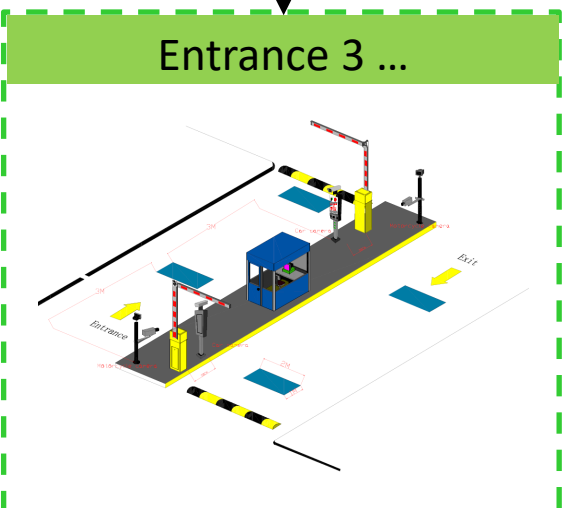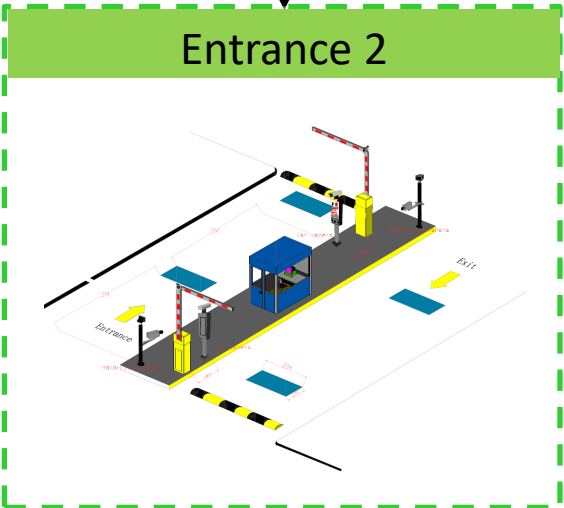# Licensed Plate Recognition System
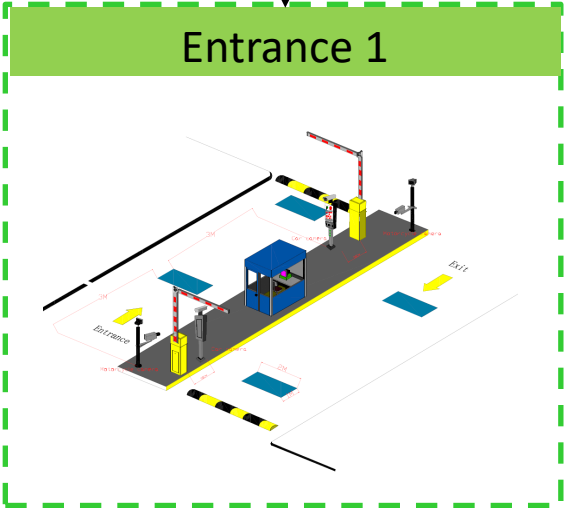
Vehicular Entrance & Exit Control
For Visitor and Staff

Centralised Server Control Management

FCC

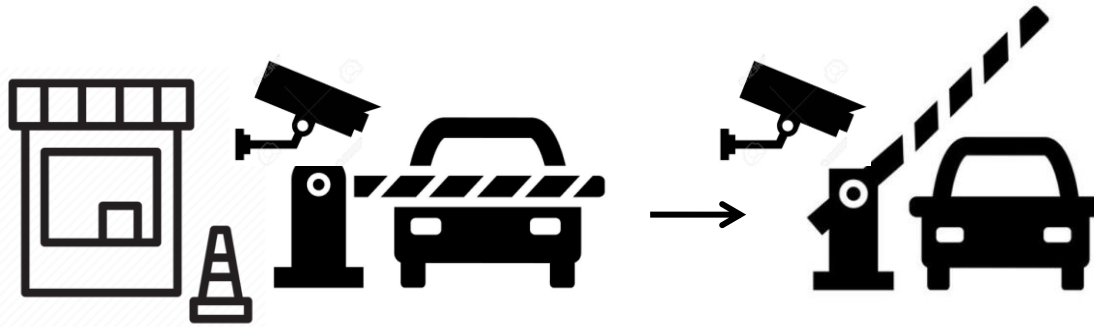Entrance 1

Entrance 2

Entrance 3 …

For Illustration purpose only
Actual layout may differ

Auto License Plate Recognition Setup

- Minimum 2 cameras (one per lane)
- Additional 2 cameras (for motorbike) (two per lane)

Cam For Car (Entrance)

Cam For bike (Exit)

Cam For bike (Entrance)

Cam For Car (Exit)

For Illustration purpose only
Actual layout may differ
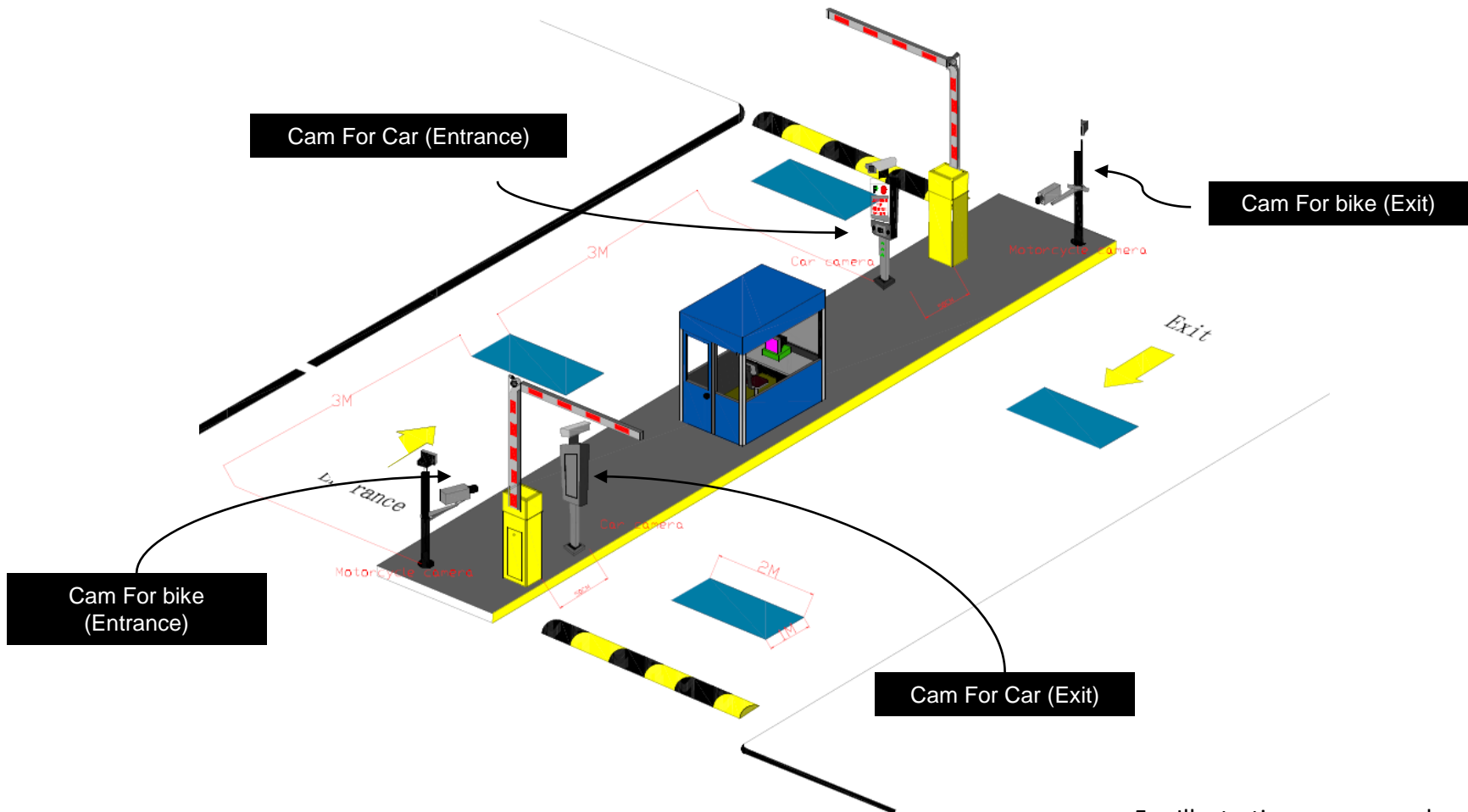
For long term vehicle

1. Resident/staff drives in/out
2. Open barrier automatically

Visitor Journey: Driving In
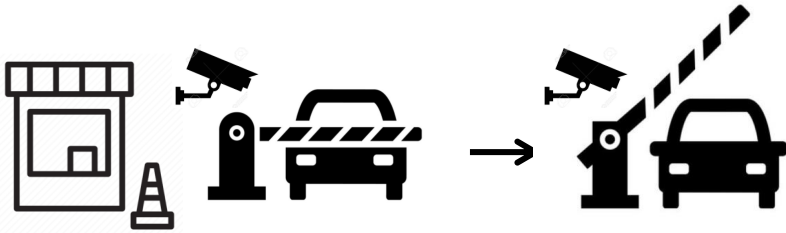
Option 1: Appointment only
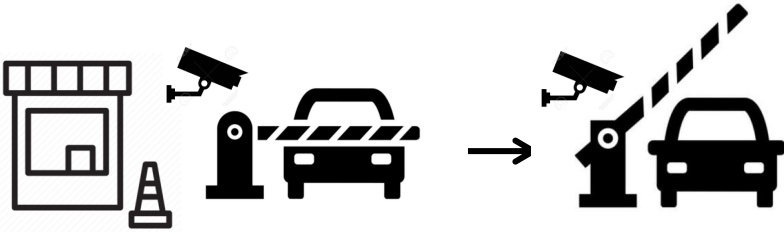
1. Visitor drives in
2. Open barrier automatically
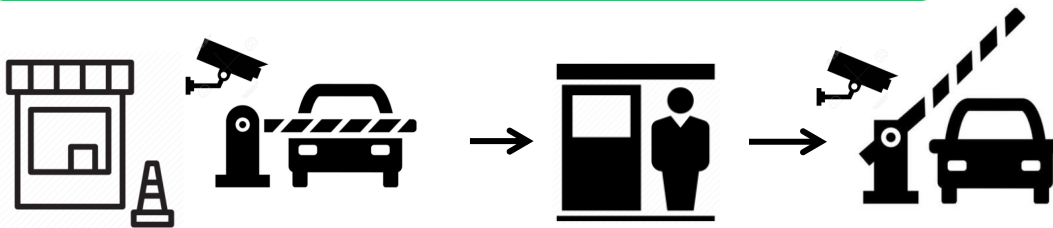
Option 2: For Appointment or Walk-in
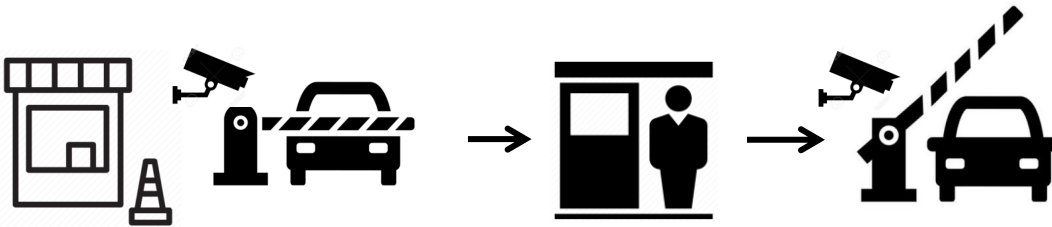
1. Visitor drives in
2. Security guard verifies/registers visitor using mobile device/computer
3. Open barrier upon completion of registration

Option 1: For all visitors – Direct exit

1. Visitor drives out
2. Open barrier automatically

Option 2: For all visitors – Verified by security

1. Visitor drives out
2. Security guard verifies visitor using mobile device/computer
3. Open barrier upon completion of verification
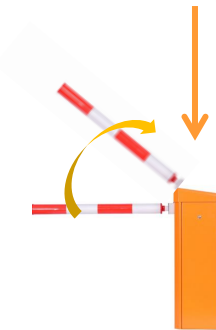
VMS+LPR Software Architecture
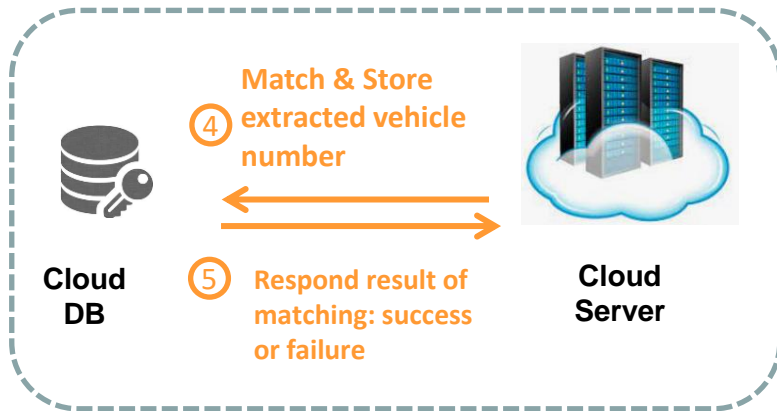

Terminal Devices

Vehicle Drives In

① Register Visitor Vehicle Number through Mobile APP/web page (if not pre-registered)

② Vehicle plate images are taken by camera

④ Match & Store extracted vehicle number

③ Upload result to server

Cloud DB

Cloud Server

⑤ Respond result of matching: success or failure

⑥ Trigger camera to open barrier if result is success

⑦ Send dry contact signal to barrier

Network Connection Diagram at Each Entrance

GoOnline™
Visitor Management Software

VMS Cloud Server

Wireless 4G Router Switch/LAN with internet

VMS PC

VMS Handheld Devices

- - - - - -	**Internet**
——————	**Cat6**
——————	**Dry signal**
(WiFi icon)	**WiFi**

Entrance

Exit

To Push Button

Front LPR Cam

Front LPR Cam

To Push Button

Rear LPR Cam (optional)

Rear LPR Cam (optional)
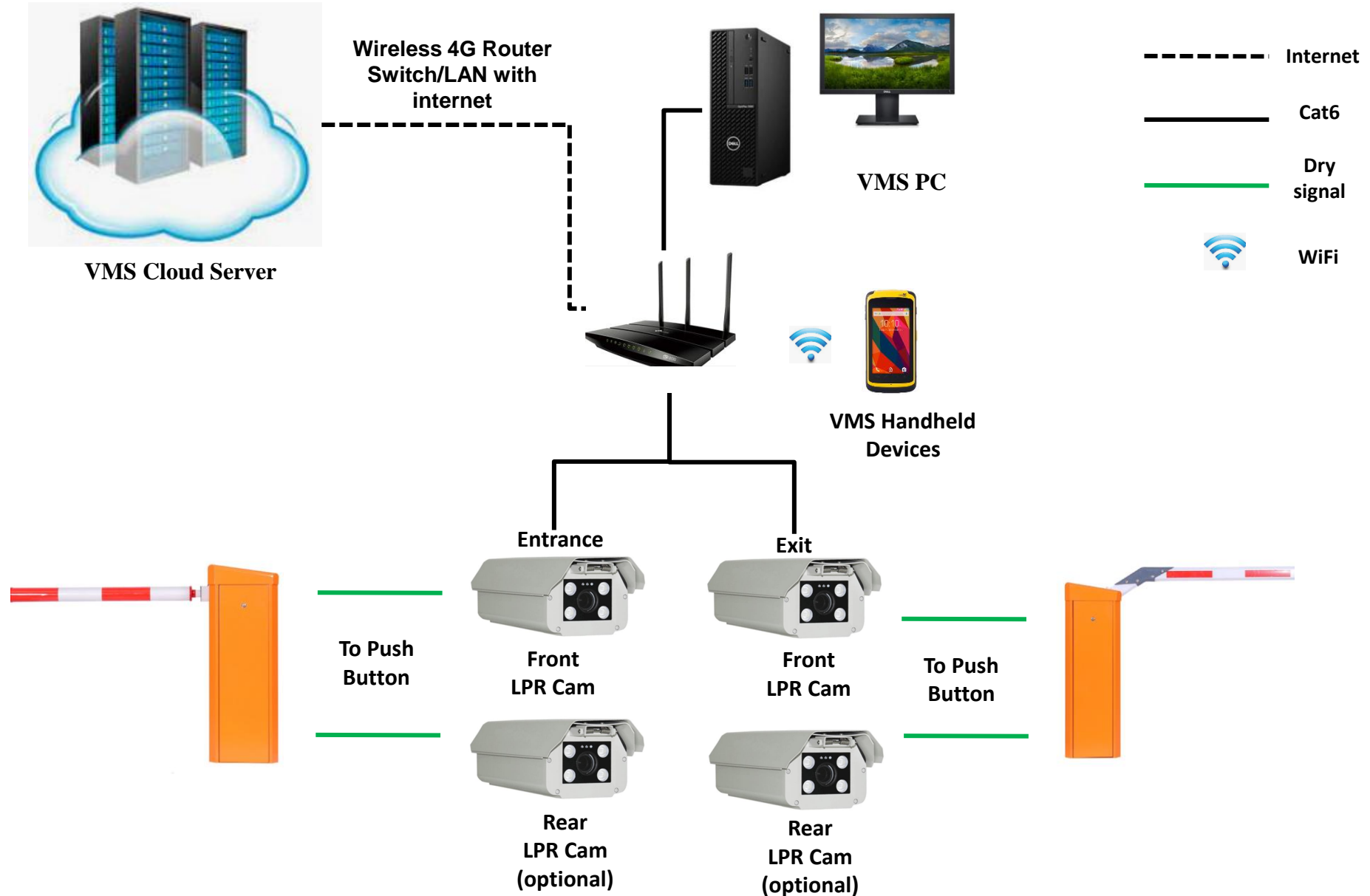
LPR Camera Specifications

- Sensor: Sony Starvis 1/2.8" CMOS

- Recognition Distance: 1-10meters

- Recognition Rate: 99% (include re-capture)

- Recognition at Speed: <30km/h

- Trigger: Video Stream or Loop sensor

- Interface: HTTP Post

- Camera Lens: 2.8-12mm

- Zoom Distance: 2-10meters

- Resolution: 1920*1080

- Record: Centralised server

- Countries: South East Asia

- Operating Temperature: <45°C

Registration Workflow

* If vehicle no. is a returning vehicle

```
Confirmation
```

```
Confirm Vehicle
Number
(auto populated
by camera)
```
→
```
Enter Name,
Mobile No
```
→
```
Select
Host
```
→
```
Select
Purpose of
Visitor
```
→
```
Open Vehicle
Gantry
```

```
Confirmation
```

• If vehicle no. is a pre-registered vehicle
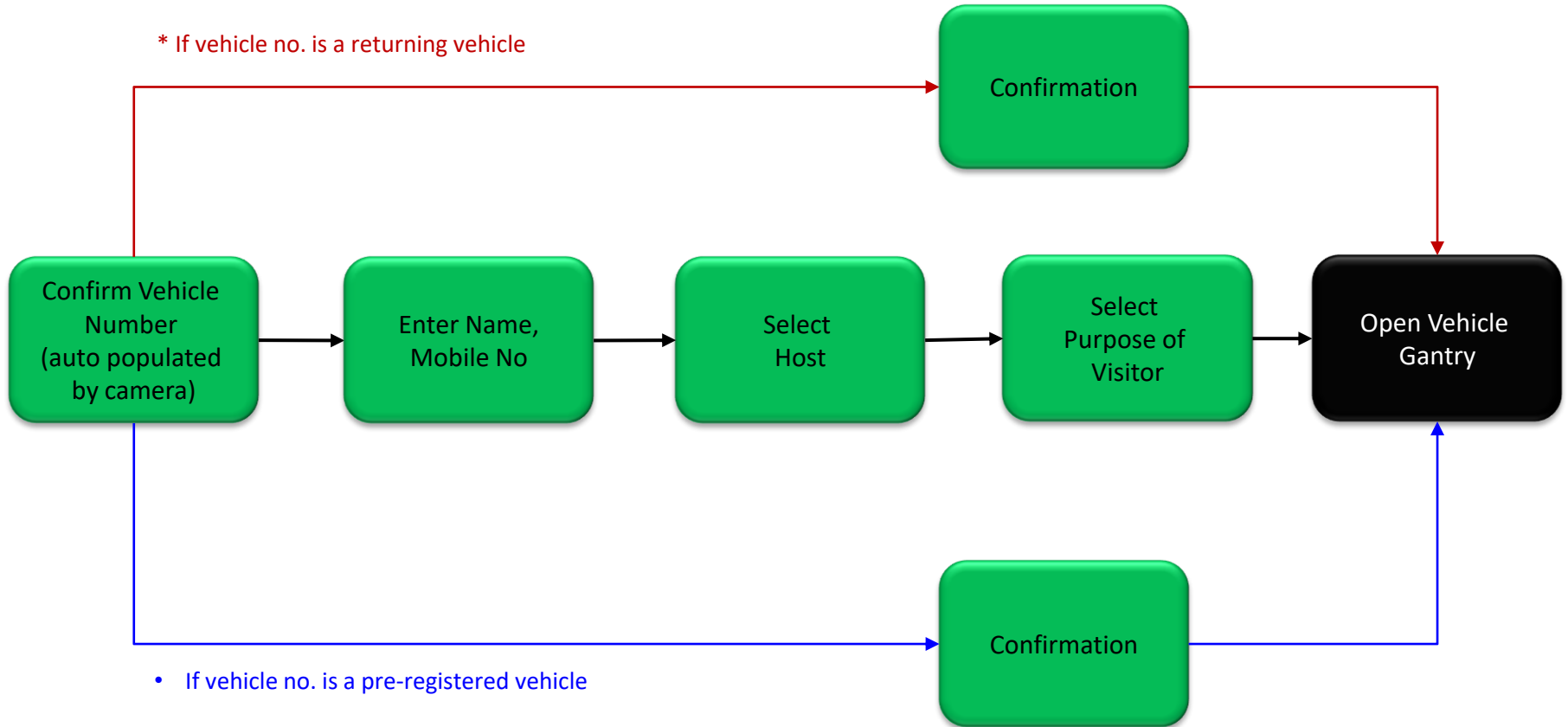
→ Pre-registered

→ Walk in (on-the-spot)

→ Returning/repeated

| Mandatory | Service |

Terminal Setup

- Support multiple IoT terminal devices (LPR cam)
- Real-time signal detection

Device Status	Property	Unit	Door Name	Model	Terminal Name	Serial Number	Action
● 07/05/2022 11:46 AM	South Gantry		South Entrance	Leego LPR	South_INCAM	18:02:00:05:AF:AF	✎ 🗑
● 07/05/2022 11:46 AM	South Gantry		South Entrance	Leego LPR	SOUTH_OUTCAM	18:02:00:05:B0:28	✎ 🗑

Vehicle Monitoring – Live Dashboard

- Data is consolidated in web portal
- Filter by unit/vehicle no./time/date/location/event/status
- Export to excel by clicking the download icon
- Download vehicle image

Status

DENIED

GRANTED

BLACKLISTED

Whitelisted Vehicles Entry

- Admin to enter whitelisted plates (resident/staff/long term)
- Auto download to cameras

Blacklisted Vehicles Entry

- Admin to enter blacklisted plates
- Auto send email notification upon detection of blacklisted plates
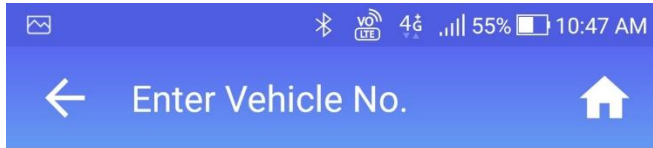
Blacklist

Basic Info

| South Gantry | ▼ | THE OCEANFRONT | ▼ |

| Email | + 65 | - | Mobile No. |

| ID No. | | Vehicle No. |

| Remarks | | Upload ⬆ | Add |

	Email	Mobile No.	ID No.	Vehicle No.	Pre-registration	Quick Access	Active	Action
▶		65 - 99995555	123A	SBA1234A	☐	☐	☑	🗑

Security Registration: Confirm Vehicle Number
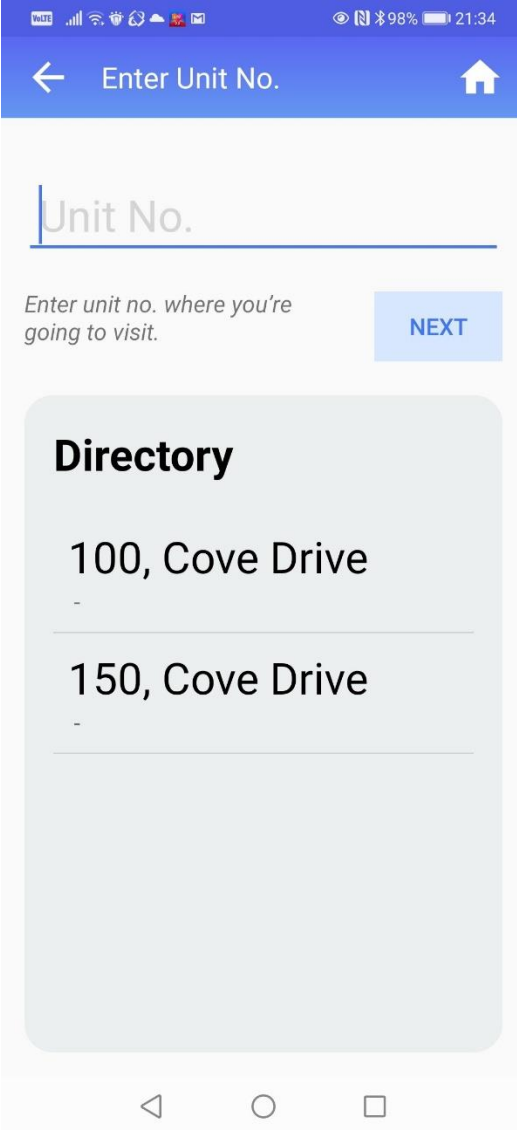
- Vehicle number will be auto populated by LPR

On-the-spot Registration - Select Unit

- Select visiting unit
- All unit no. will be populated to security
- Search by keyword

On-the-spot Registration: Select Purpose of Visit

- Select purpose of visit or manually enter for any purposes
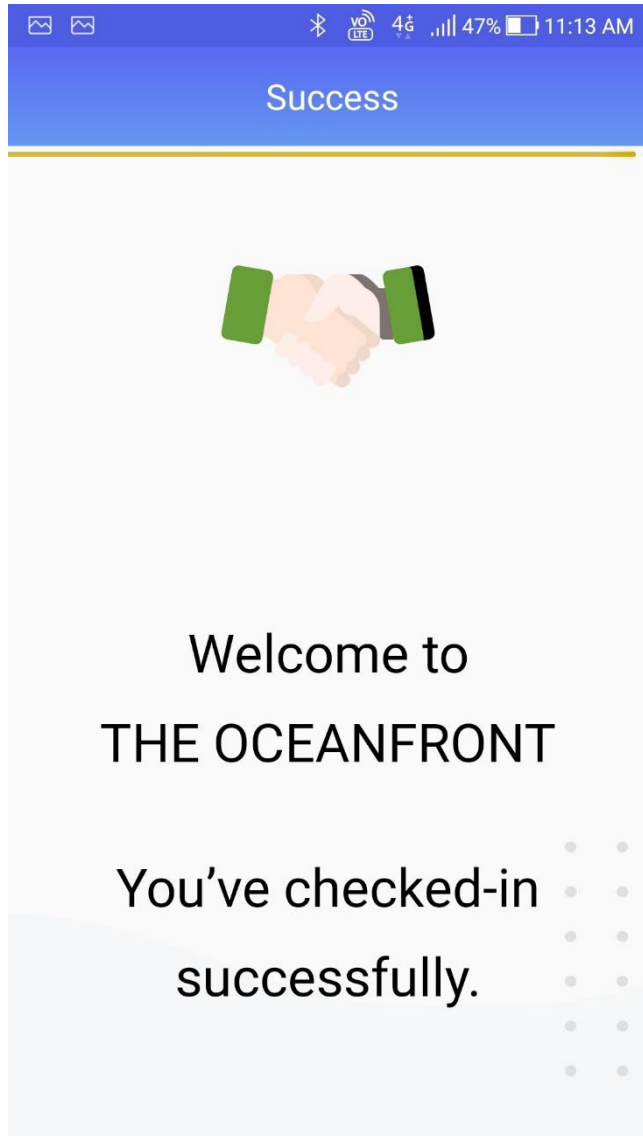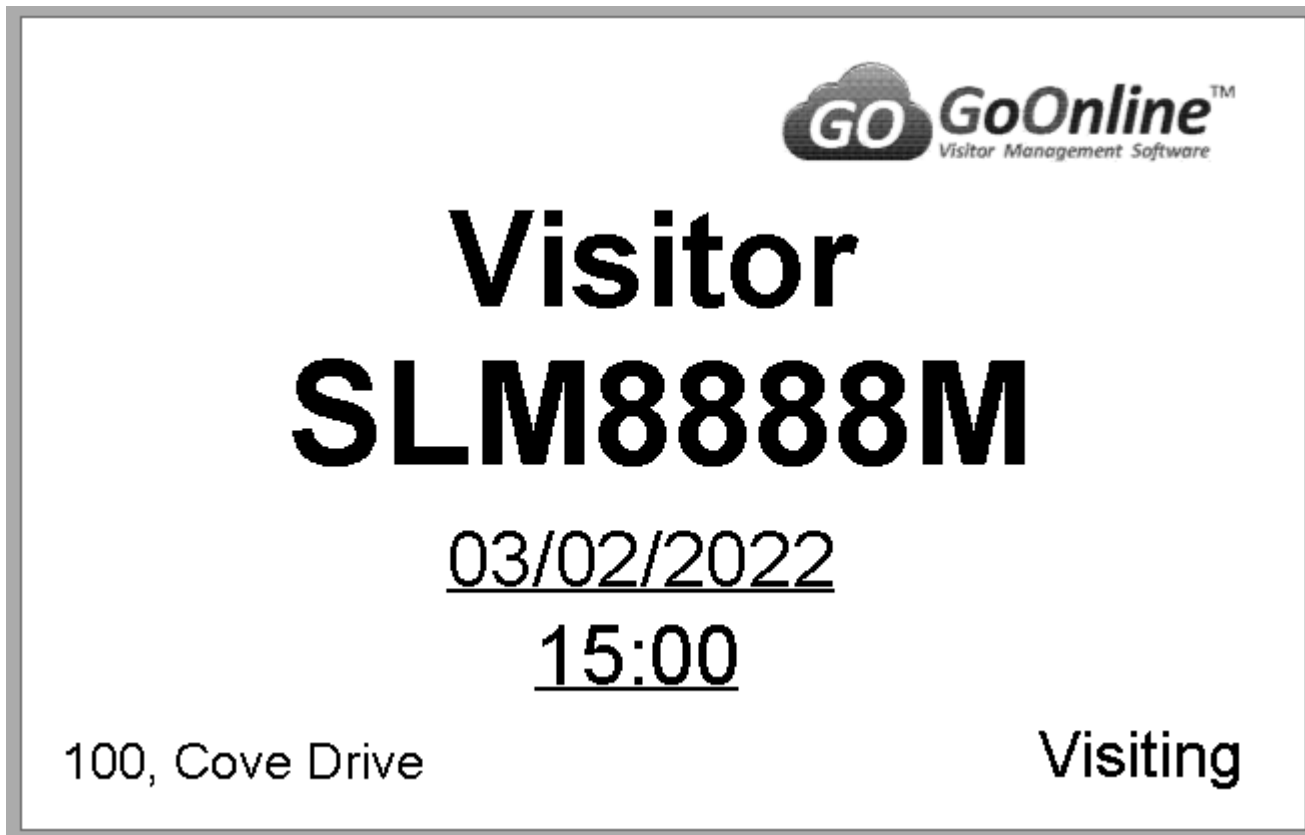- Pre-defined purpose of visitor to speed up registration

On-the-spot Registration: Success

- Auto open barrier by software upon successful check in

Other Optional Fields Setting

- **Friendly field setting**

Print Visiting Card (sample)
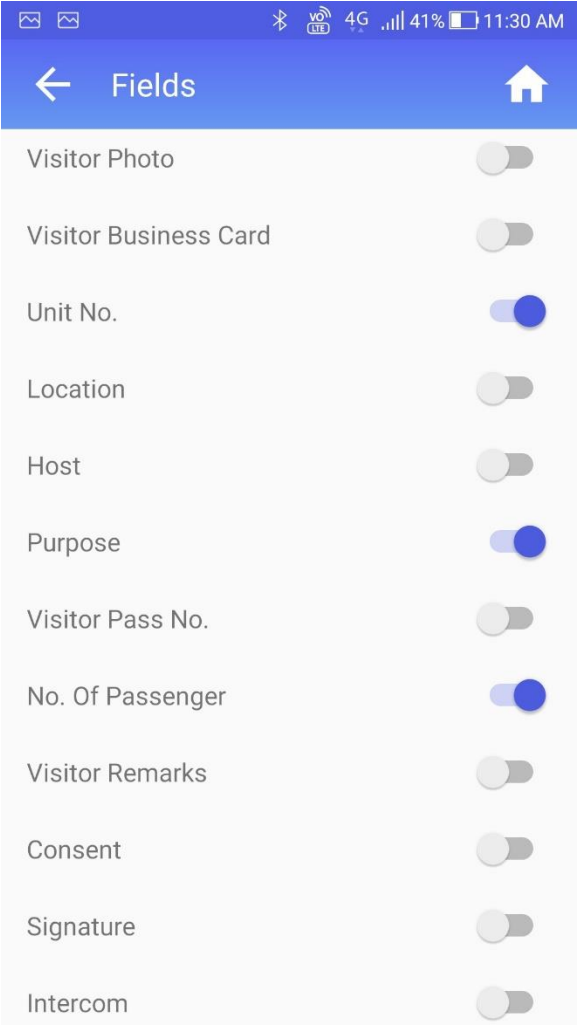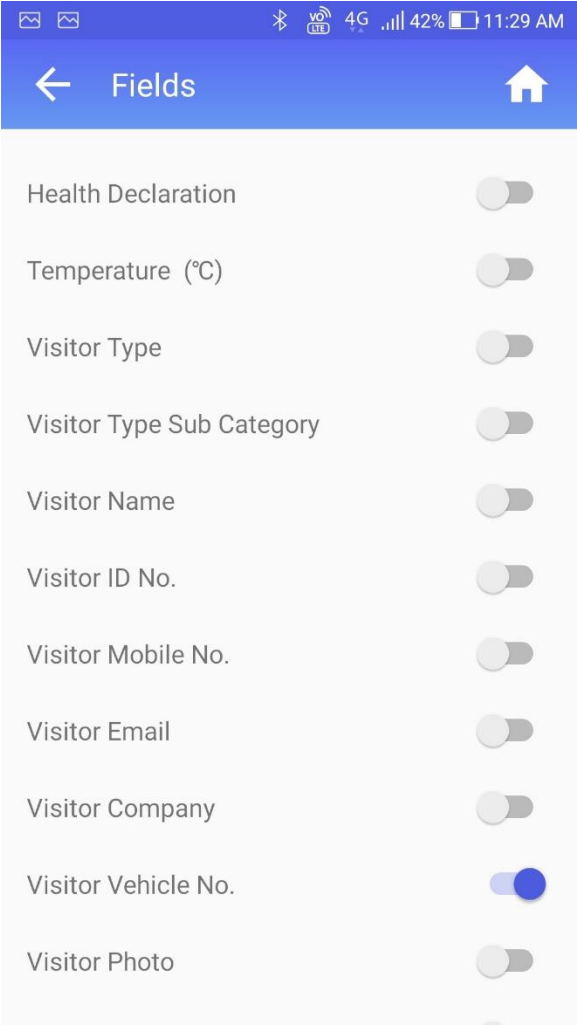
- To be placed on top of Dashboard

- Visible and neat

- Printed purpose of visit and visiting unit

Visitor

SLM8888M

<u>03/02/2022</u>

<u>15:00</u>

100, Cove Drive   Visiting

Schedule Setting

- Weekly and Daily setting

Know the PAST
     Understand the PRESENT
          Shape your FUTURE