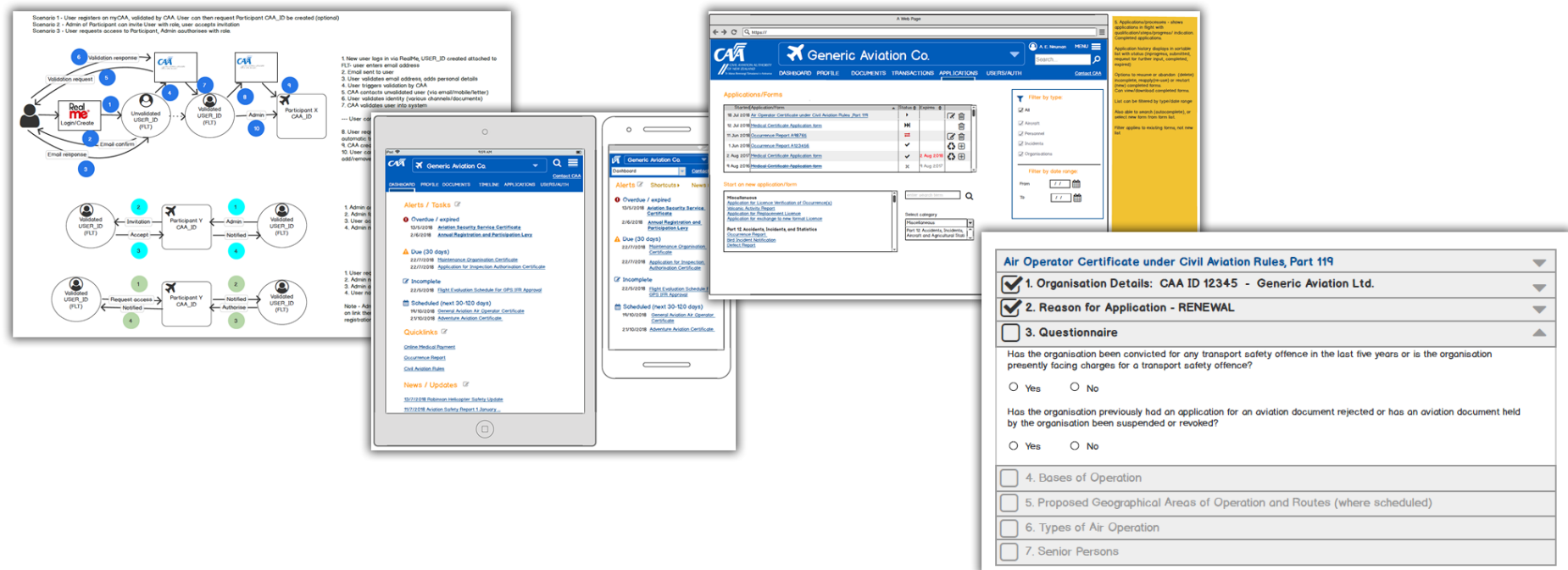


CAA

myCAA

The civil aviation sector involves a great deal of bureaucracy and compliance, necessary for managing a complex industry, but cumbersome and complex to manage. I was brought on board to develop UX proof of concept but as is generally the case, business rules and processes that look logical in isolation tend to be very difficult to implement when human actors become involved, and in some cases are almost impossible to explain or implement. Early involvement of UX is essential. The approach of designing the user interactions and flows in conjunction with business analysis can expose architectural and data issues that would later compromise the project's effectiveness.

The CAA wished to design a full 360 degree platform to support the the numerous applications and interactions between CAA staff and it's client base; private and commercial pilots, aviation companies and other businesses. Not surprisingly the general functionality shares a lot of commonality with other business-customer portals, with views and functionality dependent on role and authority. Different roles apply on both sides of the exchange, many applications require the exchange of documents and related dialogues between CAA staff and clients.



Working with the BA I developed a set of flows and wireframes which demonstrated how the various interactions and processes could work from both the user and CAA perspectives. This was then used to help decide on the projects future - my understanding is that it was decided

not to proceed at that time. What may seem simple from a data management perspective can often stumble when challenged by the user interface.

I later returned to CAA briefly to assist in developing an app for border security use. Although on the surface this seemed like a simple set of screens and interactions, my review suggested a number of productivity enhancements while questioning some ethical and legal issues. I see all these as being an important part of my role as a customer advocate in the projects I am engaged in.

ACC

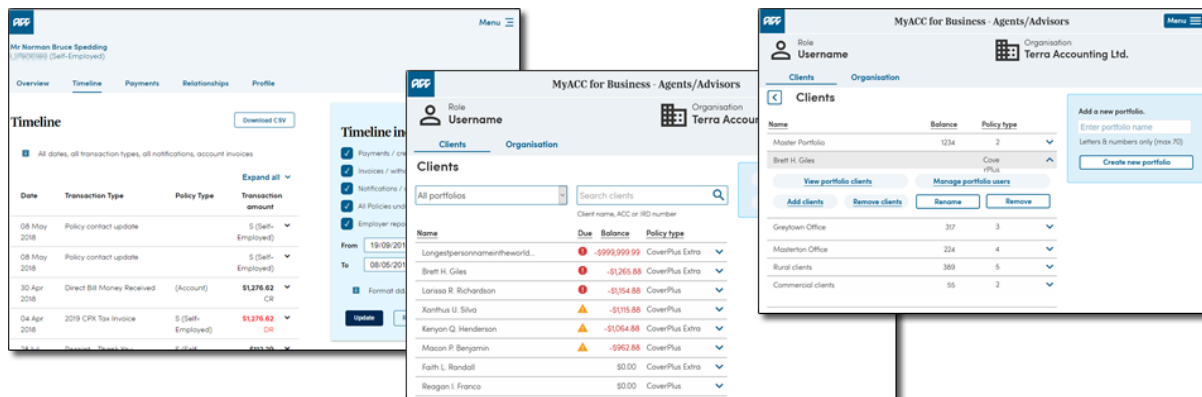
MyACC for Business

I was brought into ACC to work in the Business Customer area with several development teams. Initially working on the migration of various forms between platforms I redesigned and often simplified. This involved in-house 1:1 user testing using Balsamiq and sometimes prototyped forms to validate wording and flows.

ACC then moved to build a Business Customer Self Service portal. Initial concept work was done in conjunction with PWC and then our in-house team continued with implementation. Several rounds of user testing were involved, designs were mainly done using Atomic which we had close involvement with. The Business Customer portal has gone live, the Agent/Adviser and ACC Staff systems were designed and in development when my contract finished.

Much of my work involved identification, analysis and simplification of business rules to make for a simpler UX, and then developing patterns based on this. The complexity of managing the various authorisations from each of the involved parties helped refine the business rules around this area. My experience has been that often what seems like a straightforward rule can be exposed as unworkable when exposed to interface design. Designing a 360 degree, 3-way system with admin multiple authorities on all sides was quite challenging but satisfying in it's outcome.

This work was carried out under the umbrella of a large transformation process ACC is undergoing. Teams were agile, and desirable outcomes were consistent pattern libraries and code bases across projects.



Westpac Bank

Online Banking (Westpac Classic / Westpac One)

Westpac Classic is the original online banking site developed from a hybrid credit card system with mixed platforms which created numerous design issues. The site was meticulously designed for accessibility and usability where possible. Westpac One is the new responsive online banking website which has addressed many of the constraints of the classic site but has also been less successful in the areas of accessibility and design planning. It's long term success (or not) will be interesting to follow.

The migration from old to new has been tactical, with only some existing functions migrated so far, and some new functions added. The success of this strategy is also to be determined.

My involvement was in developing new processes in the original site, and then migrating some of these to the new platform when it became available. These are described below.

In my time at Westpac I developed a range of design patterns, especially defensive behaviours, but also scalable touch screen compatible patterns necessary for a truly responsive website. The Westpac online banking site highlighted the benefits of a grid based mobile first approach to responsive design.

I was generally involved from product inception, as product design is critical to the user experience, and products can be designed to make online origination and/or management difficult if not impossible.

I was also involved in much of the writing, not just page navigation/labelling, but also legal and marketing, usually with a view of introducing simple text in plain English. Managing this through the legal hoops is often a challenge.

I am not a trained graphic designer - the Westpac One style was developed externally, however as the project evolved we took on most of the graphics work and developed new patterns as needed.

Tools used:

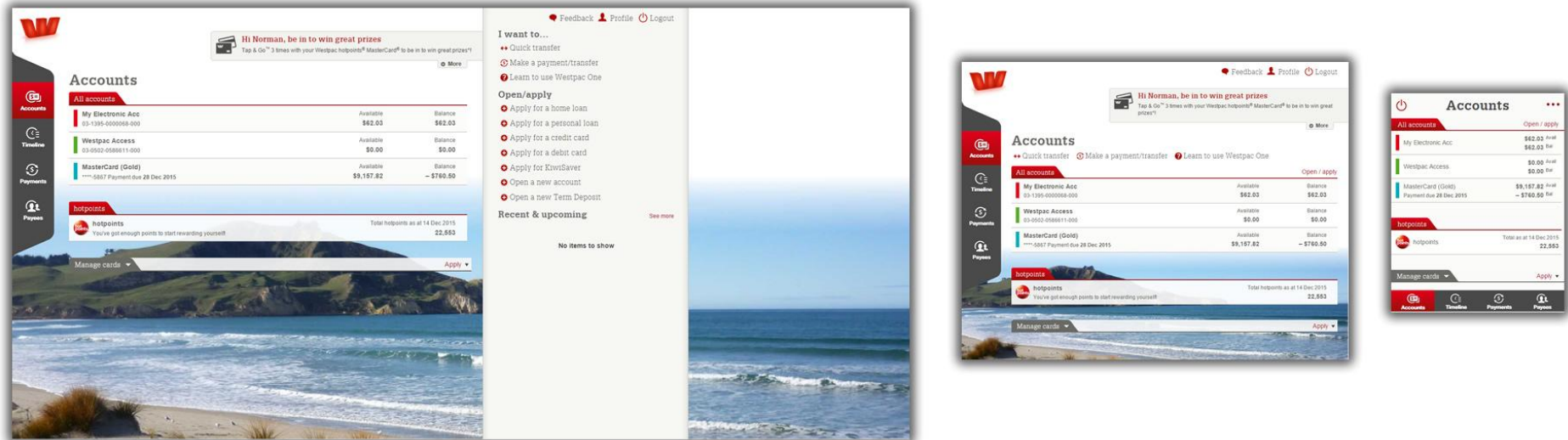
Balsamiq for wireframing / prototyping

Fireworks / Illustrator for hi-res

Confluence / Jira for collaborative documentation and project management.

LAMP (Linux, Apache, MySQL and PHP) and Javascript for working prototypes and tools

Testing - adhoc and guerilla testing was often used (staff, friends, family, bank customers) as well as formal testing in a test suite. Various testing techniques were used, including open/closed card sorting and paper prototypes.



Account originations

Facility to allow customers to open accounts immediately, including joint accounts, PIE accounts and restricted accounts (where they have outstanding identification requirements to meet). Also allows online approval (for joint accounts). Designed originally for the classic site, it allowed the user to select ownership options, account type, other account options (ie attach to cards, statement delivery etc.) and also satisfy the legal requirements. Joint accounts were opened in a restricted state, and the other owners were required to approve the account before it was fully operable. All accounts could be immediately used both online and via an ATM. The Westpac One version used the accordion format developed for the loan application forms (see later).

The accordion pattern has a number of advantages (and disadvantages).

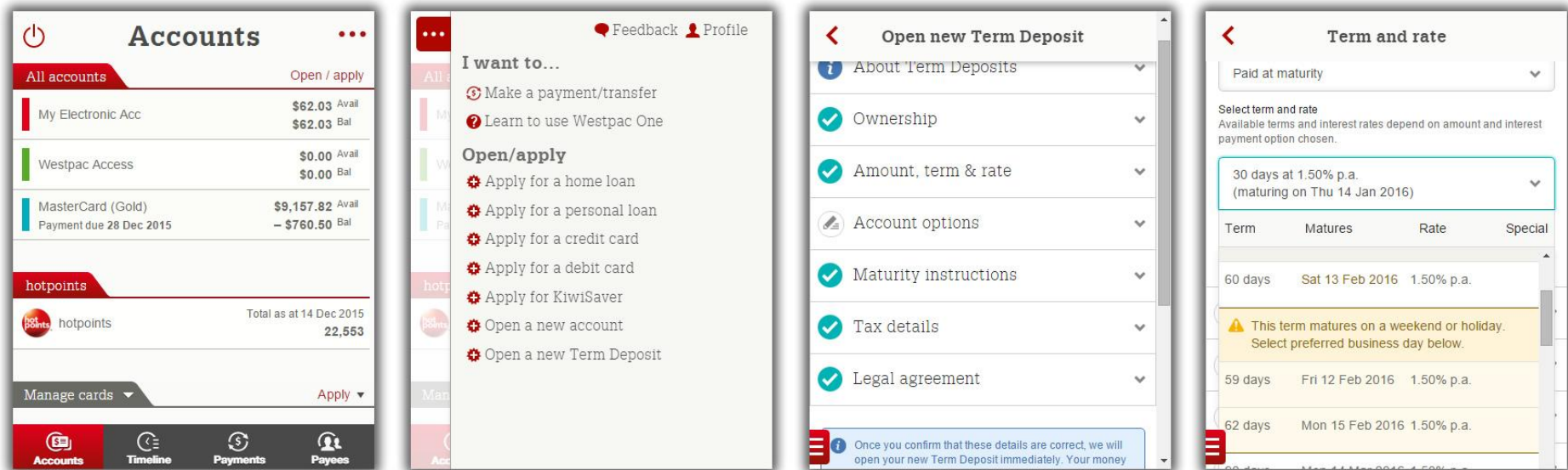
As a means to present a complex series of form sections it works well, allows each section to be fully labelled, including a summary in the tab, and allows sections to be randomly completed. By maintaining a single page view the 'confirmation' page is not required, and from a developer point of view there is no need to maintain (and restore) state between pages. It is however a more complex page to build, and dependencies are harder to manage. It adapts well to the mobile screen, and avoids the traditional 'next/back' pattern which can be tedious.

Defensive and error management is easier as it can be managed in a single view, and dependencies flagged more quickly.

The image displays eight screenshots of a web application interface for opening a new account, arranged in two rows of four. The top row shows the initial steps: 'Open account - page 1' (Account overview), 'Open account - page 2' (Choose account), 'Open account - page 4 of 5' (Account options), and 'Open account - page 5 of 5' (Please confirm...). The bottom row shows the final steps: 'Open a new account' (Summary), 'Open a new account' (Confirmation), 'Open a new account' (Confirmation), and 'Open a new account' (Confirmation). The interface features a red 'W' logo, a sidebar with navigation icons, and a main content area with various form fields and buttons. The bottom row screenshots show a summary of the account details and a large red 'Open account' button.

Open, amend and renew Term Deposits

Full creation, viewing and maintenance of Term Deposits. Term deposits are more complex than other accounts as they also require a term, interest repayment and reinvestment instructions to be managed, including terms that mature on non business days and other complexities.



KiwiSaver online origination

Facility to allow customers to sign up for KiwiSaver and select investment portfolio. Later extended to include (government) Default Provider behaviour. I did a lot of work on developing algorithms and an infographics to show both KiwiSaver allocations and balances but could not satisfy all product owners to get it implemented. I also did a lot of work on designing interactions to show various fund and risk profiles, including working/interactive models. This was fascinating, trying to visually explain a complex process in simple terms. Hard to get buy in.

Home loan, Personal loan applications

These interactions capture a large amount of data with a view to giving the user an immediate loan application decision. A modular concertina UI approach was selected after testing as offering a number of advantages.

- Translates easily into mobile screen
- Adapts to a variable number of sections
- Random entry/access into any section (not linear)
- Sections can be used separately in different flows, and also adapt well to a user profile section where personal financial data can be held/maintained.
- Section status/summaries show progress and also overall wrap-up.
- Easy access to sections for validation and error handling/highlighting.

- Easy pause/save and resume (single page), reduced number of round trips.

This pattern adapted well to other origination processes, allowing users to become familiar with the routine.

Of course it's not without it's complexities and issues, but has worked well so far.

Credit card application

Similar to account origination, the patterns make use of back-end CMS for content as much as possible. In some cases the same forms are used in both the public (user not identified) and online banking (user verified). In this case the form adapts to the information available.

We did extensive user testing on credit card selection patterns to identify a useful pattern to aid this.

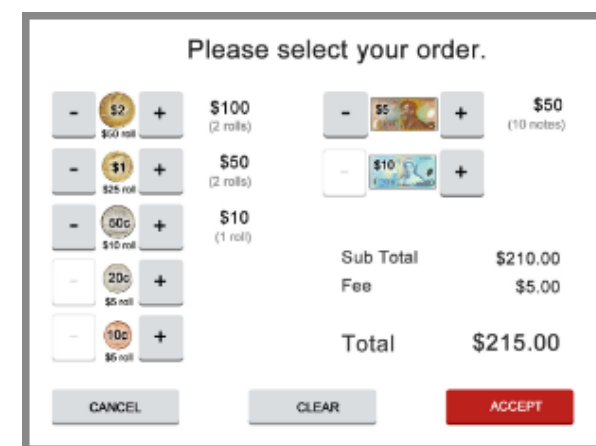
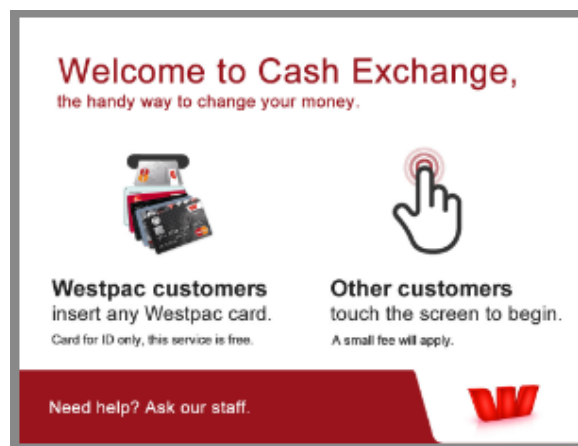
The screenshot displays a mobile application interface for a credit card application. At the top, there is a red back arrow and the title "Credit card application". Below the title, a subtitle reads "Select the card you want". A note states: "Details about the card will be displayed once you have made a selection". A large, light blue rectangular button with the text "Select card" and a downward arrow is positioned below the note. Below this button is a list of six credit card options, each featuring a card image, the card name, a brief description, and an information icon (i) in a blue circle. The cards listed are: Westpac Low Rate MasterCard®, Westpac hotpoints® MasterCard®, Westpac hotpoints® Platinum MasterCard®, Westpac hotpoints® World MasterCard®, Westpac BusinessPLUS MasterCard®, and Westpac Airpoints™ MasterCard®. A red hamburger menu icon is visible on the left side of the screen.

Card Image	Card Name	Description	Info Icon
	Westpac Low Rate MasterCard®	Our lowest interest credit card.	i
	Westpac hotpoints® MasterCard®	Lowest annual fee and hotpoints on every dollar you spend.	i
	Westpac hotpoints® Platinum MasterCard®	Earn more hotpoints per dollar spent.	i
	Westpac hotpoints® World MasterCard®	Reward yourself with Westpac's fastest earning hotpoints credit card	i
	Westpac BusinessPLUS MasterCard®	Perfect for keeping your personal and business expenses separate.	i
	Westpac Airpoints™ MasterCard®	An Airpoints™ earning credit card with a low	i

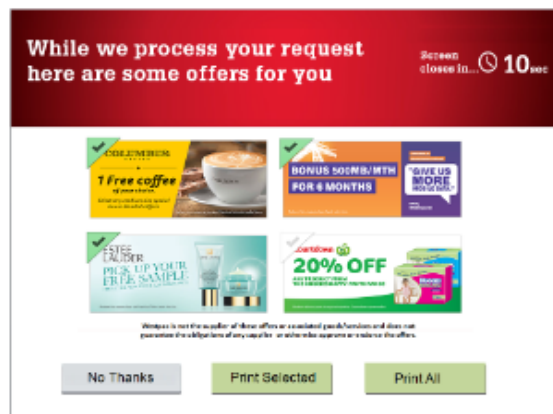
ATM (kiosk)

I consulted with the ATM team extensively, did some camera testing of users and also on-site observation of ATM (and touch screen) behaviour. Developed hybrid FDK/touch displays to work across old/new technology. Also developed best practice guidelines and behaviours. Also designed Direct Currency Conversion (DCC), vendor replacement screens, cardless withdrawal, bill pay and bunch cheque deposit. Consulted with ATM team on a regular basis on wording, behaviours and general usability design issues. ATM's are an interesting challenge because they are essentially state machines, and have a lot of hardware and processes which constrain interactions.

Cash exchange - some mockups below.



Coupons (vouchers)

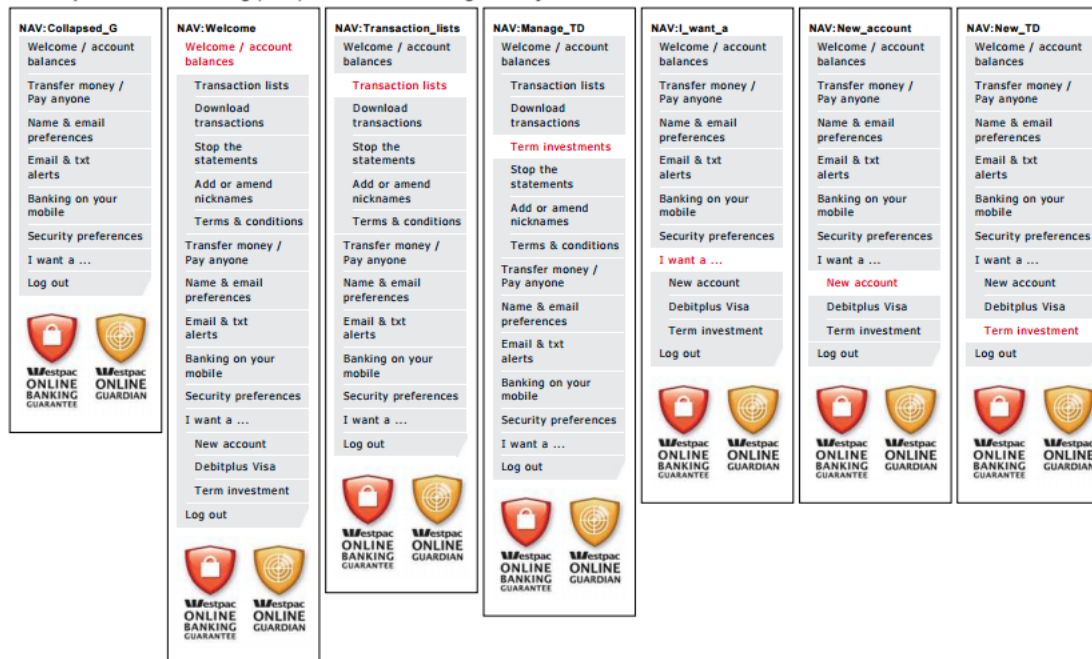


Other

Menu generator

The menu structure for IOLB (original banking platform) is hard coded, so documenting all the possible states was onerous, particularly with multiple projects in flight. I developed a web/database tool which allowed all menu permutations for all releases (past and future) to be easily maintained and automatically generated. Both graphical and tabular documentation could be automatically generated. If a particular project was moved to a different release the documents could be regenerated in a few minutes to reflect this.

3703 - Open Account Pending (WS4) Phase B : Left navigation layouts



NAV:Transaction_lists (Image)

Key: **Level:** First(1) or second(2) level navigation. **Set:** Selected item. **Click:** Linked item. **New:** has new icon.
Title text: applies only if text based menu element. **Alt text:** applies only if image based menu element.



Home Club

Very poorly implemented website - some concepts were well intentioned but classic mistake of taking an 'artists concept' and trying to build it with no analysis or design behind it. Even the site owners did not know what some sections were trying to achieve or the message that was being delivered. As a result it required a lot of remedial work to make it functional. Site was retired.

Metservice

My initial entry into Metservice was to manage a small number of specific web sites, such as a site used by the America's Cup syndicates for accessing and sharing their own and Metservice weather data.

I was asked to develop an International weather site capable of being configured to individual customers needs. After reviewing various popular CMS systems which were generally not designed to manage real time data, highly graphical data presentation, and configurable time zones and data units, I decided to develop an engine which became the basis for most of the design work I subsequently carried out.

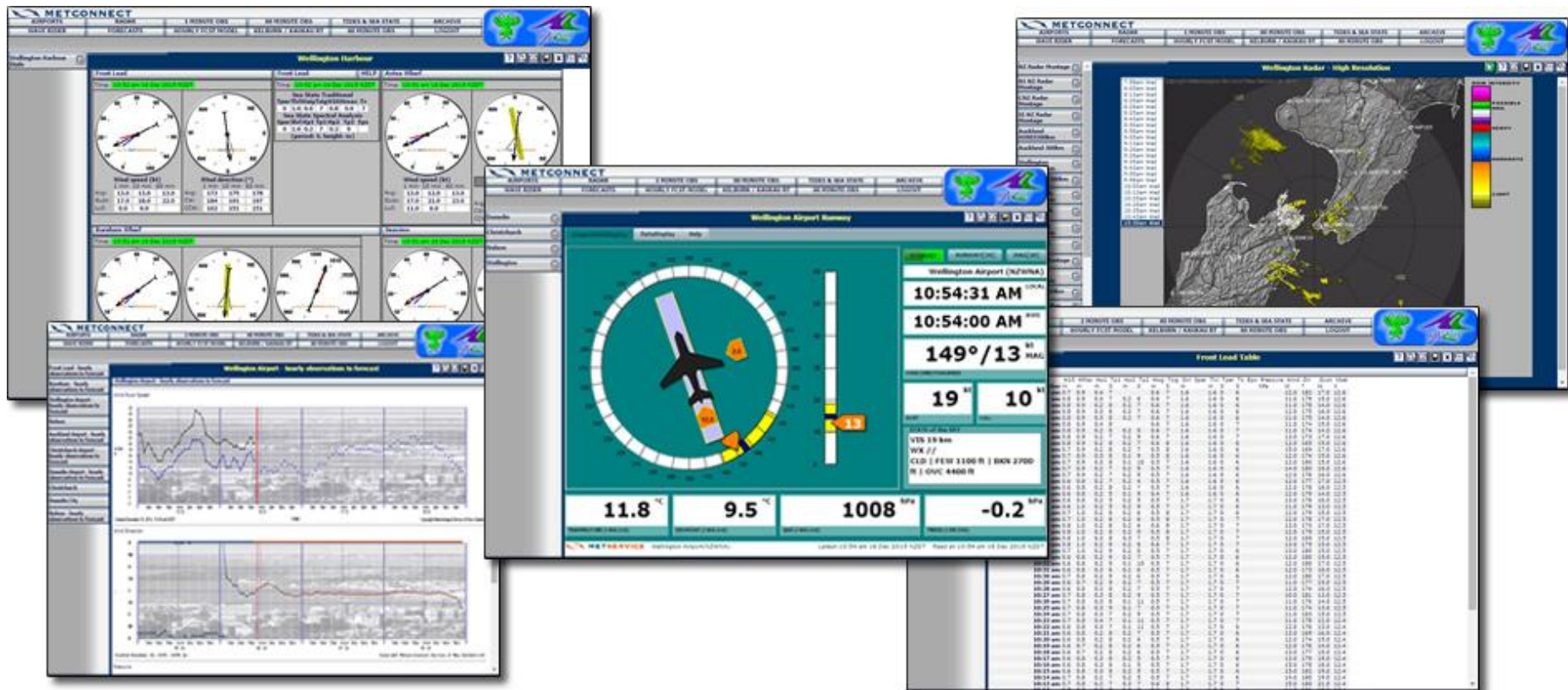
An early prototype of this engine was used to develop a speculative mobile weather site for the innovative Vodafone Live mobile multimedia application (pre smartphone). This site became the posterchild for the mobile application and won a national award for mobile content.

The international Metraweather site gained a few international customers, however the real strength of the platform became apparent when I migrated the New Zealand B2B site Metconnect onto the engine. The engine allowed pages to be quickly built using templates and configuration tools, often in the presence of the customer to confirm the design. New templates, units and data sets are easily added to meet customers needs, and **take customers closer to the decisions they wanted to make**, including specialist business rules (road marking, hay making, power generation, WRC etc.). This site won several awards for both technology and customer service - and highly customised / specialist content could be added in hours, even with new data types.

The engine is based on the LAMP (Linux, Apache, MySQL and PHP) platform with Javascript and Flex (Flash) used on client side.

The administration interface uses the same interface and allows the marketers to set up, personalise and configure customer products on the fly, with a variety of subscription and alerting options. We also created a multiple server load balancing backend to handle the loads (exceptional during bad weather), and I included various load management and dynamic caching features to reduce overhead activities during peak loads.

Variations (clones) of the site were used to create specialist sites for volcanic activity information (CAA), and modules developed to allow some clients to manage their own subscribers. Other additions allow the design of weather plugins for client sites, data protection (anti-siphoning) and complex multi-page drill-down.



The Metservice public site was regarded as a non revenue earning static site built to satisfy government contracts. Data presentation was minimal, predicated that users with money would pay for better service/content. We managed to convince the management that creating a much more friendly and usable site, and giving away more weather data would create better returns via advertising. The resulting site presented rich weather information in a highly graphical and compact form. It was in essence a single client of the Metconnect engine, even though it was the 10t busiest site in New Zealand. The structure also allowed users to build their own weather pages, with every weather element on the site available to be added and arranged on multiple pages - the ultimate customisation.

> WARNINGS, WATCHES AND SEVERE WE

WEATHER TODAY
CONSUMER SERVICES
BUSINESS SERVICES
WEATHER WINDING & SERVICE AREA

MY WEATHER
REGISTER
VIEW REQUESTS!
LOG-IN ID:
PASSWORD:
W
Forgot password?
MY WEATHER PLUS
Virtual Tour

NE LOCAL WEATHER
RAPS & OBSERVATIONS
MARINE
MOUNTAIN
SNO FIELD REPORTS
INTERNATIONAL
LATEST NEWS
ABOUT INTERSERVICE
LEARNING CENTRE
ABOUT THIS SITE
FAQ & HELP
NETRA

Warning map
Severe Weather Warnings
Severe Weather Watches
Weather Warning Criteria
Code of Practice

Severe weather warnings for all areas

Warnings Key

- Gale
- Storm
- Strong wind
- Snow
- Heavy rain

Pressure: 1005 hPa
34 hour period
to 9 Jan Wed 14 December
Air temp: 14 °C
Sea temp: 23 °C
Rainfall: 0.2 mm

Month to date
to Wed 14 December
Air temp: 16 °C
Sea temp: 23 °C
Rainfall: 27.6 mm
* based on incomplete data

Live cam radar
Download satellite images

NE LOCAL WEATHER
RAPS & OBSERVATIONS
MARINE
MOUNTAIN
SNO FIELD REPORTS
INTERNATIONAL
LATEST NEWS
ABOUT INTERSERVICE
LEARNING CENTRE
ABOUT THIS SITE
FAQ & HELP
NETRA

[illegible]

FORECASTS

Today / tomorrow

Thursday

Max: 24°C Min: 15°C

(Day) (Night)

Mostly fine, chance shower.
Humid northerlies.

Next few days

Thu	Fri	Sat	Sun
24°C	19°C	20°C	20°C
15°C	14°C	13°C	15°C

Regional forecasts also
available 24/7 from
MetPhone. **0900 999 04**

Pollen forecast

HIGH

Pollen hazard is
high

UV Forecast (clear sky)

11 - EXTREME

Reschedule outdoor
activities for early
morning/evening.

NZ Government Online (NZGO)

This site was a portal into the whole of NZ Government. The server (SGI workstation) actually sat on my desk! My role required me to respond to all enquiries through the site, maintain the database of services, and generally liaise, support and often build sites for government agencies. Although not responsible for technical support I eventually added analytics and as a result redesigned the search tool and especially the feedback from searches for null results which had a significant impact on negative feedback.



NEW ZEALAND Government Online

Official Gateway to New Zealand Government [Sun Jan 17 15:19:02 1999]

[Browse Services](#)

[Agency Contacts](#)

[Forms & Eligibility](#)

[Related Links](#)

[Update Listing](#)

[E-mail NZGO](#)

Type your search words in the box below, then click button

Select ☒ Service Enquiry or ☐ Web Search [... options](#)

[Go](#)

[State Sector News](#) *issue: 23/12/98* [News - Views](#)

New Online in Government *(updated 24/12/98)*

This site will be updated again from 19 January 1999. For further information, refer to [News-Views](#)

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- [Land Transport Safety Authority is ONLINE!](#)
- [Check out the new site of Landonline](#)
- [Electricity Reform Transition Unit - Final Reports on the Restructuring of ECNZ](#)
- [IT in Schools 1998 \(Ministry of Commerce\)](#)
- [Report of the Government Superannuation Fund for the Year Ended 30/6/98](#)
- [Kiwi Bond Interest Rates](#)
- [Synopsis of the Business Evaluation of the Public Trust Office \(PDF format\)](#)
- [Reserve Bank of NZ Bulletin December Qtr 1998](#)
- [New Munster Bluebook December 1998 \(Early NZ Life\)](#)
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[Business](#)

[KIWIS OVERSEAS](#)

Winzurf.co.nz

This site was my entree into the web. Working as a contractor in this new area I developed the Windsurfing Guide to New Zealand as a result of my sporting interest and frequent enquiries on the subject from overseas. The site won the first New Zealand web design competition plus several other awards. It was carefully designed to be usable over 14.7K dial up modems, and restricted to the (then) standard 16 colours available to most users.

