

Integrated Fares

Project Control Group Meeting

March 2016

Journey Concept

Zonal map

Final fares

Deloitte Report

Technical Update

Project Schedule & Financials

Project Risk update

Focus for April



Decisions required

1. **APPROVE** changes to Journey configuration
 - 5+ legs, 30 min interleg, 4 hour journey
2. **ACCEPT** draft Deloitte report and **APPROVE** AT responses / mitigations. Report to be provided to Exec and Board.
3. **NOTE** that full xWP (CWP/CCCWP) replacement may not be ready prior to launch of Simpler Fares

Journey Concept

- At this stage of the project, we now need to start locking down key configuration items.
- 3 key items relate to the Journey definition as follows:
 1. The number of legs to be included in a journey
 2. The inter-leg time from tag-off to tag-on for each leg
 3. The total journey duration
- One consideration for the total journey time is the system behaviour for crossing the total journey duration.
 - If you are in the middle of a bus or rail leg when the total journey time expires, the passenger will get a “failed tag off” at that point and when they tag off will get a “failed tag on”. This will result in a double initial fee being charged – 2 x \$4.90 (3 zone fare)
 - We have identified that 250 passengers per day could be impacted by this outcome
- As a result, a working group have come up with the following recommendations:
 - Unlimited legs (NOTE – this is subject to technical validation – see later slide)
 - Keep inter-leg duration at 30 mins
 - Total journey duration to be 4 hours

Not recommended to change after go-live

Can be changed at any time via the monthly EOD drop

DECISION X – Approve 30 min interleg, 4 hour journey, and X legs (max number technically supported in solution)

Zonal Map update

- The Zonal map was reviewed with the Customer Design Team
- A number of updates have been made as follows:
 - Colours subtly changed to improve zone differentiation for vision impaired passengers
 - Zone overlaps updated to incorporate our latest changes
- One final update to the maps will be required
 - one additional A4 map will be created for Bus Companies (no suburbs)
 - Potential enlargement of Otahuhu zone boundary



Final Fare table

- The fares table that is going into the Board paper and CFC update now includes fare for 6, 7, and 8 zone fares.
- 8 zones are required as the longest journey on the network is from Pukekohe to Silverdale, and Pukekohe to Helensville.
- Fare table may be configured at back-end up to 15 zones to allow for Ferry integration. Inner aligned to 3 zone, mid – 5 zone, outer, 8 zone, Waiheke – 12 zones

Simplified Zone Fares (FINAL)					
Concession	Adult		Child		Tertiary
Product	AT HOP	Cash	AT HOP	Cash	AT HOP
CityLink	\$0.50	\$1.00	\$0.30	\$0.50	\$0.40
1 zone	\$1.80	\$3.00	\$0.99	\$2.00	\$1.40
2 zone	\$3.25	\$5.00	\$1.90	\$3.00	\$2.54
3 zone	\$4.90	\$7.00	\$2.80	\$4.00	\$3.90
4 zone	\$6.20	\$9.00	\$3.70	\$5.00	\$4.90
5 zone	\$7.50	\$10.00	\$4.50	\$6.00	\$5.90
6 zone	\$8.80	\$12.00	\$5.10	\$7.00	\$6.70
7 zone	\$10.10	\$13.50	\$5.60	\$7.50	\$7.50
8 Zone	\$11.20	\$15.00	\$6.00	\$8.00	\$8.20
9 Zone	\$11.95	\$16.50	\$6.35	\$8.50	\$8.80
10 Zone	\$12.70	\$18.00	\$6.70	\$9.00	\$9.40
11 Zone	\$13.45	\$19.00	\$7.05	\$9.50	\$10.00
12 Zone	\$14.20	\$20.00	\$7.40	\$10.00	\$10.60

Discount Rule = Less than AT Metro policy concession or AT HOP discounts

Marginal Fare Rule = The marginal fare is decreasing (not higher than any previous increment)

Fare Difference Rule = Fare is not more than the sum of lower zone fares

\$1.80	Good
\$1.80	Breaks Marginal Fare Rule Only
\$1.80	Breaks Fare Difference Rule Only
\$1.80	Breaks Discount Rule Only
\$1.80	Breaks Marginal Fare & Fare Difference Rules
\$1.80	Breaks Discount & Fare Difference Rules
\$1.80	Breaks Discount & Marginal Fare Rules
\$1.80	Breaks All Rules

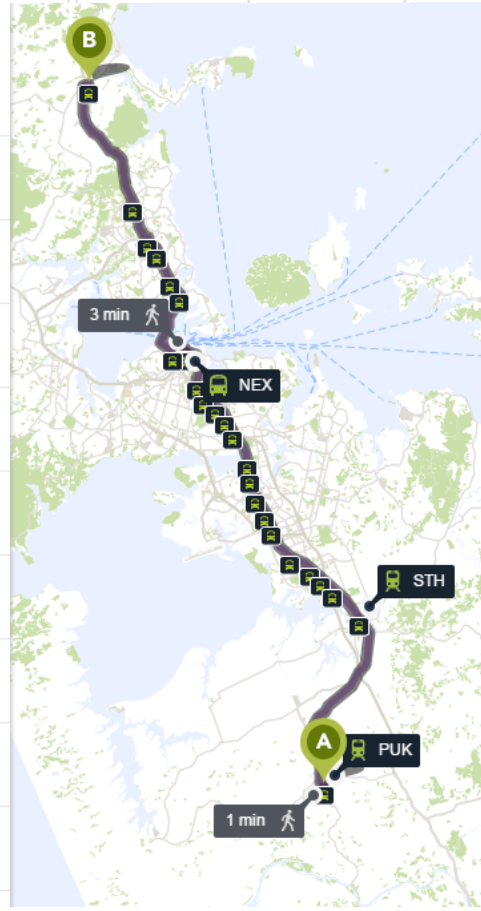


Longest Journey Fare Comparisons

Silverdale to Pukekohe

Fare NOW		Simpler Fare	
Cash	\$20.00	Cash	\$15.00
AT HOP	\$16.00	AT HOP	\$11.20

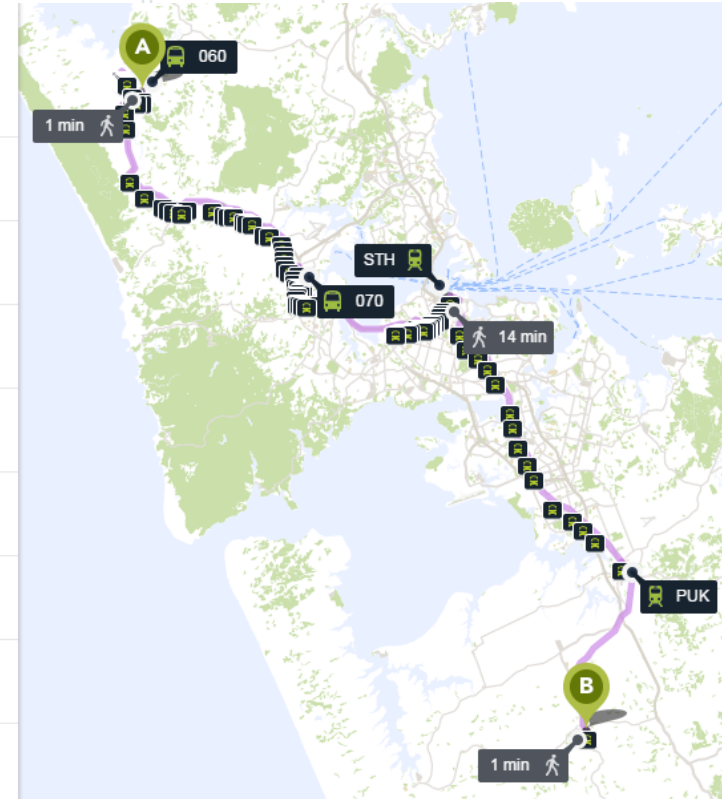
Pukekohe Train Station, Pukekohe to - Hibiscus Coast Station, Silverdale	
Departs at 9:11 am	2hr 35min
🚗 PUK 🚗 STH 🚗 NEX	\$20.00
Departs at 9:51 am	2hr 25min
🚗 PUK 🚗 STH 🚗 NEX	\$20.00
Departs at 10:51 am	2hr 25min
🚗 PUK 🚗 STH 🚗 NEX	\$20.00
Departs at 11:53 am	2hr 23min
🚗 PUK 🚗 STH 🚗 NEX	\$20.00
Departs at 12:53 pm	2hr 26min
🚗 PUK 🚗 STH 🚗 NEX	\$20.00
Departs at 1:53 pm	2hr 11min
🚗 PUK 🚗 STH 🚗 991X	\$20.00
Departs at 2:51 pm	2hr 20min
🚗 PUK 🚗 STH 🚗 991X	\$20.00
Departs at 3:17 pm	2hr 39min
🚗 475 🚗 STH 🚗 992X	\$23.50
Departs at 3:51 pm	2hr 20min
🚗 PUK 🚗 STH 🚗 991X	\$20.00
Departs at 4:11 pm	2hr 15min
🚗 PUK 🚗 STH 🚗 992X	\$20.00



Helensville to Pukekohe

Fare NOW		Simpler Fare	
Cash	\$21.00	Cash	\$15.00
AT HOP	\$16.80	AT HOP	\$11.20

Helensville, Helensville to Pukekohe Train Station, Pukekohe	
Departs at 7:11 am	4hr 24min
🚗 060 ...	\$24.50
Departs at 9:12 am	4hr 25min
🚗 060 ...	\$24.50
Departs at 11:13 am	4hr 24min
🚗 060 ...	\$24.50
Departs at 1:12 pm	4hr 13min
🚗 060 ...	\$24.50
Departs at 1:12 pm	3hr 33min
🚗 060 🚗 PUK ...	\$28.50
Departs at 3:11 pm	3hr 14min
🚗 060 🚗 STH 🚗 PUK	\$21.00
Departs at 3:11 pm	2hr 54min
🚗 060 🚗 PUK ...	\$28.00
Departs at 5:13 pm	4hr 6min
🚗 060 ...	\$24.50
Departs at 6:46 pm	11hr 19min
🚗 060 ...	\$24.50



Draft Deloitte Report – Product, Fare and VfM findings

Finding	AT response
AT has achieved a significant level of ticketing and fare reform over a relatively short period of time, given the constraint of existing net cost contracts and commercial registrations.	Noted.
AT is following a similar path as other jurisdictions, apart from contract reform	Potential “grossing up” of NET contracts at launch.
AT’s phased introduction approach is consistent with other jurisdictions, but more compressed than others.	Noted.
The degree of product and mode integration is relatively high compared with other cities.	Noted.
The simplified products will have relatively limited appeal with other jurisdictions typically having a broader range of options.	Noted. Conscious push towards Stored Value. Roadmap to move to caps in future.
Short distance fares remain affordable, and the proposed fares represent an improvement for medium distance travel (10-15km) where Auckland ranked 25 of 28 in a recent benchmarking exercise.	Noted.
Shorter distance cash passengers will experience a substantial increase in fares, and the cash to HOP differential is larger than Australian cities for shorter distances, but in line with London.	1 zone cash fare reduced by \$0.50. Board recommendation to limit HOP fares through Cash increases.
Minimising impact on HOP losers and maintaining farebox recovery have been funded by increases in short distance cash fares. It is not clear impact on cash users has been fully considered.	Impact on cash users has been widely considered, and 1 zone fare reduced.
AT should consider peak / off-peak fares to encourage off-peak travel.	Noted. Capability exists in new system and can be deployed in any monthly EOD
The absence of a weekly loyalty product has been highlighted, and AT should consider earlier introduction of weekly caps.	Noted. Revenue stabilisation, New Network rollout, and PTOM implementation prior to consideration of caps.



Draft Deloitte Report – Integrated Fares Model

Finding	AT response
A review was completed of the mechanical accuracy of the Model and all issues identified have been actioned by AT.	Noted.
HOP data provides a reliable base for the AT model and evidence to support a number of key model assumptions.	Noted.
There are 6 key assumptions used in the model that explain the forecast change in fare revenue.	Noted.
Of the 6 assumptions, 4 were found to have a high level of certainty – baseline revenue and patronage, direct impact of fare changes, effect of journey concept, rationalisation of products. 2 require sensitivity analysis (see next slide).	Noted. See next slide.



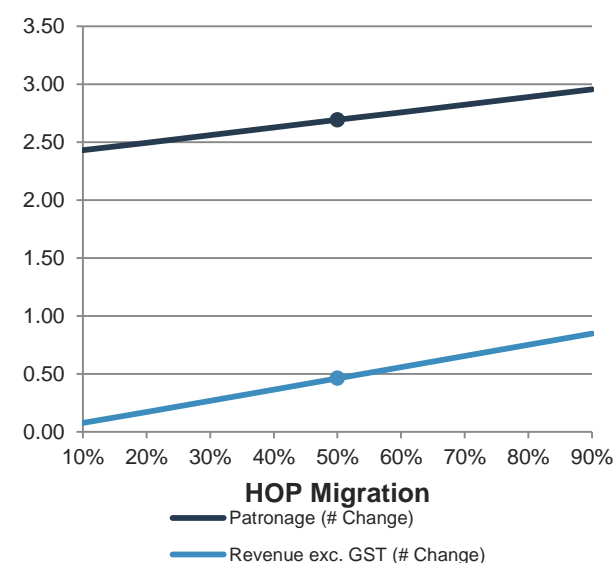
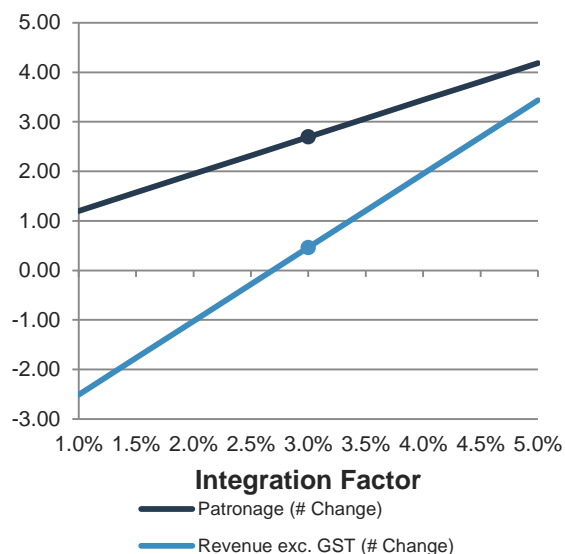
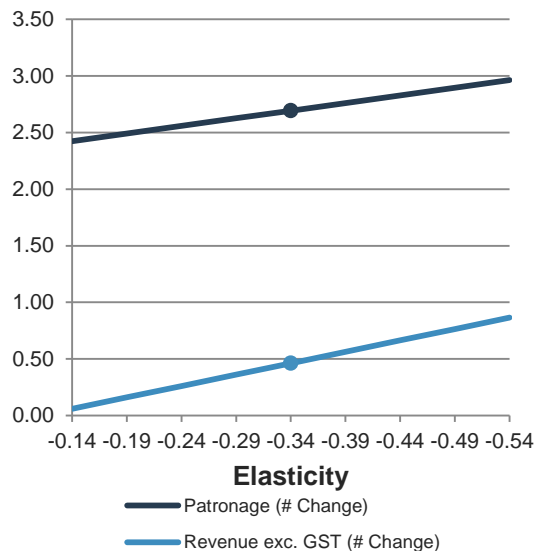
Final Deloitte Report – Recommendations (1)

Recommendation	AT response / mitigation
A1. Develop a medium term product strategy to transition towards NZTA target of 50% farebox recovery	Existing strategy in place. Review and update planned.
A2. Review the 2015 HOP penetration policy and develop a medium term strategy to achieve target levels.	Planned.
A3. Review costs and benefits of proposed discount for Cash vs. HOP for short distances and consider maintaining a uniform distance discount (IMMEDIATE).	Current fare table focused on minimising fare increases. Future annual fare reviews will harmonise discounts and fare steps.
A4. Extend communications campaign to support the launch of the new fares to promote HOP to cash users, and look at retail presence and prioritising mobile top-up (IMMEDIATE).	Cash to HOP migration already identified as a key theme for the Simpler Fares campaign.
A5. Evaluate the cast for off-peak fares for rail in the event of extended periods of capacity constraints.	Off-peak fares for all modes to be considered in the future, and technical capabilities in place. Not planned to do a rail-only fare as not integrated.
A6. Develop an implementation strategy for early introduction of a weekly loyalty product.	Potential move to Caps to be reviewed once revenue stabilises from New Network and PTOM implementations, and based on customer feedback to zonal fares and current products.

Final Deloitte Report – Recommendations (2)

Recommendation	AT response / mitigation
B1. Undertake sensitivity analysis on the “fare integration effect” (IMMEDIATE).	Sensitivity analysis completed (see next slide).
B2. Undertake sensitivity analysis on the price elasticity factor (IMMEDIATE).	Sensitivity analysis completed (see next slide).
B3. Document a reconciliation of the AT model baseline patronage and fare revenue against AT reported patronage and revenue (IMMEDIATE).	Under action. Results to be presented to April PCG.
B4. Develop local price and service elasticity measures by customer group to reduce reliance on international precedents.	Planned. Over next 12-24 months a more comprehensive model will be developed with more sophisticated elasticities.

Draft Deloitte Report – Sensitivity Analysis



Sensitivity analysis has been completed on three key assumptions – (1) fare elasticity, (2) the integration factor, and (3) HOP migration. The conclusions are that:

- A 0.1 change in fare elasticity results in an approx. \$200k change in annual revenue; and
- A 1% change in the integration factor results in an approx. \$1.5m change in annual revenue; and
- A 20% change in HOP migration results in an approx. \$200k change in annual revenue (note that HOP migration relates to cash passengers who would have a greater than 10% fare increase and would stop using PT due to the elasticity effect but instead migrate to AT HOP).
- In terms of revenue, the model is fairly robust on the fare elasticity and HOP migration but quite sensitive to the integration factor.

Technical update (1)

- Philippe Le Morvan has returned from a trip to Thales France and OSL in Hong Kong, conference calls were held with both Thales France and OSL in Hong Kong while Philippe was there to ensure version VS 7.1 requirements were on track
- Version VS7.0 Testing has highlighted two key issues
 - Paper tickets not available – resolved VS7.1 awaiting collateral from Thales France to confirm resolution
 - Ferry validators and monthly period passes not functioning consistently - two issues identified, one resolved by Thales NZ (Ferry validators, the other with Thales France for resolution – will prevent payment of a significant VS7.0 milestone)
- Version VS7.1 release is on track for delivery to Thales France and Thales NZ for March 31 except for a small delay to the Web development stream (being undertaken by Thales Australia).
 - Thales have on boarded a NZ Web resource to assist, the resource will start April 18 for a 6 month contract and has previous Thales and AIFS experience).
 - At this stage it is not expected that API development for the replacement of CCCWP will be completed prior to the planned go live for Integrated Fares.
 - Work is underway to stand up an further integrated test environment for replacement of CWP and CCCWP on the new AT ITF platform

Technical update (2)

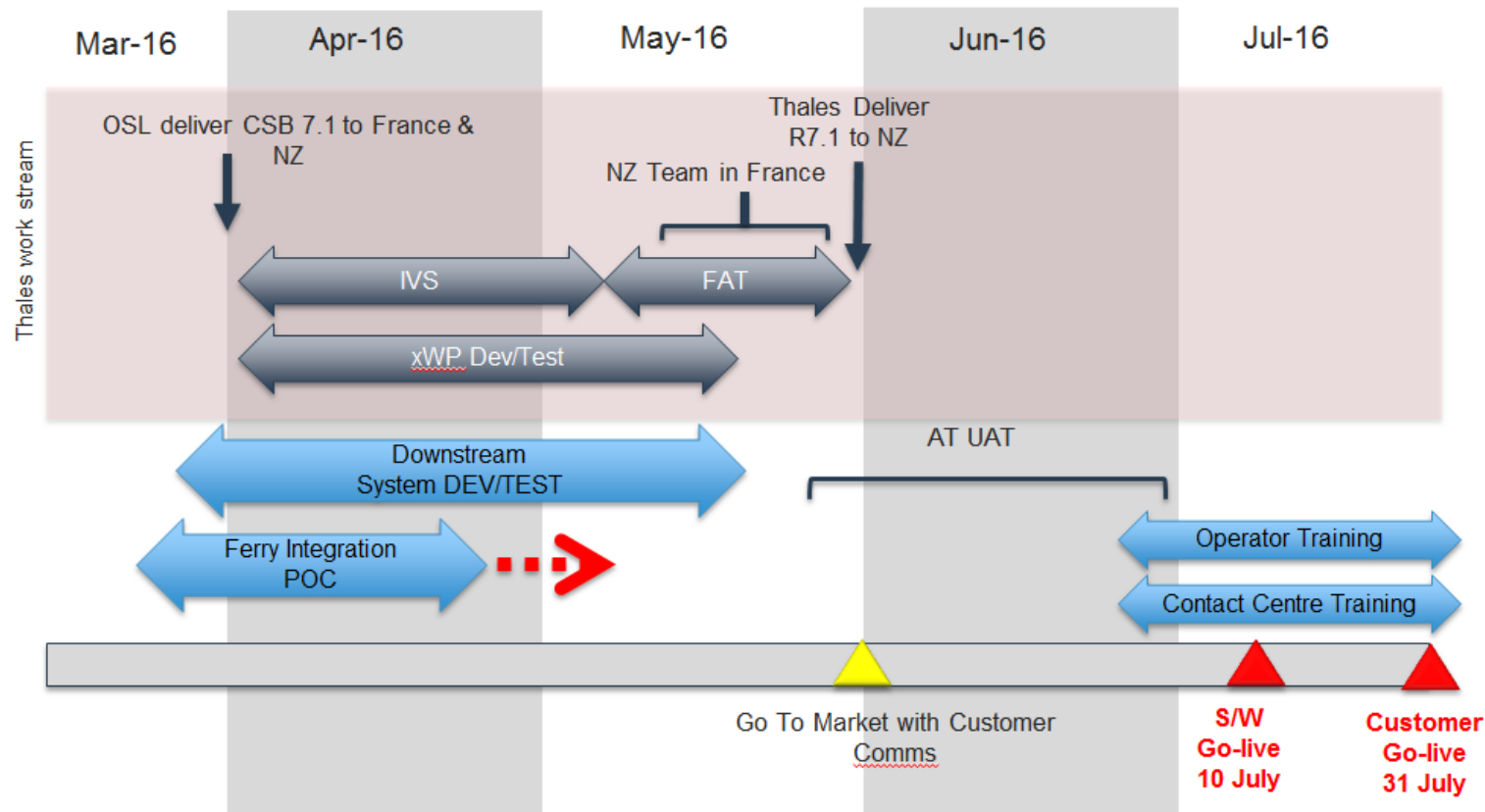
- As part of the lockdown of the journey configuration parameters an investigation into the ability to support an unlimited number of legs per journey is underway:
 - Initial findings are that the current solution does not support an unlimited number of legs per journey. However, version 7.0 does support different leg values and testing will be undertaken to confirm more than 3 legs is supported
- A reorganisation of the Thales France team has meant the Development Manager Jeremy Bocquet has been replaced by Laurent Piegard
- A period pass transition paper was prepared and reviewed, the paper presented options for minimising the time that passes would be unavailable while reducing the potential number of refunds required due to passes that were not fully utilised. Further testing is being undertaken to confirm further scenarios discussed at the review session
- Planning is under way for AT staff to attend Factory Acceptance Testing in France in Mid May
 - Enables AT to play a role in sign-off of FAT
 - Enables AT early access to the full solution

Water Zone Proof-Of-Concept

- To enable us to perform a POC for full integration of ferry for stored value travel there were 2 technical dependencies:
 1. The ability to have more than 16 zones (we current have 14 bus/rail zones and we will need x water zones to make this work
 2. The ability to have dual fare matrices so that the system knows to charge a different fare for bus/rail vs. ferry.
- Dependency 1: Zone limit: Thales have provided a Whitepaper confirming more than 16 zones can be supported. We anticipate an additional 5 water zones could be required
- Dependency 2: Dual fare matrices: The issue has been discussed with Evelyne the AIFS Design Authority and is expected to be included as part of the VS 7.1 release, while testing collateral has been developed testing cannot commence until the new schema is available, update scheduled for the next PCG

Project Schedule

- We are **ON-TRACK** for the 2 go-lives - 10 July and 31 July customer Go-Live
- Key risks to schedule
 - Commercial negotiations with Bus Operators (revenue impacts)
 - Major defects in Release 7.1 (no “buffer” for major re-development)
 - Issues during Phase 1 go-live require “roll-back”
 - Downstream system enhancements



Project Financials

- The Project is ON-TRACK for both Opex and Capex in the current and next fiscal year, but is looking like around \$130K over the approved \$8M project budget.
- See the latest financial forecast below:

Integrated Fares Financials						
	Capex			Opex		
	actuals / forecast	budget	(under) over	actuals / forecast	budget	(under) over
2014/15	896,031	-	-	79,075	-	
2015/16	4,898,089	5,000,000	-101,911	863,010	965,000	-101,990
2016/17	1,134,181	1,000,000	134,181	260,000	350,000	-90,000
Overall						
Approved budget		8,000,000				
Forecast spend		8,130,386				
(under)over		130,386				
variance		1.63%				

Project Risks (1)

- At Risk Register Review was held in February, and we have also completely re-formatted our register to comply with the latest PMO methodology. This has enabled consolidation of risks from 36 to 11. A further review will be held in April.
- Of the 11 risks, 2 were identified in the “Large Threat” category – see next slide
- Each PCG we will now be reporting on the status of the Large Threat risks
- If all risks materialised, the potential financial impact to AT is assessed as \$2.25M

Threat Probability Impact Grid						
		Probability				
		Very Low	Low	Medium	High	Very High
Impact	5		1	1		
	4		2	2	1	
	3			1		
	2		2	1		
	1					

Project Risks (2) – Large Threat Risks

What is the risk?	Who is the person responsible for monitoring this risk?	What causes that uncertainty?	What is the impact to the project should the event occur?	What is your current control to manage the risk?	How well will those CURRENT CONTROLS work to change the risk profile?
IFY		ANALYSE			
Risk	Risk Owne	Cause	Impact (Narrative)	Current Control	RCE
Business changes made within 'brown out' period	Ben Fernandez	<ul style="list-style-type: none"> - Ineffective communication - Inability of business to effectively manage system changes (e.g. KiwiRail block of line) 	<ul style="list-style-type: none"> - Could impact the quality of project delivery; break the system - Delay to project go-live as a result of resource availability - Increase in time it will take to resolve issues post go-live 	<ul style="list-style-type: none"> - Attendance of fortnightly AT Metro timetable meeting to protect project 'brown out' - Escalation process agreed if any conflicting business change is identified - Engagement and buy-in from AT Metro SMT - Engagement with BT and Thales to identify potential conflicts throughout 'brown out' 	Improvement Required
BAU operations unable to support changes as a result of project implementation	Jeani Powell-Smith	<ul style="list-style-type: none"> - System not adequately scoped to handle projected volumes - Insufficient load/stress testing - "Big Bang" deployment approach 	<ul style="list-style-type: none"> - Incomplete settlement process - Backlog of unreconciled transactions - Reduced confidence in the system/brand - Financial penalties - Break current HOP system 	<ul style="list-style-type: none"> - Infrastructure project commissioned to address capacity issues and future proof system (David Owen) - Created new testing environment (ATITF) - 2-phased deployment (1) backend software upgrade (2) EOD drop for zonal fares - Undertake targeted performance testing on pre-prod to determine suitable 	Generally Sound

Project Focus for April

- Complete technical analysis of the max. number of legs and lock-down the Journey Concept
- Develop marketing and communications plan ready for approval at April PCG
- Commence testing of release 7.1
- Operator commercial negotiations
 - Revenue risk
 - 7-day payment lag
 - BOM updates