2019 Mega Event Presentations
For a Full List of 2020 Event Dates & Locations visit:

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Check out the website if you wish to SPEAK and/or SPONSOR a 2020 Event
Guestlogix Travel Commerce Platform

The Guestlogix travel commerce platform enables airlines to significantly increase ancillary revenues while improving traveler satisfaction across their entire journey.

- Increase Ancillary Revenue
- Improve Traveler Satisfaction
- Quick to Deploy
- Success-Based Pricing

Visit guestlogix.ai to book a demo today!
CarTrawler | Bringing opportunities to life
Through a global online marketplace bringing partners, customers and suppliers together.

B2B MOBILITY PLATFORM
The only B2B mobility platform providing end-to-end connections to every significant mobility provider globally.

B2B FOCUS
Delivering long-term, sustainable growth by building your brand and improving customer ownership. We never compete to acquire your customers.

CHOICE
Customers can shop the market without leaving your site. We provide them with multi-modal content including car rental, private transfer, taxis, shared shuttle and bus in 50,000 locations.

ONLINE RETAILING EXPERTISE
Maximising conversion and revenue through bespoke partner solutions focused on cross-selling the right product at the right time.

PERSONALISATION
Pricing, content and display is personalised based on each customer’s itinerary and powered by data science.

TECHNOLOGY
CarTrawler technology is built in-house specifically with B2B in mind. Our understanding of travel distribution supports seamless integration of our partners.

Discover CarTrawler
www.cartrawler.com/partnerships

Mega Event Worldwide #megaevent
About CarTrawler

Our market-leading B2B mobility platform brings opportunities to life for our partners and their customers, building long term sustainable growth. We maximise market share and in turn revenue for our partners by building their brands not our own.

CarTrawler connects in real time to every significant mobility supplier globally including car rental, private transfer, taxis, shared shuttle and bus. We make that content available to over 900M airline passengers through our 100+ airline partnerships.

We power over 85% of European airline’s online traffic using an aggregator solution, including Ryanair, Vueling, Norwegian Air Shuttle, SWISS and KLM. We also work with other key partners such as Emirates, Virgin Australia and Volaris powering their mobility solutions.

Discover CarTrawler

www.cartrawler.com/partnerships

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‘The Next Big Ancillary: The untapped potential of media revenue for airlines

Travel brands are full-fledged retailers, including airlines. Forrester has said it, and now the IATA has declared it, too. Ancillary revenue is expected to reach close to $100 billion in 2019, with even more growth in 2020.

There’s a massive opportunity for airlines to think more like retailers. To better serve, upsell and monetize their users like retailers. It doesn’t have to be just more of the same. In fact, it can be easier, and more lucrative.

Download the ebook

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In the period 2007–2017 ancillary revenue grew $2.5 billion per quarter – initially due to baggage, then other fees. Growth from new revenue streams has been sustained largely by introducing new product. That can only go so far. A new stream is needed that can provide reliable, consistent revenue. For ambitious airlines that want to compete in the same space as other digital retailers, media can do just that.

Download the ebook

$1.09 billion

Media and advertising revenue generated by Expedia Group, 2018

Expedia, 2019
Machine Learning to Personalize & Price Dynamically

MadhuSudan Kummara
RM Solutions & Innovations, Etihad Airways
ETIHAD AIRWAYS

National airline of the United Arab Emirates, established by Royal (Emiri) Decree in 2003

- **AIRCRAFT**: 107
- **DESTINATIONS**: 86
- **COUNTRIES**: 49
- **PASSENGERS IN 2018**: 17.8M
- **PAX REVENUE IN 2018**: $4.7B
- **ANCILLARY REVENUE**: 5.1%

Hub and Spoke carrier Based out of Abu Dhabi (AUH)

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Etihad Offer Transitions

STATIC OFFER

DYNAMIC OFFER

CUSTOM OFFER

Excess Baggage  +  Wi-fi  +  Seat choice

NDC

NDC

NDC

2019

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Ancillary Dynamic Pricing Engine (ADPE)

Input Data
- PNR 1
- PNR 2
- Flight Info

Ancillary Dynamic Pricing Engine

Purchase Probabilities
- PNR 1:
  - 22% chance of purchase with price of $15
  - 34% chance of purchase with price of $18
  - 47% chance of purchase with price of $25
- PNR 2:
  - 18% chance of purchase with price of $12
  - 45% chance of purchase with price of $22
  - 22% chance of purchase with price of $14

Personalized Dynamic Prices
- PNR 1:
  - $15
  - $18
  - $25
- PNR 2:
  - $12
  - $22
  - $14

Mega Event Worldwide #megaevent
ADPE – Input Data

Input Data

Ancillary Dynamic Pricing Engine

- PNR 1
- PNR 2
- Flight Info

Passenger Attributes
- Seat Advance Purchase
  - POS Country
  - Paid Ticket Fare
  - Passenger Type
  - Seat Row

Travel Attributes
- OD Travel Time
- Seat Advance Purchase
- Seat Product
- Seat Column
- FFP details
- Seat Characteristics
- Base Fare Currency
- Form of Payment

Aircraft Attributes
- Flight Leg & Route
  - Seat Purchase Lag
  - Flt Arrival Time
  - Seat Product
  - Dep. DOW
  - Ticket booked GDS
- Equipment & Aircraft Type
  - Flight Leg & Route
  - Seat Purchase Lag
  - Flt Arrival Time
  - Seat Product
  - Dep. DOW
  - Ticket booked GDS
- Type
- Dep. Month
- Ticket Issue Month

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ADPE – ML model for Ancillary Seats

Ancillary Dynamic Pricing Engine

Variable Importance

<table>
<thead>
<tr>
<th>Feature</th>
<th>Impact</th>
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<tbody>
<tr>
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<tr>
<td>FLT_LEG</td>
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<tr>
<td>SEAT_ADD_AP_HRS_FLAG</td>
<td>High</td>
</tr>
<tr>
<td>OFFERED_SEAT_PRICE</td>
<td>Medium</td>
</tr>
<tr>
<td>POS_COUNTRY</td>
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<td>MARKET_ORIGIN</td>
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<tr>
<td>BASE_FARE_CURRENCY</td>
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</tr>
<tr>
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<td>TRAVEL_CAT</td>
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<tr>
<td>BKG_MONTH</td>
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</table>

ROC AUC = 96%

Predicted

Actually

<table>
<thead>
<tr>
<th>Predicted</th>
<th>Actually</th>
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<tbody>
<tr>
<td>NO</td>
<td>98%</td>
</tr>
<tr>
<td>YES</td>
<td>18%</td>
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</table>
public class main {
    public static void main(String[] args) throws Exception {
        EasyPredictModelWrapper model = new EasyPredictModelWrapper(MojoModel.load("fin_ap_gb"));
        Map<String, Double> row = new HashMap<String, Double>();
        row.put("ISSUE_AP_HRS", "2000");
        row.put("FLT_LEG", "AUHLHR");
        row.put("SEAT_ADD_AP_HRS_FLAG", "BEYOND96HRS");
        row.put("OFFERED_SEAT_PRICE", "100");
        row.put("POS_COUNTRY", "AE");
        row.put("MARKET_ORIGIN", "AUH");
        row.put("SEAT_PRODUCT", "EXIT_RLRS");
        row.put("PHYSICAL_AIRCRAFT_TYPE", "38B");
        row.put("SEAT_LOCATION", "WINDOW");
        row.put("DEP_MONTH", "12");
        row.put("RESERVATION_COUNT", "2");
        row.put("FARE_CLS_RANK", "18");
        BinomialModelPrediction p = model.predictBinomial(row);
        System.out.println("Label (aka prediction) is Seat Purchase Probability: " + p.label);
        System.out.println("Class probabilities: ");
        for (int i = 0; i < p.classProbabilities.length; i++) {
            if (i > 0) {
                System.out.println("");
            }
            System.out.println(p.classProbabilities[i]);
        }
        System.out.println("\n");
    }
}
**Economy Space – ELRS**

<table>
<thead>
<tr>
<th>PNR</th>
<th>WINDOW</th>
<th>MIDDLE</th>
<th>AISLE</th>
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<td>60%</td>
<td>59%</td>
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<tr>
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<td>24%</td>
<td>32%</td>
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<tr>
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<td>29%</td>
<td>17%</td>
<td>35%</td>
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<tr>
<td>DDDDDD</td>
<td>16%</td>
<td>29%</td>
<td>21%</td>
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<tr>
<td>EEEEEEE</td>
<td>21%</td>
<td>18%</td>
<td>24%</td>
</tr>
<tr>
<td>FFFFFFFF</td>
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<td>18%</td>
<td>22%</td>
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<tr>
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</table>

**Preferred Seats**

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<td>DDDDDD</td>
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<td>30%</td>
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<tr>
<td>GGGGGGG</td>
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</table>

**Standard Seats**

<table>
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<tr>
<td>GGGGGGG</td>
<td>32%</td>
<td>36%</td>
<td>44%</td>
</tr>
</tbody>
</table>
Ancillary Dynamic Pricing Engine (ADP Engine with Machine Learning)

Model Features

- Passenger Attributes
- Aircraft Attributes
- Travel Attributes

Model Accuracy

- Model Prediction Accuracy
  - Predicted: YES, 98%; NO, 2%
  - Actually: YES, 18%; NO, 72%

Model Accuracy over various trials

- 76% 76% 76% 82% 82% 82% 88% 88% 88% 96%

Number of Trials: 1, 2, 3, 10, 11, 12, 20, 21, 22, 40+

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Implementation & Next Steps

❖ Proof of concept (POC) on 5% of Network
❖ If proven Revenue +ve, Scale to Network
❖ Expand the scope of Ancillaries to Bags & Upgrades
Thank You

MadhuSudan Kummara – MKummara@etihad.ae
RM Solutions & Innovations, Etihad Airways