Melbourne Airport

EACC Situational Awareness Platform

TIBCO Now Keynote – March 2017
Welcome...

It is a journey

It is about people, process and technology

It is about a strong technology ecosystem
Planning the journey...
Planning the journey...

We started with a holistic model of the journey from booking a flight at home thru to boarding the plane and returning.

- 24x7 operations
- Airside, terminal and landside operations
- 75,000 visitors daily
- 15,000 contractors
- 100’s systems and applications
- 1000’s devices, alarms and alerts
Planning the journey...

9.26M INTERNATIONAL

34M PASSENGERS

24.74M DOMESTIC

JULY 2013
30 MILLION

JUNE 2014
31 MILLION

APRIL 2015
32 MILLION

JANUARY 2016
33 MILLION

JULY 2016
34 MILLION
Planning the journey...

We want to be able to ensure you park easily and in close proximity to your departure terminal.

- Dynamic road signage
- Bayfinding
- Traffic counting cameras
- License plate recognition
- Taxi Management
- Bus scheduling
Planning the journey...

Future State Customer Journey Model

13 August, 2013

No delays leaving to the gate and eating plane
Contactless and self-service required
No delays to on-board
No delay to land—just get me out of the plane and help me on my journey
The airport is clean
Car rental service
Smooth離焦
Rumours free of delays

Flight Information Displays

• Check-in counters
• Kiosks
• Bag drops and pickup
• Retail

NUKON

MELBOURNE AIRPORT
Planning the journey...

• Security gates
• Anti pass back
• CCTV
• Access control
• Incident Management
• Fire Systems

We want to get you boarded safely and securely
Planning the journey...

- Scheduling
- Runway monitoring
- Nose in Guidance
- Air bridges
- Catering
- Refuelling
Planning the journey...

Mini City

Reactive

Data

Smart City

Proactive

Information

Predictive

Knowledge
Getting there...

LEADER

HIGH

MEDIUM

BASIC

INTEGRATED

SITUATIONALLY AWARE

EFFICIENT RESPONSE

PREDICTIVE CONTROL

OPTIMISED

PHASE 1

PHASE 2

PHASE 3

PHASE 4

MATURITY LEVEL
Getting there...

- Business Requirements
- Roadmap
- Decision
- System Design
- Phase 1 Implementation

Requirements Spec
Tech Roadmap & Product Selection
System & Interface Design
Phase 1 Solution Deployed into EACC
Implementation

• Hybrid Delivery Model
• Build delivered using Agile methods
• 6 x 2 week iterations with demos + testing and handover
• Core team of 6 people
EACC – Situational Awareness

- Live visual representation of the airport
- Aircraft are color coded to indicate early, late and on-time arrival, departure
- Emergency work orders are displayed as they happen
- Drill down for status of key operational assets, such as check-in counters, baggage carousels and
- Modern software and web-based
Airport Live Map

A real-time updated map that shows not only the aircrafts, but also service vehicles and assets such as gates and baggage carousels.
Manage Incidents

Add and edit incidents.

Once an incident is added, it pops into every user’s screen.
Passenger Flow

Heat map of passengers projected in time.

Passenger projection in key areas such as Customs and T4 Arrival Hall.
Work orders

A spanner overlay on a gate icon will indicate maintenance work is being scheduled or in progress.

Real-time integration with the asset management system.
Manage Master Data

Inbuilt master data management.

Updates are made by authorized users directly into the web application and propagate immediately.
EACC – The Technology

- Hybrid OT and IT solution
- Featuring TIBCO technology to integrate and augment intelligence
- TIBCO Enterprise Service Bus (ESB)
- StreamBase complex event processing (CEP)
- Business rules engine, Live Datamart
- SCADA System and Automation (PLC) Platform
- Web Application
Capabilities and Benefits

• Highly flexible, integrate to any system or device
• Enterprise Service Bus Architecture enables scalability and reuse of interfaces at low cost
• Real-time geospatial mashup of data streams in a fully interactive map on any device
• Incident identification and management
• Fuels continuing drive for operational innovation and efficiency
• Delivers the “wow” factor – sets the foundation

“The system has delivered remarkable connectivity of our applications. Brilliant job guys.”
CIO, Melbourne Airport
Roadmap

• The infrastructure is in place
• The goal is to reach Full Collaborative decision making (CDM) between airport operators, service providers, stakeholders and airlines to improve quality of service to customers

“We now have the technology to have a visual real time tool for the operational activities which are occurring at the airport.”

Katie Cooper, Head of Aviation Operations, Melbourne Airport
It is a journey

It is about people, process and technology

It is about a strong technology ecosystem
We exist to inspire teams and create transformational change by delivering the technology solution to realise your vision.