

Establishment of a Fingerprint Authentication Platform



Agenda

- 1) Company Introduction
- 2) Pilot Project Overview
- 3) Key Learnings
- 4) Future Business Plan

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LIQUID

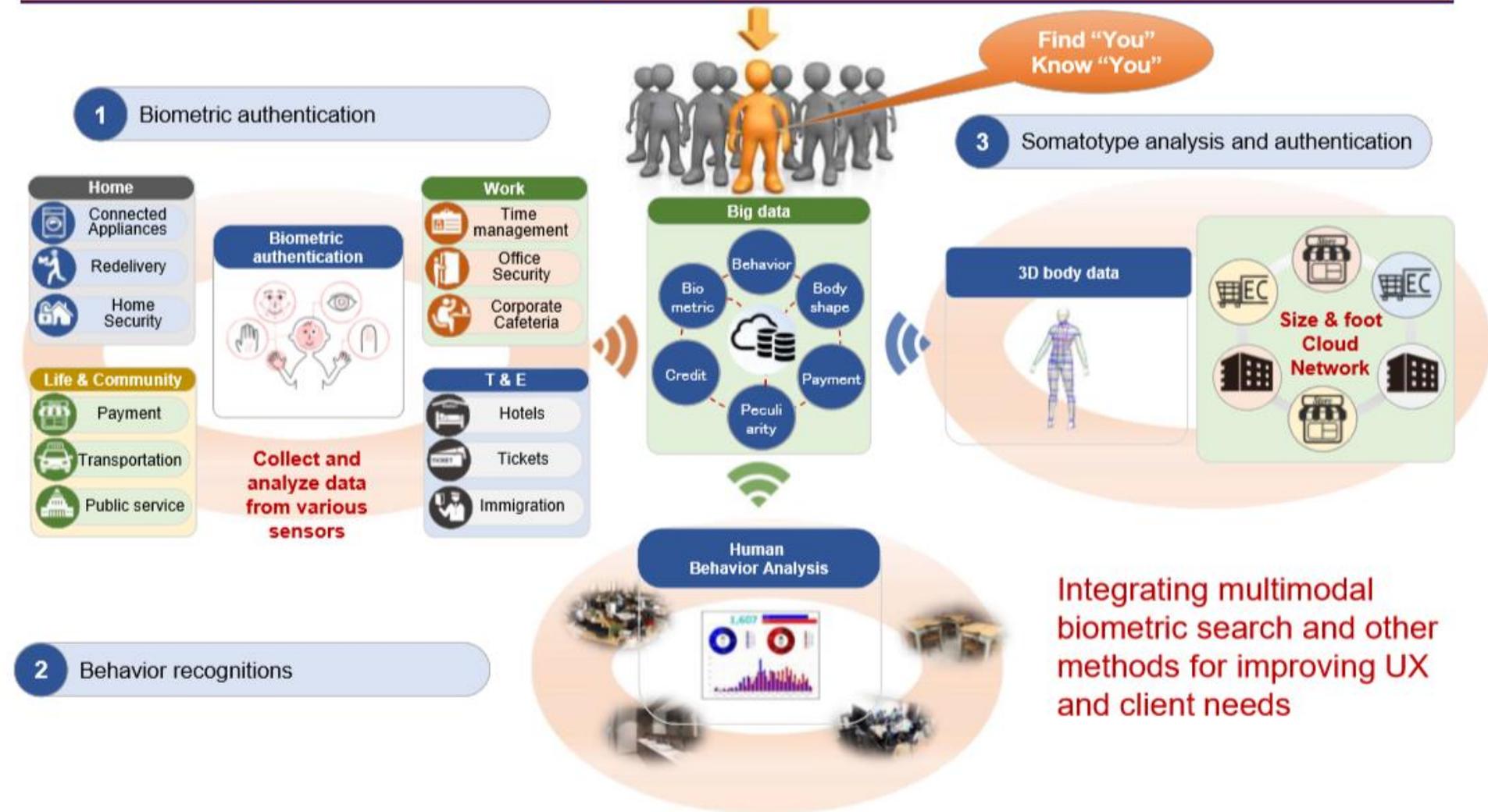
Free your hands,
touch the future.

We provide the world's top-quality biometric authentication platform.
We change YOU yourself, into wallets, keys, and IDs

Corporate mission

Develop and support the new society with LIQUID AI engine and various sensing technologies  **LIQUID**

Support business and the society to manage the connected hub for life in "Industry 4.0"



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Our Pilot Projects in the Philippines



Retail



Government

Our Pilot Projects in the Philippines



LIQUID

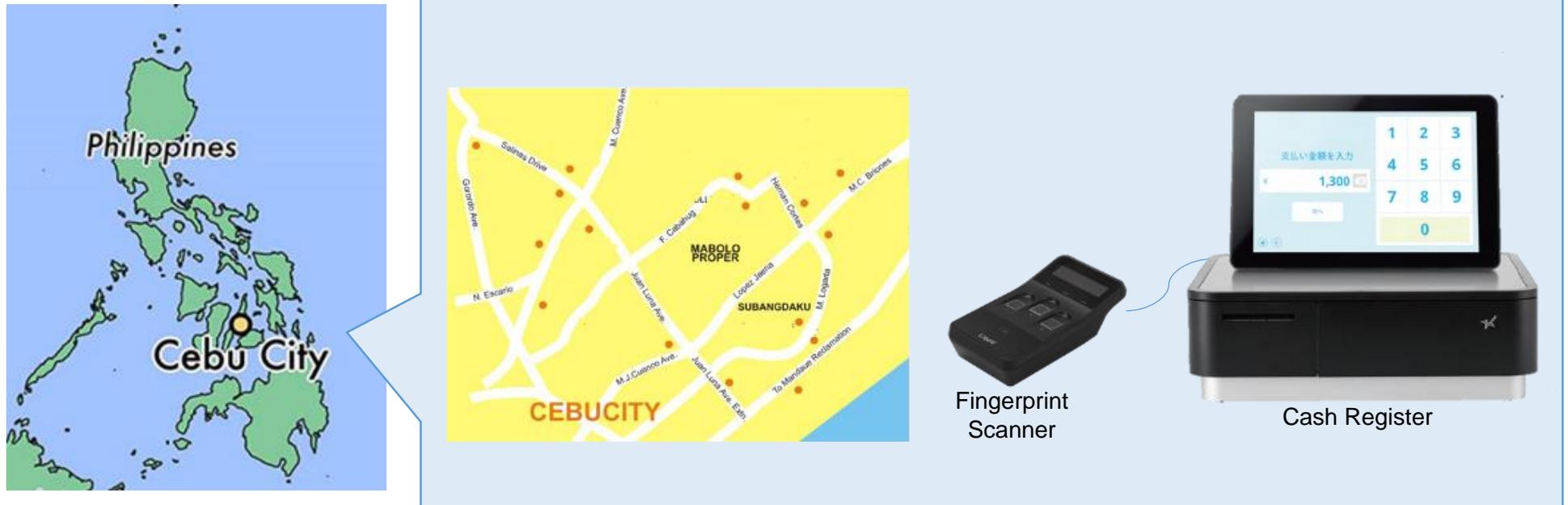


Retail



Government

Biometric Payment at Retail Stores

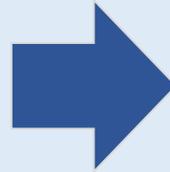


Proof of Concept Test executed on **Dec 2017 – Jan 2018** in Cebu area with 20 local retail stores and 1,500 Test users

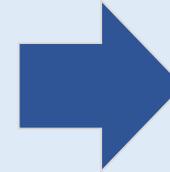
As-Is



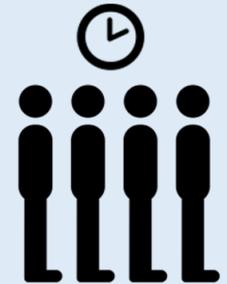
Various Payment Methods



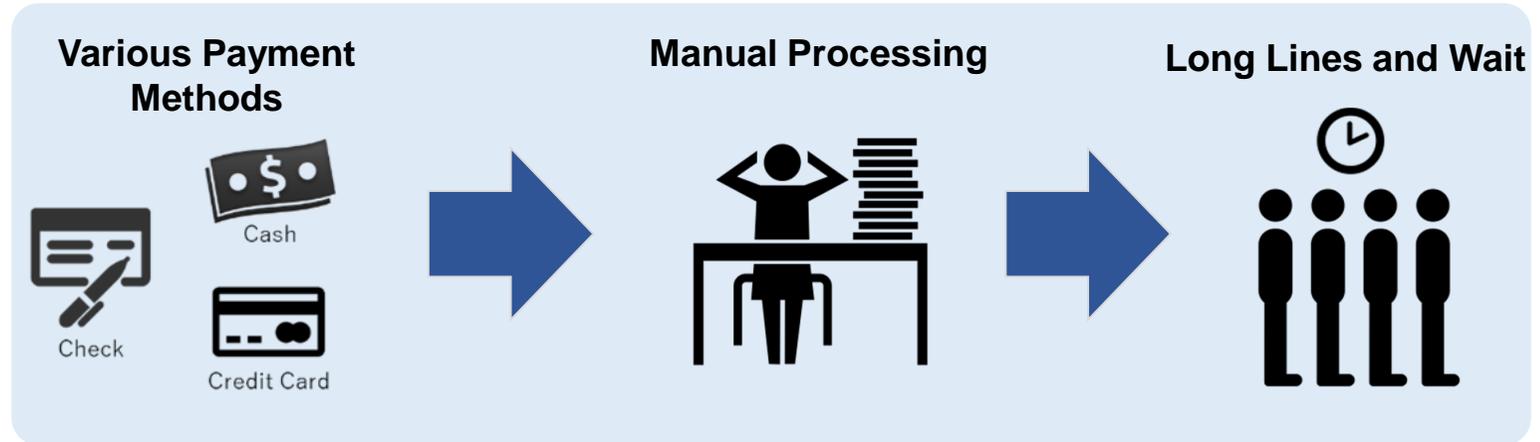
Manual Processing



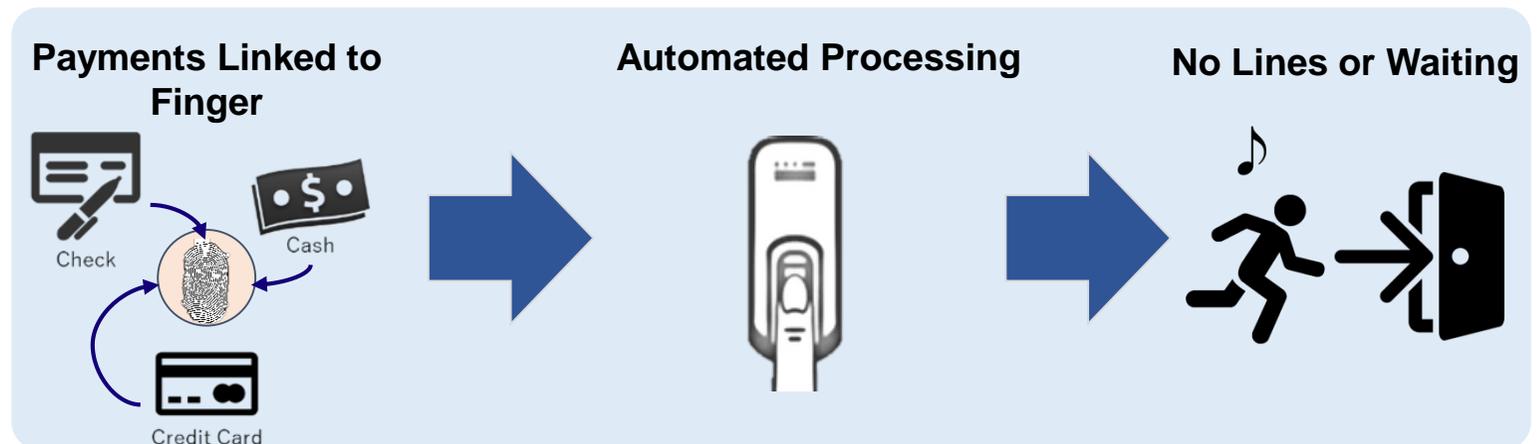
Long Lines and Wait



As-Is

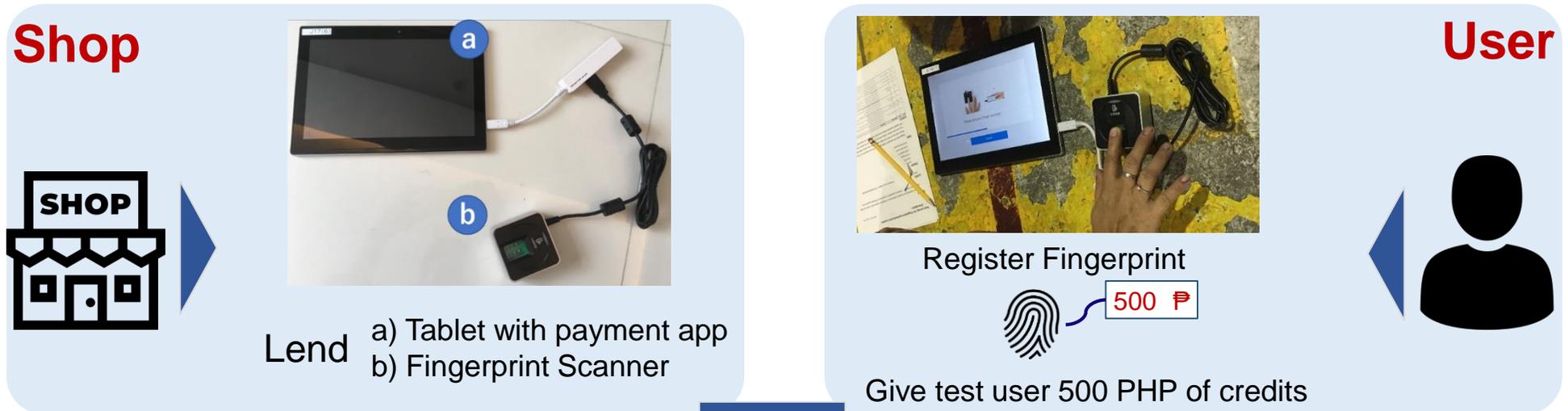


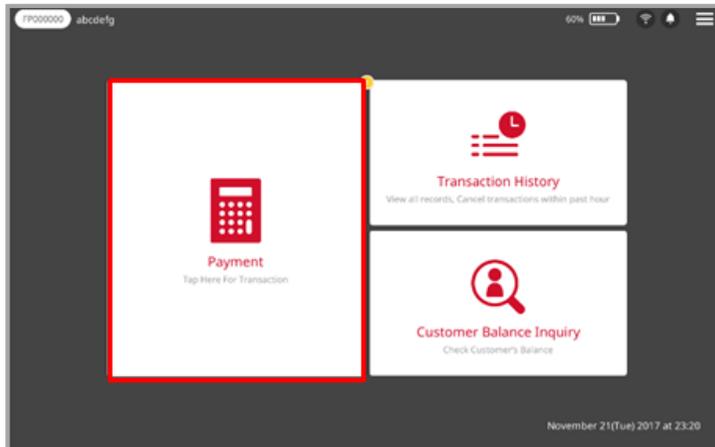
To-Be



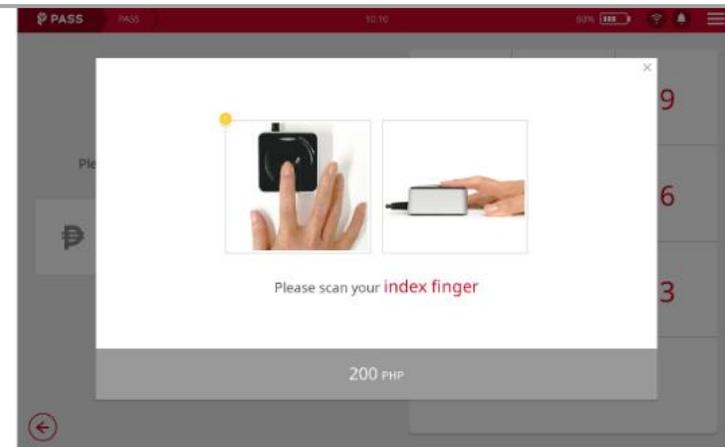
Pilot Test Summary

Test the viability of biometric payment by receiving feedback from both retail stores and end users

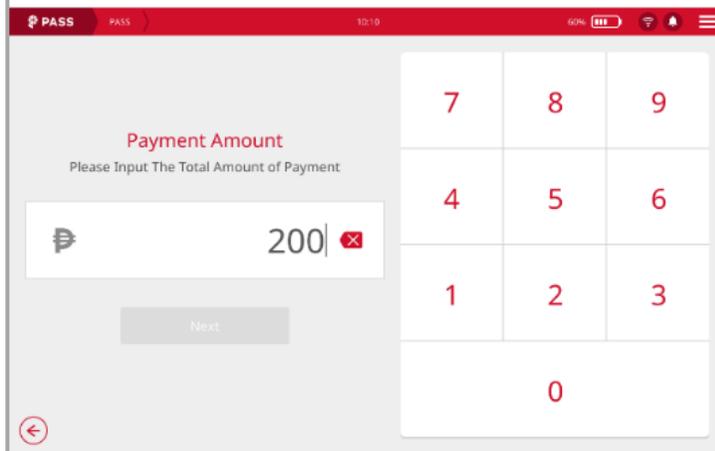




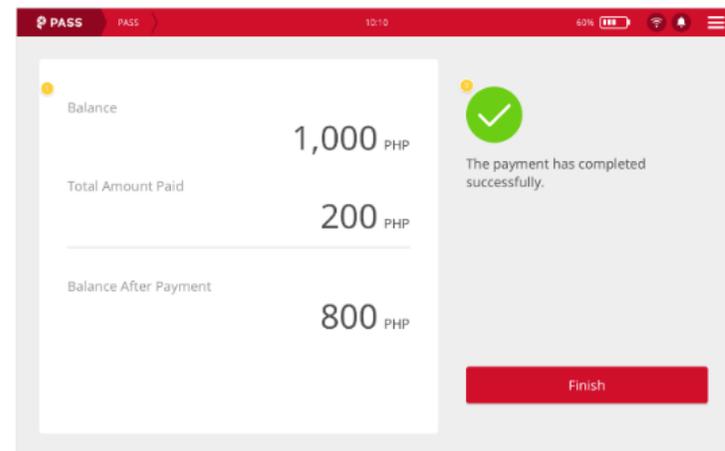
① Select Payment Function



② Scan Index and Middle Finger



③ Input payment amount



④ Payment Complete

Shop



Overall Satisfaction: 4.0 / 5

Allowable Payment Transaction Fee

| Transaction Fee | # | Share |
|-----------------|----|-------|
| < 0.5% | 10 | 50% |
| < 1.0% | 2 | 10% |
| < 1.5% | 1 | 5% |
| < 2.0% | 3 | 15% |
| No Answer | 4 | 20% |

User



Overall Satisfaction: 4.3 / 5

Preferred Mode of Payment

| Method | # | Share |
|-------------|-----|-------|
| Fingerprint | 223 | 47% |
| Cash | 138 | 29% |
| Credit Card | 35 | 7% |
| Mobile | 26 | 6% |
| No Answer | 50 | 11% |



Need to work out pricing model and a network of shops that can make the business model produce profit

Our Pilot Projects in the Philippines



Retail



LIQUID



Government

Simulation of Clearance Renewal biometric issuance

Republika ng Pilipinas
(Republic of the Philippines)
Kagawaran ng Katarungan
(Department of Justice)
PAMBANSANG KAWANIHAN NG PAGSISIYASAT
(NATIONAL BUREAU OF INVESTIGATION)
Maynila
(Manila)

2020
1554439

DEC REC. NC10
REC. NC10

Name: _____ Date of Birth: _____
Address: _____ Place of Birth: _____

Nationality: FILIPINO Gender: FEMALE

Purpose: TRAVEL

TO WHOM IT MAY CONCERN:
This is to certify that the person whose prints appear hereon has requested a clearance from this office and the result(s) is/are listed below.

NO RECORD

VALID FOR ONE YEAR FROM DATE OF ISSUE

DOCUMENTARY STAMP (P15.00) PAID

Republic of the Philippines
National Police Commission
Quezon Police Provincial Office
Lucban Police Station
Lucban, Quezon

09/08/2009
DATE

POLICE CLEARANCE CERTIFICATE

No. B 851852

TO WHOM IT MAY CONCERN:
This is to certify that the person whose name, picture, signature and right thumb print appear hereon, has passed the records verification which was conducted by this Station. The result(s) of which is/are listed below:

NAME : _____
ADDRESS : _____
DATE OF BIRTH : _____
PLACE OF BIRTH : _____

FINDINGS : NO DEROG

PURPOSE : INTERNAT

VALID FOR : Six Month

Res. Cert. No. : 21742036

Date issued : 01/19/2009

Verified By: _____
Chairman, Peace and Order

Chairman, Education and Livelihood

Chairman, Trade and Industry

Chairman, Agriculture, Sports and Youth Development, Appropriation

Chairman, Health and Sanitation

Chairman, Environment

Chairman, Infrastructure

Republic of the Philippines
Province of Laguna
City of Santa Rosa

TEL. NOs. _____

CERTIFICATION / CLEARANCE

To Whom It May Concern:

This is to certify that Mr./Mrs./Miss LOUREN D-JOVITO of legal age, single, married, separated, widow, widower, is a bona-fide resident of this barangay, with postal address at _____, and known to me of good moral character.

Certify further that as per records filed in this office, subject person, has NO derogatory records as of this date of issue.

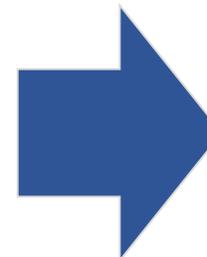
This certification is hereby issued upon the request of the above subject person in connection to his/her application for:

LOCAL EMPLOYMENT
 TRAVEL ABROAD
 LOAN PURPOSE
 OPEN ACCOUNT
 TRICYCLE FRANCHISE

POSTAL I.D.
 POLICE CLEARANCE
 N.B.I. CLEARANCE
 LICENSE RENEWAL (FIREARMS/DRIVER'S)
 OTHERS _____

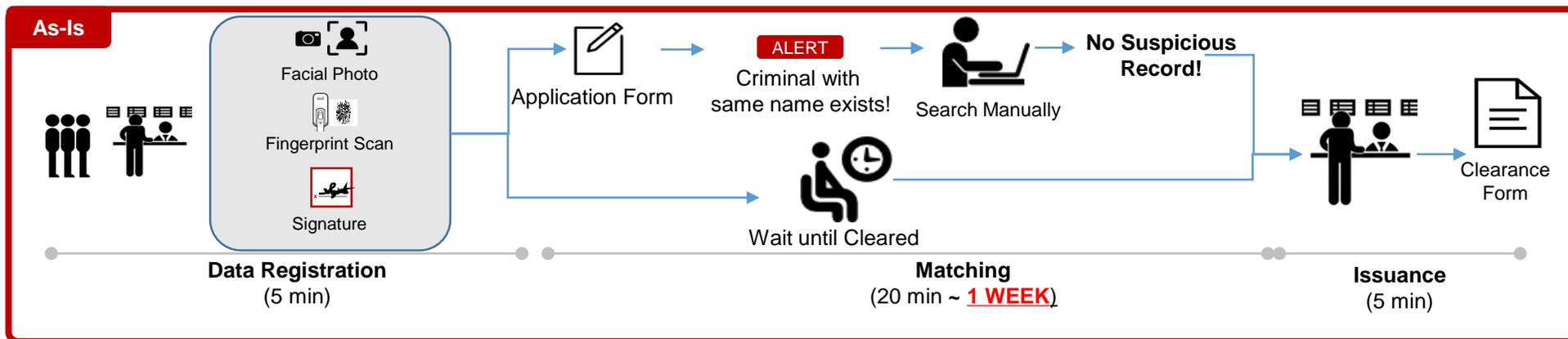
Given this 11th day of July, 20 at _____, City of Santa Rosa, Laguna.

NOT VALID WITHOUT SEAL

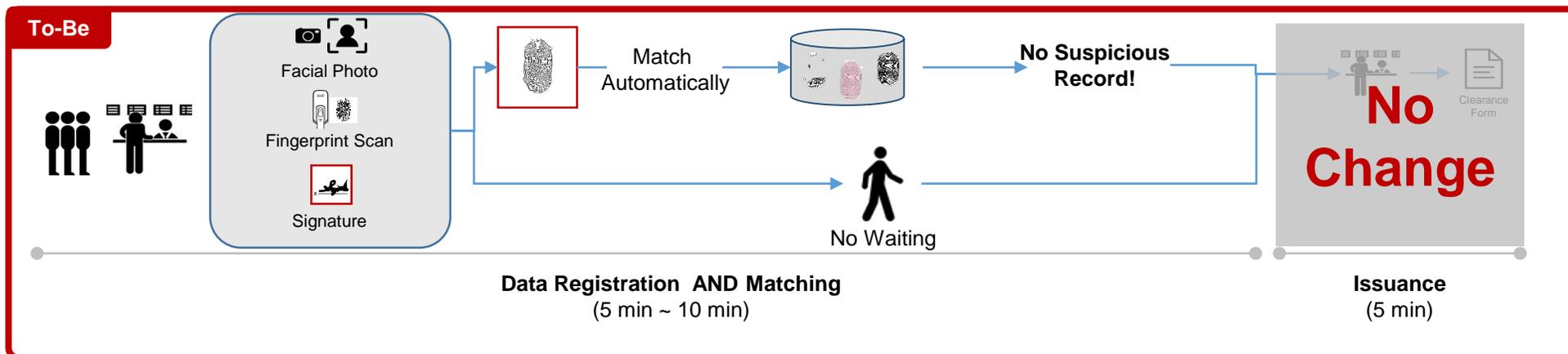
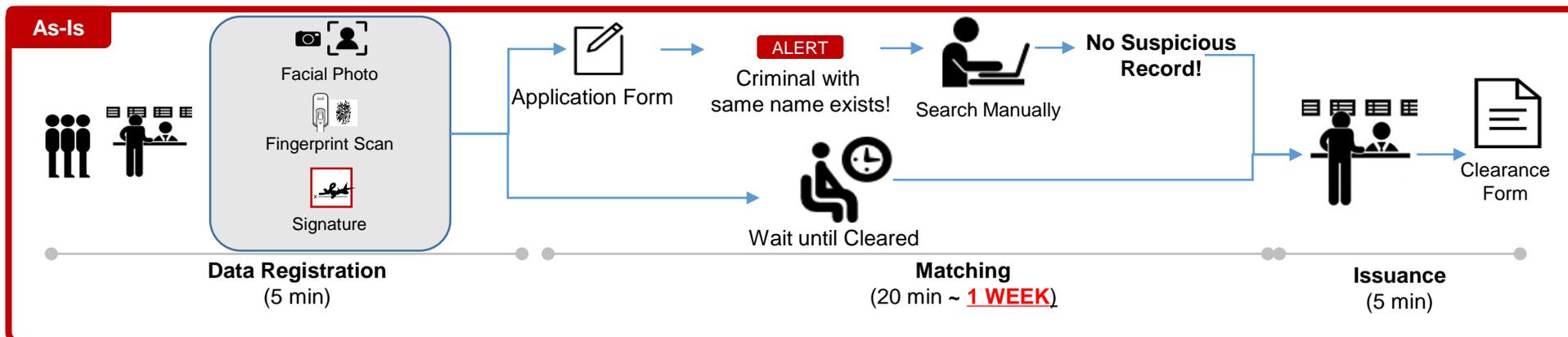


Proof of Concept Test executed on **Jan 2018** with 500 test users

Current clearance process is centered on manual confirmation and has room for automation



Current clearance process is centered on manual confirmation and has room for automation



In order to prove the viability of the biometric system, we showed that our system was capable of high-speed and accurate simultaneous matching



Requirement 1

High Volume
(500 Users with
one small local server)

Requirement 2

High Speed
(Under 3 seconds)

Requirement 3

Simultaneous
Matching
(500 matching)

Requirement 4

High Accuracy
(FAR <0.3%, FRR <5%)

Pilot Test Summary

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Simultaneous
Matching
(500 matching)

High Accuracy
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Requirement 3

Requirement 4

User General Information Input

ID -

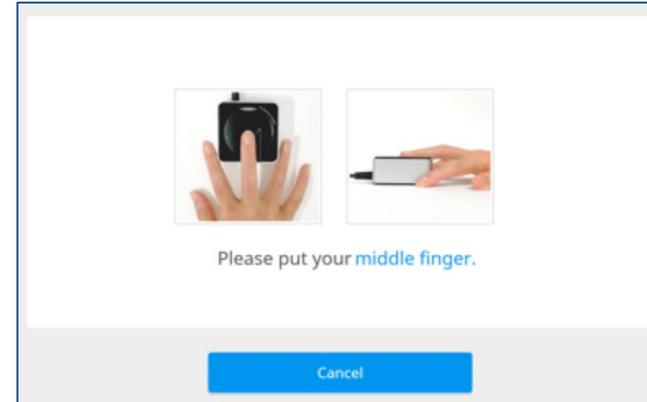
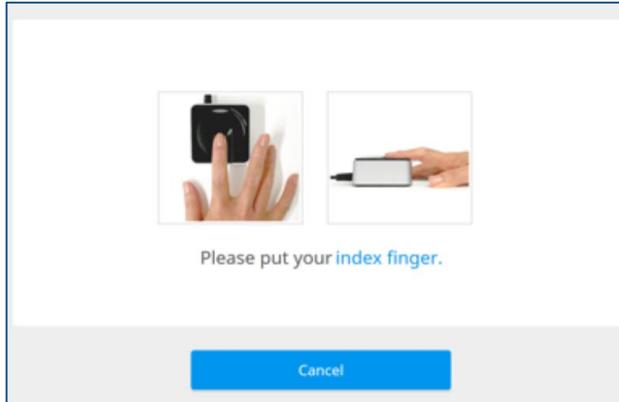
Gender Male Female

Age ▼

Fingerprint Registration (3 Fingers)



Scan Fingers (index and middle)



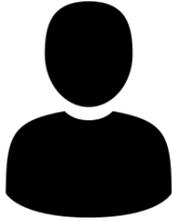
Identify User

| ID | Age | Gender |
|-----|-----|--------|
| a10 | 29 | male |

 Is this you?

No Yes

User



Agency



Overall Satisfaction: 4.3 / 5

| KPI | Goal | Actual |
|-------------------|---------|----------|
| User Registration | 500 | 500 |
| Identification | 1,500 | 3,320 |
| FAR | 0.30% | 0.09% |
| FRR | < 5% | 2.50% |
| Speed | < 3 sec | 1.45 sec |

“The PoC showed that the various standard KPIs are achieved and contextually meets what we are looking for.”

“Flexibility of integrating the software as well as a nationwide deployment plan are things that must be considered next”

Feedback from Agency officer



Technical capability has been proven and deemed satisfactory from both users and the agency. Along with the implementation plan, working towards the procurement process is the next step

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Key Learnings



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Key Learnings



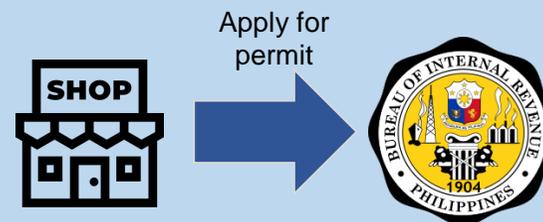
Various accreditations and verification with the Bureau of Internal Revenue will be required for full scale implementation

BIR Accredited POS



Point of sales device must be registered and accredited by BIR to be utilized

Permit to use POS



Each merchant must apply for a permit when using a new POS

Our Pilot Projects in the Philippines



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Government

When pursuing government projects within the Philippines, understanding various options may lead to a higher chance of acquiring the project

Public Bidding

Project Funded by
Philippine Government

Pursuant to RA9184
Private companies apply to bid for a government project, that is publicly announced on local newspaper or PhilGEPS

ODA

(Official Development Assistance)

Project Funded by
Foreign Government
(via grant or loan)

Pursuant to ODA Act
Private companies apply to bid for a government project, that is publicly announced on local newspaper

Agency-to-Agency

Project Funded by
Philippine Government

Pursuant to RA9184
In special cases, a government agency procures goods or services from another local government agency

It is the general policy of government to purchase its requirements from the private sector. However, it acknowledges that, in some exceptional cases, procurement from another agency of the government is more efficient and economical for the government.

[In] exceptional cases, and when justified by the conditions prescribed under these guidelines, can the procuring entity procure from another government agency under the 1st paragraph of Section 53(e) of the IRR-A of R.A. 9184.

Source: IMPLEMENTING GUIDELINES ON AGENCY-TO-AGENCY AGREEMENTS Negotiated Procurement under Section 53 (e) of IRR-A



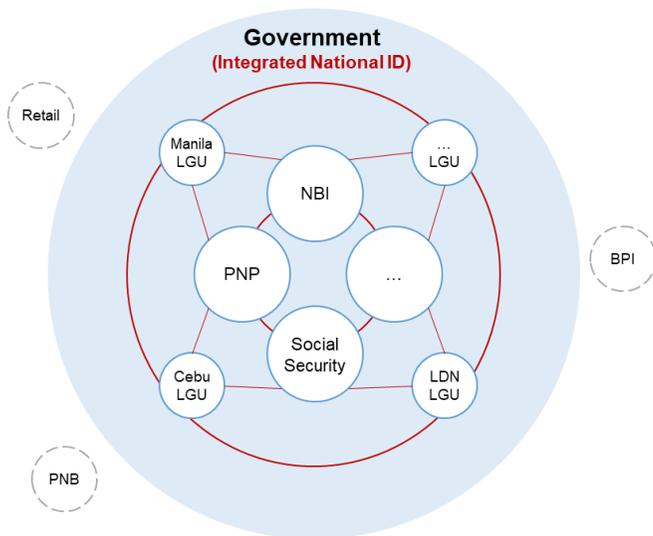
Although specific conditions are required, A-to-A could be a viable option for private companies

Agenda

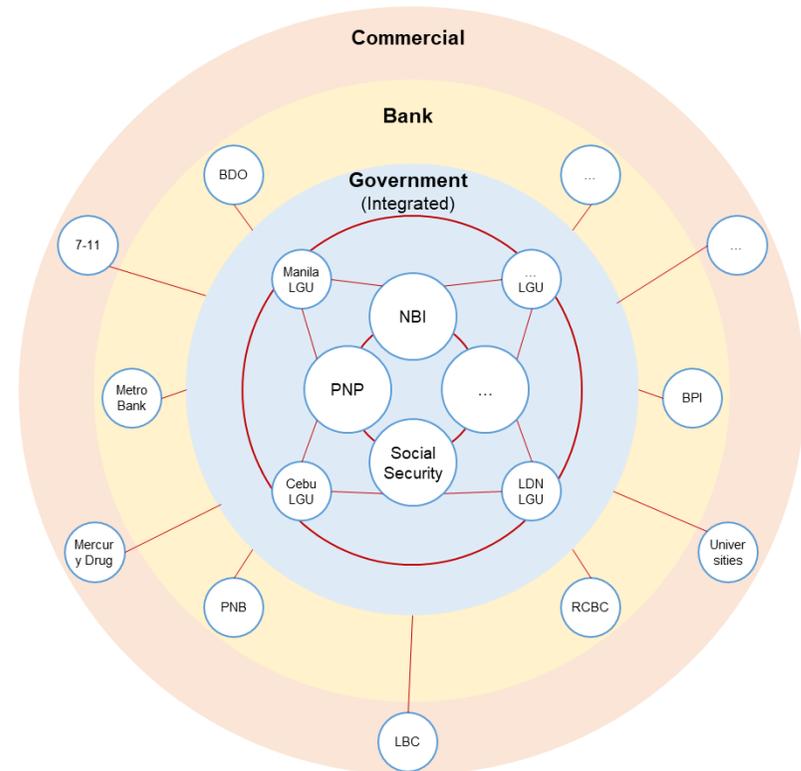
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After creating a track record in the Philippines, integration of all government identification under a national biometric ID will follow; the national biometric ID can then be used in various sectors

Track Record leading to National ID



Expansion to other sectors



Philippines National Fingerprint Authentication Platform

