The Journey to Yellow

Retail System Integration of Mercury and Trustpower

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Mercury

INTRODUCTION

Background

>Mercury purchased Trustpower Retail in May 2022

>“Inter-GREAT-ion” of the two companies began in October 2022

>This included rationalization of technical systems and integration layers

>Decision made to:

- Retire existing digital platforms from both companies and build new website and mobile app
- Move from Mercury SAP platform to Trustpower GTV core system

INTRODUCTION

Background

>Scope included:

- Rebranding
- Creation of new website, mobile app and associated APIs
- Enhancements to GTV and integrated systems to support Mercury features such as :
  - Starship Donations
  - Rewards
- Customer data migration from Mercury SAP platform to Trustpower GTV

OVERVIEW

>Priority was focussed on speed to market to enable business integration

>Big room planning sessions held to discuss change across the business

>Functional testing started in December 2022

>Brand change release deployed to production June 2023

>Data migration testing started in May 2022

>First pilot of over 12,000 SAP to GTV customers migrated end July 2022

>Testing of bug fixes for both brand change and migration continues

FUNCTIONAL TESTING

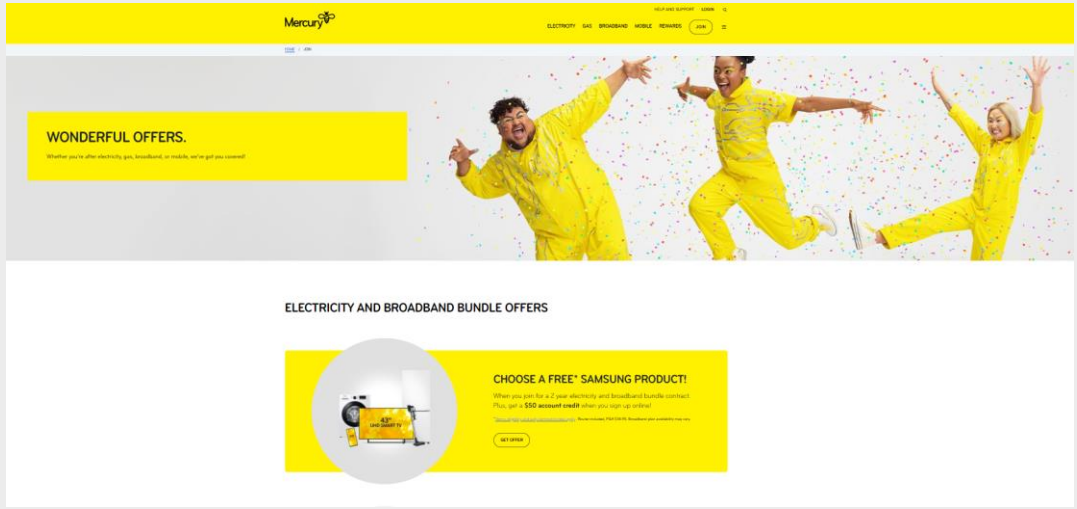
>Brand change user stories tested by 17 different squads in 7 agile delivery teams

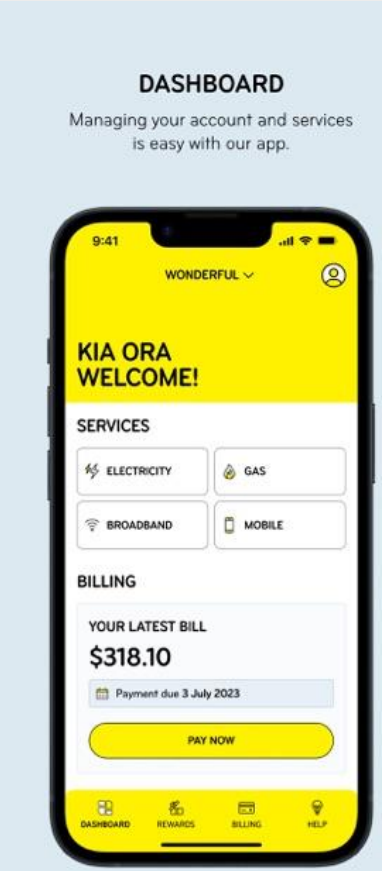
>Included new and updated functions and features

>API tests were performed against stubs

>Teams were focused on systems that supported:

- >Digital
- >Markets and Products
- >Telco & Energy Provisioning
- >Billing and CRM
- >Energy Data





BILL REBRAND

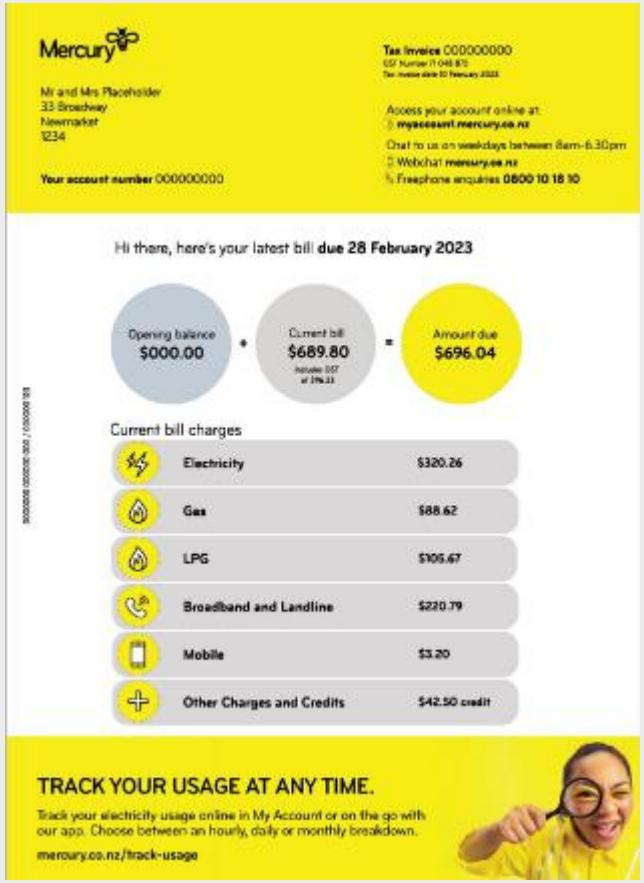
> Also known as **Yellow** Bill

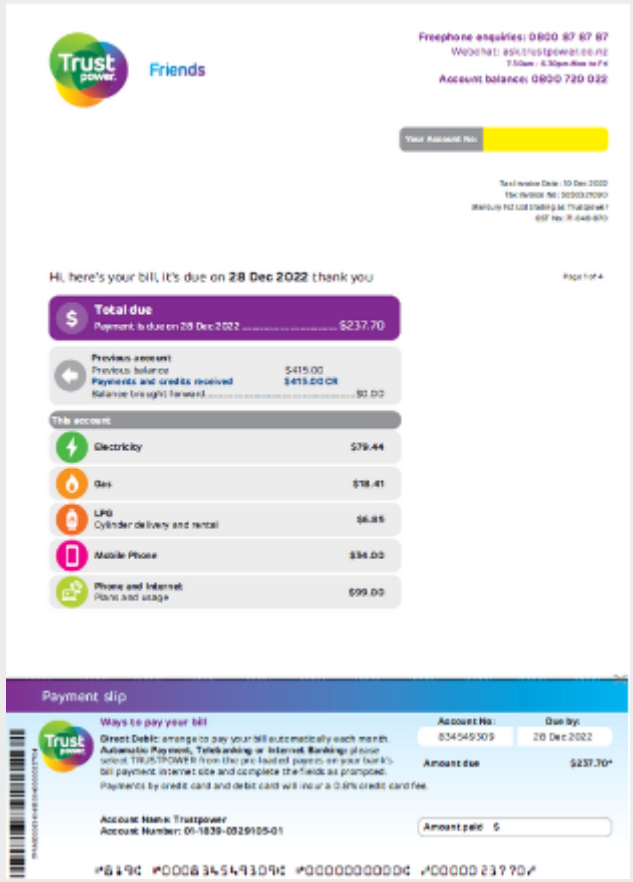
> Plenty of challenges!

> Producing the new prettier “Mercury Style” statement (and supporting data) using legacy Purple systems

> Lots of variations!

- Approximately 250,000 unique “Purple” bills were produced each month
- Knowledge of the variations and what we do now has faded over time





BILL REBRAND

> Fragile code = Tech Debt

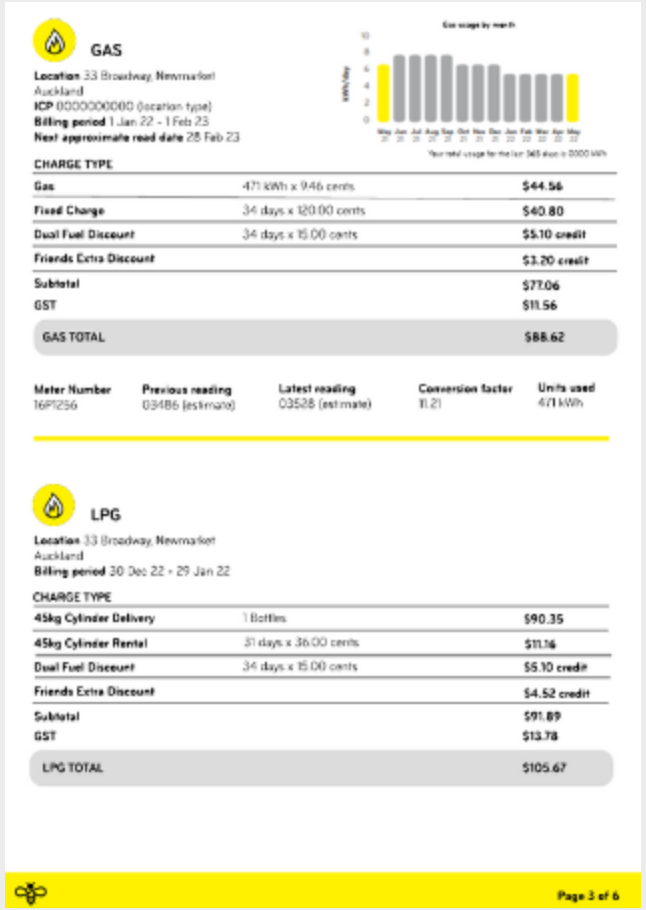
> Limited time

> Re-used existing processes and file formats where possible

> Simplified our vendor's display logic

> Made the least changes possible to internal processes and systems

> Testing, testing & more testing!



GAS

Location 33 Broadway, Newmarket
Auckland
ICP 0000000000 (location type)
Billing period 1 Jan 22 - 1 Feb 23
Next approximate read date 28 Feb 23

CHARGE TYPE		
Gas	471 kWh x 9.46 cents	$44.56
Fixed Charge	34 days x 120.00 cents	$40.80
Dual Fuel Discount	34 days x 15.00 cents	$5.10 credit
Friends Extra Discount		$3.20 credit
Subtotal		$77.06
GST		$11.56
GAS TOTAL		$88.62

Meter Number	Previous reading	Latest reading	Conversion factor	Units used
16P1256	03486 (estimate)	03528 (estimate)	11.21	471 kWh

LPG

Location 33 Broadway, Newmarket
Auckland
Billing period 30 Dec 22 - 29 Jan 22

CHARGE TYPE		
45kg Cylinder Delivery	1 Bottles	$90.35
45kg Cylinder Rental	31 days x 36.00 cents	$11.16
Dual Fuel Discount	34 days x 15.00 cents	$5.10 credit
Friends Extra Discount		$4.52 credit
Subtotal		$91.89
GST		$13.78
LPG TOTAL		$105.67

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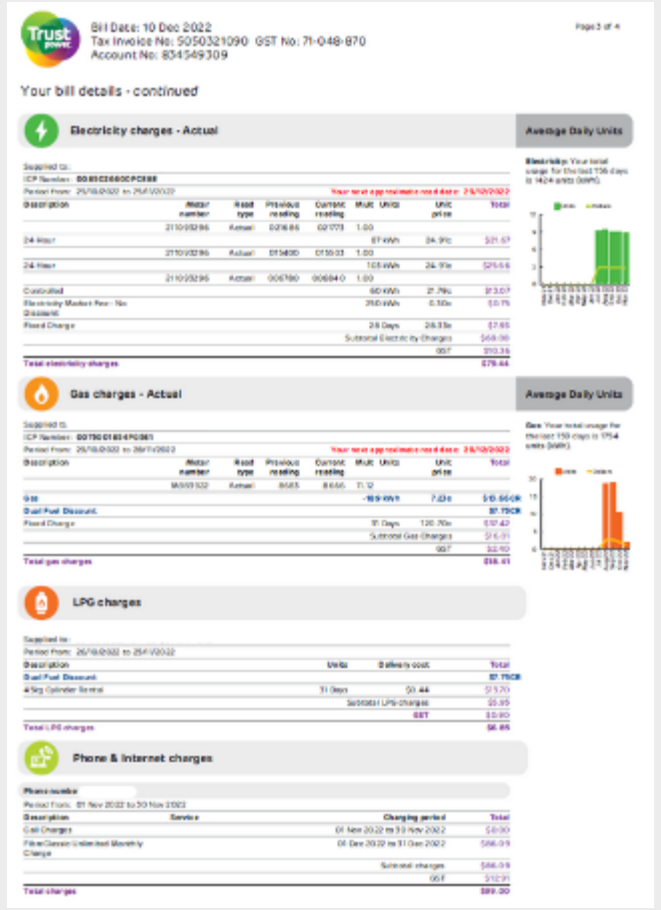


Bill Date: 10 Dec 2022
Tax Invoice No: 5050321090 GST No: 71-048-870
Account No: 854549309

Your bill details - continued

Electricity charges - Actual

Average Daily Units

Gas charges - Actual

Average Daily Units

LPG charges

Phone & Internet charges

SYSTEM INTEGRATION TESTING

>Ran for 23 weeks in parallel with functional testing

>Focussed on end-to-end customer journeys and lifecycles

>Discrete team of 30 testers: 29 contractors, 1 permanent

>Permanent delivery team testers provided support and advice to SIT team

>Total number of tests written – 2443.

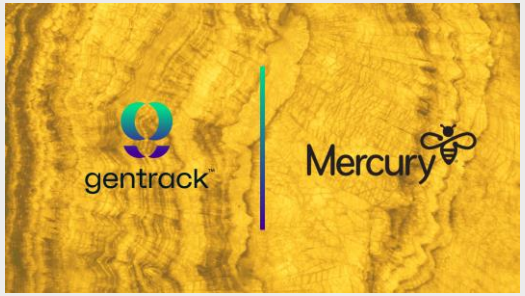
>Number of tests executed greater due to retests

>Total number of defects – 651

NON-FUNCTIONAL TESTING

>Performance Testing performed in-house and externally

- Digital APIs tested using jMeter
- Performance testing of GTV carried out by vendor



>Security/Penetration/UX performed externally by third parties.

- Penetration testing performed on APIs, web and mobile application implementations
- Digital UX testing carried out to validate usability and customer experience

ACCEPTANCE TESTING

>Ran for 2 weeks in parallel with final SIT execution

>Focussed on User and Operational Acceptance Testing

>Over 20 acceptance testers across 12 business units

>Kick off session held in Auckland, first week of AT most participants co-located

>Total number of tests written – 194.

>Total number of defects – 25

DATA MIGRATION

>Involved validating the accuracy and completeness of data being moved from SAP to GTV

>Also verifying the migrated data could be transacted successfully in the target system.

>GTV changes to support SAP migrated data were functionally tested first

>Sharing of test environments by other test streams created issues and delay

>Testing use of the data within business-critical scenarios followed

>First pilot of over 12k customers migrated successfully in July

>Currently being reviewed and analysed before full migration begins

CONCLUSION

> Terminology could have been more consistent

> Use of tools such as Jira, Confluence and qTest provided good visibility to stakeholders

> Engagement of a dedicated test programme manager provided centralised test oversight

> Early communication and engagement would have improved understanding

> Running concurrent test phases proved challenging

> Capability uplift was missed through most testers being contractors

> Tight timelines meant test automation opportunities were missed

WHAT A RIDE!