EUROAIR TRANSPORT IT SUMMIT
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EVOLVING AIR TRAVEL.
The digital transformation
DATA MANAGEMENT AND EVOLUTION

Big data and Operational Analytics
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By: Alan Burgess
HARNESS THE POWER OF DATA

Implication:
• Adapt how data is stored, analyzed and exploited
• Inform decision making at the tactical level
• Predict potential outcomes
• Prescribe actions in decision time
BIG DATA SCOPE AT AIRPORTS

- Airports
- Airlines
- Ground Handlers
- CRS/GDS/OTAs
- B2C APP Developers
- Others

APIs/SDKs
- Avg. Q-Wait time
- Location Services
- Baggage Alerts
- Flight Status
- Parking Status
- E-Tagging
- Shopping Offers
- Context Alerts
- Third parties

Airport Data Hub (Developer.aero)

- Pax Flow / Dwell
- Q Management
- AICC
- CUTE / CUSS BI
- Operations BI
- Baggage BI
- Patterns / Trends
- Analysis / Predict

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MAKE THE MOST OUT OF YOUR AIRPORT DATA

All data matters: big and small (unstructured and structured)
Operations analytics opportunities are driven by:
• increased availability of data
• improvements in technology
• access to algorithms

Realities:
• Change is constant
• Agility is key
PASSENGER OPERATIONS

Analyse patterns and build profiles
• Learning to support decision making
• Multiple profiles for multiple dimensions
• Maximise knowledge base

First Detection Profile
Show-up profile at public area

First Scan Profile
Show-up profile at security points

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PASSENGER OPERATIONS

Analyse passenger flows
- Analyse unstructured data from IoT
- Correlate with structured data, e.g. flight tracking
- Respond to identified situations
Predict, identify and improve

Use Flow Prediction algorithms to accurately forecast passenger flows and proactively optimize airport efficiency.

• Enjoy continuous visibility of the effect of irregular operations on passenger flows
• Identify potential processing choke points and evaluate alternative solutions with other stakeholders in real-time
• Analyze relevant flights and identify which events are having the greatest impact on passenger flows
Manage the Prediction Rules

- Apply historical trends
- Make adjustments based on recent info
- Add special event parameters
**Predict load per Flight**

- Import the flight schedule
- Add flights to the schedule as required
- Predict PAX, bags, car park utilization etc per flight
Review Simulation Results

- PaxFlow
- Baggage
- Parking
- Resource demand
Request resources

- Identify required manning levels
- Review and refine the plan
- Order and negotiate resources
Manage Day of Operation

- See the effect of deviations based on real-time flight updates
- Take proactive steps to rebalance the workload
- Make sure transfers are made and passengers are at the gate in time
- Adjustments to resources and passenger routing are simulated in real-time
- Simulation uses real-time operations data to provide most accurate prediction
Big Data and Operational Analytics are relevant for Airport Operations
Use data to enable timely adaptation to changing conditions, including increased demand, Irregular operations and disruptions

• Combine knowledge of historical trends with real time data to predict the expected situation if no changes are made
• Apply well tested algorithms and continuously refined business rules to prescribe required actions
• Build confidence to automate prescribed actions and carefully monitor the environment, making adjustments as necessary
• Analyze the effect of changes and actions taken to identify required adaptation of algorithms or business rules
Stay on the pulse of your airport operations

#AirportMatters

THANK YOU