The Airport IT Trends Survey

Executive summary

2012 A joint ACI, Airline Business and SITA survey
Now in its ninth year, the Airport IT Trends Survey delivered in partnership by Airline Business, the Airports Council International and SITA, tracks key technology trends impacting airport management and operations.

This established benchmarking survey provides an insight into industry thinking, covering airports representing 67% of passenger traffic from the top one hundred airports (2.3 billion passengers).

As airlines continue to battle the headwinds of higher fuel costs and economic uncertainty, airports have been conservative in 2012 with their absolute IT&T spending. But their expectations are more optimistic for 2013 with more than half anticipating an increase in IT&T expenditure.

The survey shows that top investment drivers focus on ‘improving passenger experience’, while ‘reducing the cost for airport operations’ and ‘improving workforce productivity’ also ranked high up the priority list. The key role mobile will play in helping to facilitate passenger communication over the coming years is underlined as mobile apps are seen as the biggest channel for passenger interaction in 2015 and beyond. In terms of delivering operational efficiency and cost savings, airports show a strong interest in the value of business intelligence and collaborative decision making.

In the following pages we provide a breakdown of some of the headline findings from this year’s survey and we would like to thank all of those airports and airport operators for taking the time to complete the questionnaire and for your continued support of these key benchmarking trends.

We welcome any feedback or comments on the survey. For more information on our previous surveys and our sister survey on airline IT Trends, together with all our accompanying features and analysis, visit the Airline Business IT zone at flightglobal.com/ITzone

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Foreword

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In 2012, airports remain cautious on IT&T spending in absolute dollar terms. With the sustained economic and market pressures and the national debt crisis in specific regions, airports overall have been more conservative in their planning for 2012 compared to 2011. The survey shows that, only 36% of airports see an increase in IT&T absolute dollar spend, while 31% forecast a decrease in 2012. In contrast in 2011, 54% actually reported an increase, and only 24% experienced a decrease.

The outlook for 2013 is optimistic: more than half of all airports expect IT&T spend to increase, while it will remain stable for another third.
Respondents this year rank ‘improving passenger experience’ as the No 1 driver for IT investment. Airports see ‘reducing the cost of operations’ as the second most important driver, ranking it higher than in 2011. Furthermore, in 2010, this was ranked as the number one driver which may suggest that airports are once again cautious about the overall global economic and aviation industry stability.

We see some regional differences with markets experiencing high rates of passenger growth: airports in Middle East & Africa and Asia consider ‘managing airport capacity’ as more important than ‘reducing the cost of operations’ as a business driver for IT investment.

The readiness of airports to invest in new services is strong: over 8 out of 10 airports are set to invest in, or evaluate, major programmes, including mobile services to passengers and staff, and business intelligence solutions.
By 2015, airport passenger communication strategies will have evolved dramatically, with mobile apps playing a leading role in passenger interaction. The survey shows that 72% of airports see mobile apps as one of the top two channels for customer service communication, closely followed by website services.

Airports show a strong ambition with their investment plans to provide passenger mobile applications: keeping passengers informed about wait times or flight status remains the airports’ highest perceived value for passenger mobile apps and social media.

### Top reasons for providing passenger mobile apps

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Keeping passengers informed</td>
<td>55%</td>
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<tr>
<td>Improving customer relationship</td>
<td>29%</td>
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<tr>
<td>Commercial opportunities</td>
<td>26%</td>
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</tbody>
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### Top channels for customer service communication beyond 2015

<table>
<thead>
<tr>
<th>Channel</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Smart phone app</td>
<td>72%</td>
</tr>
<tr>
<td>Website services</td>
<td>67%</td>
</tr>
<tr>
<td>Kiosk</td>
<td>21%</td>
</tr>
<tr>
<td>Social network</td>
<td>16%</td>
</tr>
<tr>
<td>Agent/staff</td>
<td>12%</td>
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</table>
Airports are investing widely in both mobile apps and embedded social media apps to enable them to develop a more personalized customer experience – improving both the passenger journey and airport efficiency. By 2015, there will be four times as many airports providing multiple services via social media. Seven of the eight services delivered via social media will be implemented by over 50% of the airport respondents by 2015, spanning customer service and retail.

In terms of the barriers to provide such new services to passengers, lack of system integration and data access are the main challenges for mobile (57% of airports), while for social media applications justifying the business case is the main obstacle – with 59% of airports highlighting this barrier.
Airports are constantly seeking new ways to improve their operational efficiency and create a better passenger journey. Together, business intelligence and collaborative decision making are set to play key roles in enabling continuous measurable improvements in the future.

Operationally, the top four values of Business Intelligence ranked by airports relate to airport operations and passenger experience. The survey shows that 57% of airports see the use of Business Intelligence to ‘improve collaboration and sharing of information with airport partners/tenants’ as the highest priority.

Airports want to focus on collaboration with airlines, other tenants and ground service providers through 2015, in order to maximize the effectiveness of business intelligence systems.

### Reasons for implementing Business Intelligence

<table>
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<tr>
<th>Reason</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Sharing of information/collaboration between airport partners/tenants</td>
<td>57%</td>
</tr>
<tr>
<td>Ensuring more accurate service information to passengers</td>
<td>47%</td>
</tr>
<tr>
<td>Reducing flight delays relating to ground operations issues</td>
<td>46%</td>
</tr>
</tbody>
</table>

### Plans to share data with other stakeholders

- **Government organisations**: 52% Implemented, 22% By the end of 2015, 26% No plans
- **With airlines**: 35% Implemented, 45% By the end of 2015, 20% No plans
- **Ground service providers**: 33% Implemented, 34% By the end of 2015, 34% No plans
- **Other tenants**: 26% Implemented, 44% By the end of 2015, 30% No plans
By 2015, the majority of airports will have implemented some Business Intelligence systems to improve customer service, drive operational efficiency and cost savings. At the same time airports recognize that there are key challenges. Airports have ranked the lack of integration as the main challenge to establish their Business Intelligence-related platforms.

Airports are looking at leveraging geolocation technology to track, in real-time, the location of staff, vehicles, baggage, passenger movements and other key assets and resources. The survey shows that half of the airports value the use of geolocation technologies: with 50% saying that the highest priority is its use in reassigning and adjusting staff tasks in real time in order to help reduce passenger congestion.

**50%**

of airports see geolocation technology as a priority to reduce passenger congestion

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### Challenges implementing Business Intelligence

| Lack of automated platform and data warehouse | 19% | 27% |
| Lack of willingness to share data with third party stakeholders | 18% | 26% |
| Lack of integration amongst disparate systems | 16% | 53% |

### Reasons for using geolocation technology

| Reduce passenger congestion | 50% |
| Accurate location and monitoring of aircraft movements | 32% |
| Monitoring the movements of passengers in the airport | 31% |

- Significant barrier Rank 1
- Rank 2
- High priority
This year the survey is based on responses from 91 respondents representing the views of 173 airports. 63% of the replies came from airports within the Top 100 in terms of revenue, representing 67% of revenue within the Top 100. 46% of the replies came from airports within the Top 100 in terms of passenger numbers, representing 67% of traffic amongst the Top 100.*

*Source: Airline Business - Airport Traffic Finance 2012

Airport responses - by region

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Asia-Pacific</td>
<td>28%</td>
</tr>
<tr>
<td>Americas</td>
<td>19%</td>
</tr>
<tr>
<td>Europe</td>
<td>15%</td>
</tr>
<tr>
<td>Africa/Middle East</td>
<td>28%</td>
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Airport responses - by size

<table>
<thead>
<tr>
<th>Size</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;100 million</td>
<td>38%</td>
</tr>
<tr>
<td>100-299 million</td>
<td>28%</td>
</tr>
<tr>
<td>300-499 million</td>
<td>19%</td>
</tr>
<tr>
<td>500+ million</td>
<td>15%</td>
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The statements below have been selected as they reflect issues or projects frequently mentioned by all respondents in this year’s survey. Please note that these statements are directly taken from the survey responses and reflect the opinions/wording of our respondents.

**Major IT successes of the last 12 months**
- Introduction of mobile boarding service, completed interfaces of several systems, and deployed the backbone for a service oriented architecture going forward
- Keeping operations function with minimal spend
- Thin client desktop standard operating environment, improved user mobility, operating cost improvements and improved storage (storage area network) performance and capacity
- Implemented a runway availability planning tool for arrival planning; rolled out self-service bag tagging at kiosks for all domestic passengers

**Major IT challenges over the last 12 months**
- Replacement of the flight information display systems, implementing customised airport operational database system
- Collaboration with other airport stakeholders; implementation of WiFi at apron and other remote locations to capture data at source; acceptance of cloud and virtualisation technologies
- The implementation of the first mobile-based applications for passengers and staff
- Developing a closer alignment with the business. Improving a focus on customer service. Managing the sheer volume of work, particularly new capital verses operational.

**Future challenges in the airport IT environment, within the next 12 months**
- E-gates, advanced passenger information system, automating baggage handling system, perimeter monitoring system
- Moving the remaining information systems to the new automated environment (for example airport operational database etc.), virtualisation of server environments
- Using smart phone and mobile technologies combined with near field communications to modify and benefit operational process changes
- Collaborative decision making promises much, but the road I feel will be fraught in misinformation and a lack of understanding
Methodology & Further Analysis

The survey objectives are to monitor key IT trends within the airport industry including:

- IT&T investment and strategies
- Passenger Management
- Business Intelligence and Collaborative Decision Making
- Successes & Challenges

The survey was first launched in 2004 and comparisons are made where appropriate with previous surveys, although the sample may vary between years. Research is focused on senior IT executives at the top 200 airport operators.

A comprehensive 100+ page PDF report is available and includes commentary & analysis covering all of the following questions:

- Priorities for investment decisions
- Key technology investment trends in the next 3 years
- Long-term strategy for cloud services
- IT&T investment programmes in the next 3 years
- Evolution of self-service technology
- Strategy for social media services for passengers
- Strategy for mobile applications for passengers
- Long-term strategy for Business Intelligence
- Geolocation technology trend

For further details:
www.flightglobal.com/ITzone
www.sita.aero/surveys