WE TAKE 43 MILLION PASSENGERS TO 230 DESTINATIONS ALL OVER THE WORLD

Aeroporti di Roma

The Airport Digital TRANSFORMATION
The history of the Italian capital’s airports begins in 1916, when Ciampino “Giovan Battista Pastine” Airport was inaugurated for airships and military purposes. Today it is the airport for low cost traffic, “express courier” goods and General Aviation traffic (state, humanitarian and civil defence flights).

In 1961 “Leonardo da Vinci” international airport was inaugurated, it is now the “main hub airport” for scheduled and charter international and intercontinental traffic.
Since 2013 it is part of Atlantia Group, a global player in the motorway and airport infrastructure sector, operating 5,000 km of toll motorway in Italy, Brazil, Chile, India and Poland and managing, moreover, the three airports of “Cote d’Azur” in France.

ADR recorded over 47 million passengers with over 230 destinations worldwide that can be reached from Rome, thanks to around 100 airlines operating at the two airports.

According to ACI figures, in the third quarter Leonardo da Vinci Airport was ranked number 1 of all the major EU airports in terms of passenger satisfaction. This is the best performance ever recorded in the airport’s history.
<table>
<thead>
<tr>
<th>Aeroporti di Roma</th>
<th>Facts &amp; Figures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Runways</strong></td>
<td>4</td>
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<tr>
<td><strong>Check-in Desks</strong></td>
<td>376</td>
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<tr>
<td><strong>Parking Spaces</strong></td>
<td>22,031</td>
</tr>
<tr>
<td><strong>Terminals</strong></td>
<td>6</td>
</tr>
<tr>
<td><strong>Information Desks</strong></td>
<td>11</td>
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<tr>
<td><strong>Gates</strong></td>
<td>96</td>
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<tr>
<td><strong>Assistance Totem</strong></td>
<td>14</td>
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<tr>
<td><strong>Shops</strong></td>
<td>130</td>
</tr>
<tr>
<td><strong>Refresh Areas</strong></td>
<td>47</td>
</tr>
</tbody>
</table>
Video Aeroporti di Roma
ADR is working for the future of Rome Airports.

The construction of new facilities is planned at precise time intervals, to ensure, over the years, a balanced relationship between supply and demand, and to continuously improve the quality of the service offered to passengers.
Currently, Aeroportual ecosystems have not been impacted by a large Business Disruption as other industries (AirBnB, Uber ecc.).

However, Airports and Airline Companies invest on service continuous improvement through infrastructural and digital transformations.

Market Insights

Aeroporti di Roma

Passenger Autonomy & Luggage Info
- DELTA Airlines // Proactive Baggage Tracking via RFID (only USA)

End-To-End Seamless Journey
- Schiphol // Airport Unique Pass via Biometric experiments

Actionable Information
- Munich Airport // Virtual Digital Map Experience

Fast & Secure Control
- Many Airports // eGate and facial recognition to reduce queue time

Enriched Waiting Experience
- Washington – Baltimore Airport // A Gym session before the flight

Enhanced Retail Experience
- Madrid Barajas International Airport // Digital VAT refund
Aeroporti di Roma
Ecosystem & Customer Journeys
ADR Digital Strategy is a must have enabler to deliver innovative, efficient and high quality services to passengers, retailers, companies and the entire Airport ecosystem.
ADR Digital Strategy is based on three specific layers.
By connecting Flights, Wi-Fi data, Passengers Flow and Retailer Incomes we discovered that the most popular item for Chinese Pax is…

…a Travel Neck Pillow
How a MAC Address became a Chinese passenger buying a travel neck pillow

1. Passenger Flow Heatmap view
2. Crowded Area identification
3. Analyzing Retailer Incomes it is possible to determine the most relevant Flights
4. And the best selling items
5. Gate is the last point where we have seen the Passenger before the selected Flight
6. By analyzing Wi-Fi data it is possible to determine the MAC Address

How a MAC Address became a Chinese passenger buying a travel neck pillow
7. Knowing the exit point it is possible to determine the single Passenger Flow and the origin point.
8. Moreover, it is possible to analyze the time spent in every shop and restaurant.
Predictive analytics are NOW possible thanks to the combination of all these streams of data in one place.
Passenger Flow Project
Goal: Observe location of people throughout the airport via MAC address analysis per time and volume - in production since early 2016

Leverages StreamBase and Live Datamart, BusinessWorks & EMS
Heatmap Area Density
Overcrowding Alarms per Area with #Volumes and #DwelTime
Visual IN&OUT Path with #PeopleCount and #AverageTime per Area
Aeroporti di Roma
Phase I | Passenger Flow

Trend KPI’s Dashboard per Area
Aeroporti di Roma
Phase I | Passenger Flow

Control Room
Overall
Dashboard
Main achieved benefits:

- Occupancy Optimization
- Operational Costs Reduction
- Improvement Customer Experience
Leverages StreamBase and Live Datamart, BusinessWorks & EMS

Airport Operations Plan
Goal: Real-time tracking of all KPIs of the airport for common awareness
Aeroporti di Roma
Phase II | Airport Operations Plan (AOP)

Unique Dashboard to monitor Airport Opts
Aeroporti di Roma
Phase II | Airport Operations Plan (AOP)

Graphic view for Aircraft parking area occupation

#StandOccupancy
#Actual/Forecast
#LoadingBridgeMgmt
#Turnaround
Graphic view for Aircraft lane occupation

#RunwayCapacity

#TaxiTime
Predictive Passenger Analysis

#OpenPaxTrack
#OpenSecurityGate
#OpenPassportGate
#OpenBoarderGate
#OpenCheck-In
Aeroporti di Roma
Architecture | Current

Stand-alone information sources, not integrated and comprehensive
Aeroporti di Roma
Architecture | Phase II

MOBILE

TIBCO® API Exchange Gateway

CLOUD

B2B

BUSINESS SERVICES

DATA INFORMATION

SOA

BIG DATA PLATFORM

TIBCO® Live Datamart

TIBCO StreamBase®

Integration Platform

TIBCO ActiveMatrix BusinessWorks™

TIBCO Enterprise Message Service™

Kafka

Spark Streaming

Sqoop

HDFS HBase

TIBCO® API Exchange Gateway

Airport Operation

Location Tracking

Facilities

Parking & Public Transport

Car Rental

Food & Beverage

TIBCO® BusinessWorks™

TIBCO Enterprise Message Service™

DATA INFORMATION

Flights

Boarding Card

Wi-Fi

Beacon

Queues

eGates

TIBCO® StreamBase®

TIBCO® Live Datamart

TIBCO® API Exchange Gateway
Main benefits of our Digital Strategy will be:

- Occupancy Optimization
- Operational Costs Reduction
- Customer Experience Improvement
- Retail Revenues Increase
- Resiliency Strengthen
- Throughput Intensification