

AIR NEW ZEALAND 

Air New Zealand's API Journey (so far)

APIdaysNZ 7 October 2016

ZK-DKC

A STAR ALLIANCE MEMBER



About Me



Mark Sim-Smith:

- Over 20 years in Auckland IT
- Software Development & Architecture
- Various NZ and Australian corporates
- At Air NZ for almost 6 years as Solutions Architect
- Product Owner of Air NZ's API Management Platform



<https://twitter.com/marksimsmith>



<https://nz.linkedin.com/in/marksimsmith>



<mailto:mark.sim-smith@airnz.co.nz>

About Air New Zealand



International:

- Tasman Empire Airways Limited (TEAL) in August 1939
- TEAL became Air New Zealand in 1965

Domestic:

- National Airways Corporation (NAC) in April 1947

Air New Zealand and NAC merged in 1978

2016 Results:

- Revenue: \$5.231B
- Profit: \$663M
- Passengers carried: 15M

Technical Sales Channels at Air NZ



Pre-1970s:

- Communication by telephone
- Bookings stored on cards and books



Technical Sales Channels at Air NZ



OLIVETTI TE 300 year 1967

1970s to today:

- Teletype
- Now responsible for 5-10% sales (still!)



Technical Sales Channels at Air NZ



1990s to today:

- EDIFACT was responsible for most sales in 1990s
- Used by GDSes - kind of interoperable
- EDIFACT defines an API (just not a very good one)
- Shrank over time to around 50% after introduction of direct website

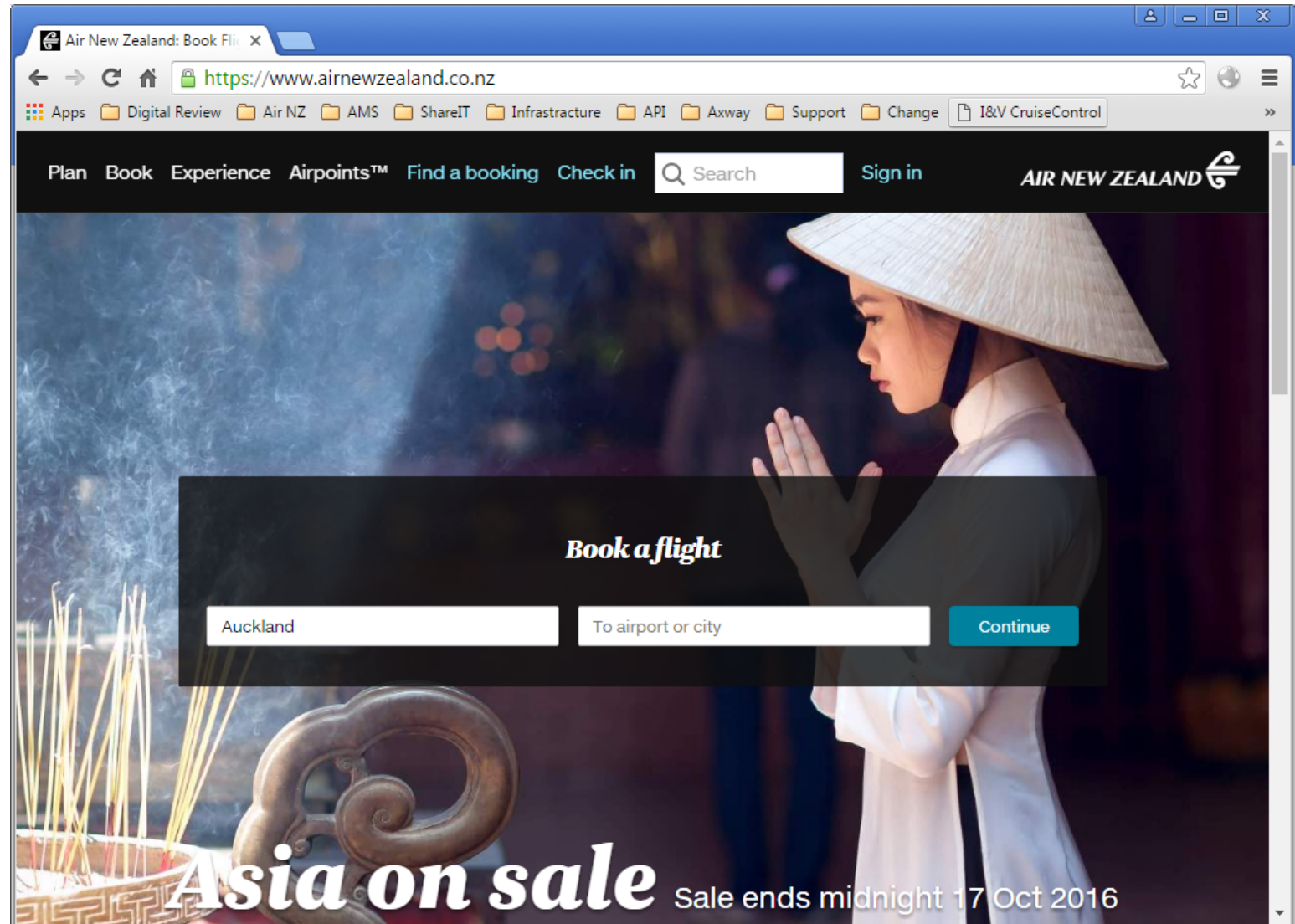
```
UNA:+. ? '
UNB+IATB:1+6XPPC+LHPPC+940101:0950+1 '
UNH+1+PAORES:93:1:IA '
MSG+1:45 '
IFT+3+XYZCOMPANY AVAILABILITY '
ERC+A7V:1:AMD '
IFT+3+NO MORE FLIGHTS '
ODI '
```


Technical Sales Channels at Air NZ



2000s to today:

- Online Website
- Responsible for almost 50% of sales



Air NZ Web API Journey



- Late 2009: VPNs and IBM WebSphere WebServices Gateway, mostly for Air NZ Airpoints programme partners
- March 2014: The API Penny dropped for me – Mulesoft Summit, listening to Ross Mason
- November 2014: Air NZ IT Department – Digital Transformation
- February 2015: API Squad started
- March 2015: RFP process started for API Management Platform

Air NZ API Management Platform RFP



- RFP issued March 2015 to 5 vendors
- Detailed! Around 225 FRs, 125 NFRs
- Major functional areas:
 - REST & SOAP
 - Flexible Licensing Model
 - Flexible Deployment Model
 - Security
 - Monetisation
 - Self-Service Community Portal
 - Continuous Integration/Continuous Delivery
 - Contract management
 - Sign-up Workflow

Air NZ API Management Platform Business Case



- June 2015: submitted business case
- Based entirely on cost savings from on-boarding new partners
- No mention of increased revenue
- No mention of increased number of partners
- Payback: 2-3 years

Air NZ API Management Platform

Vendor selection & negotiations



- Yes, vendor selection came after the business case!
- Selected Axway API Management
- Middleware NZ as implementation partners
- Commercial negotiations relatively quick
- Legal negotiations not so much
- Sep/Nov 2015: Signed contracts

Air NZ API Management Platform Pilot & Implementation



Implementation phase doubled as a pilot/evaluation

- Oct 2015: Started implementation: 4x2-week sprints
- Dec 2015: Largely finished
- Dec/Jan 2016: Holiday!
- Feb/Mar 2016: 2x2-week sprints
- Mar 2016: Training for Air NZ API developers

Air NZ API Management Platform

Pilot - Sample APIs



As part of the pilot phase, a number of APIs were developed to test different functional requirements of the API Management Platform:

- Get Arrivals and Departures – Public, REST
- Get Customer Details – Customer OAuth, REST
- Get Flight Availability – Private, Performant, REST
- Get Staff Travel – Employee OAuth, REST
- Accrue NAL – Private, SOAP

Air NZ API Management Platform Infrastructure



- Five environments: Local Dev, Shared Dev, Test, Qual, Prod
- API Gateway available to the Internet
 - Prod: <https://api.airnewzealand.co.nz/>
 - Qual: <https://api-q0.airnewzealand.co.nz/>
- API Portal exists, but closed at the firewall at the moment
 - Prod: <https://developer.airnewzealand.co.nz/>
 - Qual: <https://developer-q0.airnewzealand.co.nz/>
- API Management: internal only
- Descoped analytics and workflow integration for now

First Web APIs: Airpoints Programme



Aug 2016:

- First Production usage of Web API

Splitsville: Airpoints and Fly Buys part company

10:30 AM Thursday Sep 1, 2016

Air New Zealand Ltd

Aviation

Retailing

SHARE:



An Air New Zealand's 777-300 at Auckland. The airline says it is simplifying its Airpoints scheme. Photo / Nick Reed.

Air New Zealand loyalty scheme Airpoints and Fly Buys are parting company.

The two schemes say they will now focus on their own respective loyalty programmes and will no longer offer Airpoints Dollar earning through the Fly Buys network from October 17.

The organisations have worked together since 2010, but say they now need to offer something new to their respective membership bases.

First Web APIs: Airpoints Programme



Seven private APIs currently in Production:

- GetAPMember: validates an Airpoints Member (REST & SOAP)
- GetAPMemberDetails: retrieves personal details of an Airpoints Member including balance (SOAP only)
- NALAccruePoints: credits Airpoints to a member's account (REST & SOAP)
- Two more Customer Partner Product APIs

Three Business Partners in Production (lots more coming)

Air NZ Future API Possibilities



- Public API Portal
- Air NZ Booking API
- Public Airpoints API
- IATA NDC API
- Moving Axway API Gateway to AWS



Thank you