Business Technology (BT)

Strategy & Work Programme 2013/14

Auckland Transport
An Auckland Council Organisation

Business Drivers

To achieve the "overarching outcome", Auckland Transport has developed the "Programmes of Action" that will drive the business over the next 3 years. BT need to manage business demand together with operational delivery of current services.

The Programmes of Action support the Regional Public Transport Plan (RPTP), Long Term Plan (LTP) and Integrated Transport Plan (ITP) objectives with strong themes of improved customer experience; integrated services; fares and ticketing; high quality infrastructure; effective and efficient allocation of public transport funding; and monitoring and review.

Programme of Action (business drivers):

1. ***Manage Auckland's transport as a single system***
2. ***Integrate transport planning & investment with land development***
3. ***Prioritise and optimise investment across transport modes***
4. ***Implement new transport funding mechanisms***
5. ***Transport safety initiatives***

BT support and enable the programmes of action

Priorities Next 6 Months

Priorities for the next 6 months include a maintaining the focus on operational excellence with "no surprises", communicating the strategy, enhancing delivery capability, delivering projects successfully and mobilising to commence the strategic initiatives

1 › ***Maintain the focus on operational excellence*** *to provide balance between achieving future focused innovation, while continuing to provide reliable daily "no surprises" delivery of services*

2 › ***Communicate the strategy*** *to gain trust and to motivate people on the strategic imperatives and required changes, starting with the BT team and then engaging with the rest of the business*

3 › ***Realise delivery capability enhancements*** *with a focus on portfolio planning (3 year prioritised programme of work), governance, architecture, delivery excellence, resource planning and fulfilment*

4 › ***Complete high priority in-flight projects*** *including AIFS, disaster recovery, EMU radios, WiFi for PT, Real-Time for Buses, Trains & Ferries, Online CRM, Business Reporting and Collaboration*

5 › ***Mobilise to commence high priority new initiatives*** *such as providing multi-channel RT information to customers, by obtaining approvals for business cases, engaging with partners, engaging with stakeholders and mobilising resources*

Strategic Opportunities

BT investments over the next 3 years are driven by customer demand, revenue, intelligent transport technology and delivery excellence. Those investments deliver high-value business outcomes to customers and incremental improvements to the BT organisation

Customers are increasingly demanding real-time and relevant transport services anywhere anytime. This drives a connected & integrated approach to sustainable **multi-mode transport delivery**, and **location-specific** on-the-move access to **information** about their journey.

Central government are actively moving away from owning and operating commodity technology assets such as core infrastructure in favour of a **service-based model** and a maturing of the **risk assurance** approach. This improves efficiency, reliability, scalability and uses partners to carry the accountability for risk and performance at higher quality and lower cost while accessing their knowledge resources.

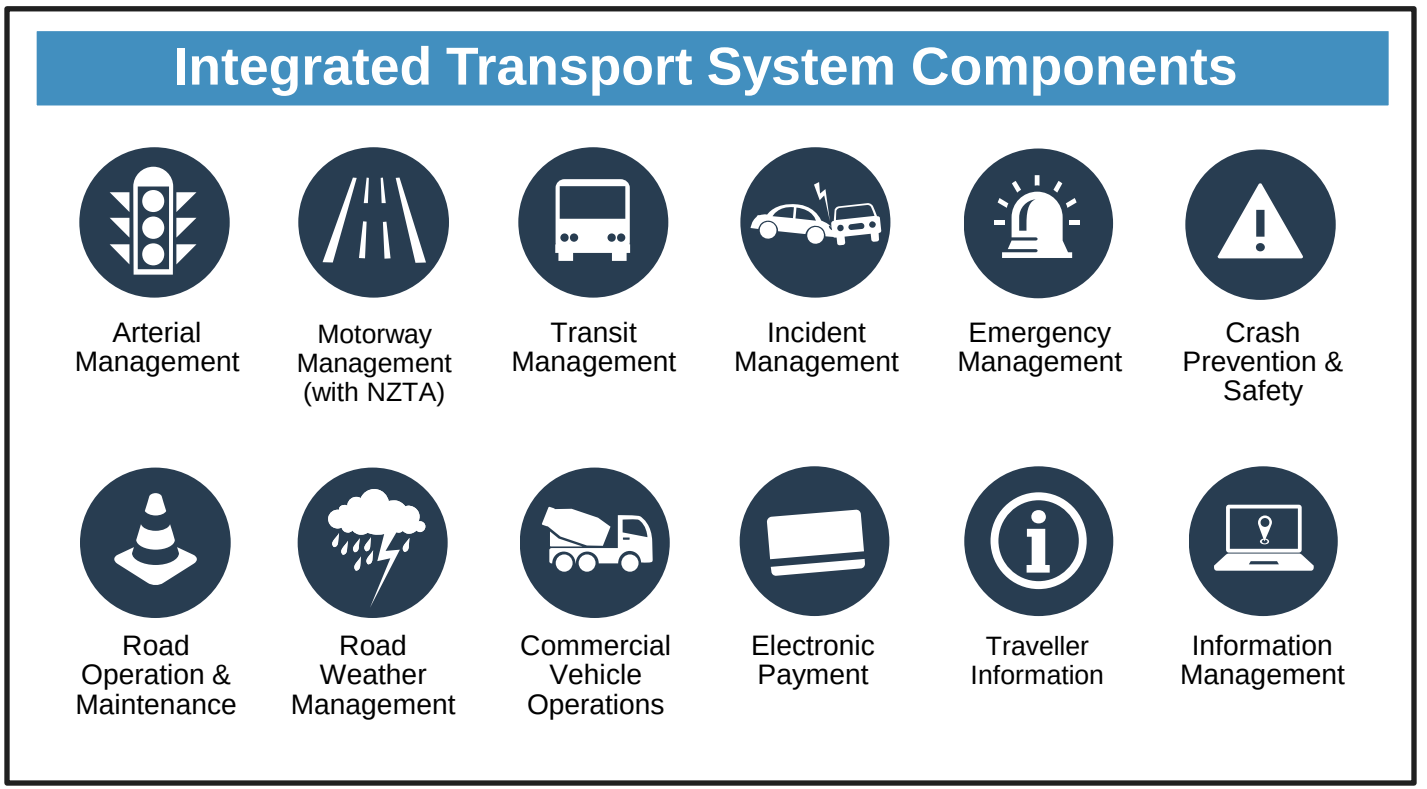
Making better use of transport sector assets by maximising sharing opportunities (e.g. NZTA)

Help meet funding shortfalls by engaging with the Auckland Council, the other CCO's and partners to introduce **new products and services** that drive **new or increased revenue**

Intelligent transport technology (ITS) now enables the capture and analysis of real-time information about the status, location and condition of transport assets and the network. Much of that data still exists today from multiple unstructured, untrusted, under-valued sources waiting to be used to provide predictive information supporting real-time interventions and demand analytics for planning.

Intelligent Transportation Systems (ITS)

As Auckland Transport's ITS maturity improves to encompass the integration of information and communications across the multiple modes of transport infrastructure, it will progressively achieve true multi-modal automation. This will improve the customer experience and complete the feedback loop for network & financial planning.



Auckland Transport Indicative Maturity Model

The indicative Maturity Model is based on interview feedback and assessment by IBM

		Level 1 Silo	Level 2 Centralised	Level 3 Partially Integrated	Level 4 Multimodal Integrated	Level 5 Multimodal Optimised
Strategic Planning	Planning	Functional Area Planning (single mode)	Project-based Planning (single mode)	Integrated agency-wide planning (single mode)	Integrated corridor-based multimodal planning	Integrated regional multimodal planning
	Performance Measurement	Minimal	Define metrics by mode	Limited integration across organisational silos	Shared multimodal system-wide metrics	Continuous system-wide performance measurement
	Customer Management	Minimal capability, no customer accounts	Customer accounts managed separately for each system/mode	Multi-channel account interaction by mode	Unified customer account across multiple modes	Integrated multimodal incentives to optimise multimodal use
Real-time information creation capability	Data Collection	Limited or Manual Input	Near real-time for major routes	Real-time for major routes using multiple inputs	Real-time coverage for major corridors, all significant modes	System-wide real-time data collection across all modes
	Data Integration	Limited	Networked	Common user interface	2-way system integration	Extended integration
	Analytics	Ad-hoc analysis	Periodic, systematic analysis	High-level analysis in near real-time	Detailed analysis in real-time	Multi-modal analysis in real-time
	Payment Methods	Manual cash collection	Automatic Cash Machines	Electronic Payments	Multimodal integrated fare card	Multimodal, multi-channel (fare cards, cell phones, etc)
Real-time intervention capability	Network Ops. Response	Ad-hoc, single mode	Centralised, single mode	Automated, single mode	Automated, multi-modal	Multimodal real-time optimised
	Incident Management	Manual detection, response and recovery	Manual detection, co-ordinated response, manual recovery	Automatic detection, co-ordinated response and manual recovery	Automated pre-planned multimodal recovery plans	Dynamic multimodal recover plans based on real-time data
	Demand Management	Individual static measures	Individual measures, with long term variability	Coordinated measures, with short term variability	Dynamic Pricing	Multimodal dynamic pricing
	Traveler Information	Static Information	Static trip planning with limited real-time alerts	Multi-channel trip planning and account based alert subscription	Location-based, on-journey multimodal information	Location-based, multimodal proactive re-routing

Average City

Auckland Transport

Now

3-5 Years

Leading Practice

Auckland Transport
An Auckland Council Organisation

Introducing the BT Strategic Imperatives

The strategic imperatives are a consequence of the strategic context, maturity growth and the unique challenges for BT to proactively deliver & support the Programmes of Action over the next 3 years. They are focused on generating technology-enabled value for Auckland Transport.

Improve the end-to-end customer experience

Understand customer needs and provide personalised information and services to meet those needs in the manner each customer prefers

Maximise effectiveness of assets and infrastructure

Leverage real time data and analytics to improve equipment uptime and life span while reducing cost

Enhance products and services

Increase the agility of customer sales and service systems to support fluid distribution models, bring new products to market faster, provide consistent service across all channels, and reduce cost

Improve operational efficiency and reduce environmental impact

Improve the planning and execution of operations, making better use of human and physical resources

Assure safety and security

Exploit new sources of information and new ways of using that information to improve security and safety

Strategic alignment with the Programmes of Action (business drivers)

The strategic imperatives have a direct relationship with the Programmes of Action and by extension to the direct contribution BT makes to the success of Auckland Transport

Business Technology Strategic Imperatives 2013 - 2016	AT Programme of Action Alignment				
	Manage Auckland's Transport as a single system	Integrate transport planning & investment with land development	Prioritise and optimise investment across transport nodes	Implement new funding mechanisms	Transport safety initiatives
Improve the end-to-end customer experience	Strong	Moderate	Strong	Moderate	Low
Enhance products and services	Strong	Moderate	Strong	Moderate	Low
Maximize availability of assets and infrastructure	Strong	Moderate	Strong	Moderate	Strong
Improve operational efficiency and reduce environmental impact	Moderate	Low	Strong	Low	Moderate
Assure safety and security	Low	Low	Moderate	Low	Strong

Improve the end-to-end customer experience

Understand customer needs and provide personalized information and services to meet those needs in the manner each customer prefers

Improve the end-to-end customer experience continues Auckland Transport's journey towards putting the customer at the centre of its affairs, and is aligned with the ITP intervention of **Managing Demand Efficiently and Safely** by getting a better understanding of the creators of that demand, vis-à-vis, the customer. It also supports the **Make Better use of the Network** by helping address customer wants, needs and aligning them to the capabilities within the network as a whole.

Overview of strategic initiatives

The following initiatives **improve the end-to-end customer experience** by standardising, simplifying and targeting interactions, products and service offerings to the individual. These initiatives contribute to Auckland Transport's understanding of its customers, and contribute towards more relevant customer engagement.

Inflight Initiatives

- Online channel (providing real-time multi-channel information to support customer choices)
- Customer Service & Case Management
- Collaboration (customers, staff, partners)
- Customer Multi-Modal Mobility

New Initiatives

- Social Media Analytics
- Customer Information Integration
- Customer Experience Analytics
- Multi model selectable information provision

Enhance products and services

Increase the agility of customer sales and service systems to support fluid distribution models, bring new products to market faster, provide consistent service across all channels, and reduce cost

Enhance revenue-generating products and services supports the ITP intervention of **Make Better use of the Network** by maximising its revenue potential. This will create new sources of funding that contributes to the **Invest in New Infrastructure Services and Security** intervention by proactively establishing new mechanisms to pay for that investment.

Overview of strategic initiatives

The following initiatives enhance the revenue generating products and services of AT by leveraging existing and developing new revenue capabilities. It provides AT decision makers with better information on customer behaviour and sensitivity to pricing models, and optimises the network potential and revenue generating capacity.

Inflight Initiatives

- Operationalize AIFS and expand integration
- Campaign Management
- Enhancement of Parking System & Services

New Initiatives

- Customer Payments & Loyalty
- Product & Services Pricing Analytics
- Tolling & Road Revenue

Maximise effectiveness of assets and infrastructure

Leverage real time data and analytics to improve equipment uptime and life span while reducing cost

Maximising the effectiveness of assets and infrastructure is a consistent theme in the ITP including managing transport as one system and all four (4) interventions particularly “operate, maintain and renew infrastructure optimally” and “invest in new infrastructure, services and technology. **BT contribute directly to the effectiveness of assets and infrastructure for Auckland Transport** with a similar mandate for their own assets to cost effectively enable the business for the long term.

Overview of strategic initiatives

The following initiatives are **core for intelligent transport solutions (ITS)** and progressively realise the integrated operations centre as the “hub” for information, planning, detection, response for all modes of transport across the entire network.

Inflight Initiatives

- Multi-Modal Network Operations Centre
- Intelligent integrated Video Surveillance and management
- GIS Presentation and improved management Assets
- Multi-Modal Public Transport Real Time System
- Integrated Transport Data Gateway
- Traffic Prediction Analytics & Demand Management
- Transport Planning
- Optimise Inter-Agency Shared Assets
- Optimise BT Operations Infrastructure

Improve operational efficiency and reduce environmental impact

Improve the planning and execution of operations, making better use of human and physical resources

Improve operational efficiency and reduce environmental impact supports the ITP interventions of **Operate, maintain and renew infrastructure optimally** and **Make better use of networks** with a consequential impact on the environment. BT initiatives are targeted at themselves and at improving how services are provided to the other divisions.

Overview of strategic initiatives

The following **initiatives provide direct improvements** for the wider Auckland Transport business to improve processes and provide information. Social business innovation is a progressive goal to incorporate social capabilities into the innovation process for Auckland Transport.

Inflight Initiatives

- Business Process Enablement
- Business Information Management
- Social Business (innovation with customers, staff, partners, agencies)

BTSpecific Initiatives

- Establish Portfolio Planning & Architecture Governance
- Project Financial Management & Reporting
- Resource Planning & Fulfilment (consistent delivery model)

Assure safety and security

Exploit new sources of information and new ways of using that information to improve security and safety

Assure safety and security is indirectly **reflected in all of the ITP interventions** and is **core to the Auckland Plan outcomes, the Auckland Transport over-arching outcome, impacts and the Programmes of Action** outlined in the SOI. The focus for Auckland Transport (SOI) is on implementing a Crash Reduction Programme and reducing identified black spots.

Overview of strategic initiatives

The following initiatives **provide the IT-enabled systemic basis for assuring safety and security** particularly through incident management processes and systems. Managing production risk provides the planning and assurance of agreed business responses (with known impacts, risks and mitigations) so that in the event Auckland Transport has to implement business continuity plans, any risk for safety and security is known and mitigated.

Inflight Initiatives

- Incident Management Processes and Supporting Systems
- Optimise Integrated Production Risk Management (Disaster Recovery, Business Continuity Plan)

New Initiatives

- Improve Intersection & Cycling safety through CCTV
- CCTV Analysis and alerting

Delivery Of Strategy

Strategy developed in conjunction with business and key stakeholders

Business Technology reviewed by PwC and benchmarked.
Re- focussed into two distinct , enhanced areas

BUSINESS DELIVERY

- Enhanced, dedicated programme managers and resources to interact with and deliver to the business areas.:
- Aligned delivery of technology

TECHNOLOGY DELIVERY

- Enhanced dedicated team to build, deliver and run the base infrastructure and all systems required to support the Auckland Transport business
- IT as a commodity

Key Projects

ATOC/JTOC

- CCTV convergence of management systems
- Implementation of CCTV technologies and analytics
- Multi agency incident management
- Integrated multi-modal information dissemination channels

Customer Channels

- Introduce social media management and analytics
- Introduce integrated digital media management for EMUs public kiosks and signs

Capital Projects

- Multi agency secure information management and access
- Defined business model and processes with selected supporting system(s) choice
- Secure remote access for multi agency approach

Key Projects

Public Transport

- Multi model Journey Planner, including park and ride and cycling
- Real Time replacement and enhanced Operator reporting & management
- Campaign Management
-

Roads

- Implement Information sign integration to other communication channels
- Provide enhanced integrated information to public and planners

AIFS

- Roadmap obsolete equipment and procure replacements
- Integration of solution to other systems i.e. Parking
- Deliver Near Field Communications (NFC) devices
- Delivery alternative payment options i.e. text to top up

Key Projects

Parking

- Remediate off street systems
- Replacement on street parking
- Integration of above systems to provide information to public and AT

EMU

- Implement Digital Media Management (Train and all Kiosks)
- Implement Radio network and handhelds across AT
- Public WIFI on PT

Key BT Projects

Data Centres

- Complete build of new capacity in new data centre (66 Terabytes storage currently)
- Rethink and plan for replacement of all current equipment due end next year in existing data centre

Disaster Recovery (DR) & Business Continuity Plan(BCP)

- Complete build of DR site,
- Provide uninterrupted power supplies at all sites to support 24x7.
- Security – ensure all systems meet security requirements
- Ensure AT is compliant with the Payment Card Industry Data Security Standard (*PCI* DSS)

Information Management

- Get end user improvements in this including better search
- Build multi stakeholder capability, capacity and access to support Capital Projects

User Support

- Lift Service to achieve enhanced defined service Levels
- Enable and manage securely additional mobile devices

Summary

BT have engaged with the business, understood the requirements, altered its structure and delivery model and will deliver;

Improved end-to-end customer experience

Enhanced products and services

Maximised effectiveness of assets and infrastructure

Improved operational efficiency

Systems that are safe and secure