

STP (STRATEGIC TRANSFORMATION PROGRAMME) CUSTOMER JOURNEY – DESIGNING THE FUTURE

Paul de Quaasteniet, Portfolio Manager (Watercare)

ABSTRACT

"When we shift the conversation from one about features and functions to one about customers and customer outcomes, we deliver more useful, usable, and desirable solutions."

Following the drive for consolidation and optimisation of business processes in the 6 years since integration (seven retail network operators distributed across Auckland into one provider) Watercare then set out to create a compelling and aspirational vision for the future. This customer centric vision will be brought to life through a business transformation.

Taking a design thinking approach Watercare developed a clear, visual, and high-level view of the vision through a set of journey maps and associated material.

The approach began with crystallising the key requirements and key business objectives for the programme. The team then worked with a cross-functional working group to describe the future way of working by developing user stories and four journey maps (residential customer; business customer; network planning to construction; network operations and maintenance).

These journey maps have been used extensively to inform the board, staff and partners and to illicit areas of innovation from the market.

This paper discusses Watercare's process, experience and learnings of this new approach. Creating the right environment and the use of design thinking techniques established momentum and ensured ideas were out in the open; leading to rapid and informed consensus.

There are a number of key learnings that can be shared from this experience. The journey mapping was completed at pace (over 6 weeks) and was designed to create strong collaboration, imagine Watercare's future with an open mind, and generate creativity through great ideas. It has been a fun and engaging process with the output receiving many plaudits from Watercare's staff, vendors and other utilities.

KEY WORDS

Design thinking, collaboration, customer journey mapping

PRESENTER PROFILE

Paul is a senior technology leader currently working on a digital reinvention programme with Watercare. Core principles of the programme are customer centricity and team-based agile delivery.

Paul's experience includes responsibilities for ICT management and business transformation within global firms including Chevron, Texaco, Fonterra and Balfour Beatty International Business. He has worked in the Middle East, Asia and New Zealand. Paul's industry experience includes utilities, manufacturing, consumer products, oil & gas, transportation & logistics and health.

1 INTRODUCTION

Watercare's customer focus as a strategic priority, the drive for consolidation and optimisation of business processes in the 6 years since integration, plus the desire to make insight-informed, fact-based decisions have collectively created a compelling context for considering Watercare's step change in the business across asset, customer and billing.

While Watercare's core customer, asset and billing systems have served the business well to this point, they are not fit-for-purpose to support Watercare's transformation to a customer-centric, insight-driven business. This has led Watercare to initiating a business change programme that will deliver Watercare's future-state needs across three enabling streams – People, Process and Technology.

The proposed programme approach is not just a straight lifecycle management replacement of technology but rather a strategic approach that utilises the latest technologies to step change the customer experience and position Watercare with greater business agility, optimised and efficient business processes and improved management insight across the customer and asset lifecycles.

2 WE KNOW WHAT PROBLEMS WE WANT TO SOLVE

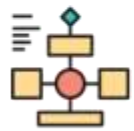
The programme is intended to address all four of the problems below and achieve a step-change in Watercare's capability while also supporting the business to be more adaptable to business change in the future.



Business continuity risk reduction: our existing technology solutions are aging, increasing our risk profile, and not future fit. Critical billing and asset management systems need to be replaced to ensure business continuity.



Increasing customer expectations: our customers have ever increasing expectations and this will continue to accelerate as innovation in the marketplace continues at pace. Customer expectations are being shaped by other industries – mobile, self-service, social media, etc.



Improvement in efficiency and productivity: optimise our business and drive greater efficiency by better leveraging our people, processes and technology.



Increased business agility: provide greater business flexibility by implementing technology platforms that have the capability to support different operating model options in the future.

3 WE STARTED WITH THE CUSTOMER EXPERIENCE AND WORKED BACK TO THE ENABLING CAPABILITIES

Moving from traditional analytical thinking towards design thinking Watercare was deliberate with not considering any solutions upfront. Both present and future

conditions of identified problems were examined and new opportunities were considered and explored. Problem statements were derived from real customer and workforce data. This provided the foundation and research, focusing the teams on the “why”, rather than the “how”.

“Designers...don’t try to search for a solution until they have determined the real problem, and even then, instead of solving that problem, they stop to consider a wide range of potential solutions. Only then will they finally converge upon their proposal. This process is called ‘design thinking’”. – Don Norman, Design Lab director, University of California

3.1 THE APPROACH – DESIGN THINKING

Watercare worked with an IBM design thinking framework which provided a modern approach to iterative experience design and development. Design thinking methods are uniquely poised to tackle design problems. Unlike other practices, they’re specialised to deal with ambiguity, foster team collaboration, and ground the team in deep empathy for the user. The teams entered design thinking activities open to new ideas, ready to collaborate across functions, and prepared to think visually and physically. Design thinking requires diverging on many possible solutions and converging on a focused direction. It avoids getting too attached to a singular solution by generating multiple alternatives, and often involves failing early to maximise learning and avoid waste.

4 WATERCARE'S APPROACH AND FRAMEWORK

Rather than using a traditional 'bottom-up' business requirements process Watercare took a strategic approach, utilising design thinking to put the customer and the workforce at the centre of the transformation from the start. The approach and framework used is outlined and discussed below.

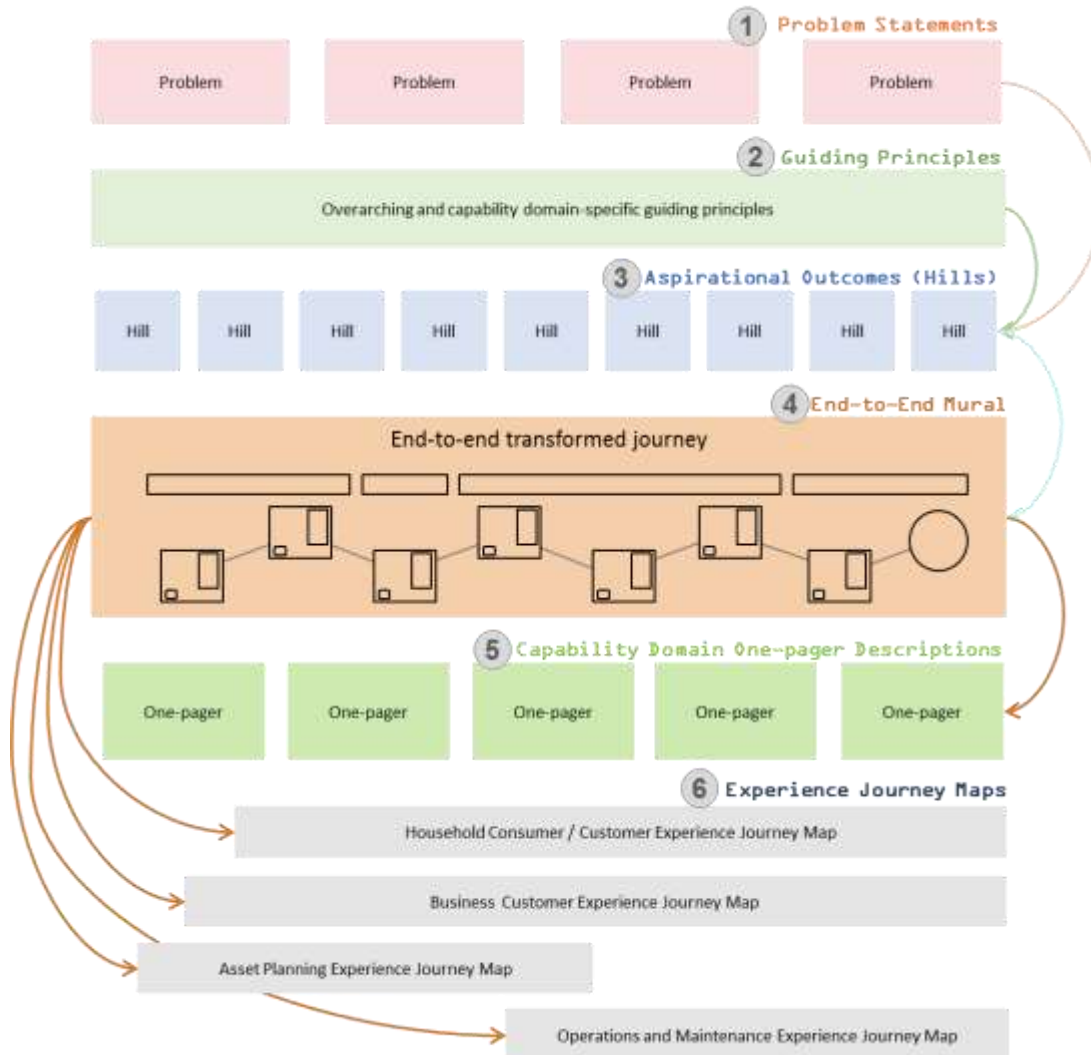


Figure 1 Watercare's design thinking approach and framework

Problem statements were derived from real customer and workforce data and sentiment providing the foundation

Guiding principles were identified by the cross-enterprise working group and validated by the programme sponsors

'**Hill** Statements' (aspirational goals) were then articulated which formed the basis for the end-to-end transformed Watercare journey

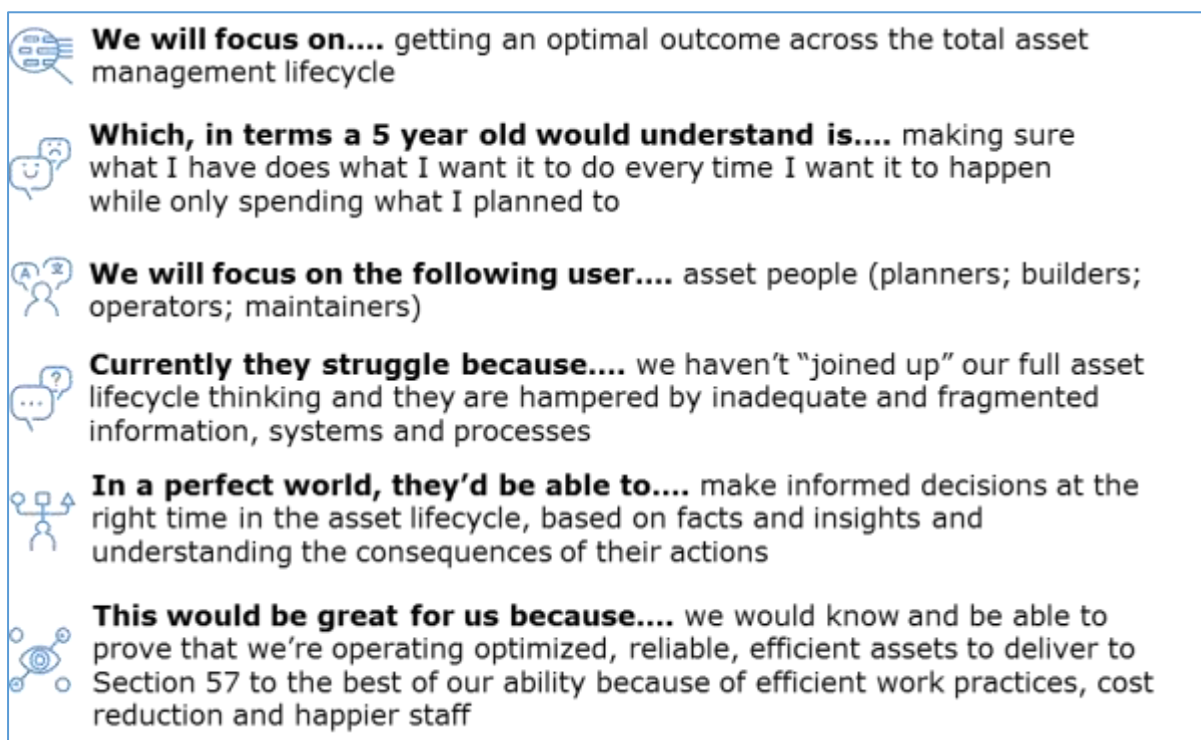
Future **capability** descriptions were produced which provides the basis for market scan requirements documentation

Experience journey maps were produced through iterative design workshops with the cross-enterprise working group and programme sponsors

4.1 DEFINING THE KEY PROBLEMS (1 Problem Statements)

Through facilitated workshops, we identified key areas of the business they believed required improvement and structured this into nine high-level problem statements. The problem statements helped simplify key concepts and goals and put focus on the benefits that would be delivered if these key problems were addressed.

Figure 2 below outlines an example of key questions used to help define and clearly describe an asset related problem:



We will focus on.... getting an optimal outcome across the total asset management lifecycle

Which, in terms a 5 year old would understand is.... making sure what I have does what I want it to do every time I want it to happen while only spending what I planned to

We will focus on the following user.... asset people (planners; builders; operators; maintainers)

Currently they struggle because.... we haven't "joined up" our full asset lifecycle thinking and they are hampered by inadequate and fragmented information, systems and processes

In a perfect world, they'd be able to.... make informed decisions at the right time in the asset lifecycle, based on facts and insights and understanding the consequences of their actions

This would be great for us because.... we would know and be able to prove that we're operating optimized, reliable, efficient assets to deliver to Section 57 to the best of our ability because of efficient work practices, cost reduction and happier staff

Figure 2 defining the problem statement

The nine high-level problem statements were summarised by the external customer, consumer/stakeholder and by the internal roles of network planner, network engineer and employee. These problem statements are outlined in figure 3 below.

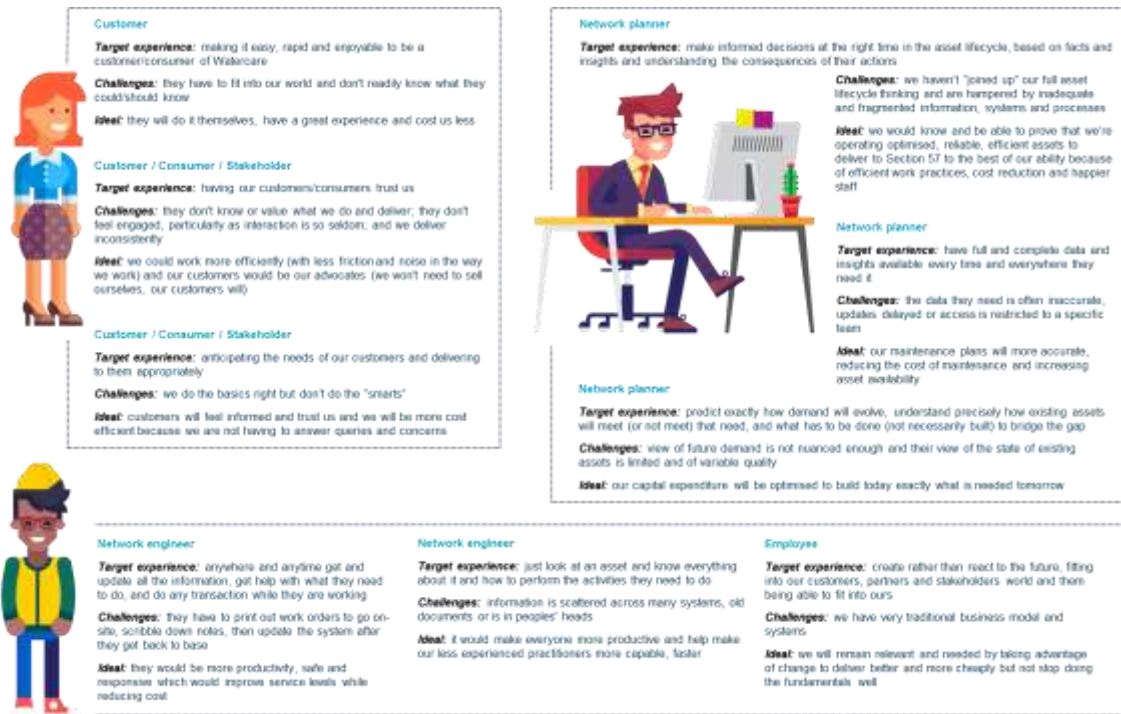


Figure 3 High-level problem statements

4.2 DEFINING GUIDING PRINCIPLES (2 Guiding Principles)

Progressively throughout the design process, the business developed a set of guiding principles. These principles will continue to evolve over the life of the programme.

Universal principles				
<ul style="list-style-type: none"> • Effective community and customer engagement is essential • We keep costs low by spending every dollar as if it were our own. • We will leverage new and emerging technologies to deliver better outcomes for Waterone and our customers. • We will have a safe and engaged team • Relevant, comprehensive, consistent, accurate and timely information is always available to view and manage when and where it is needed. • Decision making will be evidence-based whenever it is feasible. • Interactions are personalized and contextualized to deliver the "just right" experience. • We will gather relevant information on assets and people across all our processes to better serve the community. • We will learn continuously and intentionally from our previous experience and the experience of others. • Resource allocation will be risk/opportunity-based (tied to our enterprise priorities). • We will work together to make timely decisions by collaborating both within and across the business. 				
Strategic planning and design	Asset implementation	Customer/consumer on-boarding service	Asset operation and maintenance	Consumption and billing
<ul style="list-style-type: none"> • Effective ecosystem engagement will drive our understanding of demand and community needs and how best to address them. • Predictive analytics and modeling are used to accurately plan for new demand and/or drive demand shaping. • Capital plans are developed and managed holistically from retail demand forecasting and other insights from data. • A holistic view of the asset lifecycle drives all our decisions so we appropriately minimize whole-of-life costs. • Design activities will be streamlined for our stakeholders, our partners and ourselves. 	<ul style="list-style-type: none"> • We will be collaborative, transparent and efficient in how we procure and construct to deliver best value. • Capital works will be managed as portfolio - risk, cost, schedule, quality and safety. • Transition from implementation to operation will be seamless. • Asset information is critical to our business and will be created in our system of record as soon as possible. 	<ul style="list-style-type: none"> • Our customers can interact any time, any how, any where, any who. • Engage trust and recognition by everything we do. • We are proactive, so our customers don't need to be. • We are focused on the convenience of self-service, and mobile, but provide channels that meet the needs of all our stakeholders. • Provide consistency of service no matter who delivers it or how it is delivered. • Make it easy for consumers to appropriately adjust their water consumption and costs. • Flexibility and openness to incorporate our services in the businesses of others and vice versa. 	<ul style="list-style-type: none"> • A holistic view of the asset lifecycle drives all our decisions so we appropriately minimize whole-of-life costs. • We understand assets from the customer's point-of-view. • Asset reliability is appropriate to meet our business and service delivery goals and obligations. • Asset management processes are simplified, standardized and fit-for-purpose. • Asset data is available and fit-for-purpose to inform customer interactions. • We will use data proactively to keep our people and customers safe. • Decisions are predictive and evidence-based, combining embedded institutional knowledge, advanced analytics and external benchmarking to optimize whole-of-life costs. 	<ul style="list-style-type: none"> • Our services are what everyday as part of our consumers/customers lives. • A consumer/customer can accurately predict consumption/costs in near real-time and effectively manage them. • We will understand our staff so that we can use their fountain of knowledge to enable Waterone achieve their business goals. • A Bill should never be a surprise or shock to a customer. • Payment is easy and can adapt to a customer's circumstances and preferences. • We understand our customers and their consumption to help them manage use and for us to shape demand. • We will be effective at using multiple drivers, including communications and tariffs, to shape demand. • We will be firm but fair in cost-effectively obtaining payment to improve working capital. • We understand the causes of nonpayment and financial loss and how to address them.

Figure 4 Guiding principles

4.3 DEVELOPING THE KEY BUSINESS OBJECTIVES (3 Aspirational Outcomes (Hills))

A review and assessment of the water industry, other utilities, emerging technologies and other key influences were considered. These provided input to create a draft set of aspirational statements, which ultimately resulted in the development of Hills – the key business objectives from the transformation that the customer journey maps should address.

Figure 5 Two examples of an aspirational statement:

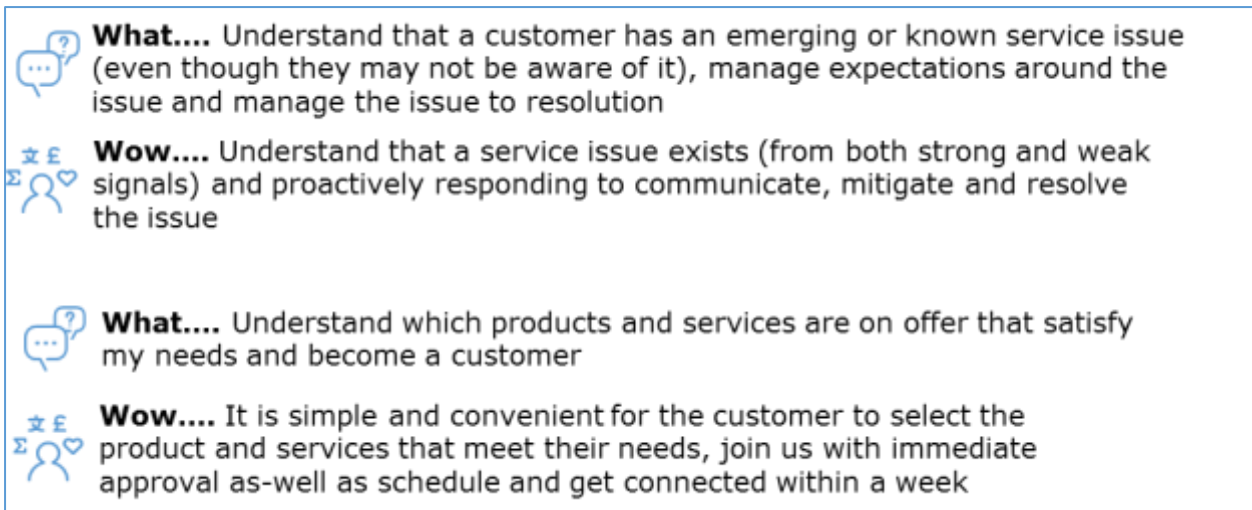


Figure 5 Aspirational outcome statements

These aspirational statements were consolidated into three high-level, key objectives and aspirations, creating the Hills for the programme:



Figure 6: Three Hills

4.4 DEVELOPING THE END-TO-END MURAL (4 end-to-end mural)

The end-to-end mural provides a summary of the key aspects of the aspirational future.

The mural depicts a story from initiation of planning through asset implementation, customer use and ending with decommissioning, invoking the experience of a range of external and internal stakeholders.

Above the "river" the mural depicts the key external (customer / stakeholder) stories and below the river are the internal customer stories and experiences.



Figure 7 Initial development of the end-to-end mural



Figure 7 Final end-to-end mural

4.5 FUTURE CAPABILITY (5 Capability domain one-pager descriptions)

“One-pagers” were created for each of the six capability domains identified:

- **Strategic planning and design** – The corporate planning, consent and design activities that support water resource management and service design and delivery
- **Asset implementation** – The sourcing and implementation of wholesale and retail assets, including water resources, used in service delivery
- **Customer/consumer on-boarding and service** – The customer/consumer service activities across their engagement lifecycle from acquisition to leaving, including debtor processes
- **Operations** – The operation and production of water and wastewater product and services
- **Asset care and maintenance** – The monitoring and maintenance of wholesale and retail assets, including end-of-life
- **Consumption and billing** – The management of demand and consumption (both by consumers and Watercare), together with funding including billing and payment processes

4.6 CUSTOMER EXPERIENCE JOURNEY MAPS (6 Experience Journey Maps)

The team then worked with a cross-functional working group to describe the future way of working by developing four journey maps (residential customer; business

customer; network planning to construction; network operations and maintenance) and key requirements in the form of user stories.

The journey maps were created through the experience of four persona's – created to help the teams understand their user needs, experience, behaviours and goals. This helped the teams start to identify with the users they were designing for.



Figure 9 Personas

The four persona's developed were:

Tom & Julie are in their mid-40s, and live in Wellington with their two children. Julie is a stay-at-home mother and keen gardener who is actively involved in her community. Tom has accepted a role as a manager in a national freight company in Auckland. The couple are preparing to move to Auckland for the new role and are looking to purchase a home in central Auckland.

Nikita is the General Manager of Operations for Acme Brewing Company that is based in Singapore. She has been given the responsibility to find a suitable site to build a new brewery somewhere in Australasia as the business continues to expand.

Alfred is a Network Planner responsible for collaborating with internal and external stakeholders across the asset lifecycle to ensure that water and wastewater service strategies are delivered and network capacity is optimised.

Gary is the Network Owner, responsible for water service delivery across Auckland. It's a demanding job keeping things running smoothly and ensuring product quality and availability while bringing new plant and assets online.

4.6.1 CUSTOMER EXPERIENCE JOURNEY MAPS

The residential journey map illustrates everything a residential customer will require, whether a new or existing customer.

A journey map was also completed for a business customer depicting the team engagement between the customer and Watercare.

For the network planner journey map we moved from strategic planning, to asset planning, design, construction and delivery. This journey was then handed over to the network owner journey map which continues the logical journey for the asset – once it's taken over from construction it progresses through operate and maintain, both planned and unplanned including customer interactions.

The journey maps form the basis for communication of Watercare's aspiration for the future.

At the bottom of each journey map is an indication of the enabling capabilities required and implied by the steps throughout each journey.

Prior to starting the customer experience journey mapping an empathy map was created for each persona. This is a quick way to characterise a user by thinking through what they say, do, think and feel. This aids the team make effective design decisions through the eyes of the user.

The four journey maps – residential customer, business customer, network planner and network owner, are illustrated in Figures 10 to 14.



Figure 10 Empathy map for Julie



Figure 11 Residential customer journey map



Figure 12 Business customer journey map



Figure 13 Network planner journey map



Figure 14 Network owner journey map

5 ROADMAP CREATION – A CROSS-ENTERPRISE DESIGN CHALLENGE

Once the journey maps were completed a programme delivery roadmap was developed using a cross-enterprise team. Intermediate objectives (called sub-hills) were prioritised across the 3 value streams:

- Planning and Construction
- Customer
- Operations and Maintenance

Each sub-hill was prioritised based on three main factors:

Benefits: A set of direct and indirect benefits was used to discuss and debate sequential ordering of the 'sub-hills' statements (intermediate objectives) for the programme

Interdependencies: As well as sequential ordering within the value stream there were some interdependencies between value streams accounted for and the roadmap sequencing updated accordingly (e.g. marketing campaign in the planning and construction value stream required a customer platform to be in place first)

Technical Complexity: A technical complexity lens was applied across the roadmap to ensure early wins were possible and the more technical complex objectives were positioned appropriately

Watercare is establishing a programme delivery structure that will enable the organisation to adapt on an ongoing basis by following an agile programme delivery approach. This is based on the four values:

Individuals and interactions over process and tools

Working solutions over comprehensive documentation

Customer collaboration over rigid contracts

Responding to change over following the plan

By aligning to the four key values we are driving a cultural change through incremental working prototypes, stakeholder collaboration and readiness to respond to change. This is a conscious move away from the more traditional and often unsuccessful one-off 'big bang' approach to programme delivery.

The programme delivery model is a disciplined process that encourages frequent inspection and adaption of outputs to ensure ongoing alignment with expectations. The journey maps and associated material will keep the teams focused on what is important to Watercare, or, more importantly, what is important to Tom & Julie, Nikita, Alfred and Gary.



Figure 15 Delivery roadmap creation

6 WHAT WE HAVE LEARNED THROUGH THE PROCESS

The journey mapping was designed to create strong collaboration, imagine Watercare's future with an open mind, and generate creativity through great ideas. The energy, team work and engagement through the process has shown us what is possible with different ways of working – ideas and techniques that we will continue to introduce into the programme and organisation as we progress through the different delivery phases.

Key learnings included:

Strong facilitation with cross functional collaboration: You don't need to send everyone off to a design thinking course, all you need is an experienced, strong facilitator who can lead and guide your teams through a design thinking process.

Visibility, transparency, inspect and adapt: To start building trust across the programme it is useful to keep working documents and diagrams visible (preferably on a programme wall). The principle is based on inspect and adapt - everyone has the ability to make changes and update.

Work in short cycles: There was a significant time commitment for people to participate in collaborative workshops, these are best completed within a two week cycle followed by regular playbacks/show-cases so people that weren't available are still informed of progress and outcomes.

Continuous Improvement: By working in shorter cycles it also enables you to hold regular retrospectives (going to the heart of continuous improvement). Ideas

and opportunities for improvements are captured in the retrospective and acted on in the following work cycle. Things that worked well are also useful to identify and continue to use in the following activities.

Educate: Train and educate everyone together (cross functionally) – sending people off to individual training courses (with little context to what your organisation is trying to achieve) wastes time and effort – there is more value in learning together.

Illuminate behaviours: Focus on and illuminate the behaviours you want, there may be a different set of behaviours required to deliver the outcomes needed.

Document the journey: the process is fast moving, document the journey as you go, so as new people join the programme they can experience how the process was developed.



Be brave and bold: Customers expect more, anticipate this, throw off the shackles and develop an exciting future for them.