MANAGING THE MANAGEMENT SYSTEMS
Business Information Technology

Moderator:
Frank Barich, Principal Consultant, Barich, Inc.

Panel of Experts:
1. **Chris Richards** - Director, Technology Services, Vancouver Airport Authority
2. **Paul Drury** - Vice President for Ultra Electronics Airport Systems
3. **Melodie Johnson** - Div Dir, Airport & Public Safety Systems, Los Angeles World Airports
4. **Peter Sonnenfeld** - Dir, US Aviation IT Solutions, for the Logistics and Airport Solutions group of Siemens AG
5. **Paul Hetzel** - Information Services Director for the Raleigh-Durham Airport Authority

2015 Spring Conference, Vancouver, British Columbia

Meet the Panel

Chris Richards - Vancouver Airport Authority
- Shares the leadership of the information technology function at the Airport
- Focus on operational systems and building a digital gateway

Paul Drury - Ultra Electronics Airport Systems
- Experience with operational delivery and support of Passenger and Baggage processing systems and messaging solutions, and managed service delivery

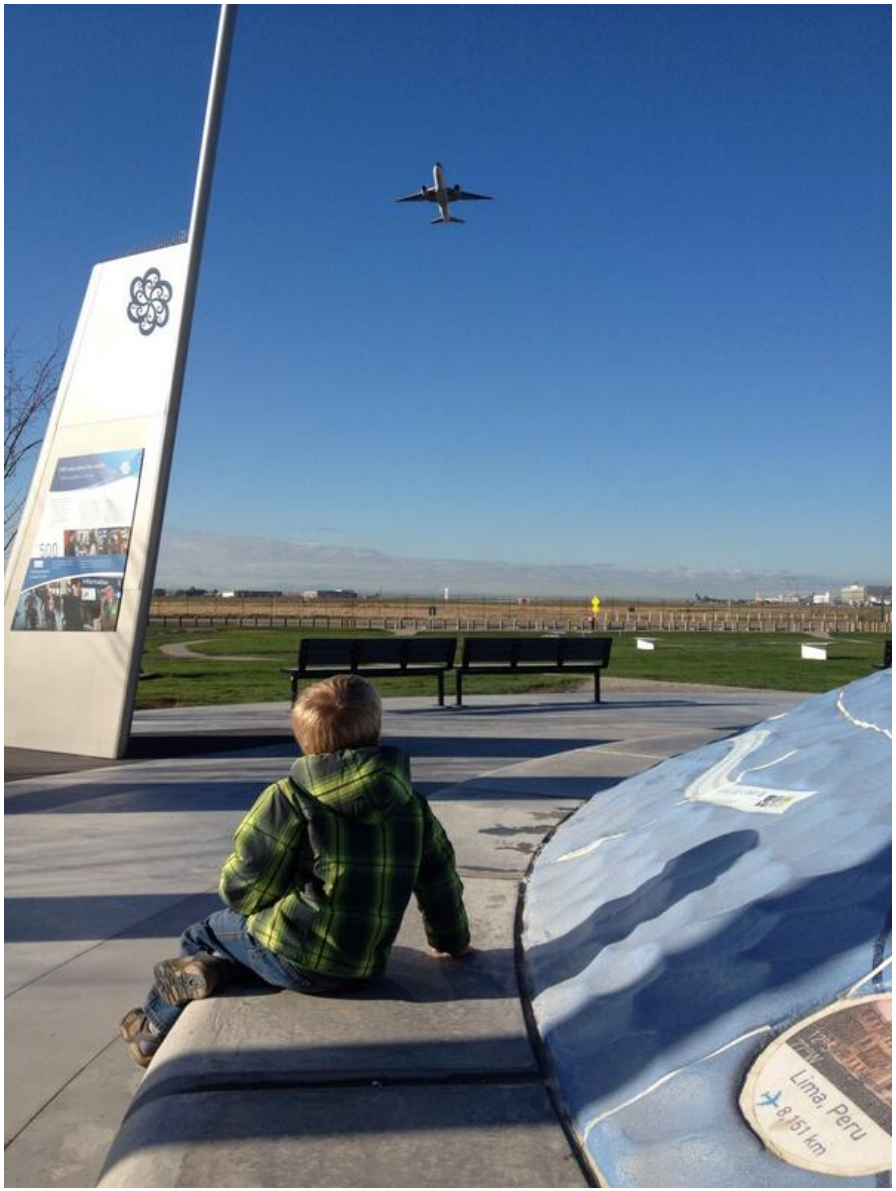
Melodie Johnson - Los Angeles World Airports
- Managed multimillion dollar public safety, security, and airport support systems based projects
- Access Control, Police Dispatch, CCTV, Credentialing, Common Use

Peter Sonnenfeld –Siemens AG
- Activities include consulting, with a focus on identifying measures of improvement in airport operations management, and developing IT solutions for airport command & control centers.

Paul Hetzel - Raleigh-Durham Airport Authority
- Balances business alignment, technology strategic planning and technical execution for RDU's IS systems including their common use systems.

Session Objectives

- Panel to present relevant issues on the subject
- Engage discussion with the audience to draw out challenges and successes (build on the key take-a-ways)
- Lead to greater discussion between committees on how we can work together to address the issues discussed and greater utilize these systems
- Key Take a-Ways
  - What is my single largest concern and can I solve it with integration? – Where is the value and how do I get started?
  - Look at the best of breed versus integration
  - Getting buy-in from the airlines – our key stakeholders – with regard to data sharing
  - Data standards – both external and internal
  - Do we have enough to form a sub-Committee



Managing the Management Systems

March, 2015

AWARDED BEST AIRPORT IN NORTH AMERICA 6 YEARS IN A ROW

Vancouver Airport Authority (YVR)

Who are we?

- Growing

  Expect over 20 million passengers

  in 2015 (almost 100,000 bags a day)

- Service focused

  Customer care is critical

- Innovative

  "Sense of place", common use, "green coats", a shopping mall, technology, ….

AWARDED BEST AIRPORT IN NORTH AMERICA 6 YEARS IN A ROW

Managing the Management System
The Opportunity

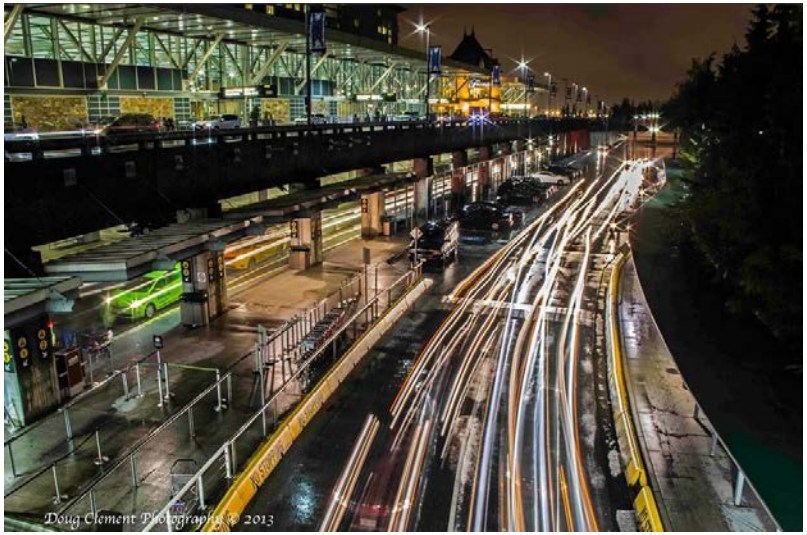
- Improve efficiency
- Reduce cost
- Increased quality

- Learn more about your business
- Build processes around building processes!
- Develop new services

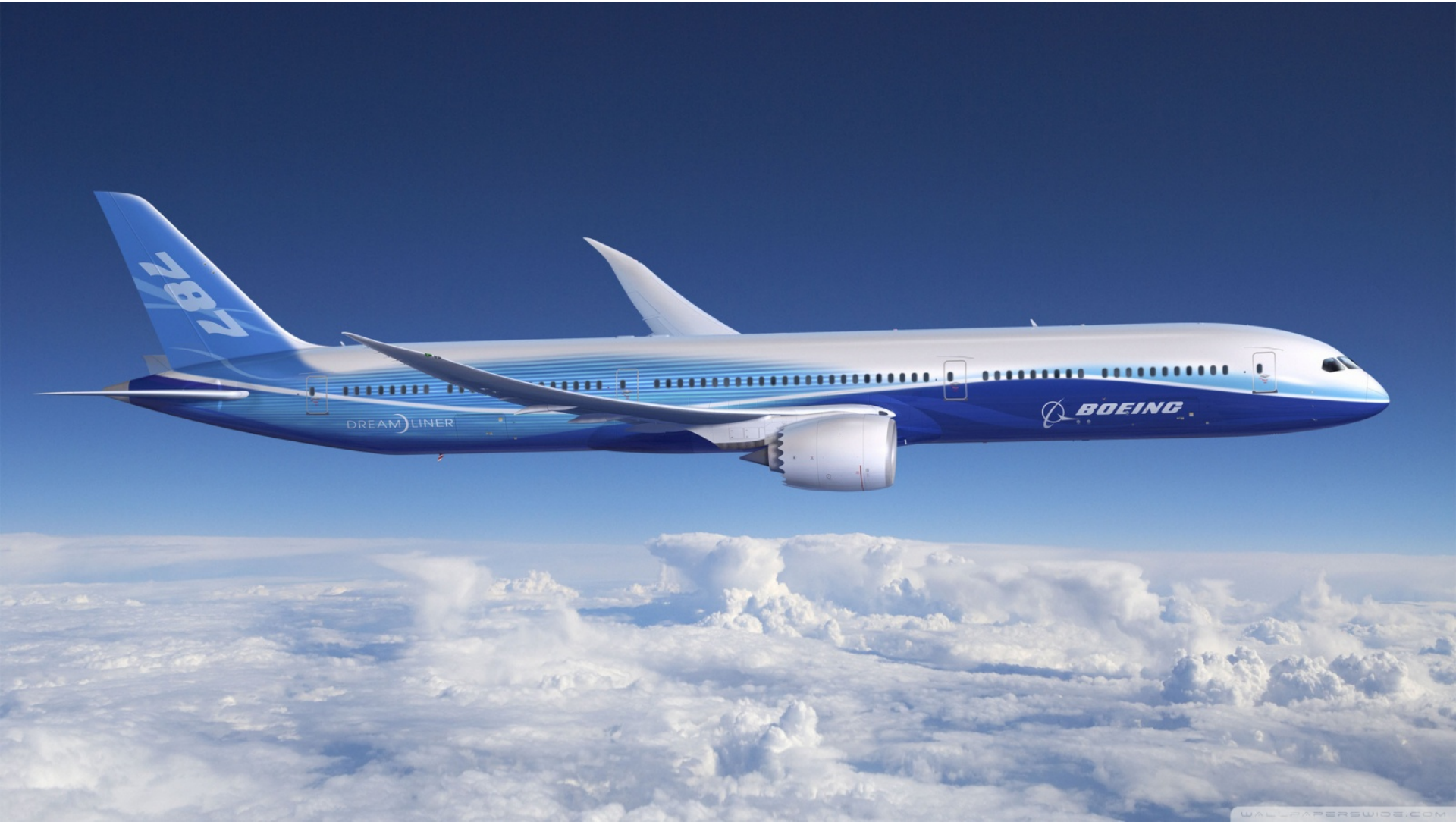
Managing the Management System
The Challenge

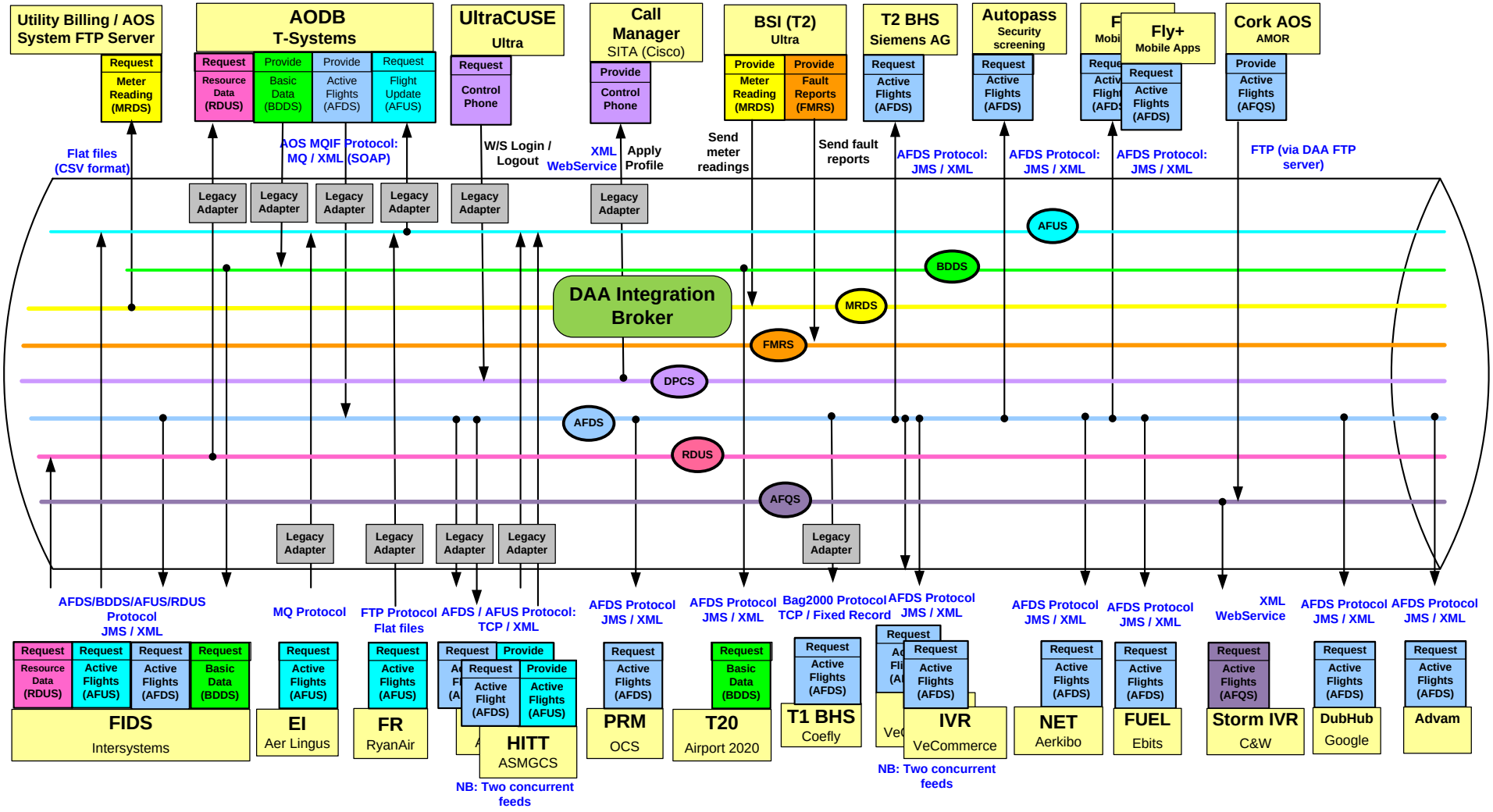
Need to take a holistic view

- Processes
- Data
- Culture
- Technology



Ultra Electronics





Dublin IB - Logical Flows between Systems using IB Services

VisioDocument

SOA Integration Benefits

- **>650 million** passengers handled on Ultra's integration services
- **Singapore Changi** (80 external interfaces)
  - System availability increased to >99.99%
  - 26,000 employees reliant on the ESB data availability
- **Shanghai Pudong & Hongqiao Airports** (>80m pax)
  - 35,000 flight updates / day delivered to >20 client systems
  - Project cost reduced by 75%
- **Heathrow Airport**
  - Distributed 60 baggage information messages/second during the Olympics
  - A BIM is an enriched BSM – which the Baggage service creates

Ultra Electronics AIRPORT SYSTEMS

- ***"You have seen one airport ...."***
  - Should *not* be applied to IT investment
  - Many success stories but even more failures
- **Don't assume it is expensive**
  - Force through adherence to standards or reuse of interfaces
  - But it requires a different approach than just buying a system
- **TALK!**
  - Share stories of success, failure & strategies
  - Come together to define SOA standards that vendors can reuse

Los Angeles International Airport

Managing Managed Systems

Melodie Johnson, Director, Airport & Public Safety Systems

About LAX

- Sixth Busiest Airport in the World – 66.6 m passengers (2013)
- Second Busiest in the United States (2014)
- 17.8 m international passengers (2013)
- Busiest Origin & Destination airport in the world
- 680 daily flights to 96 US Cities
- 910 Weekly non-stops to 59 Cities in 30 Countries
- 14th in the world and 5th in the US in Cargo
- 95 passenger and cargo airlines
- Four runways
- 9 terminals

Key Challenges

- Obtaining buy-in from the airline and ground handling entities that the CDM approach provides value to their organization. Are they collecting their data in an automated electronic means, is the data accurate, and are they willing to be transparent?

Getting Started

- Obtain buy-in and commitment from all entities
- Define the requirements with significant detail. Develop a strong interface design document (IDD)
- Start small, realize successes, grow into via phases
- Define KPIs
- Select the right integrator
- Build a team representative of all entities that are committed to the success of a CDM implementation

LAX is establishing a foundation to support CDM

- Airport Response Coordination Center (ARCC)
  - Utilize AODB as repository of data from various resources. LAX currently uses SITA solutions
  - SIAMOS operations dashboard
    - Collecting and consolidating data from various LAWA owned systems
    - Data is available to ARCC & Executive Staff
    - Future phases – integrate with non-LAWA systems

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Managing Management Systems

Turning data into decisions.

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Goal:
Operational Excellence

Have you ever asked yourself…

How can I increase the value of information I already have ?

How can I predict the future based on what I already know ?

How can I mitigate and avoid problems ahead of time ?

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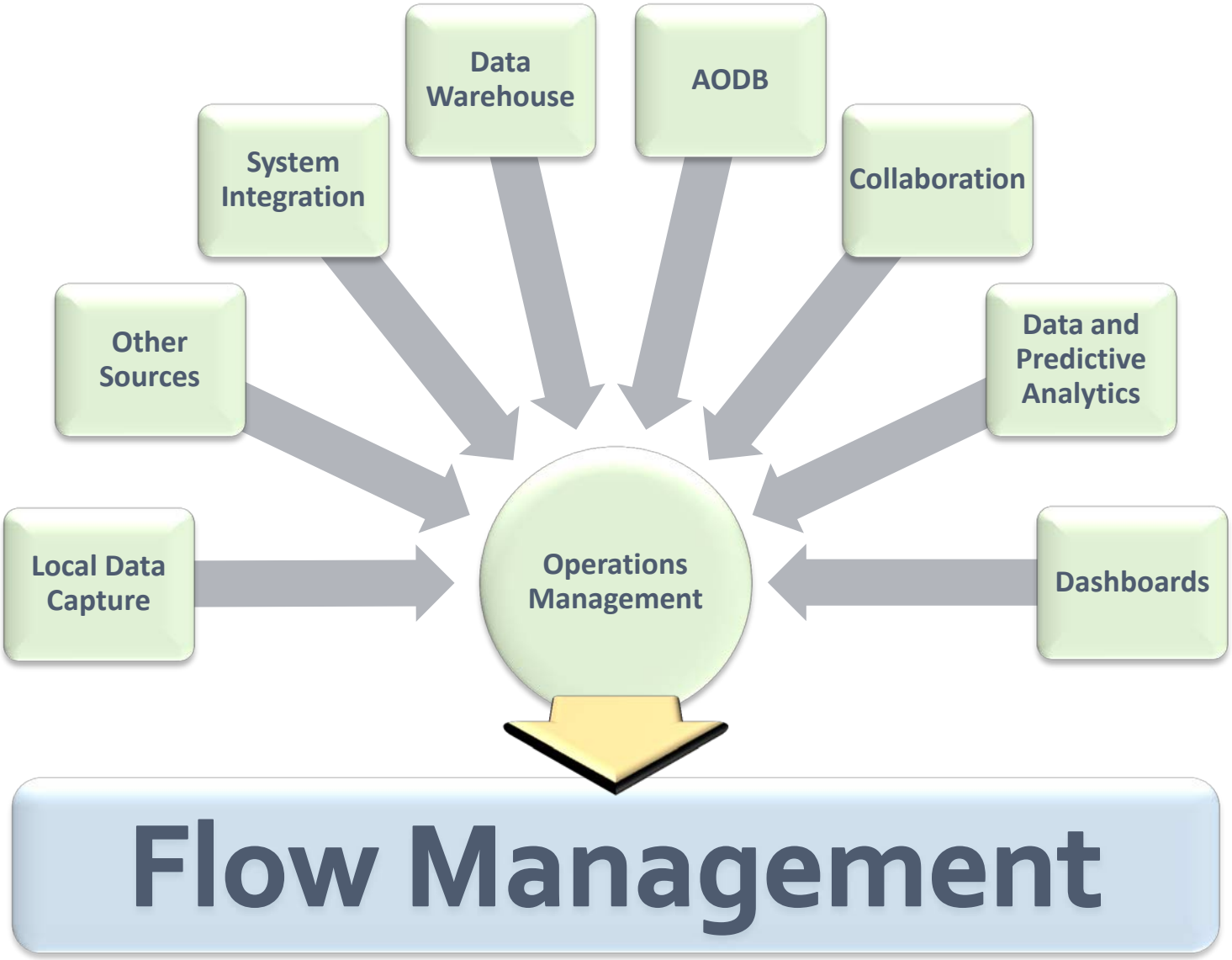
Data Warehouse
AODB
System Integration
Collaboration
Other Sources
Data and Predictive Analytics
Local Data Capture
Operations Management
Dashboards
Flow Management

We’ve all heard the expression “… runs like a Swiss watch”.

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You have a set of perfectly designed components ,
with clearly designated and distinct roles,
engineered to work in harmony with each other,
with a common goal,
each with maximum efficiency,
jointly achieving operational excellence.

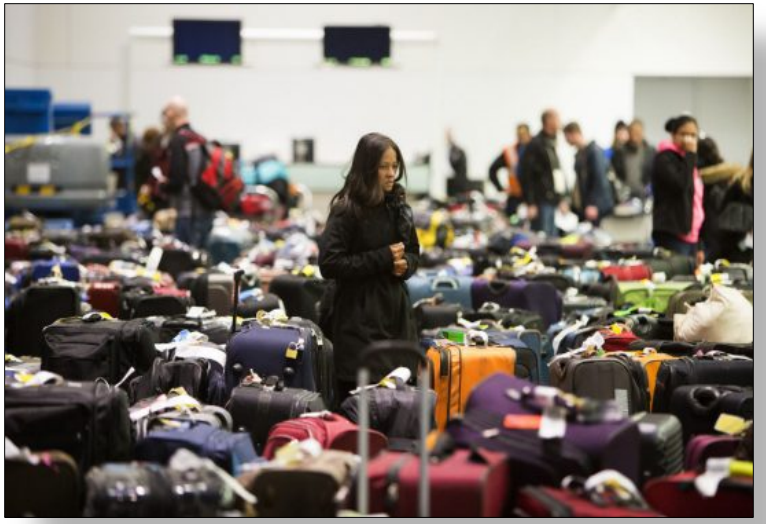
Reality at airports…

More or less well engineered components ,
with some gaps and overlaps,
designed to work within their own environment,
each with their own goal and objective,
each with varying rates of efficiency,
attempting to jointly manage complex operations.

Airside

Terminal

Landside



Plus …

It's all about the flows

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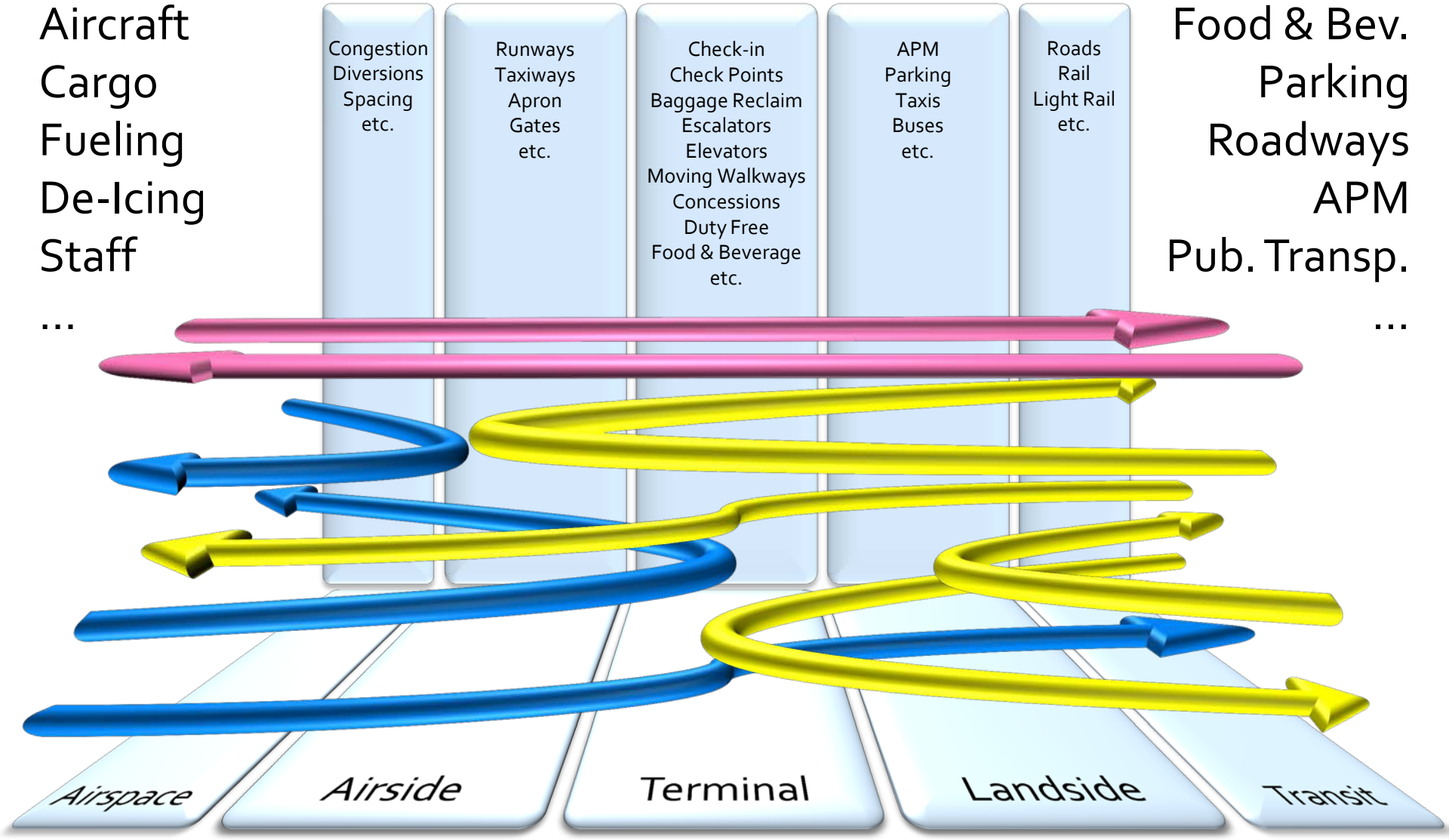
Passengers
Baggage
Aircraft
Cargo
Fueling
De-Icing
Staff
…

GHS
Retail
Food & Bev.
Parking
Roadways
APM
Pub. Transp.
…



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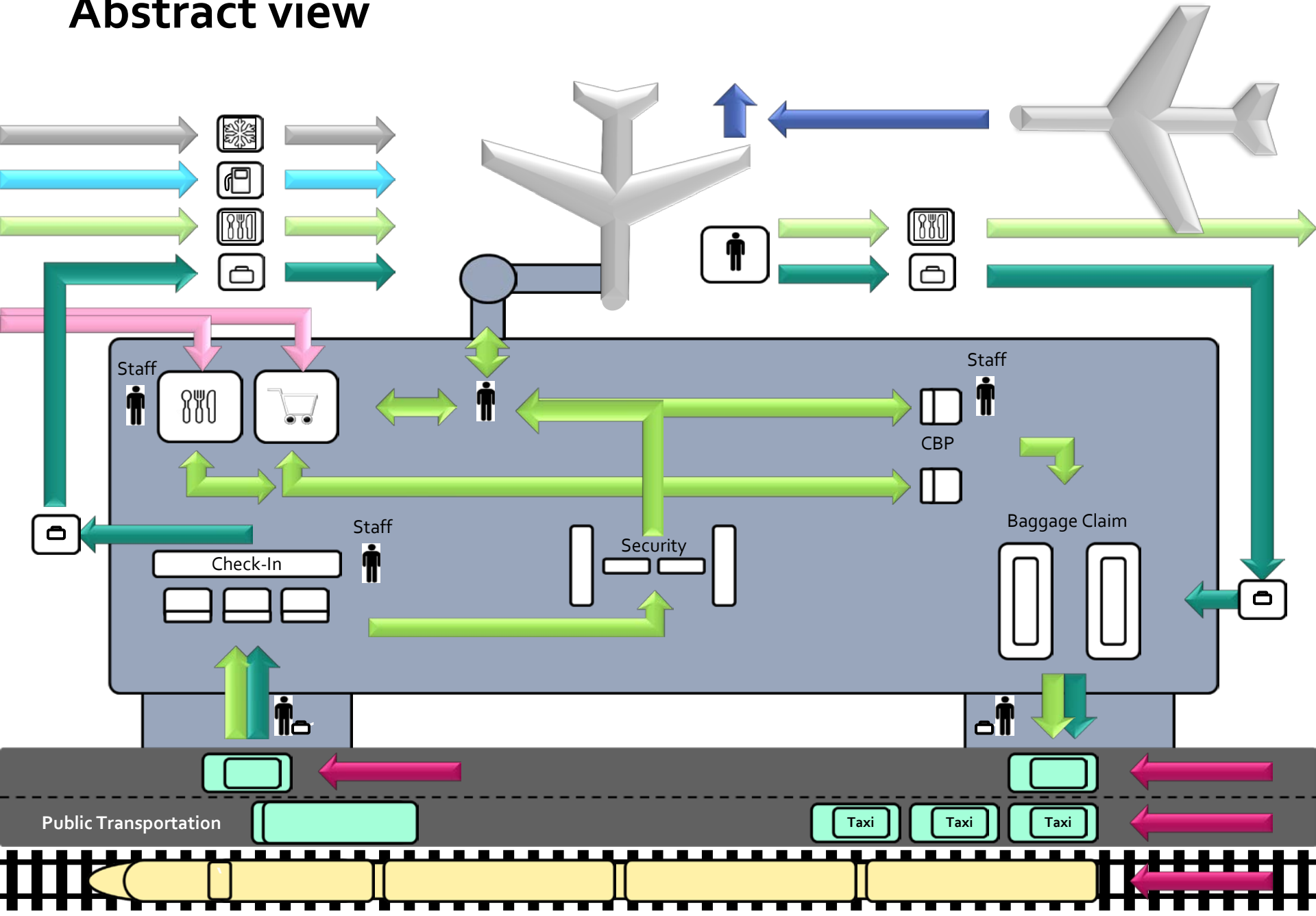
Abstract view



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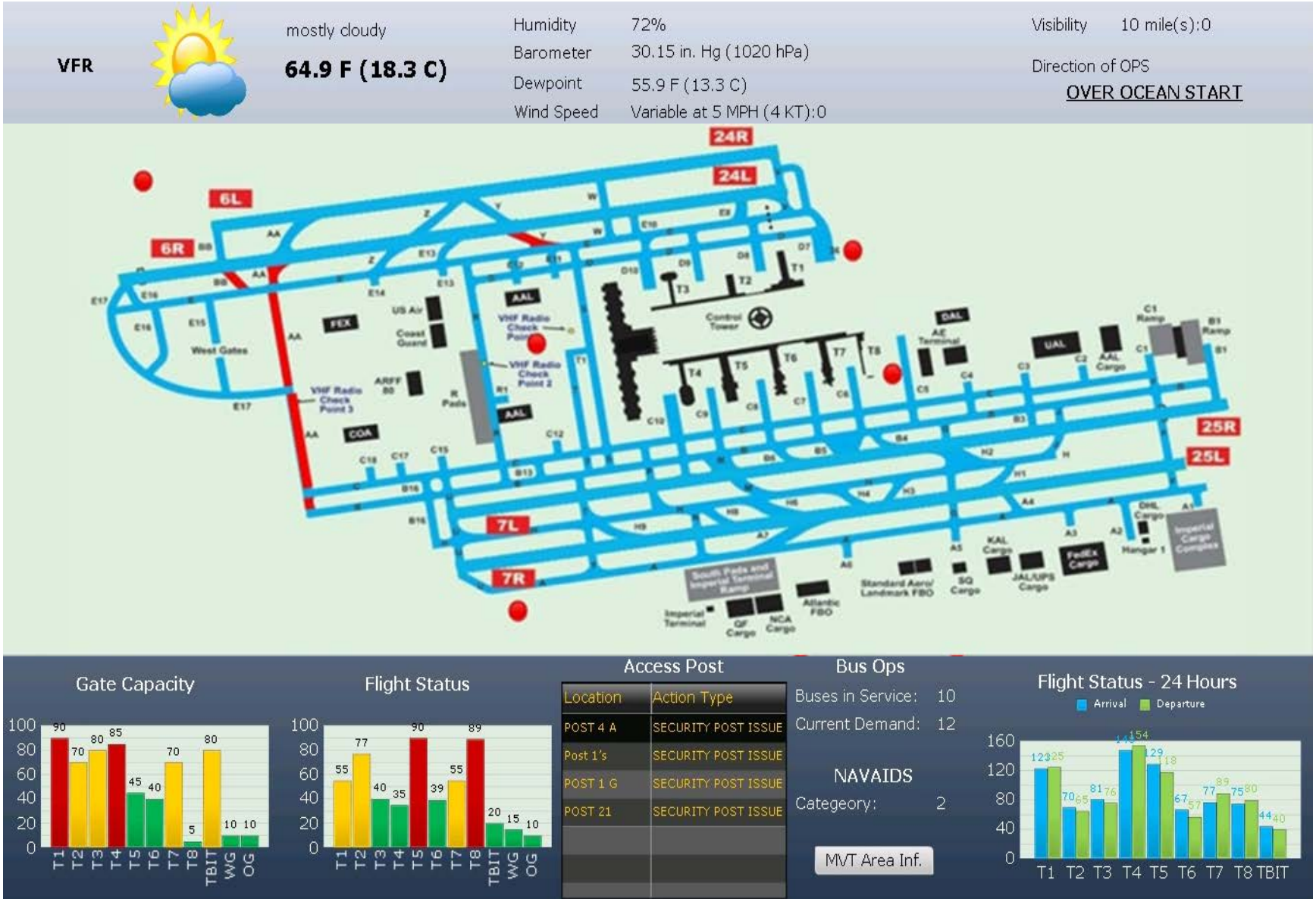
Actual view



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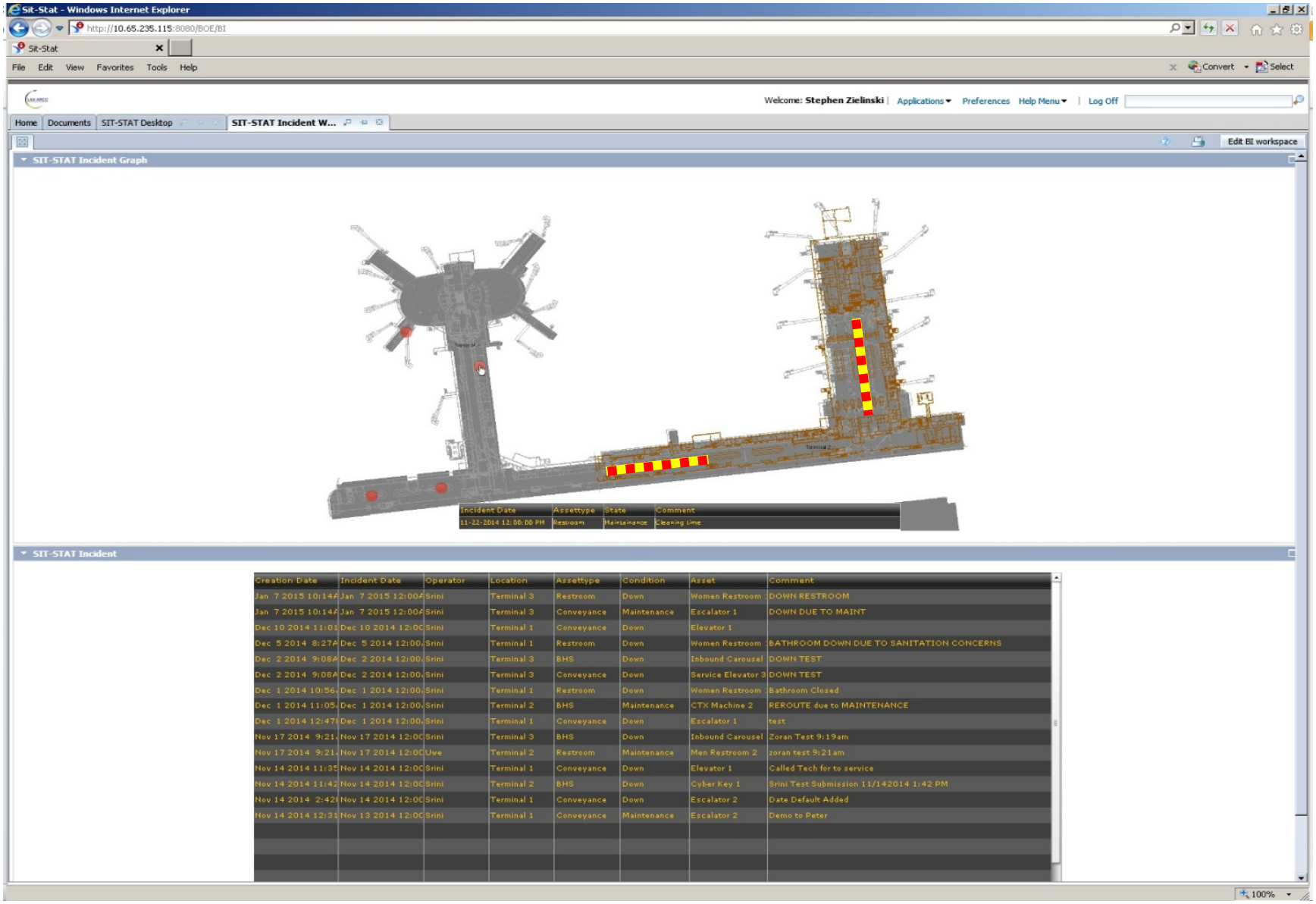
Predicted (projected) view



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Features & Benefits:

- Manage all airport flows (PAX, staff, baggage, vehicles, etc.).
- Manage current and predict future operational conditions. Analyze past performance.
- Mitigate and prevent problems before they happen.
- Improve the airport's operational performance and the performance of all the airport stakeholders.
- Depict flows in a variety of ways and generate views according to particular requirements.
- Delegate views to any stakeholder with preset thresholds.
- Allow stakeholders to manage their assets (fixed and moving) to a set of metrics.
- Enable exception-based operational management.
- Present operational areas on "canvases" and overlay flows.

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In Summary:

Know your flows …

… by shift, by day, by season, etc.

Know the status of assets supporting those flows…

… current, future and past

Develop action plans …

… around the degradation and failure of those assets

Don't boil the ocean …

… focus on the problem areas,
use manual data collection for areas not automated yet

It's a daily activity

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Questions?