Industry Perspectives: Travel and Tourism

Presented by
Rob Zazueta
Global Director of Digital Strategy
TIBCO

Michael Schuman
Senior Manager - IT Applications Development, Operations Data Enablement
United Airlines
Agenda 10AM-12PM

• The Connected Customer Journey
• A conversation with United Airlines
• 15 min break
• The Digital Stack for Travel - A Roadmap to Success
• Resources
The Connected Customer Journey
TUI Group improved customer service in a dynamic, omni-channel environment and increased NPS from 45 to close to 50. Successfully implemented real time analytics, just-right pricing for €50M in daily revenue.
Travel to Airport
TSA Security Checkpoint Wait Times API

The TSA Security Checkpoint Wait Times API is called via:

http://apps.tsa.dhs.gov/MyTSAWebService/GetWaitTimes.ashx

[valid parameters: ap, output]

Usage examples include:

http://apps.tsa.dhs.gov/MyTSAWebService/GetWaitTimes.ashx?ap=DCA
[returns XML of last 25 wait times for DCA airport]

http://apps.tsa.dhs.gov/MyTSAWebService/GetWaitTimes.ashx?ap=RDU&output=json
[returns JSON of last 25 wait times for RDU airport]
Train Companies – Nederlandse Spoorwegen

Virtual and intelligent trains, one architecture providing smart technology for all trains, providing customers with real-time information such as seat-availability on all trains – improving business and customer experience.

https://www.tibco.com/customers/dutch-railways
Baggage Drop and Check In
Airlines – United

All flight operations, baggage tracking and customer information accessible via a single platform (But let’s not steal Michael’s thunder).
Getting To The Gate
<table>
<thead>
<tr>
<th>Location</th>
<th>Wait Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFO San Francisco, CA San Francisco International</td>
<td>Post Wait Time</td>
</tr>
<tr>
<td><strong>International A</strong></td>
<td>7:51 PM Today</td>
</tr>
<tr>
<td>1-10 min</td>
<td>7:51 PM Today</td>
</tr>
<tr>
<td>T-3 (Gates 74-75)</td>
<td>4:45 PM Today</td>
</tr>
<tr>
<td>21-30 min</td>
<td>4:45 PM Today</td>
</tr>
<tr>
<td>T-2 Area D</td>
<td>2:31 PM Today</td>
</tr>
<tr>
<td>1-10 min</td>
<td>2:31 PM Today</td>
</tr>
<tr>
<td><strong>General Delays</strong></td>
<td>2:02 PM Today</td>
</tr>
<tr>
<td>0 min</td>
<td>2:02 PM Today</td>
</tr>
<tr>
<td><strong>International G</strong></td>
<td>11:33 AM Today</td>
</tr>
<tr>
<td>31-45 min</td>
<td>11:33 AM Today</td>
</tr>
<tr>
<td><strong>General Delays</strong></td>
<td>3:01 AM Today</td>
</tr>
<tr>
<td>0 min</td>
<td>3:01 AM Today</td>
</tr>
<tr>
<td><strong>General Delays</strong></td>
<td>3:50 AM Yesterday</td>
</tr>
<tr>
<td>0 min</td>
<td>3:50 AM Yesterday</td>
</tr>
</tbody>
</table>
Airports – Melbourne Airport

https://www.tibco.com/blog/

Smarter Airport for world-class customer experience – modeled around customer journey. Enhanced Airport Coordination Centre with whole-of-airport coverage.
DISRUPTION

(Not the “good” kind)
Waiting to Board
Boarding
On the Plane
Connecting Flights
Final Arrival
Connecting with Tourist – London Theatre Direct

With open APIs they saw a huge increase in number and +500% increase in value of ticket sales. Improving choice of seats for consumers and reducing empty seats for the theatres. Digital Transformation is API driven and ready for travel business!

https://www.tibco.com/customers/london-theatre-direct
Summary

• Every touch point is an opportunity to collect valuable customer data.

• Every piece of customer data provides a deeper opportunity to personalize service.

• Every touch point is an opportunity to delight the customer and build loyalty.
Digitally Transforming the Travel Industry
The Three Pillars of Digital Transformation

Accessible Data

Intelligent Insights

Turning Insights Into Actions
The Three Pillars of Digital Transformation

Integration

Analytics

People
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“Digital transformation is not about technology - it is about strategy and new ways of thinking.”

- David Rogers

The Digital Transformation Playbook
Leveraging Your Legacy
The Platform Reduces Your Time to Market
The Platform Opens New Partnership Opportunities
The Platform Enhances the Customer Experience
The Platform Sets You Up For the Future
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Omnichannel Platform Architecture

Data Consumers

- Web Site
- Mobile / IoT
- Partners
- Customer Apps
- Analytics / BI

External Platform / API Management

Data Sources

- ESB
- Databases
- Legacy Apps
- MicroServices / MicroApps
- Cloud Integration
- 3rd Party SaaS / “Shadow IT”
- Streaming Data Collection
- Business Event Processing
Omnichannel Platform Architecture

Data Consumers

- Web Site
- Mobile / IoT
- Partners
- Customer Apps
- TIBCO® Spotfire®

Data Sources

- TIBCO® BusinessWorks
- Databases
- Legacy Apps
- TIBCO® Cloud Integration
- Live Datamart
- TIBCO® StreamBase
- MicroServices / MicroApps
- 3rd Party SaaS / “Shadow IT”
Connected Intelligence

Data Sources

- Relational stores
- Real-Time Feeds
- Big Data: Hadoop
- SAP BW / HANA
- Teradata
- …

TIBCO BusinessWorks®
TIBCO Spotfire®
TIBCO Statistica®
TIBCO StreamBase®
Connected Intelligence

Visual Analytics

- Viz / Dashboards
- Data Wrangling
- GeoAnalytics
- Predictive Analytics
- App Development

*TIBCO Spotfire®*
Connected Intelligence

Predictive Analytics

- Machine Learning
- Text Analytics
- Statistical Process Control
- Model/Rule Development
- Model/Rule Lifecycle Management

TIBCO Statistica®
TIBCO Spotfire®
TIBCO Enterprise Runtime for R

Learn
Connected Intelligence

Streaming Analytics
- Connect to Real-Time data
- Stream Processing
- Live Data Updates
- Live Data Visualization
- Notifications

TIBCO LiveDataMart®
TIBCO StreamBase®
TIBCO BusinessEvents®
TIBCO LiveApps®
TIBCO AMX BPM®
Analytic Apps

- Deliver proactive customer service
- Smart cross-sell offers
- Optimize routes
- Prevent fraud
- Optimize pricing
- Real-time inventory management
- Predict impending equipment failure
- Anticipate and handle disruptions

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Digital Trends to Watch
Internet of Things (IoT)
Natural Language Generation, Analytics Bots

Get Ready for the Analytics Bot Invasion

Bots are carving out a new role in analytics, utilizing natural language generation to address questions raised by business people and consumers.

TIBCO Spotfire

TIBCO Spotfire has taken a little different approach with their analytics bot. They paired it with Automated Insights' Wordsmith and Amazon Alexa. Based on speech query, an Amazon web service calls another web service that automates TIBCO Spotfire via its APIs. Wordsmith enables rapid setup of language rules, branches (based on rules), data (by way of substitution variables) and synonyms for more fine-grained control and rigor on the analysis. Each of technologies used in this solution is extensible allowing groups to embed or integrate it into other applications.
Generate examples from the Hotel Descriptions project here. Change the narrative scenario to see how different data generates unique narratives:

**BASICS IN THE BIG EASY**

Big Easy Bunkhouse is located in New Orleans and sports a good rating of 3.5 out of 5.0 (471 reviews).

It doesn't offer a ton of amenities, but Big Easy Bunkhouse does provide complimentary WiFi on site, so feel free to stream some tunes, share pictures, and update your status.

If you're ready to book a reservation, the going rate ranges from $79 to $129 per night, and the hotel currently has rooms available.

Try changing a data row to see how different data changes your narratives:

<table>
<thead>
<tr>
<th>name</th>
<th>type</th>
<th>vacancy</th>
<th>reviews</th>
</tr>
</thead>
</table>

https://wordsmith.automatedinsights.com/gallery/hotel-descriptions
Problem Solving as a Service
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Source: http://www.slideshare.net/AmazonWebServices/devops-continuous-integration-and-deployment-on-aws-putting-money-back-into-your-mission-46838630
AWS Global Infrastructure

GovCloud (US ITAR Region) | US West (Northern California) | US West (Oregon) | US East (Northern Virginia) | South America (Sao Paulo) | EU (Ireland) | Asia Pacific (Singapore) | Asia Pacific (Tokyo)

AWS Regions
AWS Edge Locations

Source: http://www.slideshare.net/my2108/what-is-aws
What Valuable Data Do You Have?

• Detailed, confirmed customer information -> Fraud Protection

• Aggregate customer data -> Marketing Demographics

• Aggregate customer location data -> Location and trend tracking

• What else?
Programming for Non-Programmers
TIBCO Community
Travel and Transportation – TIBCO Community Wiki

TIBCO - Travel, Transportation and Logistics Solutions

TIBCO Spotfire®  TIBCO® Enterprise Runtime for R (TERR)  TIBCO StreamBase®  TIBCO Mashery®
By: Heleen Snelting
Last updated: 11:32am May 26, 2017

Introduction and Overview

We travel for leisure and business. With high expectations in terms of personalization and real-time updates about all aspects of our trips. If you work in a travel or transportation company, understanding and optimizing the customer journey will likely be a priority. There are opportunities to improve customer loyalty and increase spending prior, during and after the trip.

We travel in an increasingly digital environment sharing data and producing data along with the equipment

Related Breakout Sessions

Driving Business Value through Customer Analytics
Wednesday, October 25, 1pm
• Michael O’Connell, TIBCO

How JetBlue is Optimizing Operations to Keep Customers Happy and Coming Back
Thursday, October 26, 1PM
• Andi Azzolina, Director, Shared Development Services at JetBlue Airways

Customer Panel on Pervasive Integration
Thursday, October 26, 2PM
• Bruce Harris, EagleView
• Grant Fengstad, City of Richmond
• James Mathison, NASA
• Mayank Prabhakar, Charter Communications
• Rich Mendis, TIBCO
Hands On Labs - starting 1:00PM today

A-Z of API Management with TIBCO Mashery
1:00pm - 2:45pm 400 A

The Latest in TIBCO Cloud Integration
1:00pm – 2:45pm 400 B

Advanced Analytics Made Easy with TIBCO Statistica
3:15pm – 5:00pm 400 A

Functional Apps in Minutes? Yes, with Live Apps!
3:15pm – 5:00pm 400 B
Keynotes Tomorrow Starting at 8:30am