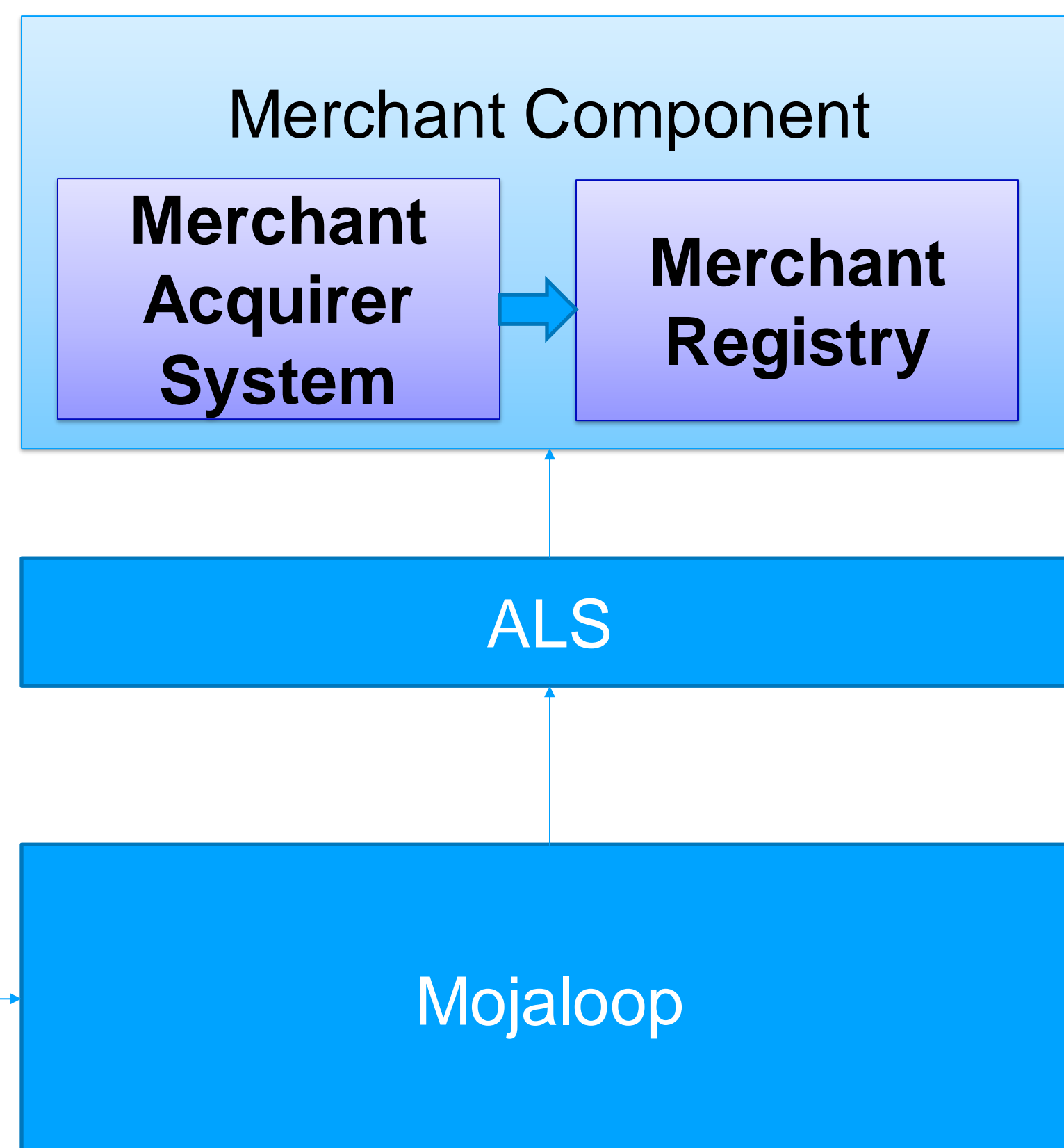
# Merchant Payments – Merchant Registry

**Merchant Registry** will not be used for

1. Storing any financial fee information e.g. Merchant fee or Merchant Discount Rate (MDR)

# High level architecture

Merchant Acquirer System is a centralized hosted data repository which will give a UI to DFSP who want to onboard merchants as well as individual merchants to self-register.



Merchant Registry is the “Oracle” which will get request from Merchant Acquirer system as part of merchant onboarding to register an **Alias**.

It will also implement the interface with ALS to provide Merchant DFSP information in response to GET /participants call



# Walkthrough of design documents


- Document Repo - <https://github.com/mojaloop/merchant-payment-docs/tree/master>
- Merchant Onboarding
  - [https://github.com/mojaloop/merchant-payment-docs/blob/robreeve 20230631 DA Changes/DFSP%20merchant%20onboard%20Sequence%20Diagram.md](https://github.com/mojaloop/merchant-payment-docs/blob/robreeve%2020230631%20DA%20Changes/DFSP%20merchant%20onboard%20Sequence%20Diagram.md)
- ERD of Merchant Acquirer Portal
  - <https://github.com/mojaloop/merchant-payment-docs/blob/master/Entity-Relations-Diagram.draw.io>
- End to End Flow for Transaction
  - [https://github.com/mojaloop/merchant-payment-docs/blob/robreeve 20230631 DA Changes/end to end merchant payment flow.md](https://github.com/mojaloop/merchant-payment-docs/blob/robreeve%2020230631%20DA%20Changes/end%20to%20end%20merchant%20payment%20flow.md)



# Design considerations

- . Merchant Registry is kept as a separate component so that it can publish standard interfaces
- . DFSP who wants to provide merchant services can push **Data** to registry and register Alias.
- . In the even of a Merchant desirous to change their DFSP, provide interface to update the Alias/DFSP mapping
- . Service the GET /participants call from Payer DFSP to fetch Merchant DFSP so that subsequent GET /parties call is routed to relevant DFSP.





# Merchant Acquirer system

Prototype



# User Stories – Merchant Acquirer System

## ★ Hub Users

- User/Role Management (Hub users, DFSP user)
- Enable/Disable DFSPs
- View Merchant Records

## ★ DFSP users

- Upload merchant records from their existing system
- Validate self-registered merchants
- Maker/Checker operators for each actions

## ★ Merchant

- Register and create account from self-registered portal
- Change DFSP, update information
- Check status of registration and amend the form accordingly



# Merchant Acquirer System Portal

## Designs and Functionality

- Figma Prototype

# Next Steps

- **Merchant Acquirer system and Merchant registry**
  - Finalize design
  - Test case planning (*functional, security, performance*)
  - Development
  - Testing
- **Design for other use cases**
  - Online Payments – USSD (user having USSD wants to pay online)
  - Bill/Invoice based payments
  - Request to Pay





# THANK YOU