ATPS APAC

Brands working together to deliver a 1st class customer experience
Engage, Experience, Execute

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Optimizing the customer experience in a changing payments environment

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Digital disruption is sweeping across Asia-Pacific

Technology Disruption
Internet penetration will be ~49% by 2019

Evolving Payments Landscape
E-wallets dominant

Online Penetration Asia Pacific

<table>
<thead>
<tr>
<th>Year</th>
<th>Smartphone Penetration</th>
<th>Internet Penetration</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>29.5%</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>32.8%</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>35.7%</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>38.5%</td>
<td></td>
</tr>
</tbody>
</table>

Internet penetration will be ~49% by 2019

E-wallets dominant

e-Commerce sales by payment methods

Source: eMarketer Nov 2017, Statista Aug 2015
Note: Individuals of any age who own at least one smartphone and use the smartphone(s) at least once per month

Source: Worldpay as of Nov 2017

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And as Millennials are becoming the largest generation of today, client behavior is changing
As experience is becoming key – the experience goes beyond traditional services

**Service**
- How customers interact with the airline during the journey

**Convenience**
- Time-saving components

**Product**
- Factual / physical components of the flight experience
And it is not only price driven, but also the type

Different types of traveler apply different value to the core paradigm.

However beside communicating the value of the offer, influencing preference is a key consideration.

“Travelers bring their own values to the booking process, but they are open to being sold something they didn’t know they wanted – as long as the purchase makes sense”. (Dan Ariely, behavioral economist)

But the next generation of travelers has more information available and changing face of loyalty in travel.

Resulting in:

a. Travelers expect a certain brand experience

b. Brand goes beyond a single channel ~ research has shown that multi-channel loyalty programs are more successful than single channel loyalty programs*

c. Airline loyalty schemes have the potential to be a key tool in building the brand affinity

* Source: The Loyalty Evolution – Crowd Twist
Increasing cross-border conversions depends on localizations, whereby local card scheme acceptance is critical to cross-border success.

According to Rapyd’s Digital Commerce market indicated localization as “Very Important”

- 64% Local card or debit network acceptance
- 60% Local e-wallet acceptance
- 49% Local currency presentation

This impacts the way Airlines structure and supportive organizations conduct their:

- Pay in
- Liquidity and FX
- Pay out
How is Cathay Pacific Airways reacting to this changing market place?

Adopt best practices of leading modern retailers.
How is Cathay Pacific Airways reacting to this changing market place?

• To be a Modern Retailer
  ▪ selling personalized air and travel related products
  ▪ delivering an addictive shopping experience
    • to our customers
How is Cathay Pacific Airways reacting to this changing market place?

- Making payment experience simple and frictionless
- Introducing cost effective and popular payment methods across all sales channels and touchpoints
- Creating a safe and secure payment environment for our customers
- Meticulous Risk Management
- Fulfilling end-to-end internal & external customer’s requirement
What else does J.P. Morgan see across the market place?

**Market forces**

1. **Increasingly international marketplace**
   - Industry players under pressure to innovate and grow online channels
2. **Digitization and faster payments**
   - Widespread move to digitization and real-time payments
3. **Diverse geopolitical and regulatory environment**
   - Divergent regulatory policies require tight risk management of liquidity, interest rate and FX
4. **Omni-channel approach**
   - Complexity and cost to accessing a full suite of global payments options for buyers and suppliers
5. **New technologies promoting new ways to connect**
   - Open APIs are improving customer interface and service distribution across geographies

**Strategic Priorities**

- Partner with strategic providers
- Comprehensively approach FX risk
- Optimize payments and liquidity to support operating flows
- Leverage technology to simplify, protect, and grow your business
Focusing on an end-to-end solution to support your brand promises
Thank you - any questions?
Fighting Account Takeover Fraud

Jeff Wixted | VP, Product & Operations
Travel Fraud Prevention Expertise

We have been combating fraud against airlines and travel agencies for over 10 years – we understand many of the challenges

- Airline industry machine learning model reduced review times by 50% and captured 80% more fraud
- Addressing payment fraud, loyalty fraud, baggage claim fraud and many more use cases
- Focusing on the good behavior and history
- Partnership/integrations with major GDS vendors
- Outsource manual review team has deep travel experience

Source: Accertify-owned data based on customer results.
Macro Trends
Data Breaches

Source: https://breachlevelindex.com/

DATA BREACH STATISTICS
DATA RECORDS LOST OR STOLEN SINCE 2013

14,717,618,286

ONLY 4% of breaches were "Secure Breaches" where encryption was used and the stolen data was rendered useless.

DATA RECORDS ARE LOST OR STOLEN AT THE FOLLOWING FREQUENCY

- EVERY DAY: 6,142,579 Records
- EVERY HOUR: 255,941 Records
- EVERY MINUTE: 4,266 Records
- EVERY SECOND: 71 Records

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Password Hygiene
Standardization
Technology
Evolution of Fraud Prevention

Validation (TXN) → Reputation (User)

**Payment Account**
- AVS/CVV2/CID
- Data Matching
- Customer Tenure
- Velocities

**TXN Characteristics**
- Product Risk/Amount
- Time of placement
- Distance Calculations
- Negative Lists

**Reputation (User)**
- Social Presence
- Email Tenure
- Phone Tenure
- Device Tenure
- IP/Network
- User Behavior

1. Is the payment account valid and in good standing?
2. Does the transaction appear risky?

1. Is the user who they say they claim to be?
Best Practices for Fighting Back
Account Takeover or Identity Theft?

**Account Takeover (ATO)**

your account is accessed by someone who knows your credentials (username and password).

**Identity Theft**

a new account is opened using information someone has acquired about you (ex: name, address, phone, email, dob, etc.).

In both cases, details are needed about another person, but how they are acted upon determines if it is an ATO or Identity theft.
Customer Journey

Macro Events
- Account creation
- Logins (successful and unsuccessful)
- Logouts
- Password reset
- Account changes
- Purchases

Micro Events
- Page avigation
- Clicks
- Typing
- Device orientation
- User agent / OS abnormalities
- Battery / accelerometer

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USER BEHAVIOR ANALYTICS

User behavior analytics (UBA) is the concept of measuring and profiling how a session interacts with a website or application. UBA has roots in marketing and been in use for over a decade.

IDEAS FOR MITIGATION

Capture notable attributes (key press – types and speed, auto-fills, pastes, cursor/mouse movement, human v. bot, etc.) that provide insight and analytics on the front-end. Machine learning (event/time-series) is key to analyze large data sets.
DEVICE INTELLIGENCE

The device and associated attributes (browser-based or mobile-based) gives us critical intelligence to assess and mitigate risk, optimize the customer experience, and leverage as a trusted 2nd factor for authentication.

IDEAS FOR MITIGATION

Identify known good users and repeat attackers.

Capture a wealth of attributes (orientation, state, accelerometer, battery, human v. bot, etc.) that help develop risk signatures. PSD2/SCA (“something you have”) – Device binding trusted 2nd factor.
COMMUNITY

Strategic accumulation and aggregation of data – internal, external, or both - that identifies positive and negative trends and reputation over dynamic time periods.

IDEAS FOR MITIGATION

Insight (reputational and transactional) when no historical context exists especially for “invisible” data. Global, industry/vertical, and client levels.
NEW ACCOUNT ORIGINATION
Cybercriminals use stolen credentials or synthetic identities to create new accounts. They may be opportunistic and look for times when there are rewards or other promotional benefits or they may be created and lie dormant for a period of time to establish tenure or bypass time-based conditions.

IDEAS FOR MITIGATION
Leverage “invisible” data – spoofing static data is much easier than behavioral and/or reputational data. Velocity patterns – many new accounts created from same IP, geo-location, or device.
UBA data can be helpful to identify synthetic traffic
CHARGEBACKS

A chargeback is a transaction reversal initiated by the cardholder’s bank to serve as a form of consumer protection from fraudulent activity. A spike in the number of chargebacks may signal an account takeover problem.

IDEAS FOR MITIGATION

Monitor the dispute process for ‘do not recognize’ activity and frequency of dispute codes/categories. Feed chargebacks back into the fraud engine – don’t want to penalize the legitimate account holder.
Closing Thoughts
People
Platform

User Behavior Analytics
Device Intelligence

Profile Data
Risk Engine
ML + Rules
Community Data
3rd Party Data

Transaction Stopped
Transaction Flagged
Transaction Processed
Optional

Review

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Thank you!