



TECHNOLOGICAL SOLUTIONS FOR BAGGAGE HANDLING ON TIME PERFORMANCE





Baggage Handling On Time Performance Management, Is a system to monitor passenger's baggage from the aircraft through Baggage Claim area. This mobile-based application is expected to help passenger to provide valid and reliable about their luggage, especially the longest estimated time of baggage delivery (Last Baggage).

BAGGAGE HANDLING FLOWCHART



ANGKASA PURA II
INDONESIA'S AIRPORT COMPANY

OPERATION FLOW

Airlines Block On

Loading Baggage



TERMINAL

Data FIDS



Conveyor Belt

Number

BAGGAGE CLAIM				BELT 9
PENGAMBILAN BAGASI				
FLIGHT NUMBER	FLIGHT ORIGIN	FIRST BAGGAGE	LAST BAGGAGE	
NOMOR PENERBANGAN	ASAL PENERBANGAN	BAGASI PERTAMA	BAGASI TERAKHIR	
GA 0137	P. PINANG	00:00:00	00:08:00	

2017-01-19 13:52:00 & KELUHAN / INFORMATION & COMPLAINT : Garuda Indonesia Duty Ma

APPLICATION FLOW

Airlines Block On



CONVEYOR READY OK!

CHANGE CONVEYOR



PRESS BUTTON FOR
1st Baggage & Last Baggage

Ready for Display on
Conveyor Board



**BAGGAGE
HANDLER**



CMS

1. Baggage Monitoring.
2. Reporting.

CMS

PIC Ground Handling operator presses the START button on the application when the Block On plane, which next countdown time will start and is displayed on the Conveyor Board



IMPACT

1. Missed communication
2. Less secure luggage handling
3. Input data manually and not terinfo well to PT AP II
4. There is no definite information about the luggage waiting time for passengers

IMPACT

1. Integrated Communication between PT AP II & Stakeholder;
2. Integrated data monitoring;
3. More Secure Baggage Handling;
4. Real time monitoring via APPS & CMS
5. Fast responses monitoring
6. Real time information for Passenger about first & last baggage handling



1. Loading & Unloading
2. Set the luggage into conveyor
3. Manual monitoring First Baggage & Last Baggage

1. Provide flight information data
2. Provide conveyor belt facilities
3. Provide conveyor board display for information to passenger about flight number & origin flight



Gapura
AIRPORT SERVICES



ANGKASA PURA II
INDONESIA'S AIRPORT COMPANY

1. Loading & Unloading
2. Set the luggage into conveyor
3. Monitoring Baggage via CMS
4. Set the information to passenger about First Baggage & Last Baggage

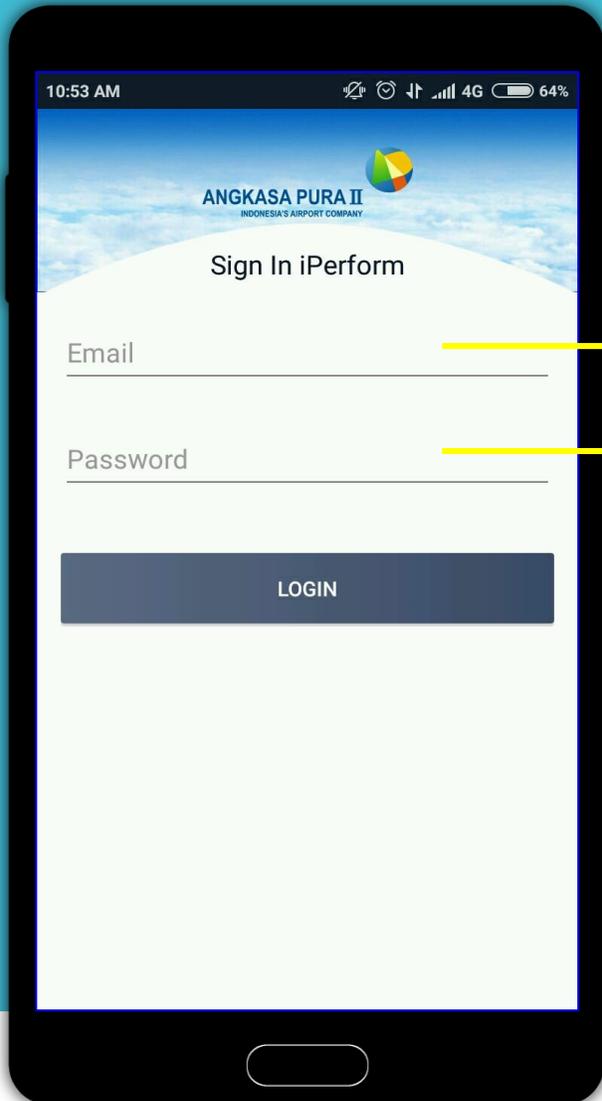
1. Provide APPS & CMS for baggage operation flow;
2. Monitoring Baggage on time performance via APPS & CMS
3. Set the CCTV at breakdown Area
4. Set the conveyor board display for First & last baggage info to passenger

BEFORE COLLABORATION

AFTER COLLABORATION via Mobile Application



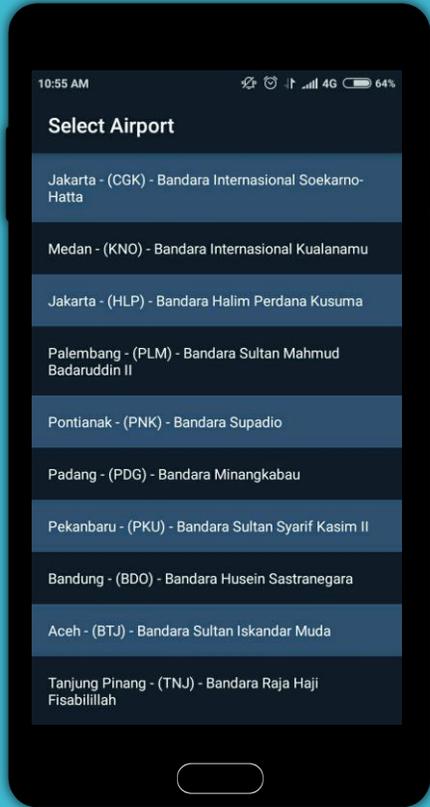
iPERFORM APPLICATION FOR BAGGAGE HANDLING



Username

Password

- On the first page of the application, user is required to log in.
- An active email is required to apply a username
- Every user and password will only valid for one person
- Each user will be treated its confidentiality
- After successful login, user will choose any specific airport on the next page



Select Airport

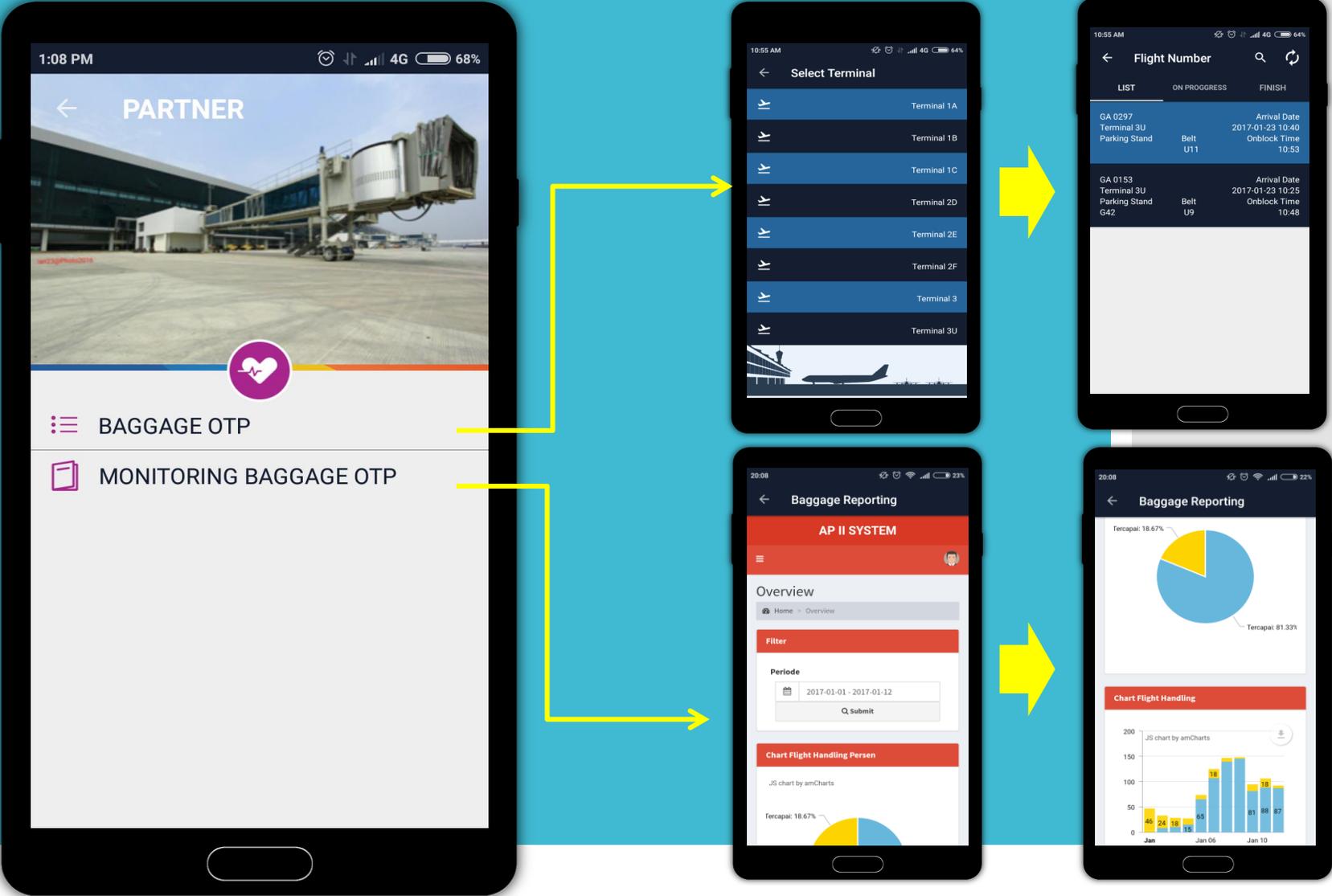


Click the AP II Internal Button, To bring up sub categories in the app



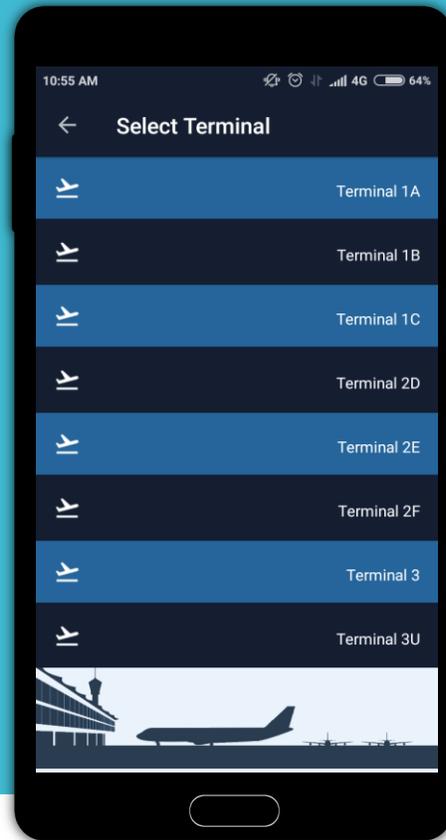
Select Sub Categories Partners to further enter into the Baggage handler application (Baggage OTP & Monitoring)

BAGGAGE ON TIME PERFORMANCE & MONITORING

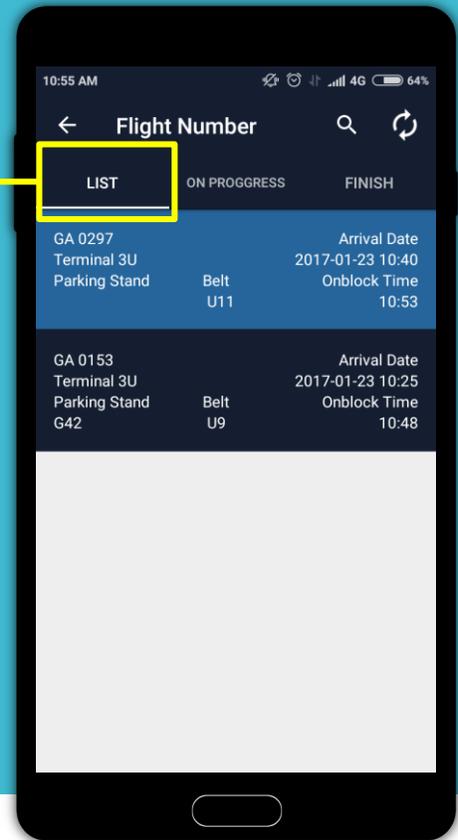


START HANDLING BAGGAGE ON TIME PERFORMANCE

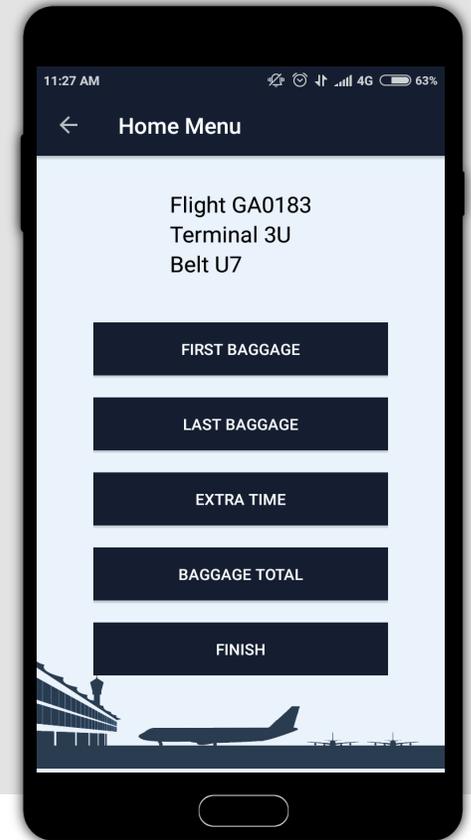
To start baggage handling, the user selects Category BAGGAGE OTP, which is then directed to select the appropriate Airport where User uses Baggage Handling application



The list field is the Flight order to be selected



Page to start entering First Baggage & Last Baggage Time

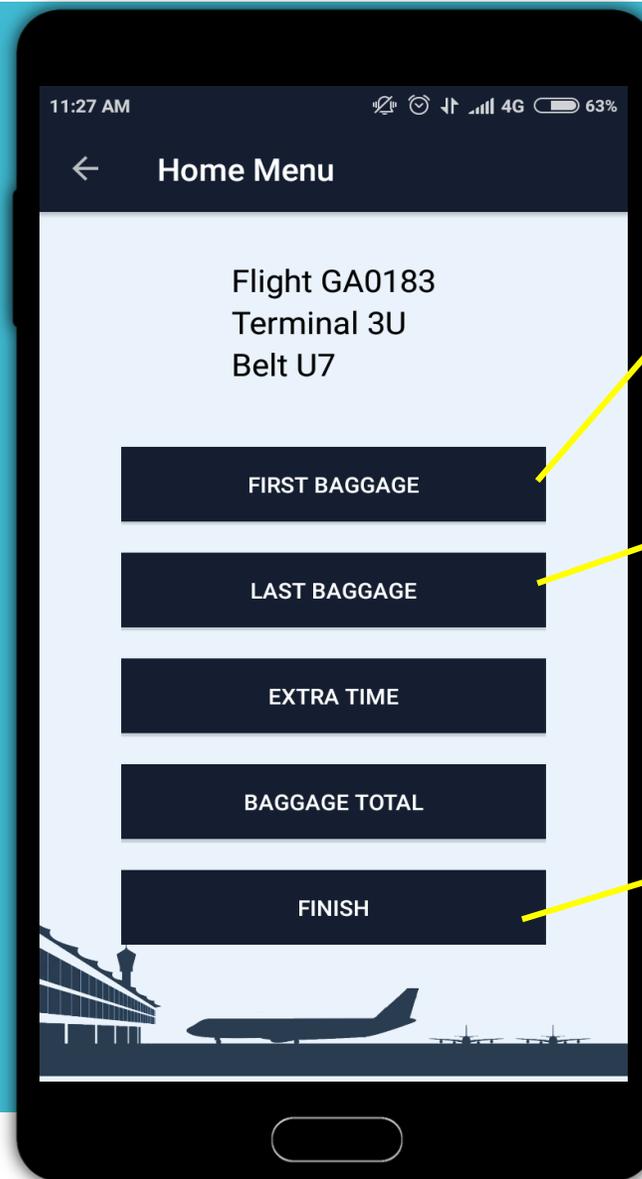




Furthermore after selecting the appropriate Flight, User is aimed at Home Page Menu to be able to process the Baggage. On This Page Users press the First Bagagge Button first baggage until the conveyor belt and last baggage button at the last baggage until the conveyor belt

After the First Baggage button is pressed, the baggage delivery time calculation has started and is displayed on the Board conveyor

Regarding the Extra Time & Total Baggage button will be explained on the next page



Click on when First Baggage has arrived at Conveyor Belt

Click on when the Last Baggage has arrived at the conveyor belt

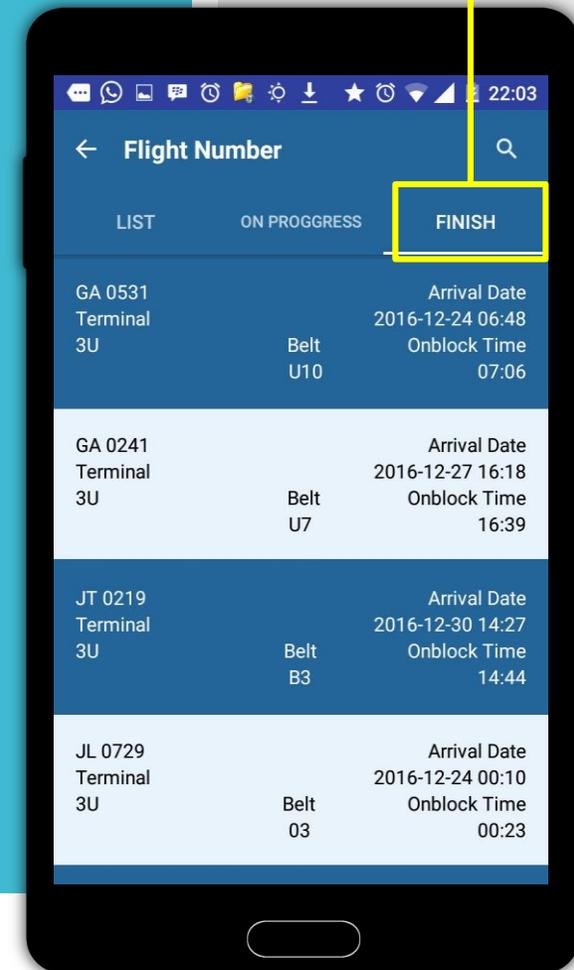
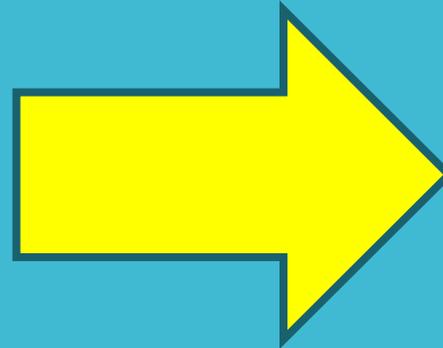
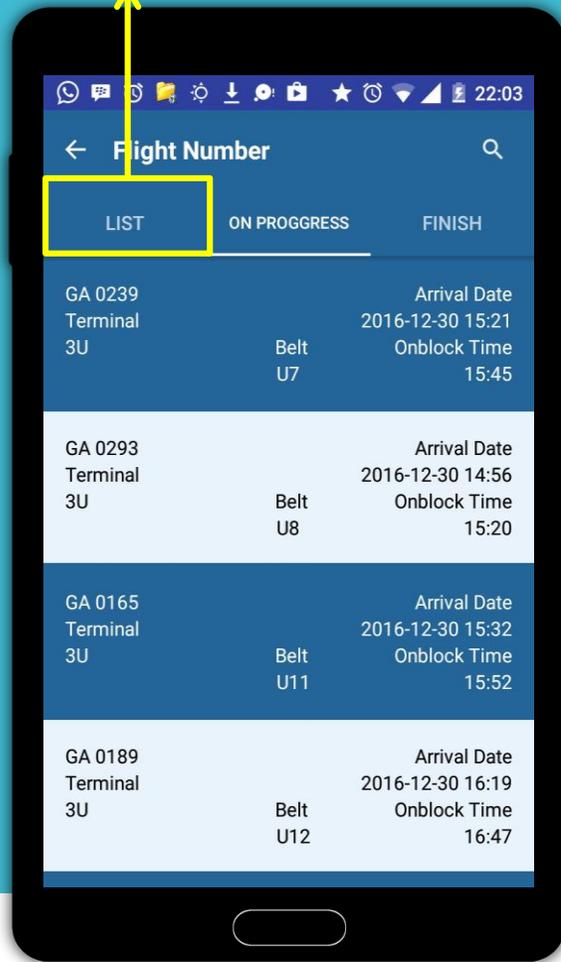
The finish button serves to end the handling of the aircraft, and officers must fill the number of baggage when click the finish button.

ON PROGRESS & FINISH PAGE



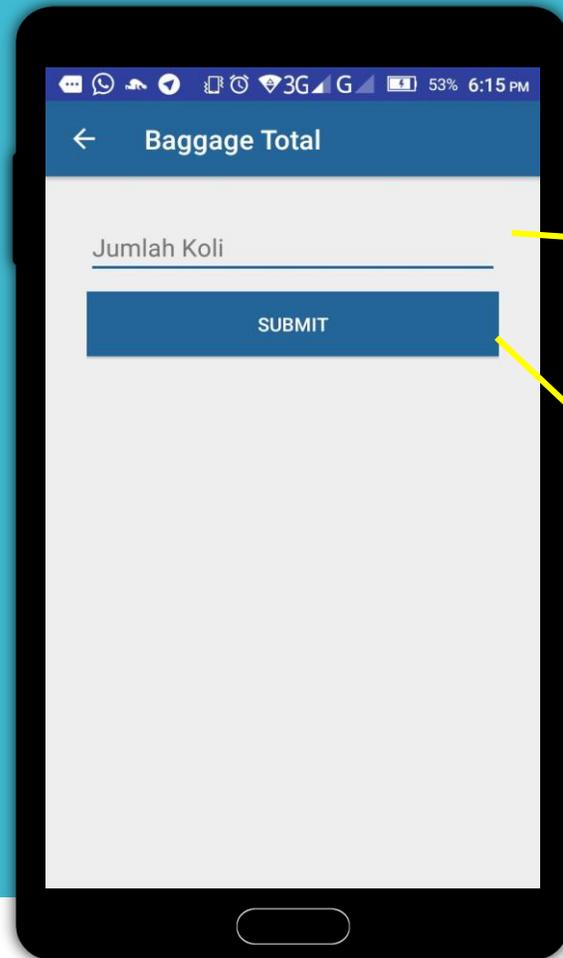
For handling Baggage by Apps, User must select flight and press the First Baggage button, after that the process will be displayed at On Progress field

The finish column is information about the flight that has been done baggage handling by the officer



TOTAL BAGGAGE HANDLING

Total Baggage Handling page on application must be done by user, after ending baggage handling process (press finish button)



Users must fill in the columns in addition to calculate amount of baggage that has been handled (press FINISH button)

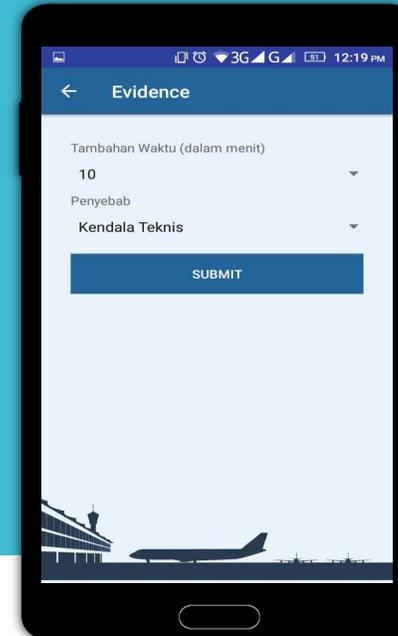
The user presses the SUBMIT key when the column is filled in correctly

EXTRA TIME

This page will appear when the User presses the Extra Time button, this button works if the baggage handling process is delayed due to some constraints (weather, tools, operation .etc)

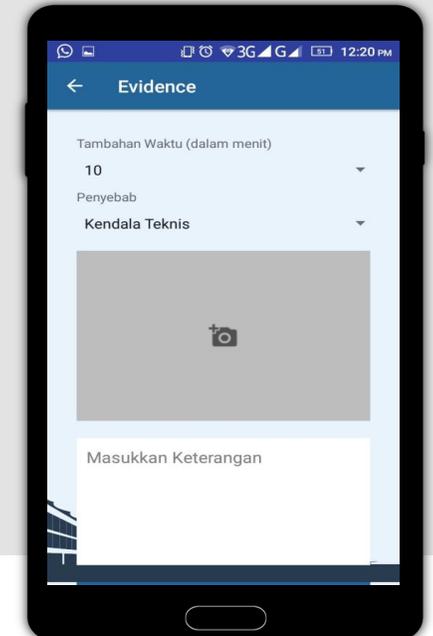
1. If the extra time is less than 10 minutes from Block On , then the officer will be redirected to the additional time page (Page Evidence 1);
2. If the extra time is more than 10 minutes from Block On or the extra time button has been clicked twice in less than 10 minutes since Block On , then the officer must fill the evidence for the report (Page Evidence 2)

(Evidence Page 1)



The smartphone screen displays the 'Evidence' form. At the top, there is a back arrow and the title 'Evidence'. Below the title, there are three dropdown menus: 'Tambahkan Waktu (dalam menit)' with the value '10', 'Penyebab' with the value 'Kendala Teknis', and 'Kendala Teknis'. A blue 'SUBMIT' button is located below the dropdowns. At the bottom of the screen, there is a decorative image of an airport terminal and an airplane.

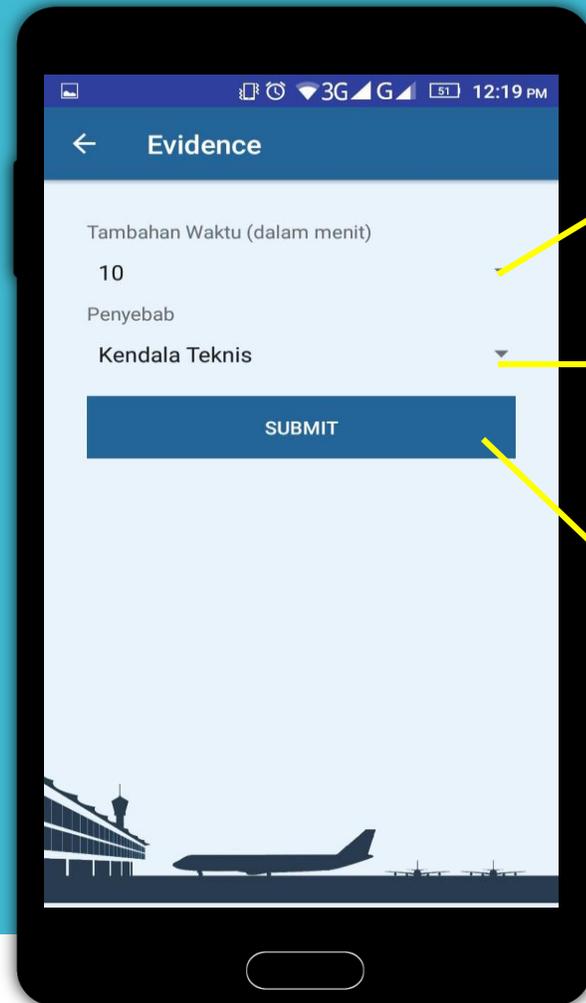
(Evidence Page 2)



The smartphone screen displays the 'Evidence' form. At the top, there is a back arrow and the title 'Evidence'. Below the title, there are three dropdown menus: 'Tambahkan Waktu (dalam menit)' with the value '10', 'Penyebab' with the value 'Kendala Teknis', and 'Kendala Teknis'. Below the dropdowns, there is a large grey rectangular area with a camera icon in the center, indicating a photo upload section. At the bottom, there is a text input field with the placeholder text 'Masukkan Keterangan'.

EXTRA TIME 1

EVIDENCE 1 Column Filling is done if the extra time is less than 10 minutes since Block On.



Additional time is filled according to estimated requirement in baggage handling

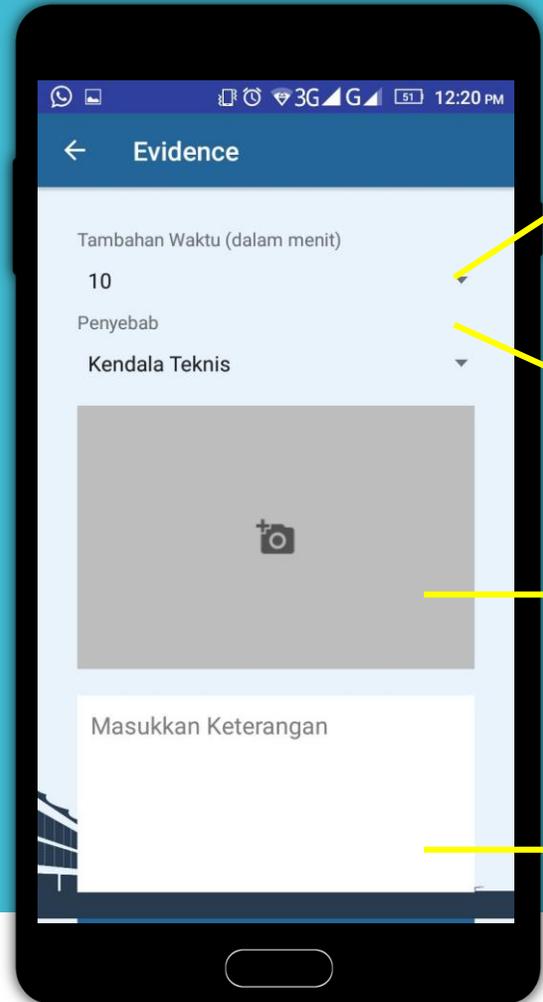
Constraints are selected according to the state of the field

The user presses the SUBMIT key if the time column and the cause of the constraint are filled correctly



EXTRA TIME

EVIDENCE 2 Column Filling is done if the extra time is more than 10 minutes since Block On or if the extra time button has been clicked 2x in less than 10 minutes since Block On.



Additional time is filled according to estimated requirement in baggage handling

Constraints are selected according to the state of the field

The user uploaded an event photo in the field (upload can be done with take picture / from gallery)

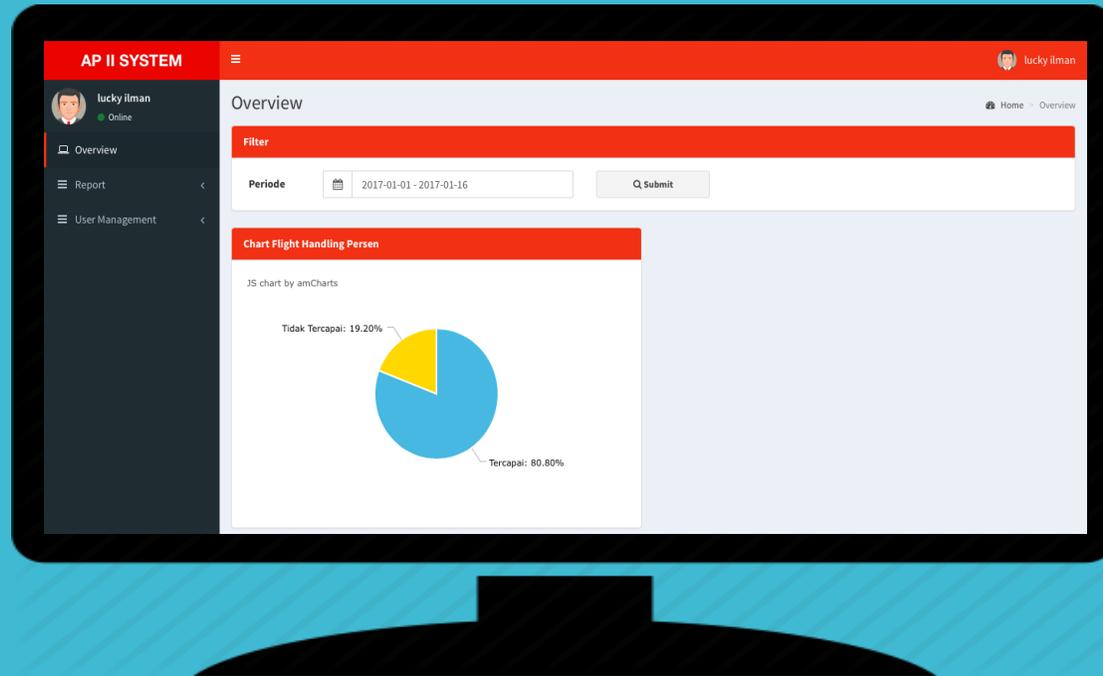
Users provide information when the occurrence of constraints and handling



CONTENT MANAGEMENT SYSTEM (CMS) BAGGAGE HANDLING ON TIME PERFORMANCE



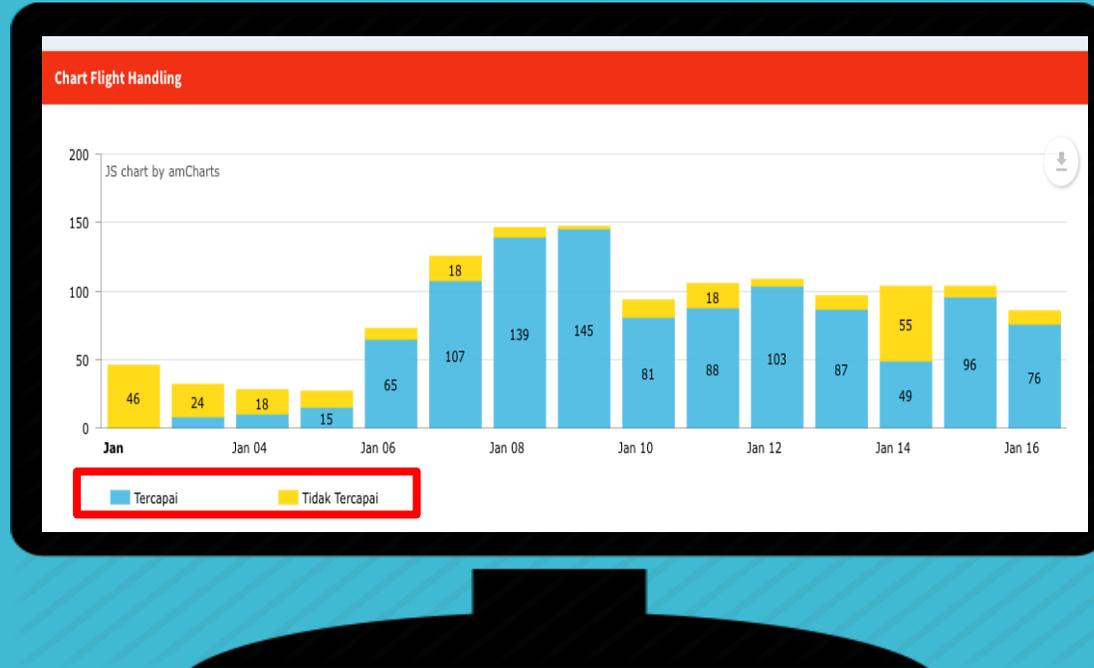
PIE CHART BAGGAGE HANDLING



On the first page after logging in, the user can see on the top left side, there are User Profile and some Menu there is Overview, Report & User Management. On this Overview page, the user can see the view of a data on Flight Handling Chart presented in the form of Pie Chart & Bar Chart

The Blue on Pie Chart shows the baggage handling results achieved (First Baggage Below 20 Minutes and Last Baggage Below 40 Minutes), and the Yellow Color on the Chart Pie shows the baggage result that is not reached (First Baggage over 20 minutes and Last Baggage above 40 minutes)

BAR CHART BAGGAGE HANDLING



Bar Chart Flight Handling is still contained in the overview page, the user can see the data handling luggage per day, on this page the user can change the date as needed to view the data.

The Blue Color on the Chart Bar shows the baggage handling results achieved (First Baggage Below 20 Minutes and Last Baggage Below 40 Minutes), and the Yellow Color on the Chart Pie shows the baggage handler results are not reached (First Baggage over 20 minutes and Last Baggage above 40 minutes)

REPORT BAGGAGE, FLIGHT LIST & MONITORING



ANGKASA PURA II
INDONESIA'S AIRPORT COMPANY

AP II SYSTEM

lucky ilman

● Online

Overview

Report

- Report Baggage
- Report Flight List
- Monitoring Flight

User Management

Report Baggage

Flight	Reg	Parking	Block on	Total Bagged	Conveyor Belt	FBag	Lubag	Total handling	Delay	Delay reason	Data
GA-0111/PMH	NORSEK		2017-01-18 14:42:00	0	UT				0		
GA-0007/MNQ	NORSEK		2017-01-18 14:42:00	0	UR				0		
GA-0170/PWJ	NORSEK		2017-01-18 14:40:00	55	U00						
GA-0315/SAB	NORSEK	G4H	2017-01-18 14:39:00	0	U33				0		
GA-0005/NDI	NORSEK		2017-01-18 14:29:00	0	UR		2017-01-18 14:47:14				
GA-0513/PMK	PMOPV		2017-01-18 14:18:00	10	U32	2017-01-18 14:25:26	2017-01-18 14:36:43	18	0		
GA-0206/MGK	NORSEK	G4I	2017-01-18 14:18:00	117	U51	2017-01-18 14:40:59	2017-01-18 14:47:04	29	0		
GA-0148/PDL	PMNME		2017-01-18 14:08:00	128	UT	2017-01-18 14:15:09	2017-01-18 14:32:47	27	0		
GA-0207/GDC	NORSEK	G32	2017-01-18 13:48:00	207	UR	2017-01-18 14:00:33	2017-01-18 14:00:44	18	0		
GA-0111/SAB	NORSEK		2017-01-18 13:40:00	51	UR	2017-01-18 13:58:22	2017-01-18 14:00:36	26	0		

Report Flight List

flight_number	airline_code	long_name	parking_stand	reclaim_first_bag_time	code_share	effective_date	sta_time_stamp	sta_time_stamp	city_nm
0031	GA	GARUDA INDONESIA	G4I	0000-00-00:00:00		2017-01-18	2017-01-18 23:25:00	2017-01-18 23:25:00	SUR
0019	JT	Lion Airlines	B12	0000-00-00:00:00		2017-01-18	2017-01-18 23:25:00	2017-01-18 23:25:00	DPS
0195	GA	GARUDA INDONESIA	G28	0000-00-00:00:00		2017-01-18	2017-01-18 23:00:00	2017-01-18 23:00:00	RNO
0425	GA	GARUDA INDONESIA	G56	0000-00-00:00:00	W5425	2017-01-18	2017-01-18 22:40:00	2017-01-18 22:40:00	DPS
0277	GA	GARUDA INDONESIA	G4I	0000-00-00:00:00	EY748	2017-01-18	2017-01-18 22:25:00	2017-01-18 22:25:00	BPH
0027	JT	Lion Airlines	B21	0000-00-00:00:00		2017-01-18	2017-01-18 22:25:00	2017-01-18 22:25:00	DPS
0029	GA	GARUDA INDONESIA	G27	0000-00-00:00:00		2017-01-18	2017-01-18 22:00:00	2017-01-18 22:00:00	SUR
0217	GA	GARUDA INDONESIA	G35	0000-00-00:00:00		2017-01-18	2017-01-18 21:50:00	2017-01-18 21:50:00	JOG
0421	GA	GARUDA INDONESIA	E51	0000-00-00:00:00	EY728	2017-01-18	2017-01-18 21:40:00	2017-01-18 21:40:00	DPS
0413	GA	GARUDA INDONESIA	G25	0000-00-00:00:00		2017-01-18	2017-01-18 21:30:00	2017-01-18 21:30:00	DPS

Monitoring Flight

Status	flight_number	airline_code	long_name	parking_stand	reclaim_first_bag_time	code_share	effective_date	sta_time_stamp	sta_time_stamp
Done	0037	GA	GARUDA INDONESIA		2017-01-18 14:42:00		2017-01-18	2017-01-18 14:30:00	2017-01-18 14:30:00
Done	0187	GA	GARUDA INDONESIA		0000-00-00:00:00		2017-01-18	2017-01-18 14:40:00	2017-01-18 14:40:00
Done	0277	GA	GARUDA INDONESIA		2017-01-18 14:40:00		2017-01-18	2017-01-18 14:30:00	2017-01-18 14:30:00
Done	0293	GA	GARUDA INDONESIA	G4I	2017-01-18 14:18:00		2017-01-18	2017-01-18 14:13:00	2017-01-18 14:40:00
Done	0313	GA	GARUDA INDONESIA	B81	0000-00-00:00:00		2017-01-18	2017-01-18 14:40:00	2017-01-18 14:40:00
Done	0311	GA	GARUDA INDONESIA		2017-01-18 14:42:00		2017-01-18	2017-01-18 14:25:00	2017-01-18 14:30:00
Done	0605	GA	GARUDA INDONESIA		2017-01-18 14:29:00	EY737	2017-01-18	2017-01-18 14:09:00	2017-01-18 14:25:00
Done	0587	JT	Lion Airlines	A63	2017-01-18 14:18:00		2017-01-18	2017-01-18 14:10:00	2017-01-18 14:15:00
Done	0587	GA	GARUDA INDONESIA	B87	0000-00-00:00:00	EY624	2017-01-18	2017-01-18 14:40:00	2017-01-18 14:30:00
Done	0515	GA	GARUDA INDONESIA	G4H	2017-01-18 14:39:00	EY719	2017-01-18	2017-01-18 14:25:00	2017-01-18 14:00:00

Report flight list serves to see the last update data reclaim_first_bag_time (onblock) from API PT AP 2, field name last update is LUP

Report Baggage menu is a detailed reporting of aircraft that have been in the handle or not in the handle

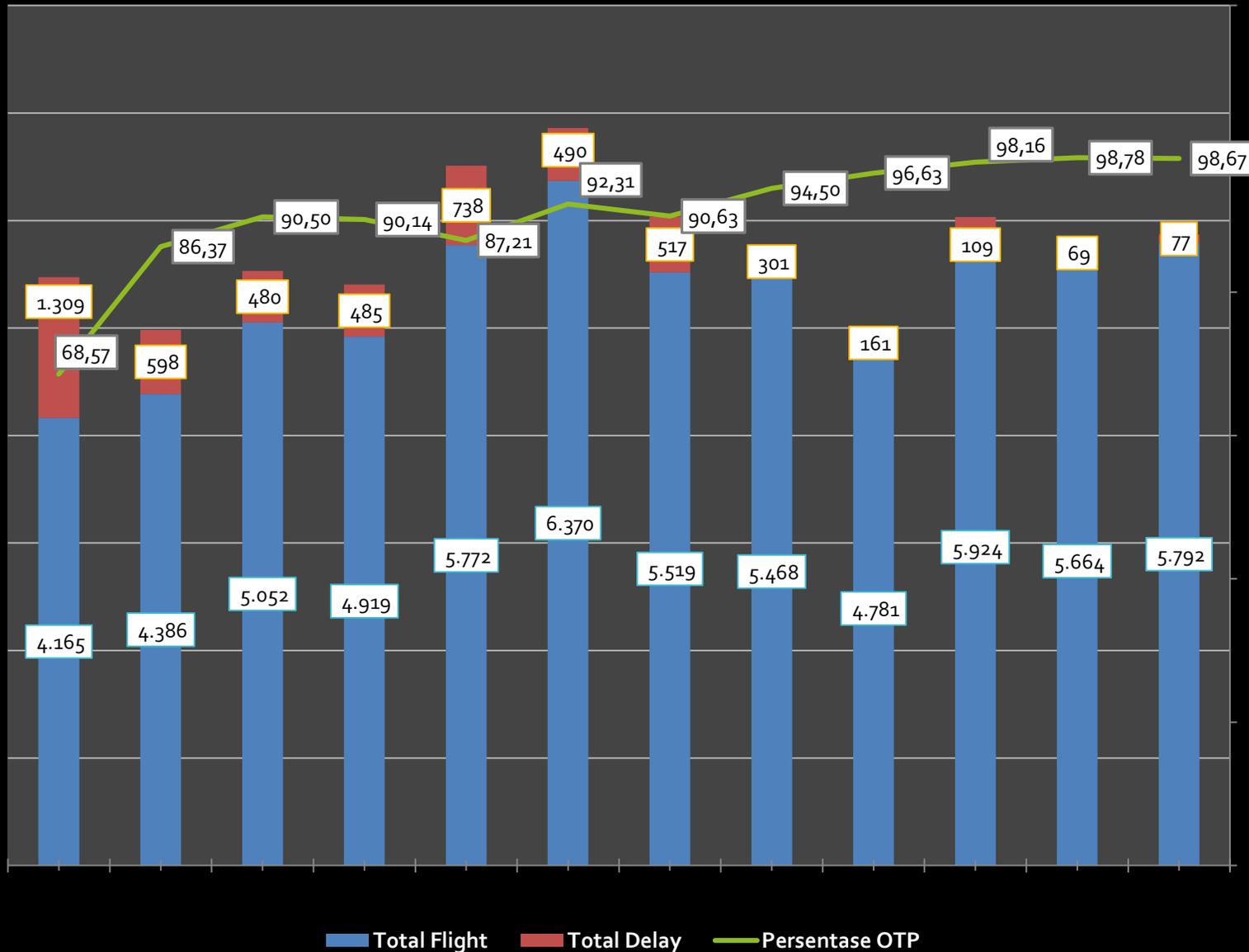
For monitoring Block On time, if Block On time is still 0 but the time is more than 3 minutes sta_time_stamp, then the status will delay, but if Block On time is filled, then the status is done



DIGITALIZE EFFECT FOR PASSENGER EXPERIENCE



OTP Baggage Handling year of 2017



- OTP trend of Baggage handling increases
- Total Delay decreases

Jenny Jusuf  @JennyJusuf

This is why I despise flying with lugagges. Woy @IndonesiaGaruda lelet kali kalian, ini penumpang smp duduk2 kelamaan nunggu bagasi Щ(°Д°щ)



- Uncertainty
- Uninformed

Before

After

BAGGAGE CLAIM

BELT 9

PENGAMBILAN BAGASI

FLIGHT NUMBER **FLIGHT ORIGIN** **FIRST BAGGAGE** **LAST BAGGAGE**

NOMOR PENERBANGAN

ASAL PENERBANGAN

BAGASI PERTAMA

BAGASI TERAKHIR

GA 0137

P. PINANG

00:00:00

00:08:00

- Informative
- Scheduled

2017-01-19 13:52:00

& KELUHAN / INFORMATION & COMPLAINT : Garuda Indonesia Duty Mar

Digitalize baggage arrival
monitoring

CCTV MONITORING AT BREAKDOWN AREA



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THANK
YOU!

ANGKASA PURA II
INDONESIA'S AIRPORT COMPANY

