

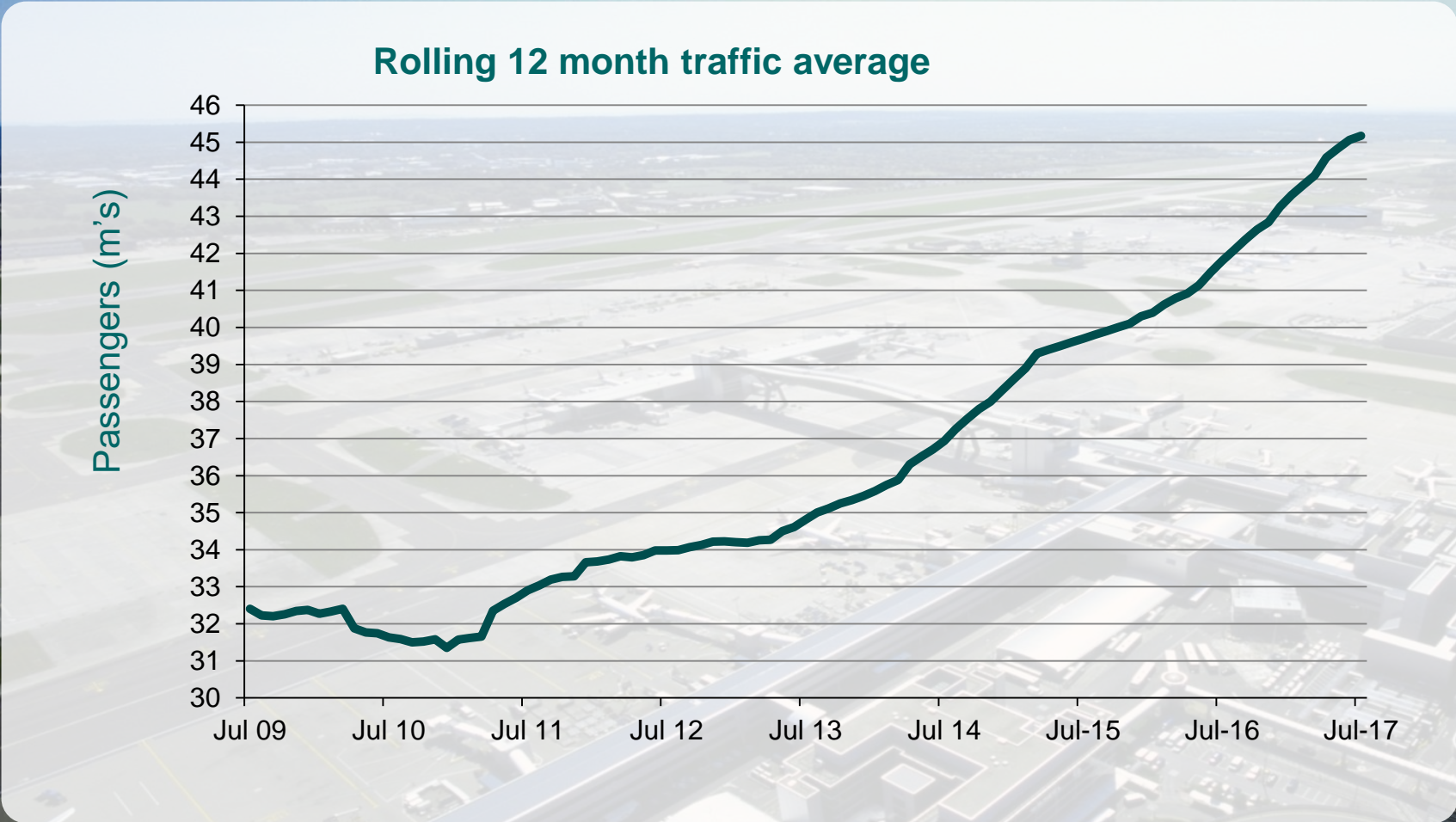
YOUR LONDON AIRPORT  
*Gatwick*

# Tech Led Innovation

Abhi Chacko  
Head of IT Commercial & Innovation



# World record efficiency



**Jul 28th**  
**946 flights**

---

**1 flight**  
a minute



# Largest single site bagdrop deployment



**95%**  
**passengers**

---

**through  
bagdrop  
in 5 mins**



# Security - highest throughput



**750**  
**trays**

---

**per**  
**lane**  
**per hour**

**95%**  
**passengers**

---

**through**  
**security**  
**in 5 mins**

# Tech innovations unique to Gatwick

YOUR LONDON AIRPORT  
*Gatwick*



# 1 Gatwick Connects



*Gatwick*  
**CONNECTS**  
Your flight connection  
Booking System

YOUR LONDON AIRPORT  
*Gatwick*

## easyJet announces 'Worldwide by easyJet'



**13 Sep 2017** easyJet, Europe's leading airline, has today launched 'Worldwide by easyJet' - the first global airline connections service by a European low fares airline.



*Gatwick*  
**CONNECTS**  
Your flight connection service

The world's best self-connection experience

easyJet TP Aer Lingus virgin atlantic WOW  
aurigny BRITISH AIRWAYS norwegian easyJet  
Thomson easyJet Airways Wizzair Hahn Merarch flybe



# 2 Beacon based indoor way finding



The Nicholas Culpeper 9min

Please follow the line

Take Lift up to L2 Departures / Check-in 7min

Please follow the line

Current Position

Cancel Start

Please follow the line 23 min

Entrance

North Terminal Oxford Bus Stop

Baggage Reclaim 8-11

Please follow the line 14 min

Check In Kiosk

Baggage Reclaim

Train Station

Gatwick Express

Taxi Office South

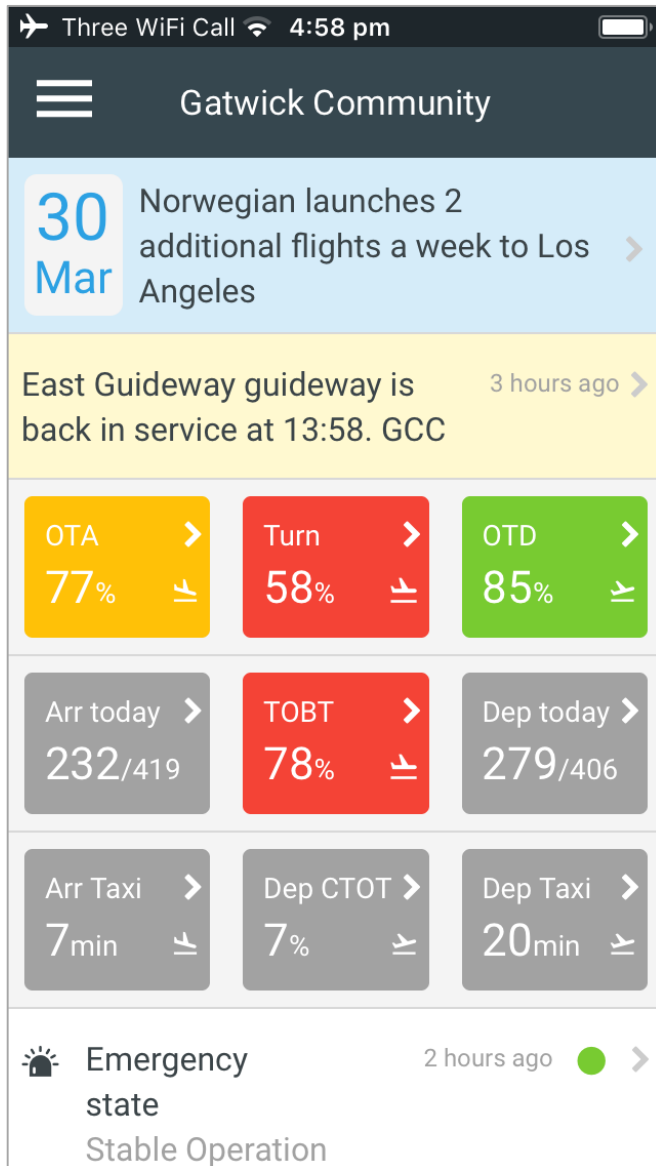


# 3 Airport Community app *“digital for the airport campus”*

DIGITAL IMPACT AWARDS 2017 WINNER

DIGITAL ENTREPRENEUR AWARDS 2017 WINNER

2017 UK IT INDUSTRY AWARDS WINNER



- Airport Calendar
- Airport messages, status, alerts
- On time performance/turn performance tool by airline/handler
- Flight Search and Operational Timeline
- Arrival & departure passenger flow dashboard
- Bag query
- Bespoke communication channels for all / specific user groups
  - Cancelled/delayed flights
  - Staff airside security entrance status
  - Commute time to airport
  - Terrorism related notifications
- Fault reporting
- Discounts/offers for staff
- Jargon buster & contacts
- Feedback feature

*More than 200 entities at Gatwick*

*Airport, Airlines, ground handlers, retailers, police, tenants, hotel staff*

*Other airports have adopted it*



## 4 Cloud FIDS (VisionAir)



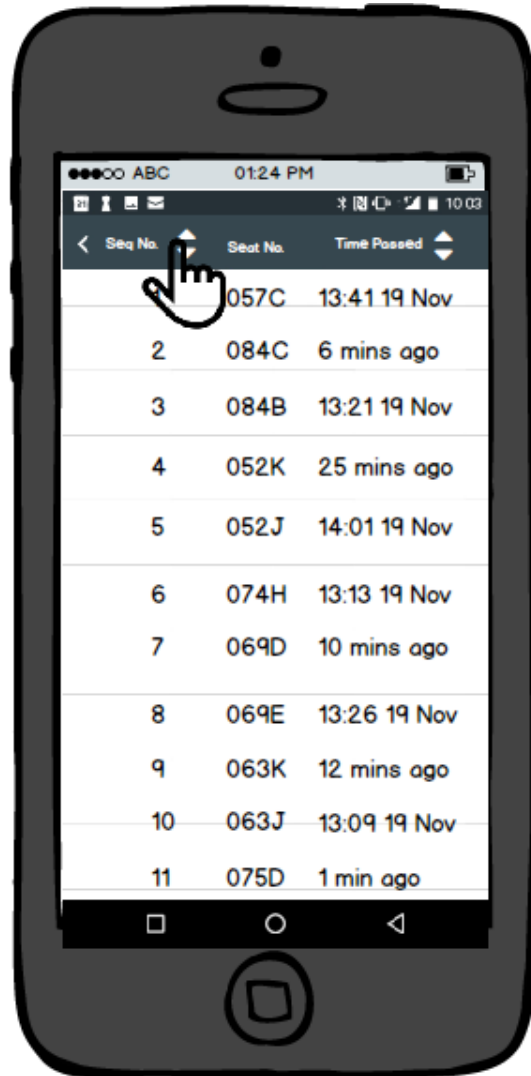
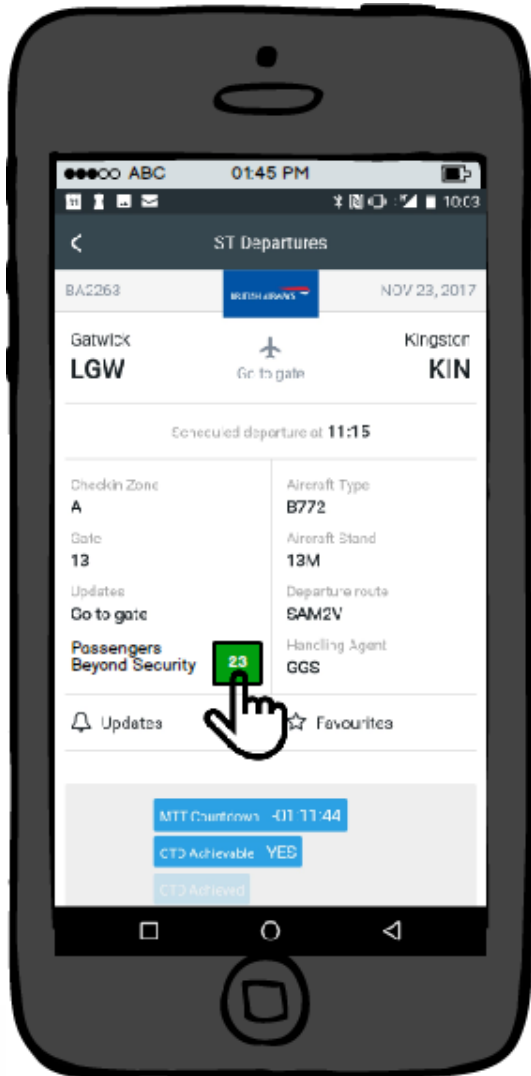
- Cloud based / low bandwidth
- FIDS, Ops and Advertising
- Granular control to screen level
- Content control delegated
- Runs natively on smart TV
- Switch off unused screens
- Video walls to smart phone



# Tech Led Innovation – Pipeline



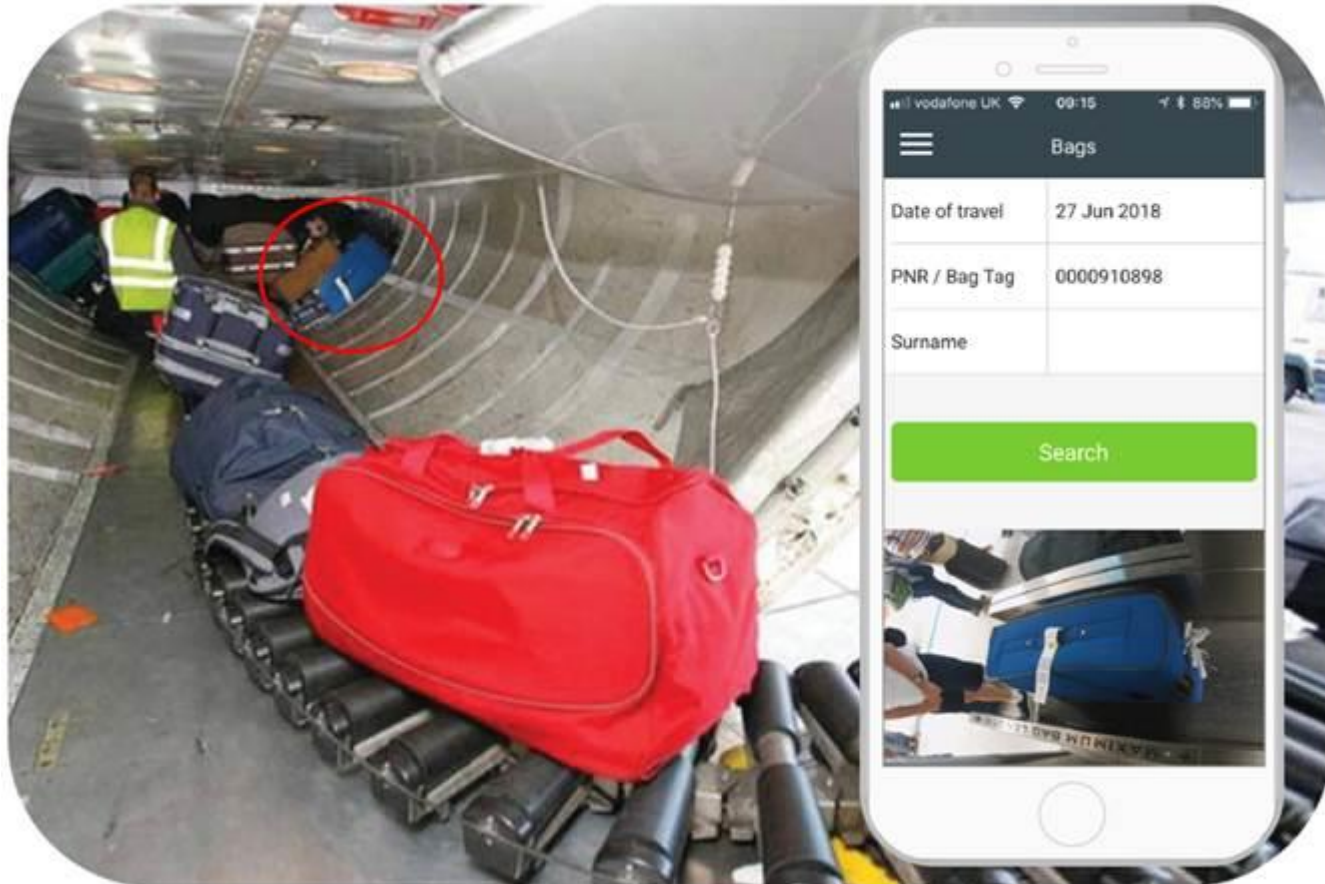
# Passengers Seen @ Security



- Primarily for boarding agents
- Check whether a missing passenger has crossed the security gate
- Close the flight vs wait for the passenger



# Bag Image Query



- Primarily for Ground Handler
- To fast track bag offload process
- Retrieve bag image based on tag no
- Initially applicable for Self Bag Drop areas





# Machine learning for predicting departure time ✓



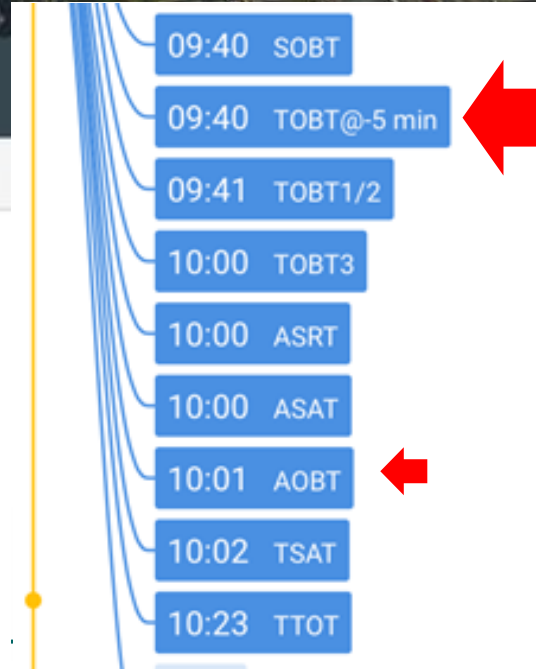
3 3G 5:53 pm

ST Departures

MT3872 Thomas Cook Airlines FEB 23, 2018  
Gatwick LGW Bridgetown BGI  
Departed

Scheduled departure at 09:40

Checkin Zone D	Aircraft Type A332
Gate 21	Aircraft Stand 21M



## Departure time prediction upon aircraft arrival:

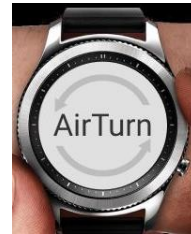
- Using fixed rules: 50% accuracy
- Machine learning target: 75% accuracy

## Benefits:

- Better prioritisation for OTD recovery
- Better departure sequencing
- Reduce stand conflicts
- Later call to gate and more pax dwell time



# AirTurn – Integrated turn management



- Integrated turn management with multiple stakeholders
- Text based interaction with all participants in the context of the flight
- Audit trail of each flight turn around activities
- Delay predictions and alerts based on statistical and real time data
- TOBT updates by pilot and by TCO on the stand
- ACDM dashboards to handlers on a commercial basis
- View of single aircraft, all aircrafts of a specific airline, specific activity across all aircrafts
- Trial voice commands, smart watch, Google glass

Flight crew

Cabin crew

Line Maintenance

Boarding agent

Airline Performance

Air Turn

Past performance - Target - Yours

October 10

02M Pier 1	DI8937 MAD 12:35	ASRT 13:14	DI8997 BCN 13:15	B738 EI-FYA
05M Pier 1	DI8937 LIS 13:05	TRN -2:45	DI8997 CDG 13:40	B738 EI-FJA
03M Pier 1	DI8937 AGP 13:35	TRN -32:14	DI8997 MAD 14:10	B738 EI-FGA
01M Pier 1	DI8937 OPO 14:05	ALDT 14:10	DI8997 BCN 14:45	B738 EI-FHA
02M Pier 1	DI8937 FRA 14:35	ETA 14:40	DI8997 MUC 15:10	B738 EI-FIA
04M Pier 1	DI8937 FCO 15:10	ETA 15:07	DI8997 GVA 15:45	B738 EI-FJA
02M	DI8937 MAD	ETA 15:40	DI8997 BCN	B738

**TCO**

Cleaning control room

Catering control room

Fueling control room

PRM control room

De-Icing



# Turn event detection – Computer vision, Sensors, Geotag



- Door open / close
- Fuelling start / stop
- Aircraft engine start / stop
- Geolocation of GSE



# Data Sharing Platform for London region

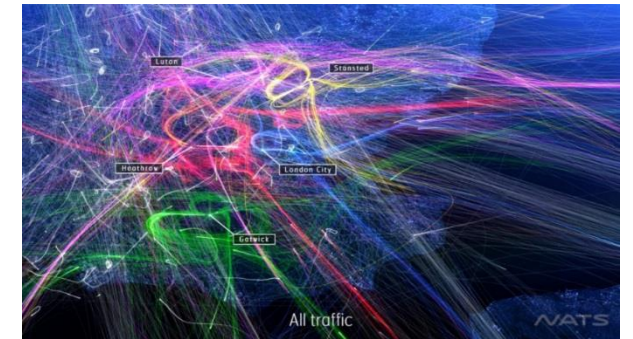
## A. Network Community app

- Summary performance metrics (~IRG analytical framework)
- Diversion handling capacity
- Departure route & air corridor congestion
- Integration with Eurocontrol & NATS feeds
- Limited to ATC, Airfield, Ops teams (not the entire community)
- Trial starting Sep'18

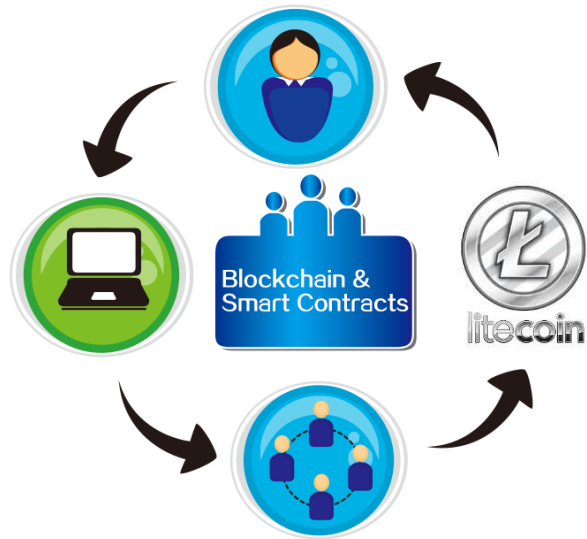


## B. Airchain

- Open source, secure flight data sharing platform using blockchain technology
- Distributed backend database among London airports
- Data visible only to the consortium members
- Each entity will control who can see their data on the platform
- Joint R&D initiative among Heathrow, Gatwick, NATS and Transport System Catapult
- Subject to funding, the new system will be available for trial in Jul'19



# Instant rewards for fast turners

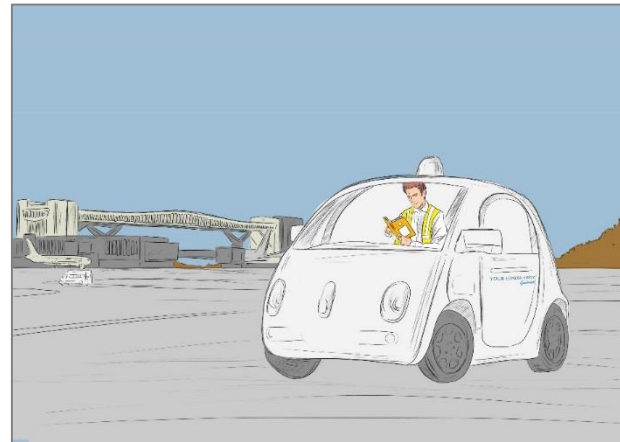


- Reward for flights which require fast turns
- LiteCoin release linked to OTD of the flight
- Automated, avoiding admin overhead
- Handlers see their LiteCoins in digital wallet
- Immediate gratification for the extra effort





# Autonomous Airfield "Uber"



# Passenger Chatbot & Voice Assistants





















- Flight, Baggage, Gate info
- Flight specific notifications
- Queue information
- Content related to outlets
- Offers for passengers
- Car park availability
- Taxi booking
- Next Bus, Train times



# Restaurant availability

## Table Availability

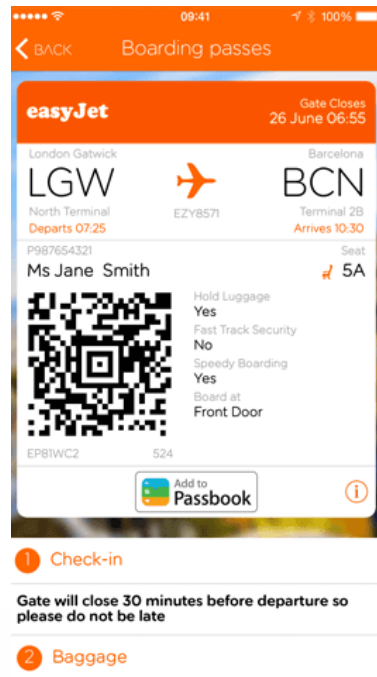
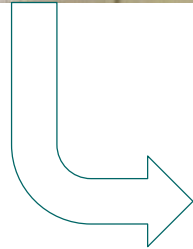
	Tex-mex grill Burgers, burritos, steaks	
	Authentic Italian Pasta, burgers and steak	
	Japanese Street Food and sushi	
	Authentic Japanese and Asian Classic british breakfast	
	Lebanese and middle eastern	
	Freshly made sandwiches and salads	
	Traditional british pub and diner	
	American style shakes & hot dogs	
	Pizzas, pastas burgers and grills	

- Busy / free indicator for restaurants
- Information delivery via screen on IDL, passenger app & airline app





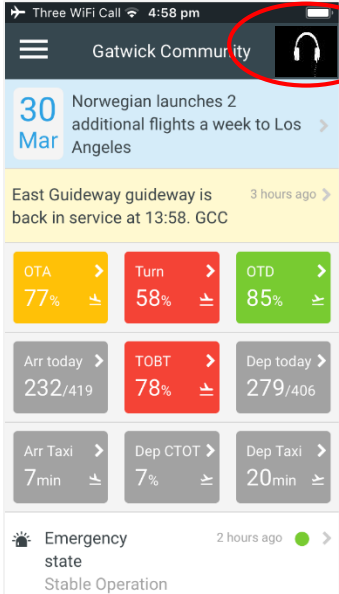
# Digital vouchers for disrupted passengers



- Airlines can load meal/hotel vouchers for delayed flights onto boarding pass codes
- Boarding pass can be used as the voucher
- Passengers don't need to queue for vouchers from airline desk
- Streamlined settlement between F&B outline and the airlines
- Same facility can be used for incentives for staff



# Gatwick Family podcast



- Summary of previous day events
- KPIs. Top performers
- Planned activities for the day / week
- Passenger comments
- Key industry news, Gatwick in news.
- Exec, Staff interviews
- Listen in as you drive in
- Delivered through Community app



# Questions?

