



# He Kupu Arataki mō te Tārai Wheako Kirihoko o AT AT Customer Experience Infrastructure Design Guide

How we bring customers into the planning  
and design of transport infrastructure

Version 1.0—19.02.2026



# Ngā kupu takamua

## Foreword

**He aha te mea nui o te ao?  
He tāngata, he tāngata,  
he tāngata.**

What is the most important  
thing in the world?  
It is people, it is people, it is people.

Kia ora koutou

As people living in Tāmaki Makaurau, we have the privilege of enjoying this beautiful, vibrant and diverse city, connected by journeys that shape our daily lives. Whether commuting, walking to the park or cycling to meet a friend, our transport network is the backbone of how we navigate Auckland's unique landscape.

As our city grows and evolves, the way we plan, design and deliver transport infrastructure becomes increasingly important. It is essential for us as transport specialists to ensure we design for people—our customers.

At Auckland Transport our customer promise is simple: 'Keeping Tāmaki Makaurau moving and connected'. We do this in many ways, through various touchpoints—one of which is placing customers at the heart of our transport infrastructure projects, programmes and initiatives.

The Customer Experience Infrastructure Design Guide (CXIDG) ensures every design decision reflects a real understanding of people's needs, aspirations, and experiences.

For the first time, it brings together clear expectations, tools, and approaches to embed

Customer Experience into projects and programmes; empowering us to deliver outcomes that are safe, reliable, accessible, and efficient for customers.

Use this guide with other chapters of the Transport Design Manual. As a first edition, it will evolve over time. We welcome your feedback and suggestions at [cxdesignstandards@at.govt.nz](mailto:cxdesignstandards@at.govt.nz).

Everything we design is for people. Let's get it right for them, from the very beginning.

Ngā mihi nui

Kelly Skelton,  
GM Design & Engineering (Acting)

# He kōrero mō ngā kupu arataki

## About this guide

This guide sits within the Transport Design Manual (TDM), AT's family of design guides, codes and specifications for the development of transport infrastructure projects in the greater Auckland region.

Based on international best practice and robust engineering theory, the TDM family of documents provide design guidance and engineering requirements for well-designed transport projects.

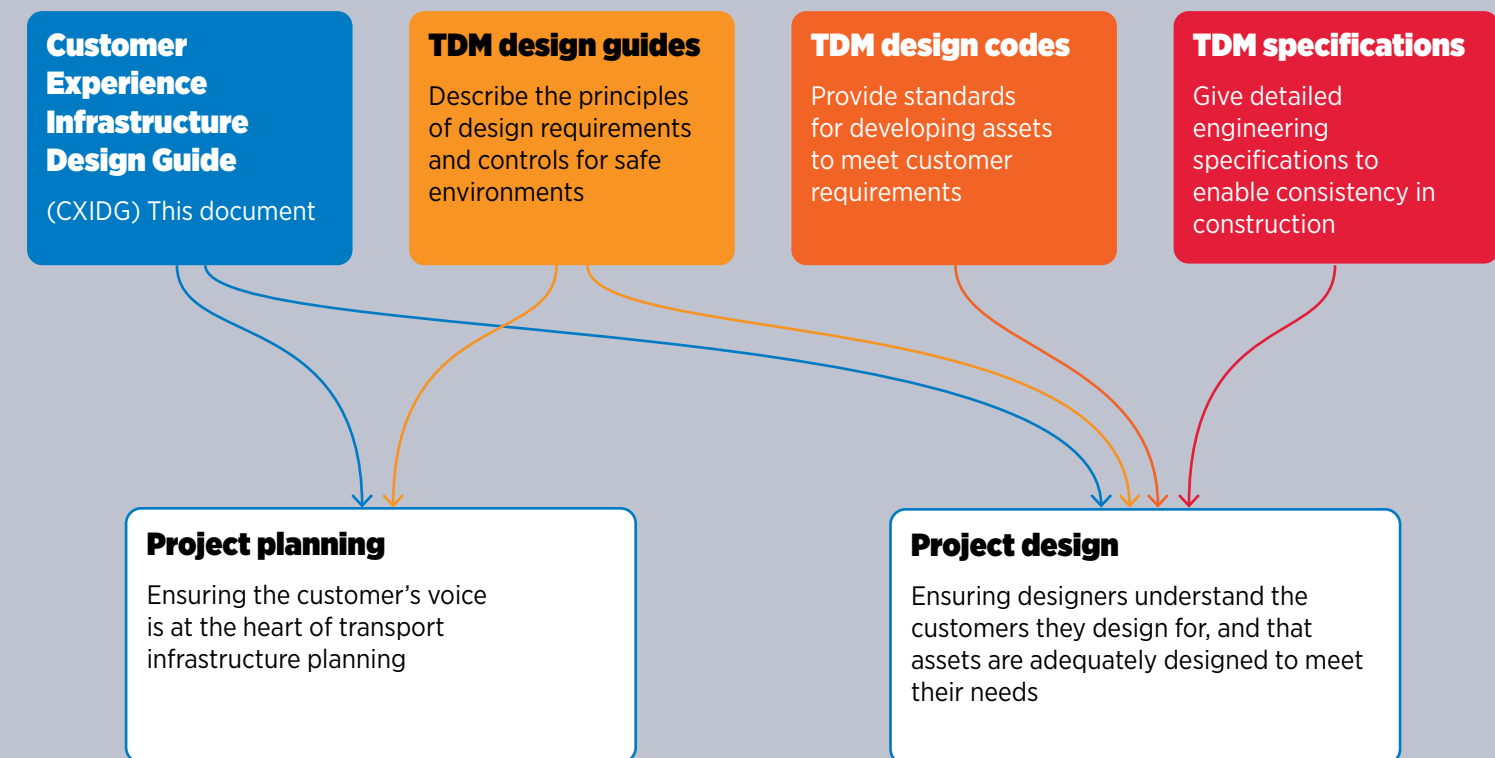
The CXIDG sits alongside other guides, codes and specifications, providing a standardised approach to customer experience to be

drawn on by projects in addition to discipline-specific materials guiding technical design. It provides a set of minimum requirements for projects to evidence an appropriate understanding of, and response to, customer needs.

### Who is this document for?

Project managers developing infrastructure projects must evidence an understanding of the needs of customers that their work supports as they progress, whether working internally at, or contracted by, AT.

For more information on AT's TDM and its strategic alignment and direction, visit [at.govt.nz/about-us/manuals-guidelines](https://at.govt.nz/about-us/manuals-guidelines)



# Ngā ihirangi

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# Ngā putanga ā mohoa

## Version history

Version	Date	Chapter or section(s) issued	Change description
Version 1.0	19/02/2026	Complete document, first issue	—

# **Wāhanga 1: he kōrero waiwai mō te Wheako Kirihoko**

## **Part 1: CX Fundamentals**

# 1

# Te whakamārama i te Wheako Kirihoko Defining CX

Millions of journeys are taken across our network every day, each by unique individuals with unique needs. Our success depends on our ability to connect customers to their destination in a positive way. CX as a discipline is essential to achieving this.

This section introduces the discipline of CX, its role in the planning and design of infrastructure and how our tools and methods improve the experiences of customers using our network.

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## 1.1 What is customer experience (CX)?

# Creating transport infrastructure that serves the needs of our customers

When we make our promise: *'Keeping Tāmaki Makaurau moving and connected'*, we commit to delivering positive experiences for all of our customers.

Millions of customers use our infrastructure everyday. From daily commuters going to and from work, to overseas visitors experiencing New Zealand for the first time here in Auckland. What they need and expect from our network is shaped by a multitude of factors such as location, journey purpose, time of day, physical or cognitive ability, gender, identity, language, age, injury or something else entirely. What makes a customer's experience positive or negative depends on how well we respond to these needs.

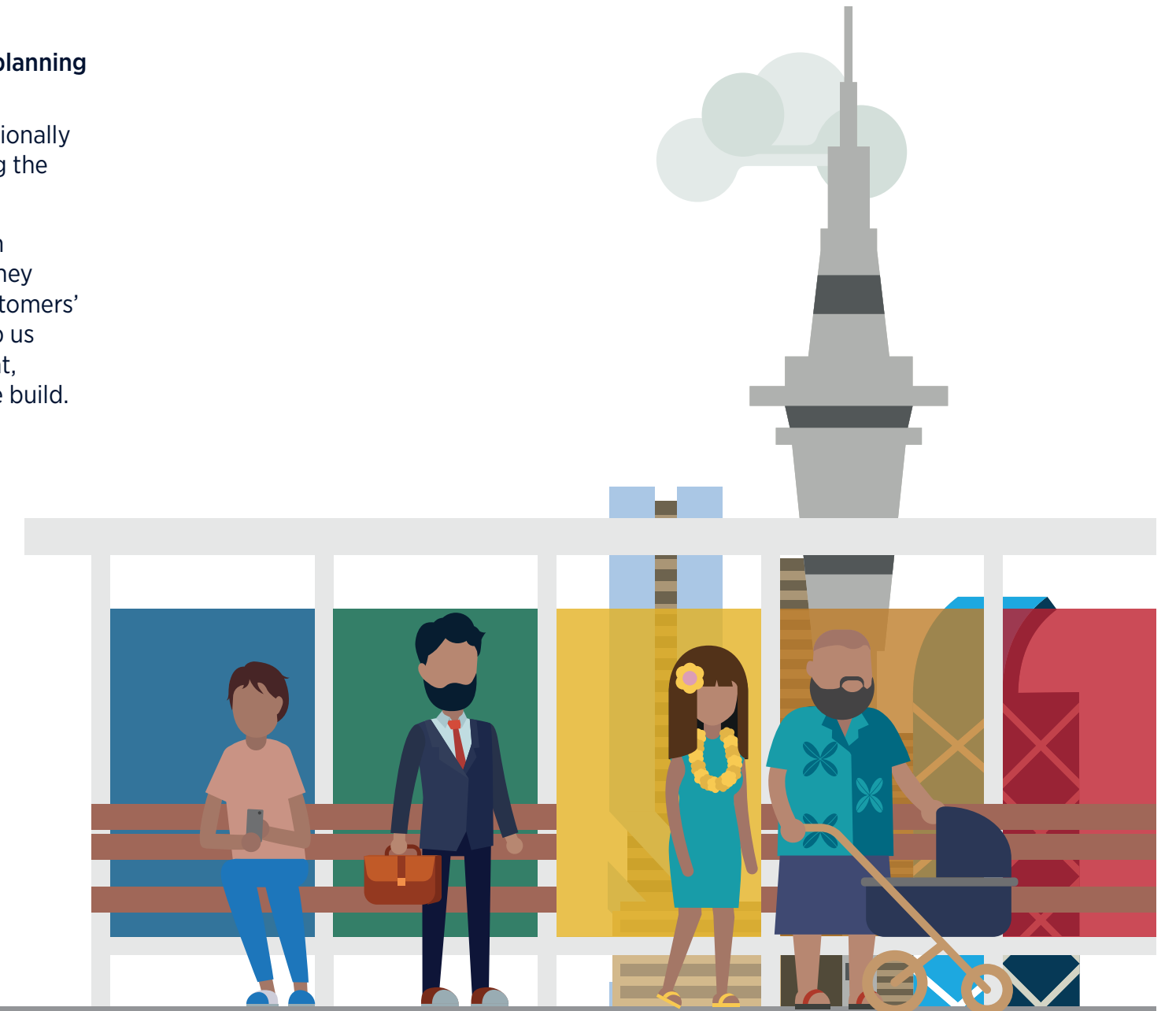
### Infrastructure is integral to our customers' journeys across the city.

The decisions we make to design and build infrastructure require a clear understanding of our customers, allowing us to deliver outcomes that genuinely respond to their needs.

### The role of customer experience (CX) in planning and designing transport infrastructure

As a discipline, CX is the practice of intentionally researching, understanding and improving the experiences of customers.

To do this, we use methods and tools such as workshops, surveys, observations, journey mapping and more to learn about our customers' needs and behaviours. These insights help us make more informed decisions about what, where, when, how and, ultimately, why we build.



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## 1.2 Why is customer experience important?

# CX ensures our customers' needs shape better transport outcomes for Tāmaki Makaurau.

CX methods and tools reveal critical insights to:

- solve customers' genuine problems, not our assumptions
- spot risks early before they become costs later
- maximise the value customers get from the investments we make
- build a network that people use and trust
- enable the uptake of sustainable modes of transport
- strengthen our social licence to operate



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## 1.3 Customer experience at AT

### What's involved in designing the experience?

Customers going about their lives interact with AT services, infrastructure and channels in many different ways. This requires an organisation-wide effort to understand and value how our work impacts the people we design for.

CX tools and initiatives are used across many disciplines, helping build a complete understanding of the customer experience. Together, they ensure that the approach we take to any project—whether building a new bridge, planning a marketing campaign, or delivering wayfinding—delivers outcomes that make a meaningful difference to the ways in which people experience Tāmaki Makaurau.



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## 1.3 Customer experience at AT

### Bringing customers into the project

The discipline most commonly confused with CX is that of Communications and Engagement. While they overlap and complement each other, their focus area is different.

CX looks beyond the local community—at everyone who may use transport infrastructure—employing research tools to capture additional data for the project team, improving people's experiences using the infrastructure.

Communications and Engagement represents the project, engaging with local community and bringing what they say to the project team.

#### Research and testing vs engagement

*Research* and testing are used to uncover needs to better shape a project outcome for customers. This is a core CX function.

*Engagement* occurs with community, which is managed as part of a project communications programme and not as part of a CX scope.

#### Customer Experience (CX)

The 'how'



#### Communications and Engagement

The 'why and what'



<b>Focus</b>	<ul style="list-style-type: none"> <li>– People using AT services and infrastructure (AT's customers)</li> </ul>	<ul style="list-style-type: none"> <li>– Communities and stakeholders impacted by projects and change</li> </ul>	<p><b>What they do together:</b></p> <ul style="list-style-type: none"> <li>– Combine research and feedback to inform design</li> <li>– Ensure engagement activities reflect actual customer needs</li> <li>– Strengthen storytelling with evidence-based insights</li> <li>– Show communities that AT is listening and responding</li> <li>– Deliver better outcomes for customers</li> <li>– Create community acceptance through customer-backed communication</li> </ul>
<b>Key Question</b>	<ul style="list-style-type: none"> <li>– <i>'How will people use this?'</i></li> </ul>	<ul style="list-style-type: none"> <li>– <i>'What does the community need and how can we mitigate impacts of change?'</i></li> </ul>	
<b>Timing</b>	<ul style="list-style-type: none"> <li>– CX Leads partner with infrastructure project teams throughout the entire project lifecycle, integrating customer needs into every decision.</li> </ul>	<ul style="list-style-type: none"> <li>– Identify and build relationships with key local stakeholders and audiences throughout the project lifecycle to understand their needs to inform decision making</li> </ul>	
<b>Methods</b>	<ul style="list-style-type: none"> <li>– Gather customer insights and data (e.g. CRM, tag-on info), feedback, focus groups, and behavioural research.</li> <li>– Translate findings into actionable project requirements, scope, and budgets, evaluating options based on the data.</li> <li>– Lead CX specification advice for design, ensuring accessibility, usability and ease.</li> <li>– Coordinate across AT teams to ensure seamless customer outcomes and readiness to implement change (mitigate disruption).</li> </ul>	<ul style="list-style-type: none"> <li>– Develop clear, consistent communications that explain projects and their impacts</li> <li>– Lead community engagement at key project stages to gain insights to develop and advocate for mitigations and meet statutory obligations</li> <li>– Build social license to operate and incorporate community feedback to deliver the right outcomes for community/place.</li> <li>– Serve as the local liaison and communicate on-the-ground process and works</li> </ul>	
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>– Embedding customer needs into projects to ensure we plan, design and deliver outcomes that improve transport experiences for our customers.</li> </ul>	<ul style="list-style-type: none"> <li>– Helping to better understand the communities we are working in to create an accepting environment for change.</li> </ul>	

# 2

# Ngā Mātāpono i te Kupu Arataki mō te Tārai Wheako Kirihoko CX Infrastructure Design Guide Principles

To deliver positive experiences, it's important for us to employ consistent indicators to measure against to ensure we know when we succeed, or fail.

This section introduces our organisation-wide Core Customer Outcomes, and the three principles we use in infrastructure design to reach them.

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## 2.1 AT's five Core Customer Outcomes

# Our customer promise

As an organisation, we make a promise to our customers to provide a transport network that *keeps Tāmaki Makaurau moving and connected*.

To achieve this, there are five Core Customer Outcomes that customers have told us are the most important to them.

### 1. Safety

Customers feel safe from harm on our transport network. This includes their physical, emotional and psychological safety with a focus given to the specific needs of high-risk groups such as women, children, LGBTQIA+ people, disabled people and minority ethnic groups.

### 2. Reliability

Customers experience a reliable and dependable journey across the transport network, supported by accurate and timely information, empowering customers to have confidence in their travel plans. They have confidence that we will manage transport network changes effectively to minimise impactful disruptions and be transparent about reasons for delays.

### 3. Efficiency

Customers feel they experience efficient and easy journeys to get to where they need to be. They have confidence that we will manage transport network changes efficiently to minimise impactful disruptions and be transparent about reasons for delays.

### 4. Access

Customers experience a transport network where anyone, regardless of age or ability, can access transport options they need without inconvenience or barriers, and with dignity.

Customers from all parts of Tāmaki Makaurau feel they can access day-to-day destinations, as well as essential services and opportunities, using our transport network.

### 5. Understanding and support

Customers believe that Auckland Transport has a clear and intentional strategic plan that ensures wise spending, prioritises the movement of people, and considers the long-term needs of the community and changing environment of Tāmaki Makaurau.

Customers feel heard and valued through genuine engagement and meaningful dialogue, building a sense of trust and understanding of the rationale and benefits of our decisions.

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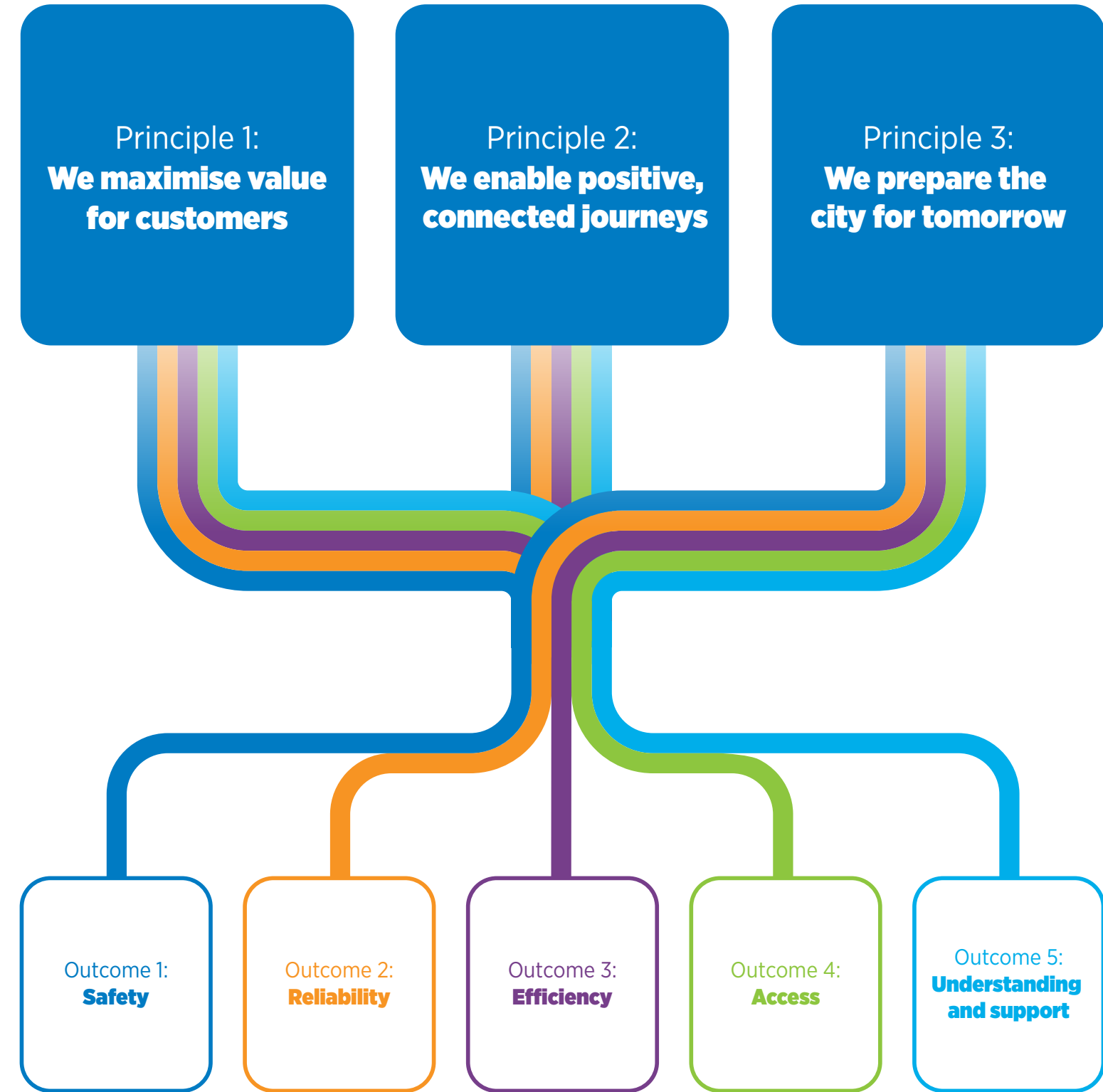
## 2.2 Overview

### The CXIDG Principles bring our Customer Outcomes into reality

While our **Core Customer Outcomes** shape success more broadly at AT, the **CXIDG Principles** distil them into what they mean for infrastructure design.

Each CXIDG Principle draws upon different elements from each outcome to inform the tangible actions we take to succeed. The principles should always be front of mind when making decisions during an infrastructure project.

Our three CXIDG Principles are defined on the following pages.



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## 2.3 Principle 1

# 1

## We maximise value for customers

As experts in experiencing our network, customers are core to our design process. By designing with their input, we build trust, ensure smooth delivery and provide infrastructure that is easier to use, resilient and better connected to the lives of those it serves.

Through this collaboration, we shape our scope, conceive proposals, generate ideas and refine designs to catch what we might otherwise miss, giving us confidence that we're on the right path—or challenging us if we aren't. This helps us to maximise the value that customers receive from our investments into infrastructure.

To do this, we scale our CX response appropriately, embedding CX into our budgets and timelines to ensure we have the time and resources to engage effectively from start to finish.



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## 2.4 Principle 2

# 2

## We enable positive, connected journeys

A customer's experience of an infrastructure project will always be part of a larger journey across our network. We recognise this in our work, designing infrastructure to connect seamlessly to the city beyond our project scope.

However, every project is different and needs an approach that, while consistent at a high level, is also fit for the diversity of customers and experiences within the local context. Whether a journey experience is positive or negative can be influenced by location, journey purpose, time of day, physical or cognitive ability, gender, identity, language, age, injury or something else entirely.

When we design with our customers input, it's our role to listen, understand and act on their insights early, often and across disciplines. This is particularly important when we consider the needs of customers who are different from ourselves or are part of minority groups.

When we design with an understanding of these different perspectives, including those who might typically be left out, we create safer, more accessible, reliable and efficient journeys for everyone who uses our network.



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## 2.5 Principle 3

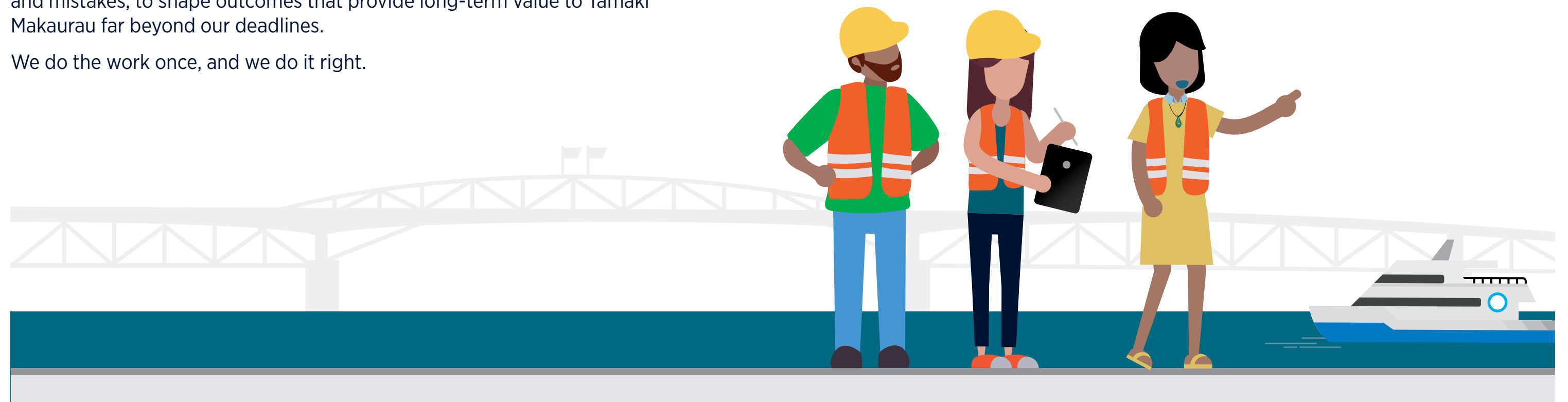
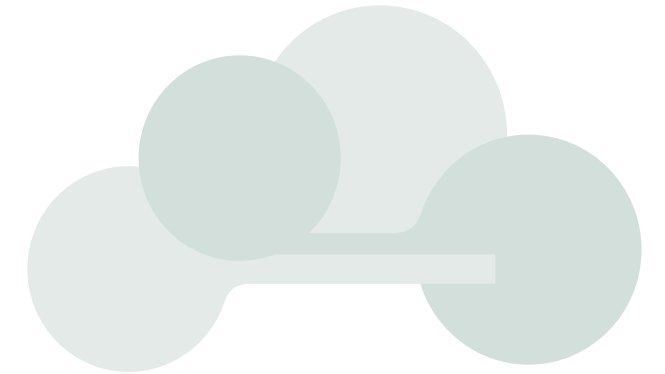
# 3

## We prepare the city for tomorrow

As the world changes, the demands on cities are evolving. It's our job to help customers adapt to this change and to ensure that our investment in infrastructure today will deliver meaningful customer experiences, both now and into the future.

Through longitudinal research, regular re-engagement and strong community relationships, we recognise that the needs of our customers shift over time. By maintaining a feedback loop that refines our work to changing behaviours and expectations, we learn equally from both our successes and mistakes, to shape outcomes that provide long-term value to Tāmaki Makaurau far beyond our deadlines.

We do the work once, and we do it right.



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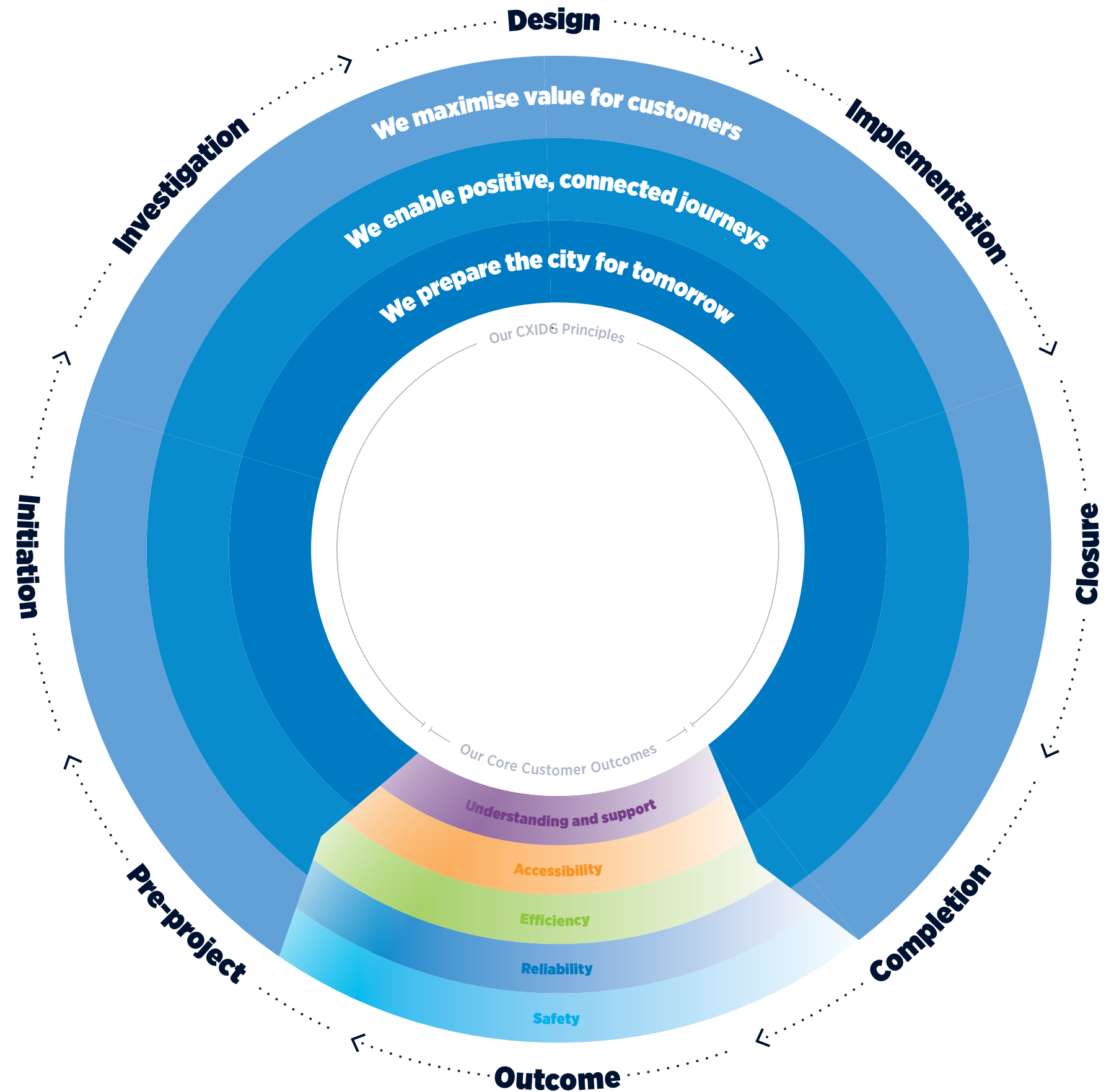
## 2.6 The CXIDG project feedback loop

### Our CXIDG Principles and Core Customer Outcomes shape every phase of a project

The Core Customer Outcomes and CXIDG Principles work together in a cycle throughout every project, guiding us to deliver meaningful work.

The **Core Customer Outcomes** ensure we are clearly aligned as an organisation as to how we want our work to serve our customers. The outcomes also act to validate the work once complete.

The **CXIDG Principles** steer how we act throughout each of the project phases to turn customer needs into real outcomes.



# 3

## Te Wheako Kirihoko i te tūāhanga CX in Infrastructure

In a city as diverse as Tāmaki Makaurau, our network is used in similarly varied ways. Our infrastructure is critical to enabling these journeys, whether it's as simple as a bike ride to a coffee shop or as complex as keeping thousands safe en route to an All Blacks game.

This section illustrates the importance of considering the diversity of our customers and the context of their different journeys when designing infrastructure for Tāmaki Makaurau.

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## 3.1 Journeys across infrastructure

### Every project is one part of a larger journey

A single trip may carry someone from their street, through a crossing, onto a bus and into a station. While scope boundaries define where our projects begin and end, the customer will experience these projects as one journey. Their satisfaction depends not only on what we design, but how well it connects them with their ongoing journey experience.

Thinking in this way shifts our focus from isolated solutions to connected experiences. For instance, a ramp designed for wheelchair users is only successful if it links to accessible pathways beyond the project. Without this continuity, even the best design can fall short.

#### Journey maps

To help us keep this bigger picture in view, we use journey maps. These maps visualise the steps, touch-points and experiences that a customer has along the way—from the moment they consider travelling, throughout their trip, to the experience of arriving at their destination. By mapping journeys, we can anticipate needs, identify points of friction and close gaps between projects to design a network with greater consistency and empathy.

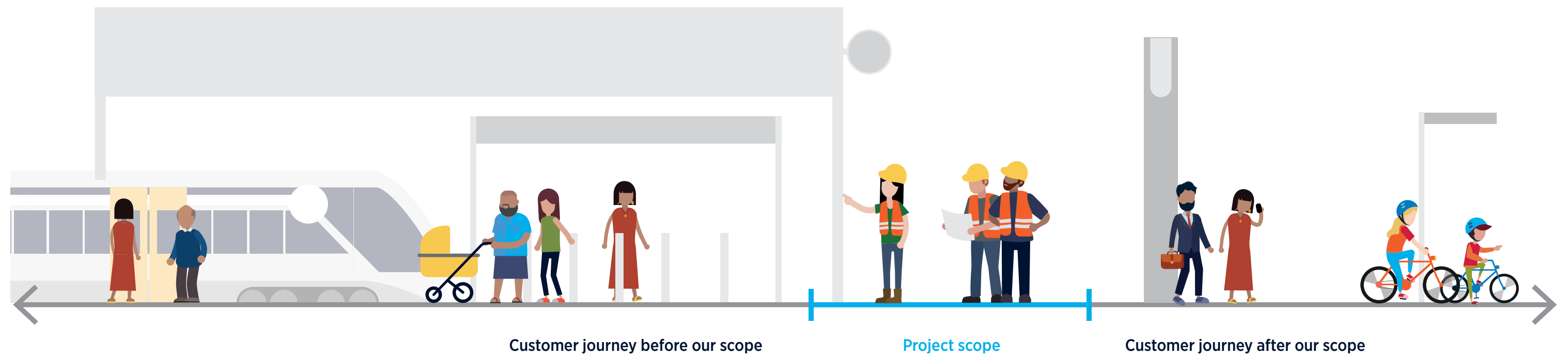
#### Site visits

By understanding the wider geography surrounding a project scope, we are able to better embed our customers' experiences within our project: *'I've designed a facility entrance here, but what does that mean for the onward journey beyond the facility?'*

#### Customer testing

The most important feedback we can receive is from the people we intend to use our design. Customer testing provides the project with direct evidence of the validity of the design within its wider context.

Explanations of how we use customer testing and journey mapping can be found in *Part 3: CX In Practice*.





# **Wāhanga 2: Ngā herenga o te Wheako Kirihoko**

## **Part 2: CX Requirements**

# 4

## **Te whakarite i te Wheako Kirihoko Planning CX**

CX research plays a vital role in ensuring that projects are successful. The earlier that customer needs are understood and applied in a project, the easier and more cost effective it is to ensure project outcomes meet those needs.

This section highlights the timing and scale of CX work that should be undertaken as part of any infrastructure project, allowing project managers to account for it well in advance.

- 4.0 Planning CX
- 4.1 **Scaling the CX response**
- 4.2 Project alignment
- 4.3 Involving CX early
- 4.4 What we already know
- 4.5 Defining success

- 5.0 Expectations
- 5.1 What projects must demonstrate
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## 4.1 Scaling the CX response

### The complexity of a project informs the scale of CX response

The majority of medium and large projects will require support from a dedicated CX specialist. Their role is to ensure the CX response is scaled appropriately to the project.

While external projects may have their own CX specialists, large projects are likely to have an assigned AT CX specialist as part of project oversight.

#### What role will the CX specialist play?

Project managers can scale the level of CX specialist involvement that their project needs using the metrics on the tables shown, from AT's *Enterprise Project Management Framework (EPMF)*.

CX involvement is scaled from key interventions at milestones for smaller projects through to a detailed partnership throughout the project timeline for larger projects.

EPMF Categorisation Matrix				
CAPEX Value	>\$20M	CAT-III	CAT-III	CAT-III
	\$2M-\$20M	CAT-II	CAT-II	CAT-III
	<\$2M	CAT-I	CAT-I	CAT-II
		Low	Medium	High
		Complexity		

	Enterprise Project Management Framework (EPMF) Complexity Level		
	CAT-I Project (Low Complexity)	CAT-II Project (Medium Complexity)	CAT-III Project (High Complexity)
Number of customers impacted	Number of customers impacted is less than 5,000.	Number of customers impacted is between 5,000 & 50,000.	Number of customers impacted is more than 50,000.
Number of modes impacted	Low number of modes impacted, e.g. only walking or only bus.	Medium number of modes impacted, e.g. walking, cycling and bus or train and walking, or driving and cycling.	Large number of modes impacted, e.g. bus, train, walking and cycling or road vehicles, cycling, walking and bus.
Scale of infrastructure/service change	Scale of infrastructure/service change is low, e.g. a couple of new bus stops, footpath, road, increased frequency of services or one new service with limited infrastructure impacts.	Scale of infrastructure/service change is medium, e.g. new road layout with new cycleway, pedestrian crossings and bus stop, train station upgrade, multiple bus services/bus stops impacted, more than one or two new services introduced.	Scale of infrastructure/service change is high, e.g. new interchange.
Level of behaviour change	Level of behaviour change for customers is low, i.e. we just need to inform customers about changes and there is a low impact on customer journeys.*  *Contact an AT CX specialist for advice where needed	Level of behaviour change for customers is medium, and changes would need to be communicated clearly and timely to allow customers to assess new transport choices, e.g. adding a new transfer.**  **Contact an AT CX specialist for guidance in project development	Level of behaviour change for customers is high, e.g. journeys are heavily impacted; customers need detailed information to assess changes to help with decision-making around new transport choices.***  *** Contact an AT CX specialist for integrated project support

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## 4.2 Project alignment

### How CX work aligns with project timelines

When projects are managed directly by AT, the CX response should align with stage gates in AT's Enterprise Project Management Framework (EPMF). Where projects are managed by external partners, the CX response should align with sign-off gates in the framework agreed for the project.

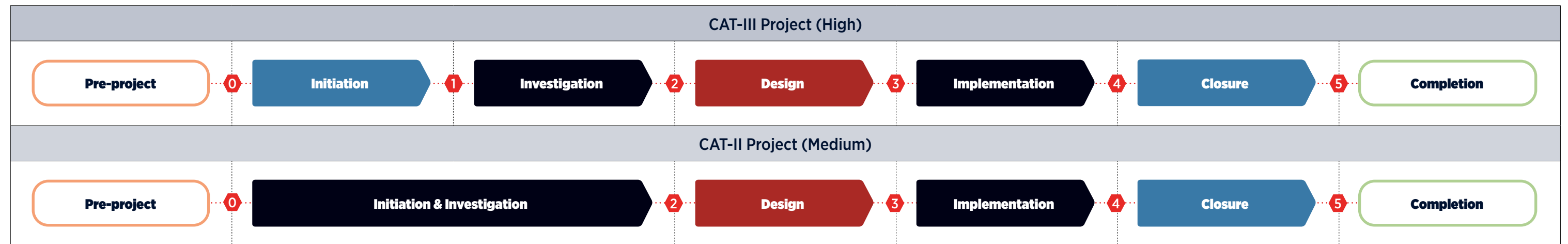
All medium (CAT-II) and large (CAT-III) projects require a dedicated CX Plan; however, this is not required for small (CAT-I) projects. A complete breakdown of the CX activities expected at each project stage gate using AT's EPMF is outlined in the next section. One of AT's CX specialists can help align CX work with both internal and external project timelines.

**Each stage gate provides an opportunity to reassess the CX response.**

By its nature, CX research will uncover new insights into customer expectations. These will require integration into the project. Furthermore, customer needs may change because of the project development itself (for example, disruption or change in customer understanding).

At each stage gate, its important to confirm what has been done, what is missing, and what needs to be passed on to the next stage to ensure all recommendations are captured and responded to.

#### AT Enterprise Project Management Framework (EPMF)



#### Typical external project framework



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## 4.3 Involving CX early

### The earlier CX is involved, the better the outcome

Customer experience hurdles are cheaper, faster and easier to solve when considered from the outset. By embedding CX into projects early, we can deliver infrastructure that achieves better outcomes.

#### Risks and pitfalls if CX is delayed

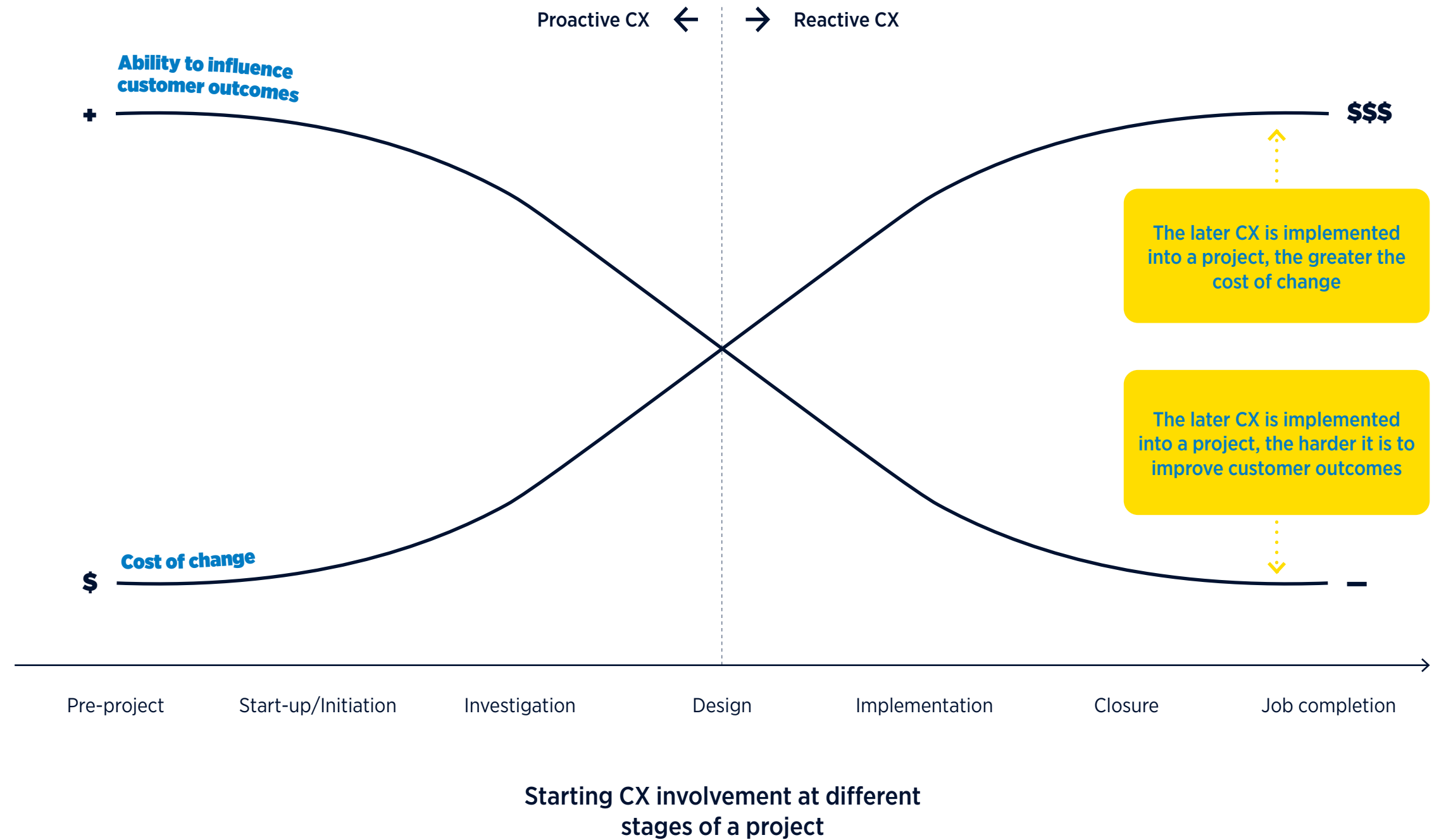
When CX is overlooked or led by assumption, projects may face added costs or encounter unanticipated setbacks. Misunderstanding customer needs can lead to design solutions that don't work.

Bringing CX teams in too late leads to reactionary problem solving and missed opportunities to shape better outcomes. Focusing exclusively on infrastructure, without considering the end-to-end journey or all customer channels, creates confusion and weakens trust. Budget cuts that remove CX elements often result in costly rework, and ignoring customer impacts during stages like construction or disruption can damage confidence long before delivery.

#### Establishing a baseline

At the beginning of a project, CX needs to collect data to understand where change is needed. This baseline can then be used at completion to validate whether change has been successful—closing the project loop—or identify whether remedial work is necessary.

Documenting these early insights are important, even if these insights are beyond scope, as they form a pool of knowledge that can then be useful for future projects.



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## 4.4 What we already know

### Is our current understanding based on valid data?

We begin a project with a set of assumptions, both our own and those that have fed into the business case. Our first step is to establish the accuracy and validity of our assumptions; how well do we understand the customer needs that have generated the work?

#### Are we solving the core needs?

There is a difference between customer opinions and core needs. As a public agency, AT's customers have expectations regarding what AT is (and is not) responsible for, and these may or may not align with what AT actually does.

Customers may not understand the scope of the network and may have built-in biases around AT's function. These will impact on customer's trust in services and confidence using the network.

It is important to identify early on whether we are responding directly to need or whether we're responding more broadly to customer expectations.

#### What do we already know?

There are existing pools of knowledge to tap into before doing additional CX work:

- Existing data, case studies: What existing research has been done by AT that can be referenced? Are there lessons learned, clear changes to customer satisfaction, boarding/ alighting data that can be called on?

- What have communications and engagement consultations uncovered? Is the project missing community needs?
- Secondary research: Is there a global best practice available? What international research can be leveraged? For example, research papers, work done by other agencies (such as Transport for London, Transport Victoria). Is it possible to communicate directly with them?
- Standards: Are there ISO/NZ/AU standards that can provide resolution for customer needs?

#### Is the existing work still relevant?

Customer needs may change faster than established research. Consider whether existing knowledge requires validation before it can be applied. In general, if research is older than 12 months, the customer baseline may have changed and findings should be validated. (See page 45 Exploration vs Validation).

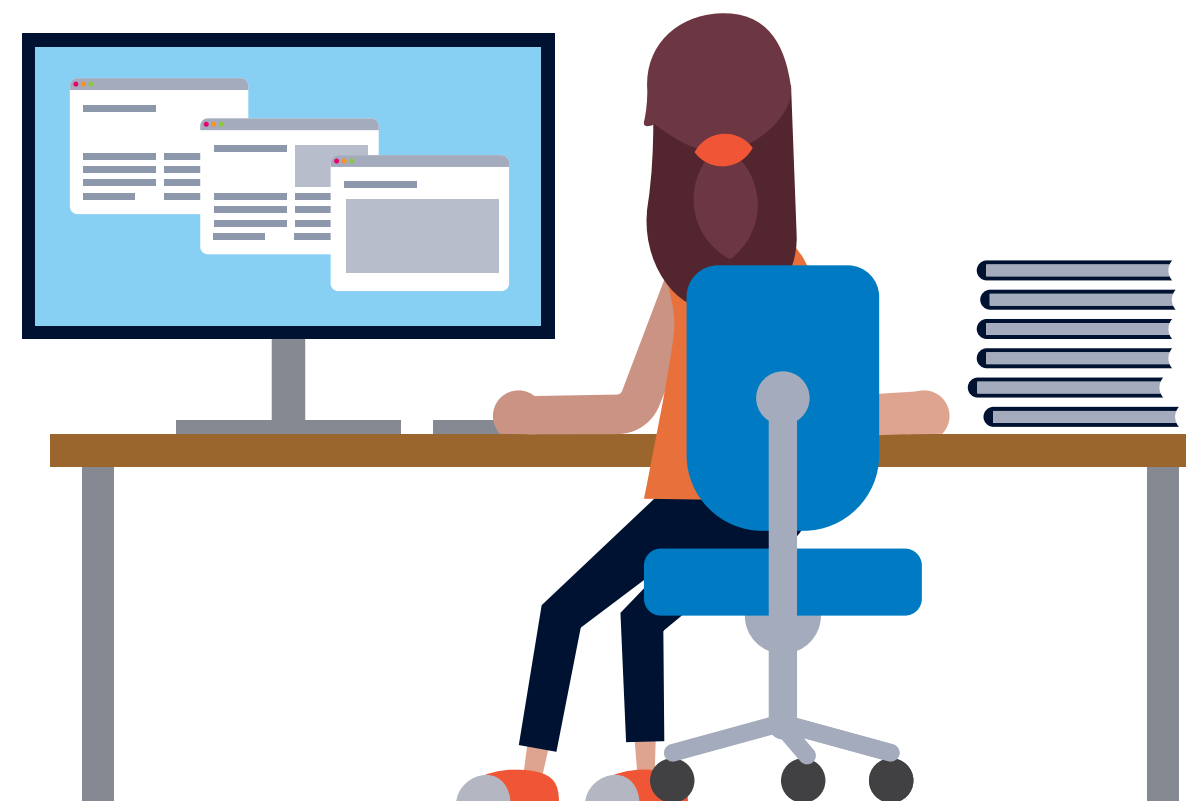
#### Recognising our own biases

Personal experiences and expertise means we always bring our own bias to the table, influencing how we view projects and the experiences of customers.

Existing research can provide pre-validated understandings of customer needs; professional CX expertise brings knowledge and the ability to make educated guesses in projects. These can be fed into a project to be validated and used as actionable insights.

#### Are existing specifications fit for purpose?

AT's Transport Design Manual (TDM) informs a huge breadth of infrastructure throughout our network. While the documents enable consistency across projects, they aren't always able to capture the nuances of customer needs. Utilising good CX practice early as part of a programme of work provides confidence that the current guidance or specification is fit for purpose.



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## 4.5 Defining success

### What does a successful project look like?

Transport infrastructure is one of the most noticeable ways we influence how people experience Tāmaki Makaurau, therefore it is critical that we embed CX throughout our projects to ensure our work best serves the city.

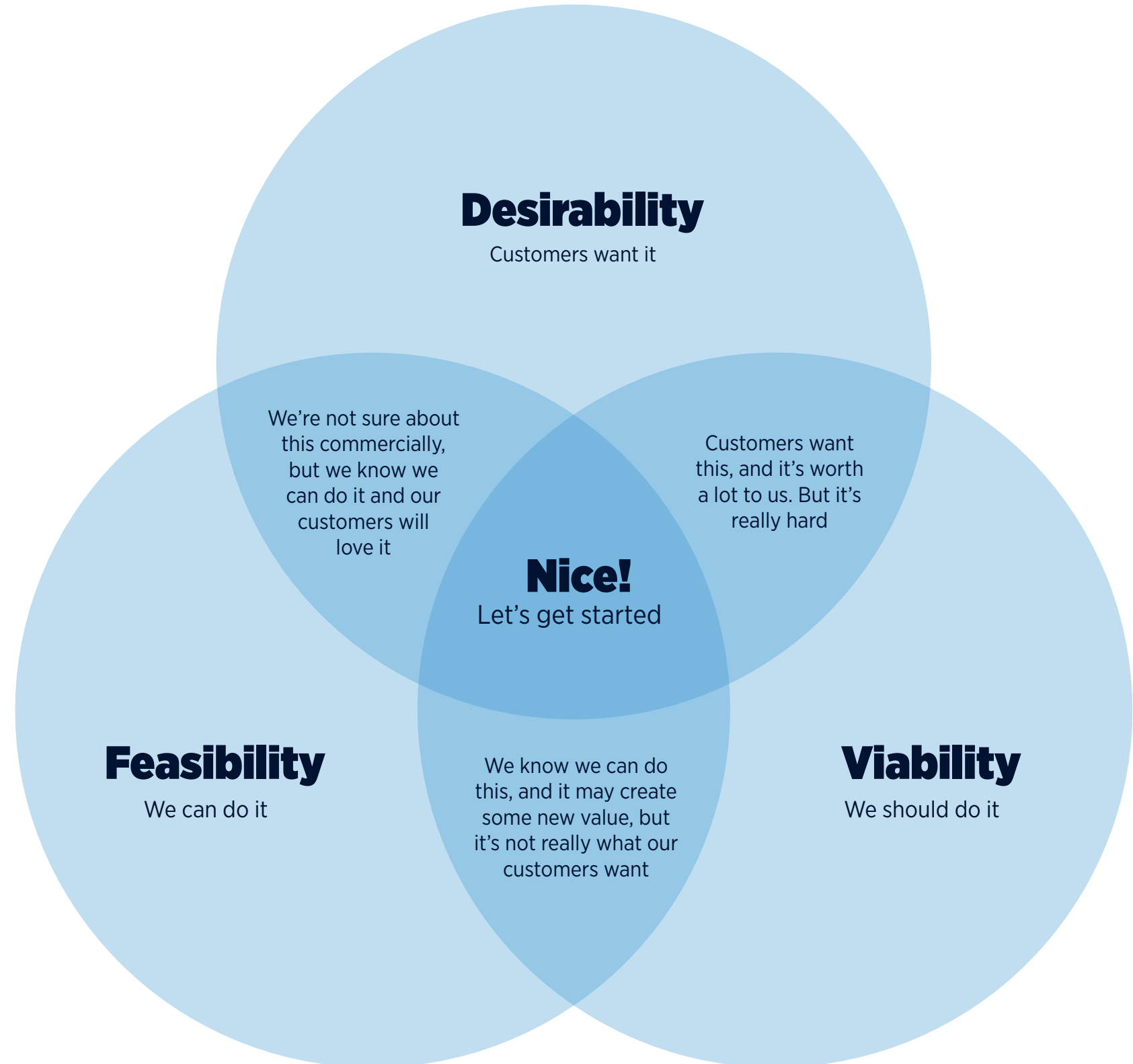
Understanding the different facets of our network helps us to think holistically about customer journeys and how we can best improve mobility for the city’s residents and visitors.

A customer’s experience consists of many different elements and touchpoints, and not all of them can be controlled within scope. However, the project can consider the influence it has over wider journeys. For example, we can’t control the weather, but we can determine the type and number of shelters we provide. Success for AT can be measured by complete, trouble-free customer journeys.

Understanding what is important to our customers will allow us to best meet their needs, balancing which of their needs is feasible, desirable and viable within the other constraints of the project.

#### Short-term vs long-term success

Much of our infrastructure work sits within city-wide plans that can stretch over decades. In some cases, these projects can negatively impact customers in the short term. Success in these situations can be measured in how we effectively manage disruptions, provide attractive alternative travel options and communicate project updates to maintain the quality of experience we provide for our customers.



# 5

# Kawatau Expectations

From the design of a train station through to the creation of a footpath, the TDM family of documents provides the technical framework for design work for AT.

This family of documents includes most of what is needed to achieve good design outcomes. The CX lens provided in this section provides the remainder of what is needed to design for

customer needs, ensuring the technical frameworks used by the project match up with understood customer needs. Where that understanding is lacking, CX provides the tools to fill that gap.

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## 5.1 What projects must demonstrate

### The project must demonstrate it is responding to customer needs

When presented with evidenced recommendations by a CX specialist, projects must either address the recommendations through design change or justify why changes can't be made. AT's CX specialists can help scale the level of change required by the design in coordination with project managers and design leads.

This section outlines a high-level overview of the minimum requirements projects must consider within the design to align with the basic needs of customers in transport environments.

Through the lens of these core needs and customer insights, the CX specialist will apply the feedback into the design accordingly.

#### Customer experience frameworks

The CX specialists may have an existing framework that identifies these needs. The frameworks are derived from global best practice for consistent infrastructure environments and experiences. These are living documents that will iterate as the network grows in maturity. A CX specialist will use the appropriate frameworks when required.

\* Source: Public Transport Passenger Rights and Quality of Service in the EU: Regulation and Standard, Regulation (EU) No 181/201117, Standard (UNI en 13816:2002)

The project must evidence a response to relevant customer standards\*



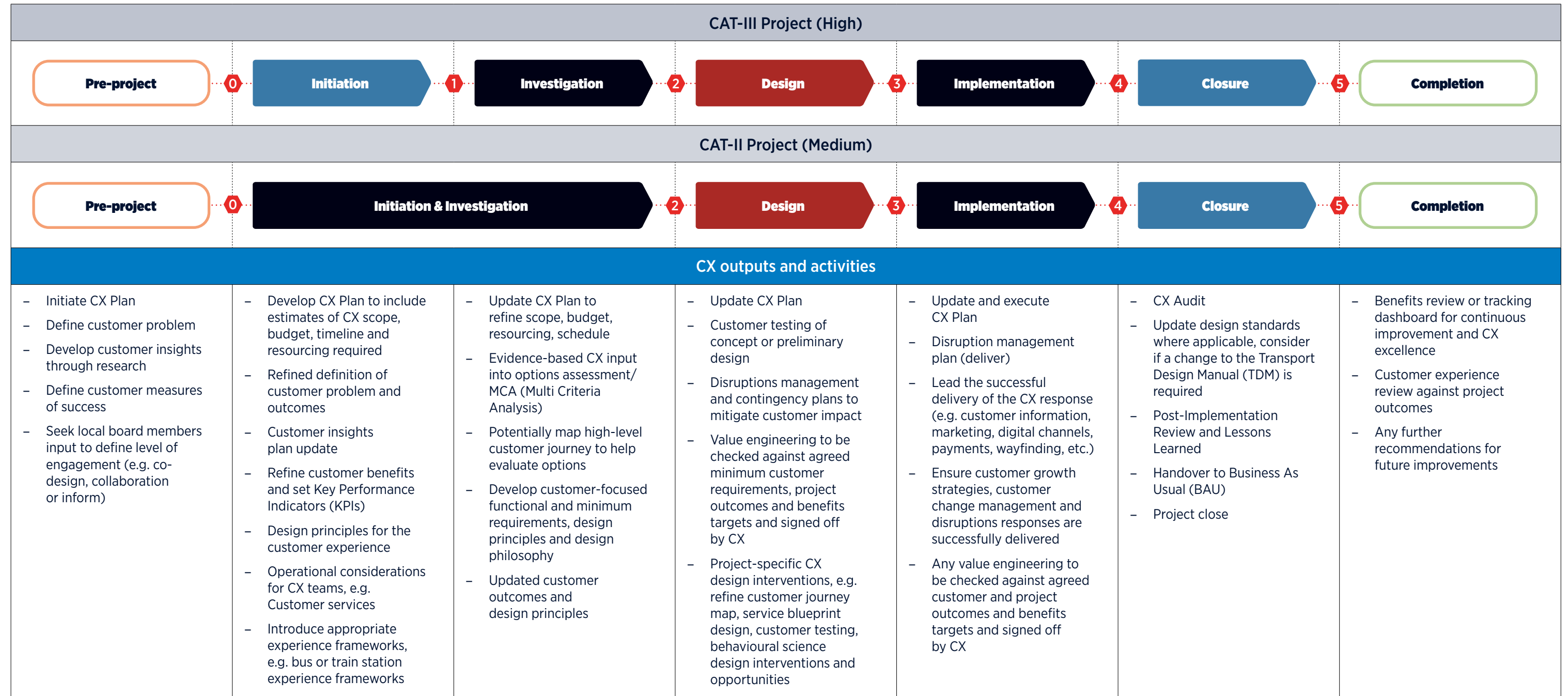
AT has done considerable work developing an understanding of customer needs and behaviours. The project must evidence a response to applicable customer research.

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## 5.2 CX across a project life-cycle

### Project CX activities by stage

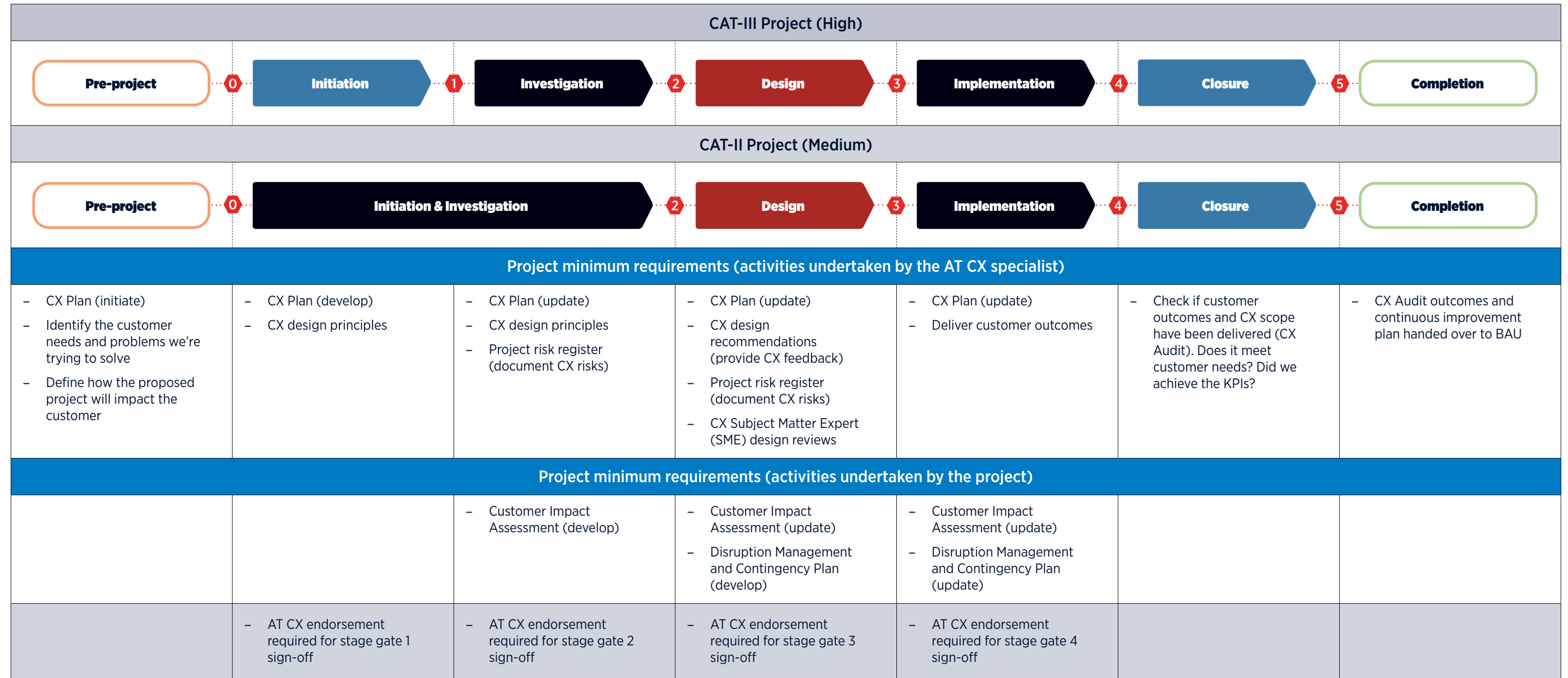


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## 5.2 CX across a project life-cycle

### Project CX minimum requirements by stage



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## 5.3 Project activities

### Project CX minimum requirements: CX Plan

A CX Plan sets out how a project will ensure customer needs are considered and met through project initiation, construction and delivery. It's a living document that details channels, responsibilities and customer-focused actions for the project. The CX Plan is updated at each project stage or when new insights emerge.

#### Value to the project

Provides the project team with assurance that customer needs are identified and addressed throughout the project, resulting in outcomes that meet customers' expectations.

#### Led by

CX specialists.

#### A CX Plan should include:

##### Introduction

- Document information – version control, dates, author, reviewer, etc
- Table of contents (if relevant)
- Executive summary
- High level project overview, purpose, connection to strategies
- High level customer context, and the job to be done in relation to customer outcomes.

##### Content

- Customer insights overview – summary of evidence and pain points
- Project status – stage gate and timeline
- Prioritised list of CX initiatives for the project
  - Initiative owners
  - Jobs to be done and outputs
  - Budgets for initiatives.

##### Appendix

- Detailed timeline, status and cost for each initiative
- Key stakeholders and CX SMEs
- Customer impact assessment overview, customer journey map
- CX risks detailed
- References to completed initiatives and results
- Links to relevant documents
- Initiatives that didn't progress and why.



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### Project CX minimum requirements: CX design recommendations

A CX design recommendation document captures clear, practical changes to the design, grounded in customer insights and the CX criteria - to make it easier safer and more intuitive for people to use. It typically lists issues found, the customer impact and specific fixes or enhancements the team should make before finalising detailed design.

**Value to the project**

Ensures designs incorporate customer needs, leading to less rework, creating project efficiencies and optimising outcomes for customers.

**Led by**

CX specialists.

CX design recommendations must:

**Provide actions**

**An actionable list of design changes required by the project:**

- Ensuring the design adequately responds to known customer needs by communicating the type of change needed
- Filling gaps in designer’s knowledge of customer needs, evidenced by gaps or omissions in the design
- Ensuring that applicable standards and guidelines for the project have been applied in a way that improves, rather than complicates customer’s experiences. E.g. CPTED, Accessibility standards are applied in a way that responds to customer needs, rather than being applied as a box-tick.

**Changes required from the design are posed as unambiguous.**

**Provide justification**

**Actions required by designers are evidenced by CX work or precedence:**

- Customer research or investigation has been carried out and analysed
- Research is appropriate for the design discipline and relevant customers.

**Recommendations are backed prioritised insights:**

- Advice in the report is limited to that which is easily understood and useful to designers
- Background research is detailed in the CX Plan and only summarised in recommendations where applicable.

**Recommendations highlight where additional research may be needed:**

- Including where research may need project engagement or design coordination.

**Track outcomes**

**How will the project respond to CX recommendations?**

- The recommendations are integrated with project feedback
- The recommendations are tracked by project managers.

**What is the priority or importance or rating of the change?**

- Recommendations are given priority rating aligned with the project’s agreed feedback format
- Recommendations are responded to by the project within the project’s agreed feedback format.

**Risks are registered:**

- Design recommendations can become project risks where they are not actioned
- Design risks uncovered by CX work are documented for the project.



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### Project CX minimum requirements: Customer Impact Assessment

As a project evolves, the potential impact to customers of the design itself, and its implementation evolve with it. The Customer Impact Assessment helps to de-risk a project by ensuring that customer needs are understood by designers as the project develops.

**Value to the project**

Provides an evidence-based way to ensure decisions reflect real customer needs, impacts, and journey considerations. It reduces redesign, improves decision quality, and helps the team choose options that deliver better customer outcomes.

**Led by**

CX Specialist

What is required in a Customer Impact Assessment:

Understand context	Highlight impacts	Discuss mitigations
<p><b>What is happening that might generate impacts?</b></p> <ul style="list-style-type: none"> <li>- Summary of project activities/milestones and potential impacts</li> <li>- Summary of non-project or external events within the project environment and its potential impacts.</li> </ul>	<p><b>Who is being impacted?</b></p> <ul style="list-style-type: none"> <li>- Individual customers</li> <li>- Groups or community segments</li> <li>- Community institutions - schools, etc.</li> </ul> <p><b>What is the nature of the impacts expected?</b></p> <ul style="list-style-type: none"> <li>- How will customers be impacted by the project?</li> <li>- What is the timeline for these impacts?</li> </ul>	<ul style="list-style-type: none"> <li>- What can we do to mitigate impacts to customers?</li> <li>- Who is responsible for which mitigation?</li> <li>- What is the timeline for implementing?</li> </ul>



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## 5.3 Project activities

### Project CX activities: Additional reviews and activities

Name	What is it?	Value to the project	Led by
<b>Customer testing</b>	Testing designs with customers to ensure they meet their needs and will work practically for them.	Identifies changes to designs and potential issues early, ensuring the design will work for customers, avoiding rework.	CX specialists
<b>CX Audit</b>	A post-delivery review of how customers actually use the space or service.	Confirms whether customer outcomes were achieved and identifies improvements.	CX specialists, in collaboration with the Project Manager
<b>CX Options Assessment Criteria</b>	A simple set of customer-focused standards used to compare project options.  It evaluates accessibility, journey experience, overall usability, and alignment with wider place and network needs, ensuring options reflect real customer impacts.	Provides a clear, evidence-based way to compare options and ensure customer needs are carried through the project, reducing redesign and supporting robust decision making.	CX specialists, working alongside the project team
<b>Disruption management and contingency recommendations</b>	A structured plan for managing and communicating planned or unplanned disruptions.	Minimises customer confusion, reduces project risk, and protects organisational reputation.	Disruptions with CX specialists input
<b>Existing customer data and insights</b>	A review of existing customer data and insights to identify what is already known about the experiences of customer groups impacted by the project.	Provides evidence of customer behaviour and needs to inform planning and decision making.	CX specialists
<b>Project design reviews</b>	Designs are reviewed by Subject Matter Experts (SMEs) via the project or Design Review Panel (DRP) to ensure the design is safe, aligns with standards, is technically sound and meets customer needs.	Identifies potential issues early, prevents redesign, and ensures a fit-for-purpose design.	Project Manager with CX specialists input
<b>Risk Register</b>	A list of potential risks, their likelihood and impact, and mitigation actions.	Identifies potential issues early, guides decisions, and tracks ownership.	Project Manager with CX specialists input

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## 5.4 Project examples

### Smart Variable Message Signs (SmartVMS) – East Auckland



The Eastern Busway Alliance (EBA) is the partnership delivering Auckland’s multi stage Eastern Busway project, responsible for designing, constructing and integrating new rapid transit infrastructure and station upgrades across east Auckland.

#### CX initiative and deliverable

Deliver real time, multi modal travel time information to customers to help improve decision making during disruption.

#### CX Initiatives

- Used CX insights from Eastern Busway research to identify uncertainty and lack of visibility of travel options.
- Partnered with Smart City NZ to deploy solar powered SmartVMS showing live travel time comparisons across car, train and bus.
- Integrated AT’s public transport API and existing travel time sensors for accurate, multimodal real time updates at key decision points.
- Ensured the solution responded directly to CX identified pain points around uncertainty, missed connections, and limited visibility of alternatives.

#### Outcome

- 2 in 5 residents noticed the signs.
- 66% said SmartVMS improved their travel decisions.
- 53% changed journeys based on SmartVMS information.
- Two thirds viewed the signs positively (clarity, relevance, reduced uncertainty).
- Insights enabled AT to scale the solution across Auckland with eight additional signs.

#### Needs addressed



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### Te Ara Hauāuru / Northwest Rapid Transit (NWRT)

Te Ara Hauāuru / Northwest Rapid Transit will deliver a new rapid-transit busway along SH16, supported by future interchange stations.

In November 2023 the WX1 Western Express launched using interim motorway interchanges, exceeded forecasts by around 45% confirming a strong appetite for rapid transit, while also exposing safety challenges at the interim interchange stops.

#### CX initiative and deliverable

Applying behavioural and customer movement insights to address safety risks at interim WX1 interchanges and inform permanent NWRT station design.

#### CX Initiatives

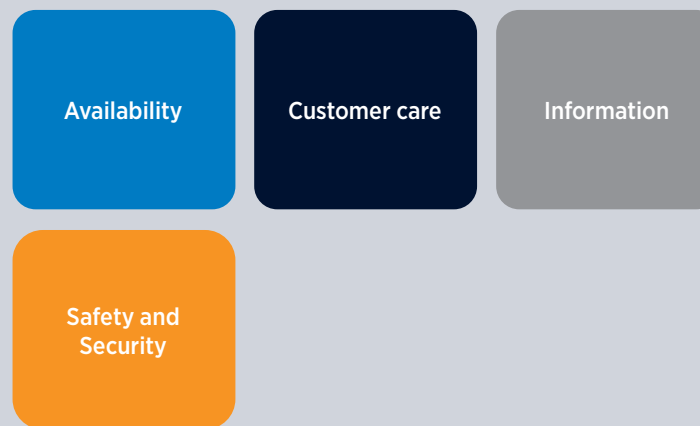
- Human factors observational findings showed that in total, 66 serious encounters were observed in 14 hours of video footage across the sites.
- Re-framed safety issues as customer movement and environmental design challenges.
- Facilitated cross agency workshops to build a shared understanding of behavioural risk.
- Deeper behavioural research including in-person observations, further analysis of recorded footage, movement analysis and engagement sessions with customers and front-line staff.
- Identified key risk drivers such as the interchange layouts, long waits, confusing crossings, poor sightlines and connection pressure.



#### Outcome

- Co designed targeted improvements: signal phasing, lighting, line marking, foliage removal, wayfinding and behavioural initiatives.
- Built cross agency alignment on a coordinated safety and design approach.
- An evaluation framework was also developed and will track progress taking an iterative design approach.

#### Needs addressed

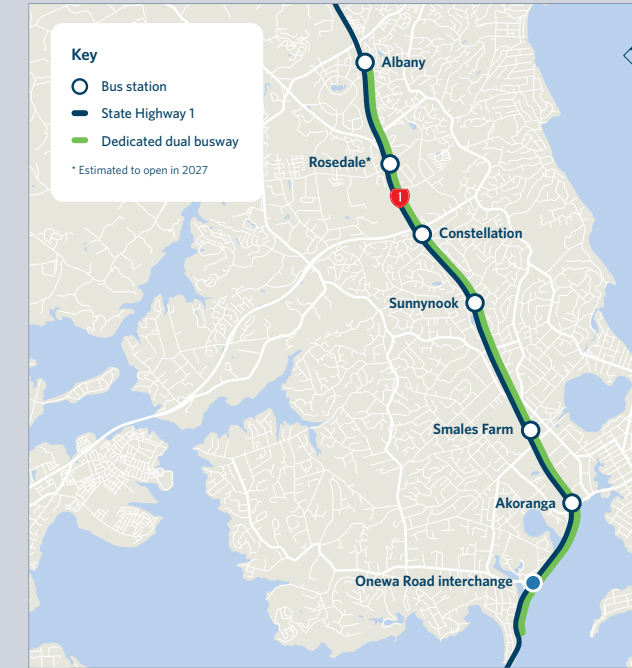


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### Northern Busway Enhancements



The Northern Busway is a dedicated rapid-transit corridor serving Auckland’s North Shore.

It provides a fully separated, high-frequency busway between Albany and the city centre. It carries almost 800,000 trips each month and is already experiencing increasing customer pressure, which is expected to intensify as demand continues to grow.

#### CX initiative and deliverable

The earlier Detailed Business Case (DBC) focused on fleet and modelled capacity issues, leaving a gap in understanding the customer experience. The CX team was brought in to apply customer insights to strengthen the Northern Busway DBC and inform future station and busway improvements.

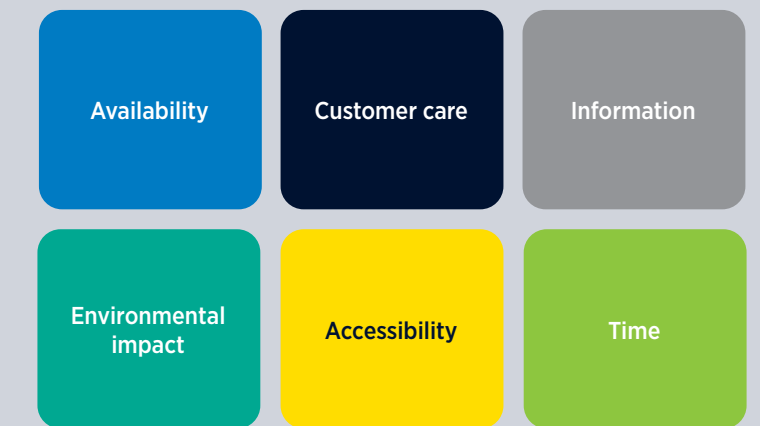
#### CX Initiatives

- Analysed patronage trends to identify customer pain points including crowding, circulation constraints, parking frustration, reliability issues and platform congestion.
- Ran customer focus groups at Albany, Smales Farm and Constellation stations to understand access barriers and test improvement concepts.
- Conducted on site observations and staff interviews to identify real time movement issues and conflict zones.
- Developed customer centred KPIs and a measurement framework to inform design and delivery decisions.

#### Outcome

- Demonstrated that existing stations already struggle to accommodate customer movements, reinforcing operational modelling.
- Clarified customer issues around safety, wayfinding, comfort and peak time crowding.
- Enabled targeted improvements to station design, access and flow.
- Ensured the refreshed DBC is customer led, future proofed and aligned to long term patronage growth.

#### Needs addressed



# **Wāhanga 3:** **Te whakatinanatanga** **o te Wheako Kirihoko** **Part 3: CX In Practice**

# 6

## **Te ako mai i ā tātou kirihoko** **Learning more from our customers**

Technical expertise and professional experience can be prone to bias. For this reason, CX specialists may conduct research directly with customers.

Through research, CX specialists can either validate the assumptions behind the design or point to where the design needs to change.

The purpose of this section is to provide project managers with an overview of the tools that CX specialists use to understand customer needs.

Not all projects require additional CX research; much has already been learned by AT. Where it is needed, AT's CX specialists will report into the project as described in Part 2.

**6.0 Learning more from our customers**

- 6.1 Gathering new data
- 6.2 How we collect new data
- 6.3 Selecting the right tools
- 6.4 Research tools

**7.0 Developing insights**

- 7.1 Defining an insight
- 7.2 Insight fundamentals
- 7.3 Insight tools

**8.0 Acting on insights**

- 8.1 Defining a priority
- 8.2 Priority fundamentals
- 8.3 Priority methodologies
- 8.4 Risk factors
- 8.5 Navigating established norms

**9.0 Glossary of terms**

- 9.1 General terminology

## 6.1 Gathering new data

### Why we learn more from our customers

While designers may have expertise that isn't part of customers' knowledge base, customers have lived-experience of using the infrastructure we create.

We learn from their experiences to ensure the solutions we create are solving the real, local challenges for our project. This is important as, while infrastructure may be similar across the city, every project is constructed within a different context.

As discussed in 4.4 *What we already know*, we begin a project by identifying pools of knowledge that may provide relevant insight into the challenge at hand. This could involve existing standards or experience that we can bring from our previous work. However, customer behaviour is the variable not covered by standards and codes. It changes over time in response to conditions and cannot be effectively modelled without customer research.

**Reducing risk by building our understanding**

As evidenced by the accompanying diagram (see right), we aim to reduce risk by growing our understanding of our customers. Up-to-date, local data enables more informed decision-making, reduces risk, helps allocate budgets effectively and shapes solutions that deliver what people actually need. Even pre-existing knowledge should be validated to ensure it is relevant to context.

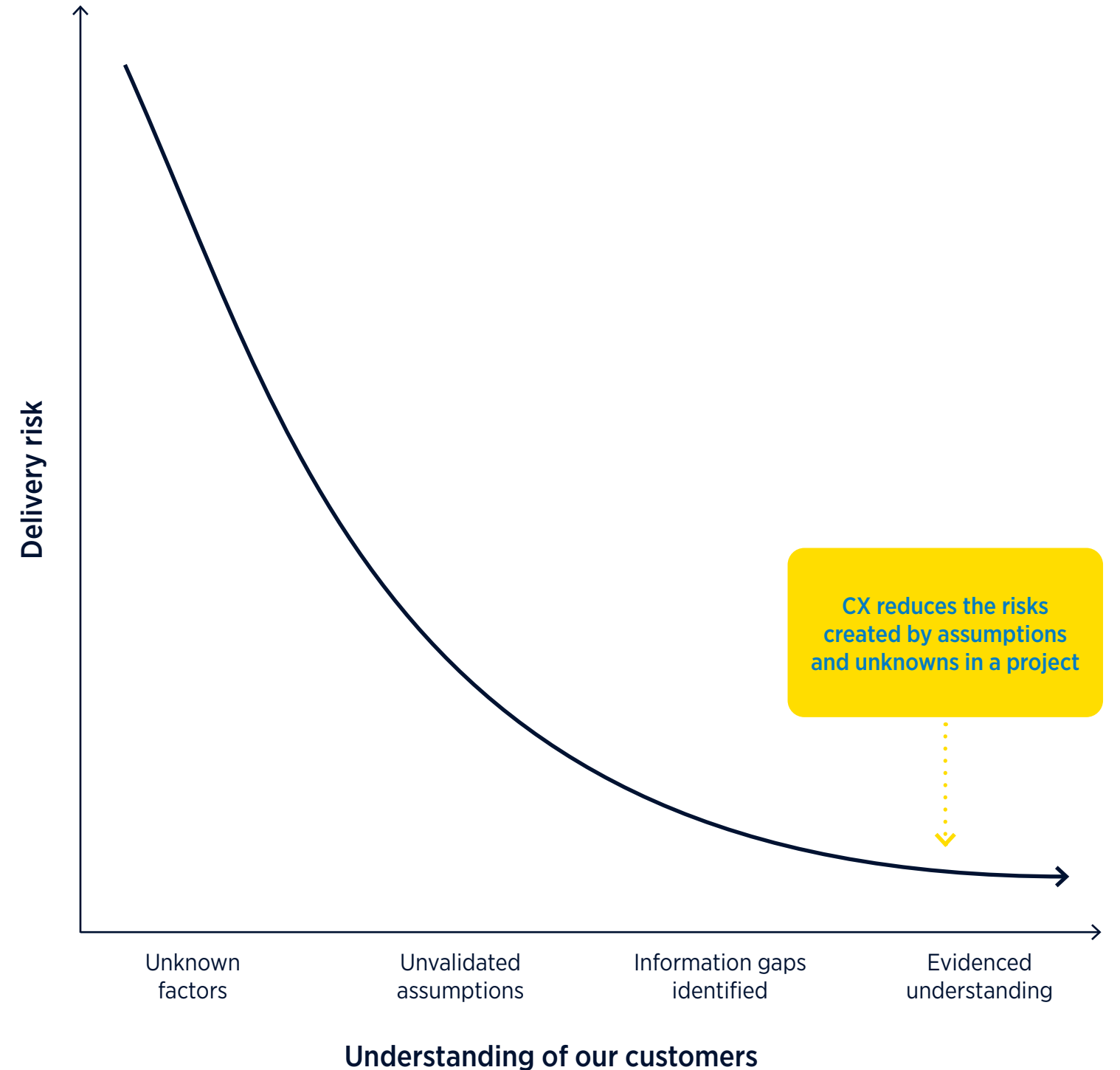
**Managing new research**

It is important that project managers understand what each CX tool means for the project in terms of time and effort needed, relative to improvements to the project outcome.

The descriptions in this section help to ensure that everyone in the project has a baseline understanding of CX terminology and methods, and that there are no surprises eventuating as CX specialists develop a plan of work for the project.

Cost-to-scale ratios illustrate the budgetary impact and savings of different tools in terms of time, money and effort.

CX specialists work with project managers to ensure that the right budget is allocated to complete the appropriate CX work. This will save on remedial work and project delays during install by ensuring designs are fit for purpose before they break ground.



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## 6.1 Gathering new data

### How we learn more from our customers

CX specialists have many tools they can use to undertake research, each of which provides answers to questions in different ways. How we research is shaped by what stage we're at in our design process and what it is that we need to understand.

#### Exploration vs validation research

A useful way to think about CX research is that it can be separated into two core types: exploratory or validating research.

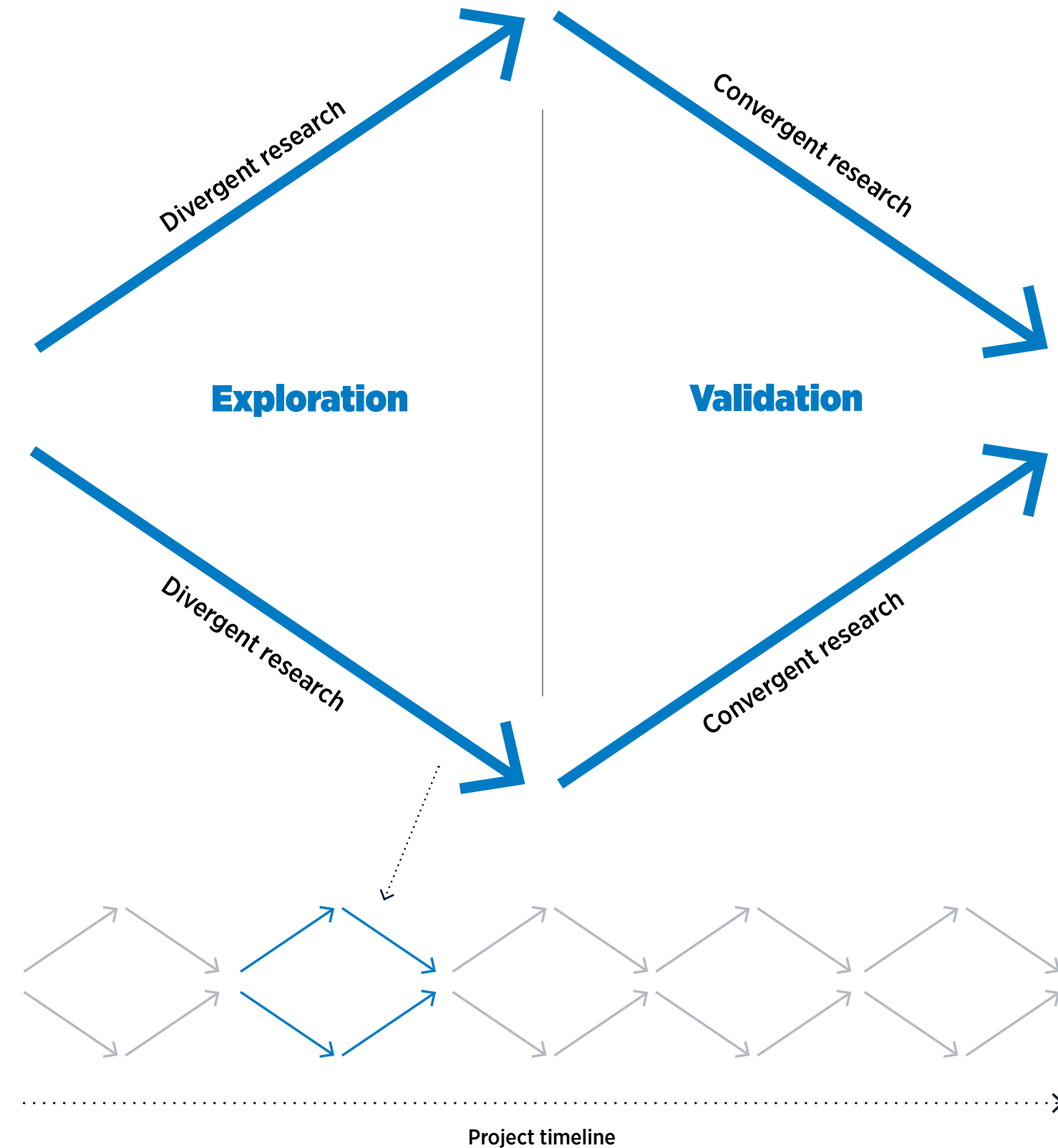
*Exploration* is divergent research. It aims to open our view, uncovering project needs, the scale or scope of a problem, and defining pointers towards how we might resolve it and what the future state could or should be.

*Validation* is convergent research. It aims to narrow our view down to an answer by confirming or challenging our design solution or our understanding of the problem (testing our assumptions). When working with public funds, validation is essential to ensure that we're spending the money in the most effective places.

#### The process repeats throughout the project

With each project stage bringing new challenges for CX to identify and help solve, this process of exploration and validation must repeat several times.

This ensures the customer's voice is always present when identifying problems, making decisions and validating the success of work.



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## 6.2 How we collect new data

### The tools we use to understand our customers

There are a plethora of different CX tools that can be applied to a project. AT's CX specialists will help plan out the right tools depending on a combination of factors. What is the project budget? What do we need to understand? What part of the project timeline are we currently at?

This section offers a snapshot of commonly used CX tools that a CX specialist may use, however the list is non-exhaustive. AT can provide advice on the most appropriate tools for a given scenario or for different stages of a project.

#### Useful data—quantitative vs qualitative

Depending on the methodology and tools used, customer experience research produces data that is useful in different ways.

Researching or testing for *quantitative data* involves collecting and interpreting numerical data points. Quantitative data can be used to quantify specific behaviours or to evidence changes in behaviour for groups of people.

By comparison, researching or testing for *qualitative data* involves discovering why behaviours occur or why choices are made. Qualitative data can be used to verify or

challenge assumptions in design direction.

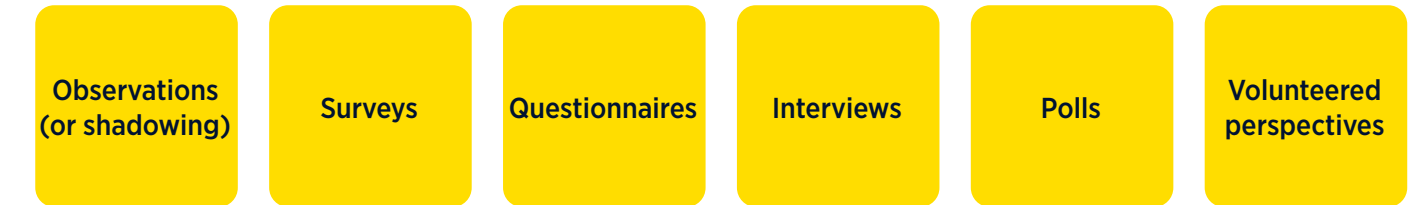
#### A matter of scale

Large scale *quantitative* testing might evidence a current shortcoming or a successful change of design, providing metric assessments for comparison. For this type of research, a sample size should be large enough to evidence a wider trend relative to the expected project outcome.

Testing or researching for *qualitative* data provides valuable insight with relatively low numbers of participants—diminishing returns may limit usefulness of additional data as similar insights start to repeat. A useful number of participants to consider for *qualitative* research is between 5 and 10 people.

Both types of data can be collected through direct observations, interviews and surveys, but there are differences in the process for each. In all cases, the framing and types of questions being asked can have a direct bearing on the outcome.

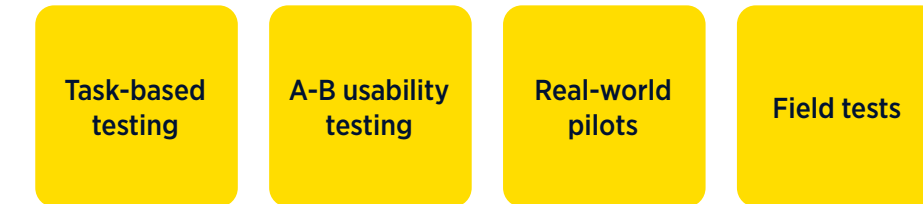
#### Talking and observing



#### Workshops



#### Customer testing



#### Other supporting tools Refer to Section 7.3 Insight tools



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## 6.3 Selecting the right tools

### Asking the right questions

Choosing the right tools for the problem at hand is the most important decision when seeking to understand our customers' needs. Doing so ensures the findings we collect best reflect the reality we are designing for, leading to better designs.

We use our research approach and the problem we're looking to solve to determine the tools needed at each stage of a project.

For example, as a baseline, we need to know our completed designs are functional. However, even before we start to design, we may want to be aware of any biases that customers hold that might impact our design approach.

#### Asking the wrong questions

When looking for insight from customers, we want to know what works best for them, not necessarily what they like or their opinion. We're not usually concerned with marketing insights or research. How we frame a question or structure a test defines the type of answer we get, and thus the usefulness of that response for the project as a whole.

Using the wrong tool can give us insights that don't truly represent reality, leading us to design based on inaccurate insights. For example, asking whether someone prefers red or green, when blue works better than both gives us a false understanding of customer needs and is wasteful, both of their time and our budget.



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## 6.3 Selecting the right tools

### Involving customers in the most effective way

In CX, there are different approaches we take when engaging with customers. These sit along a spectrum offering different levels of customer participation in the design process. Each allow us to understand customer needs in different ways, operating in harmony with project requirements.

As designers, we may have expertise and understanding that isn't readily available to customers. On the other hand, customers have lived experience of using the infrastructure we are responsible for creating. The approach we take when working with customers impacts directly on the type of data we can expect from them.

**No approach is inherently better than the other**

Efficiency can be gained by taking an expert-led approach. The trade-off is that participatory approaches can significantly reduce risk to projects through a clear understanding of customer needs that may differ significantly to established standards.

Working with a more participatory approach will provide additional benefits to projects through customer and community buy-in, due to direct involvement in the shaping of a project.

In turn, their trust in our process may differ depending on how they are expected to be involved.

Top-down approach



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## 6.3 Selecting the right tools

### Combining tools and approaches to build a complete picture

Naturally, every research method has holes or gaps that findings can slip through inadvertently. Borrowing from Reason’s Swiss Cheese Model, layering multiple research tools and/or CX approaches helps us cover more ground and reduce blind spots in our understanding, allowing us to distil more precise insights for the project to respond to.

This layering already occurs in design systems across disciplines and is common in risk management. For example, as designers, we combine ISO and NZ/AU standards, as well as the building code, to provide a robust solution that reduces risk by covering many bases.

**Layering tools**

Each tool has its own unique limitations and benefits. Surveys may capture scale, but are limited by how well we frame our questions. A-B testing helps us choose between alternatives, but doesn’t clarify if there is another, better option.

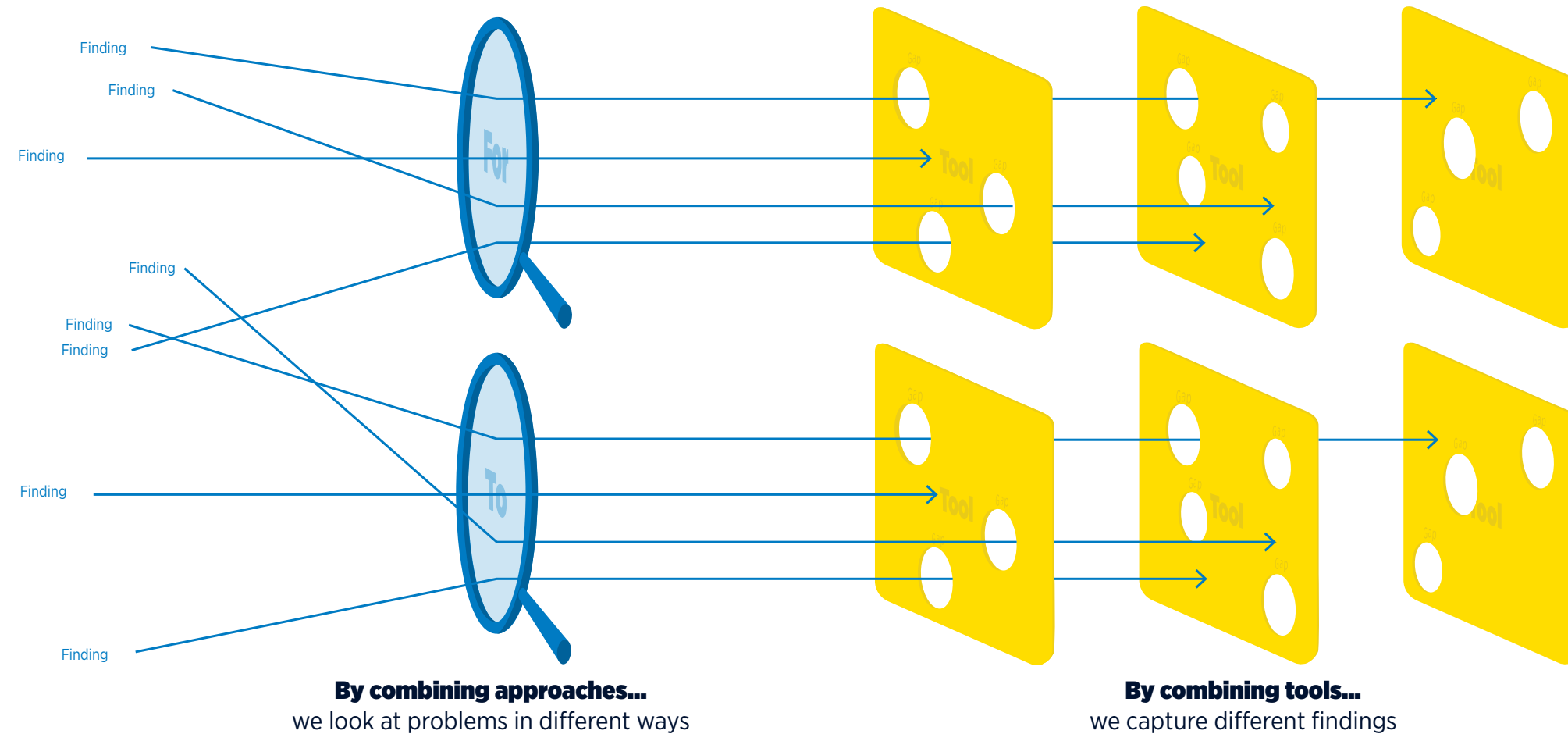
Layering several simple research tools may help provide a clearer picture faster and cheaper than a huge sample study using a costly, labour-intensive single method.

**Layering CX research approaches**

Similarly to layering tools, it is useful to layer different research approaches from across the participatory spectrum.

We can speak to customers as partners, utilising a co-design workshop to help establish trust and understanding of local perspectives. But that doesn’t provide insight about wider customer needs and may only represent vested interest.

We can speak to customers as experts, but this ignores local understanding and experience.



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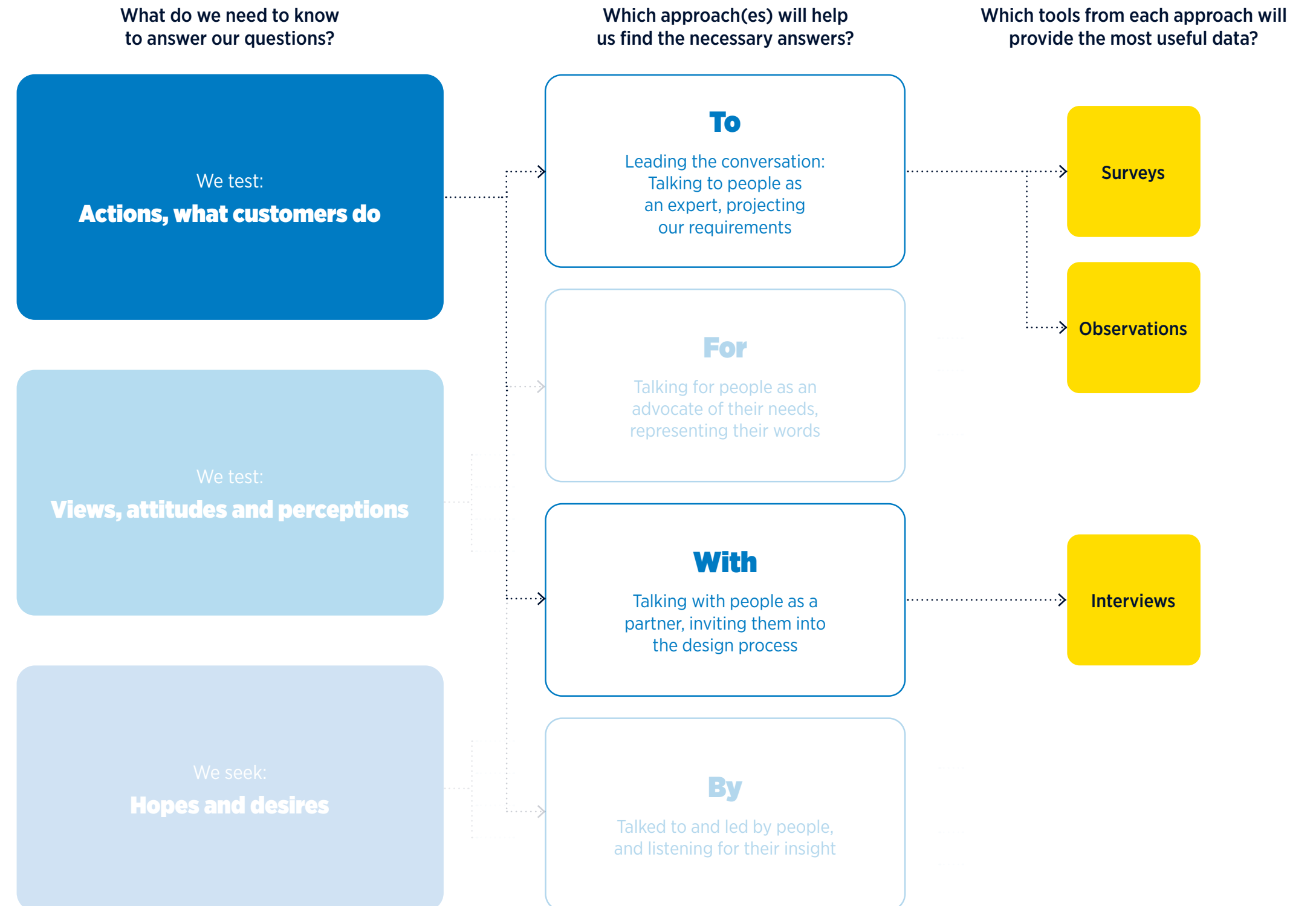
## 6.3 Selecting the right tools

### Selecting the right tools, in practice

Both what we need to test, as well as how we choose to involve customers, will influence how we select the specific tool to answer the question at hand.

The example on the right shows the decision-making process in practice.

While this diagram shows one example, in reality, we will use many different approaches throughout the design process.



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## 6.4 Research tools

### Tool overview: Talking and observing

New data can be used to establish up-to-date understandings of customer needs, as well as to validate previous research.

Consider pairing research with other tools to ensure a well-rounded understanding of customer needs.

Observation (or shadowing)	Surveys, questionnaires	Interviews
<p>Directly observing customer behaviour in the environment, either before, during or after work. Observations are a powerful tool to either uncover current pain points, validate current understanding or to validate work as part of project closure.</p> <p><b>Limitations:</b> Data gathered through observation is prone to environmental noise. For example, it may reflect nearby disruptions or special events.</p> <p><b>Pairs well with:</b> Customer observations pair well with surveys and questionnaires by providing observations of actual behaviours, rather than opinions or thoughts.</p>	<p>Asking questions directly of customers. In each scenario, questions can define the qualitative or quantitative nature of the answers. However, surveys are an effective way to gain a response that illustrates the scale of customer needs.</p> <p><b>Limitations:</b> Surveys may uncover biases and opinions and will not provide an effective illustration of observed behaviours. Interviews can be scaled to match the requirements of a project and allow for a more nuanced understanding of customer needs, but may still struggle to identify behaviours.</p> <p><b>Pairs well with:</b> Quantitative surveys pair well with both customer testing and observations that provide qualitative insights.</p>	<p>Engaging directly with customers as opposed to asking prescribed survey questions offers qualitative opportunities. Participants can be challenged, and questions can be shaped on the fly to delve deeper.</p> <p><b>Limitations:</b> Interviews can be shaped by the biases of both participant and interviewer. In addition, these can take time and effort to organise and conduct.</p> <p><b>Pairs well with:</b> Qualitative interviews pair well with other survey techniques, as well as being a useful addition to a programme of quantitative A-B testing.</p>

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## 6.4 Research tools

### Tool overview: Workshops

New data can be used to establish up-to-date understandings of customer needs, as well as to validate previous research.

Consider pairing research with other tools to ensure a well-rounded understanding of customer needs.

#### Workshops



Workshops, or guided group conversations provide direct engagement with customers. There are many ways to engage in a workshop. We can lead workshops as experts, guiding the process, or we can invite customers to participate directly or even lead workshops.

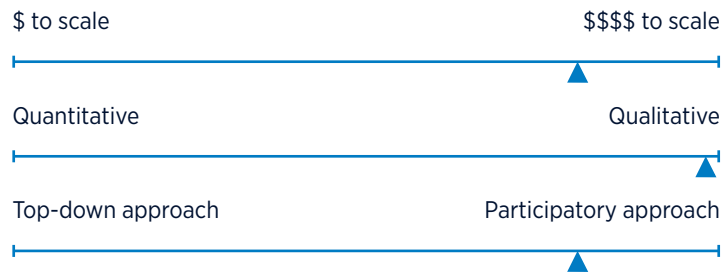
**Limitations:**

Workshops may serve to embed existing biases or groupthink, and should be managed with discipline to ensure conversation stays on track. Workshops don't often provide an understanding of the scale of customer needs, but are limited to the needs of those in the room.

**Pairs well with:**

Workshops can provide deep qualitative understandings of customer needs, as such they pair well with surveys or other quantitative tools.

#### Co-design workshops



Co-design workshops invite participants to directly participate in the workshop structure and design outcomes. They offer rich opportunities for local partners and stakeholders to directly engage in the design process, which in turn brings benefits to AT as a whole.

**Limitations:**

Workshops may serve to embed existing biases or groupthink, and they have to be managed with discipline to ensure that the conversation stays on track. Workshops don't often provide an understanding of the scale of customer needs, but are limited to the needs of those in the room. Participants are not be the sole representatives of a community, and thus without curation, workshops may increase pre-existing community tensions.

**Pairs well with:**

Workshops can provide deep qualitative understandings of customer needs, as such they pair well with surveys or other quantitative tools.

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## 6.3 Research tools

### Tool overview: Customer testing

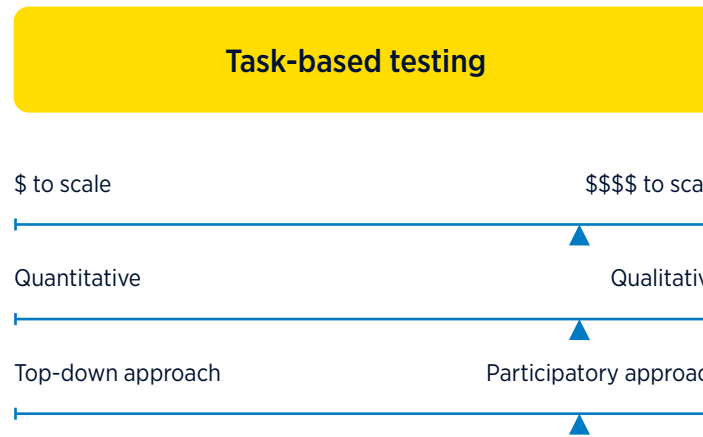
Customer testing can be done in a number of different ways and incorporate new or existing infrastructure in either virtual or real-world scenarios. Capturing customer behaviour on standard journeys is one of the most powerful tools for developing an understanding of customer needs.

**Exploration vs validation in testing**

We can use customer testing to both explore new designs and validate existing designs. During a formative or iterative testing process, designs are changed or refined across multiple sessions in response to insights. Designs evolve towards a solution. During a validation, or evaluation test session, finished or existing designs are validated by customers. This might be used to verify that a design is functioning as intended, to confirm decisions or to assess existing designs for gaps.

**Standards**

In both testing to explore and to validate, there are ISO standards that can be applied to ensure valid testing protocols are followed. Check in with one of AT's CX specialists to help shape the right kind of testing process.



Task-based testing involves observing participants as they perform tasks or solve problems within scenarios to uncover qualitative behavioural data. Testing can run over a single scenario to validate existing understandings or multiple scenarios to explore or refine new design solutions.

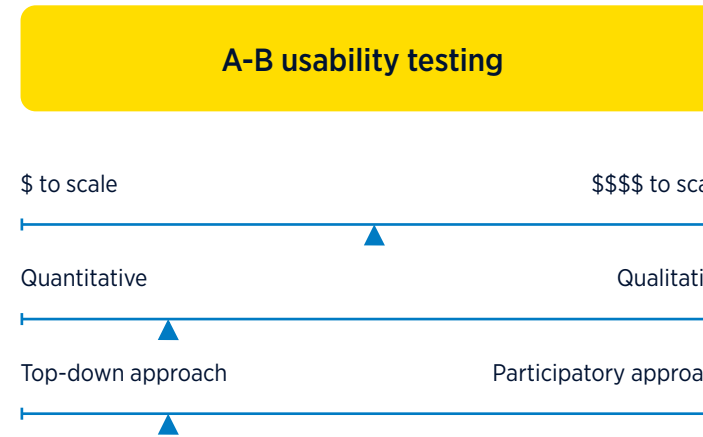
Task-based testing is useful to explore our depth of understanding of the efficacy and usability of designs through problem-solving.

**Limitations:**

Task-based testing can be scaled, but scale can drive up cost in regard to time and money. As a general rule, insights gathered from task-based testing tend to repeat, and present diminishing returns with scale.

**Pairs well with:**

Task-based testing pairs well with quantitative surveys to provide a rich understanding of customer needs. Additionally, task-based testing can validate previous research or testing.



A-B testing provides for controlled outcomes between two or more or competing design options. It offers either a validation or a challenge to existing assumptions. While A-B testing can provide qualitative insight, it is primarily concerned with a quantitative outcome in a head-to-head run-off.

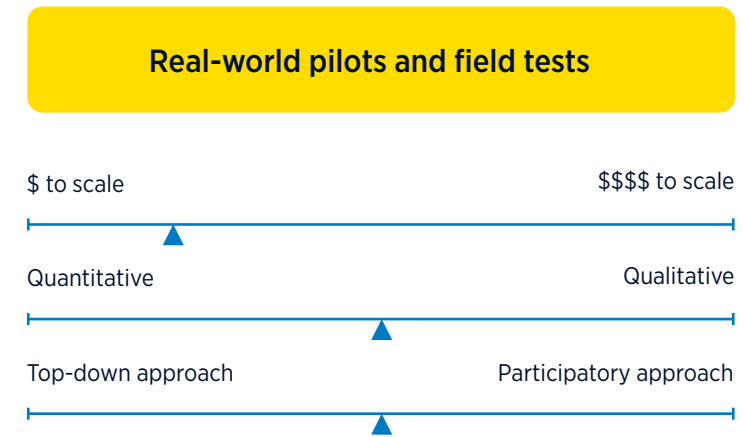
A-B testing can itself involve task-based exercises. However, the object remains validation rather than exploration.

**Limitations:**

A-B testing may struggle to identify where the most appropriate solution lies outside of the defined design options. Due to the prescribed nature of A-B testing, it can be more easily scaled, especially when carried out in a digital environment.

**Pairs well with:**

A-B testing helps with definitive and quantitative solutions to CX questions. As such, it pairs well with interviews where the object is a rich understanding of needs.



Similarly to A-B testing, field testing and pilot programmes can be used to validate understanding of customer needs in real-world conditions.

One or more options can be put to the public in real-world scenarios and monitored through observation, surveys or interviews.

**Limitations:**

There are both reputation risks and benefits to field testing. By testing the general public, we open ourselves up to public comment before designs are resolved. However, it also offers the public the opportunity to deeply involve themselves in a project outcome.

**Pairs well with:**

Pilot programmes and field testing don't provide adequate validation on their own. Instead, they should always be paired with observation, interviews or surveys. Observation and interviews can provide qualitative insight into why people behave the way they do, while surveys can provide contextual quantitative data.

# 7

## **Te whakapiki māramatang** **Developing insights**

When customer research is undertaken, it comes with a plethora of findings, many of which may not even be relevant to the project.

This section provides an overview of how CX specialists organise and catalogue research findings, turning them into insights that are suitable to influence design.

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## 7.1 Defining an insight

### What to expect from research data

This section provides background on the ways in which CX specialists will develop actionable insights out of data obtained from customers. The detail and formality of the process described here will be scaled to the project needs—ranging from a simple five minute exercise with Post-It notes through to a formally documented statistical analysis.

The tools and methodologies in the last section provide data. CX specialists will then process the data to find consistent themes that shape design requirements for the project.

#### Data

*Data* is the raw information to come out of customer research or testing. Data lacks context and presents no broader meaning. As noted previously, data can be both qualitative or quantitative. Qualitative behavioural data may be in the form of quotes or observations. Quantitative data involves measuring of numbers, such as the number of people who undertook a specific action, without interpretation, the numbers themselves may not provide enough information to define a solution on their own.

#### Findings

*Findings* are the patterns and trends that are established by the data. It is the ‘what happened’ when the data was generated. We may not know why something happened, but we can establish that it occurred repeatedly, and thus that it is something that should be addressed.

#### Insights

*Insights* are the key nuggets that represent design opportunities. Insights represent what can be done with findings. Beyond the obvious, insights require interpretation: is something missed because of its colour, its size, its shape or something else?

#### Mapping customers

We organise customer data by journey stage and information provided. This helps us decide what needs are responded to at different stages of a customer’s journey.

This process can be done with existing data, with new data from testing or with imaginary data to help check or inform our understanding.

#### Exemplar processes

The processes in this section are examples only. They can be scaled depending on budget and experience-derived intuition.



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## 7.2 Insight fundamentals

### Filtering the data

Customer research or testing can create mountains of data. Sometimes we'll see obvious and useful patterns; other times we'll need to do a little work to uncover the meanings behind a behaviour (and the relevance to the project). This section will demonstrate how CX specialists synthesise or generate actionable insights from data.

#### Link back to the research question

We filter findings by relevance to the business case or project scope. Other findings are documented, but put aside. What is our project hoping to achieve? What relevance does the finding have on the original premise?

#### Red herrings and biases

Biases materialise in the data in a number of ways, often presenting as red herrings. This can be particularly notable when we're undertaking usability testing, where the object is to uncover whether a system works. We're also likely to uncover the subjective likes and dislikes of participants, which has no bearing on the usability at all. It is important to maintain focus on the problem and avoid jumping into solutions too quickly without fully understanding core needs.

It is essential to document all findings, but not all findings provide relevant insights. Findings may, in turn, help redefine scope, depending on when

they are established. They risk derailing a project if they aren't filtered correctly.

Many interesting things appear in testing. Most are not relevant. For example, do people miss a bus stop because it is too bland, the wrong colour, not bold enough or because they're distracted by the coffee shop across the road? If we address the wrong finding, we spend money unnecessarily.

#### Beyond the obvious

It is important to look for contradictions in testing. If someone struggles to get from A to B, it could be because they can't figure out a map, they don't like to catch trains or because they're scared after dark. When we project our own biases onto this scenario, again we risk addressing the wrong thing.

Be provocative—look for uncertainty in the data—especially when we're dealing with topics that might require organisational or strategic change, or play a role in current political narratives.

Findings provide an opportunity for design resolution: they can highlight a problem, an opportunity or define our principles. Strong insights are evidenced in the data as interpreted by findings. They are actionable, even if that action is to assign them outside the project. A finding that doesn't lead to an actionable outcome, can't be considered an insight that will inform design. Insights not relevant to the project can be documented, but should be filtered out as red herrings.



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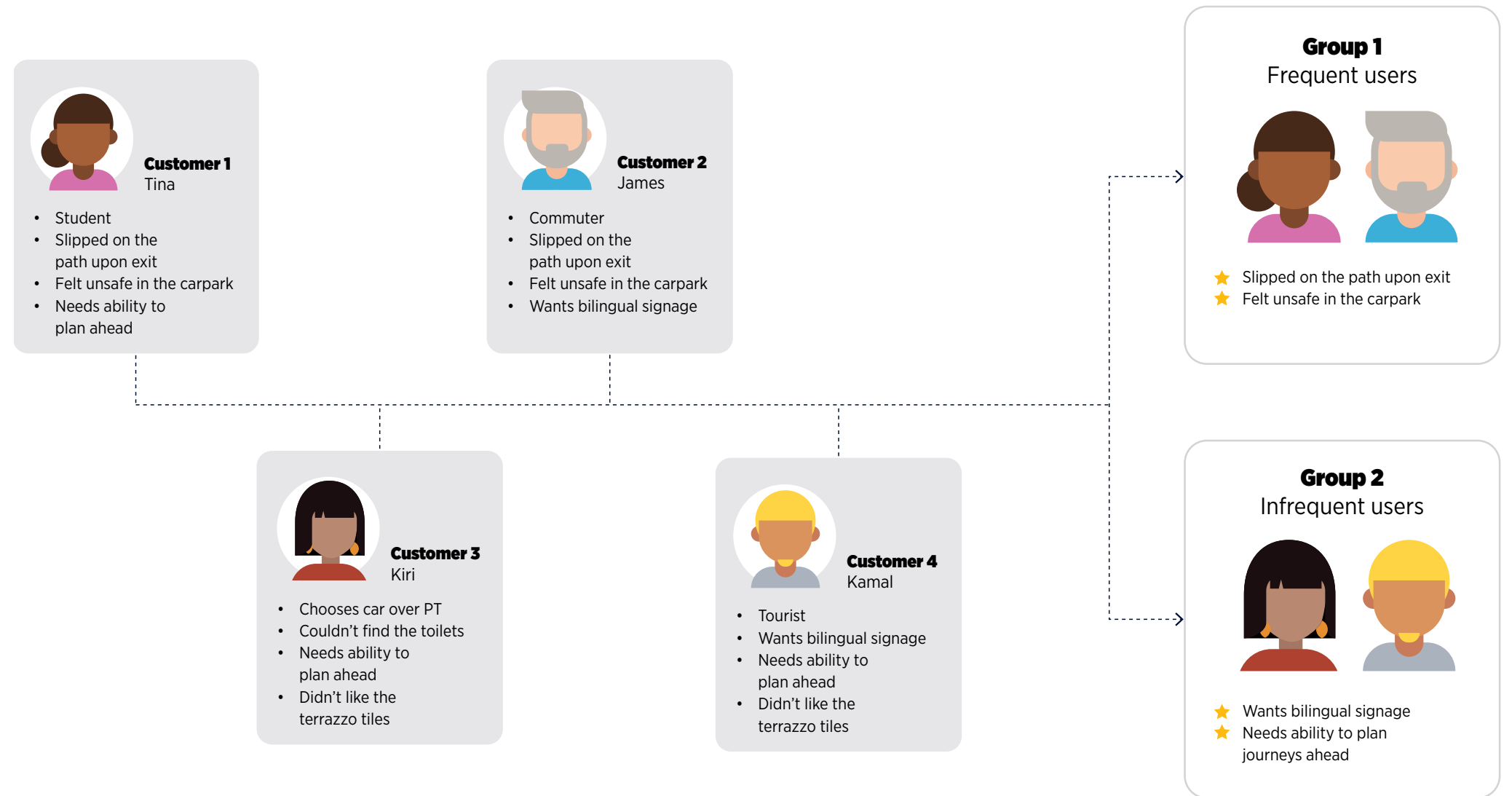
## 7.3 Insight tools

### Insight tools overview: Personas and grouping

We can group customers to help us identify common problems that need to be solved in our projects.

We can define customers in a number of different ways, e.g. as personas representing individual people or as groups of personas based on a collection of shared traits. Each offers unique opportunities for the development of insights. Individual personas offer insight into the breadth of customer needs. Groups of personas allow us to address our solutions efficiently towards broad groups.

In this section we look at how we synthesise test data to provide actionable insights. AT CX specialists will organise customers by individual persona or by groups, based on the requirements of the project.



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### Insight tools overview: Customer journeys

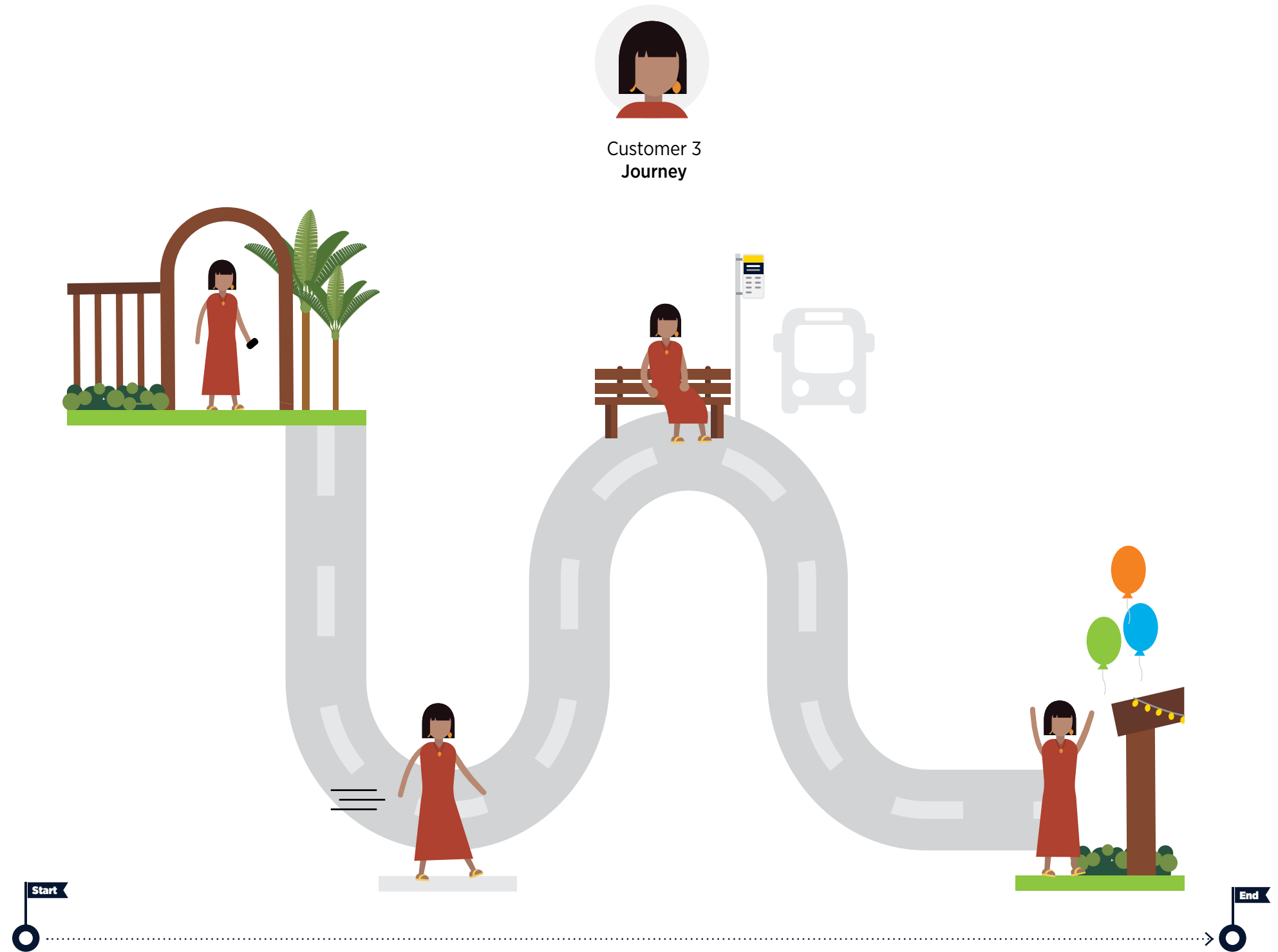
While personas provide us with a useful tool to understand customer needs, alone they are just datapoints. Journey maps use personas to help identify the best moments and locations to respond to needs. Ensuring seamless customer journeys is a primary function for AT.

**Door-to-door journeys**

A customer's journey begins even before they consider travelling, with the awareness that travel options exist. It ends after their arrival at a destination. The points of interaction with AT that occur along this journey are called touchpoints.

**Mapping touchpoints**

We map the moments and touchpoints along a journey as observed in testing, e.g. Persona A did this thing at this moment on their journey. Even without customer testing, persona journeys can be imagined and mapped as an exercise to discover ideal moments to support or intervene on their journey.



Stage 1	Stage 2	Stage 3	Stage 4
<ul style="list-style-type: none"> <li>• Customer 3 pre-searched their route online; however they haven't taken a bus in years.</li> <li>• They leave their house on foot to walk to the new bus interchange.</li> </ul>	<ul style="list-style-type: none"> <li>• They arrive at the new bus interchange, but need to rush to the toilet before their bus arrives.</li> </ul>	<ul style="list-style-type: none"> <li>• Their bus arrives on time, but they are unsure when to get off.</li> <li>• They use the AT Mobile app and on-bus audio announcements to help guide them through their journey</li> </ul>	<ul style="list-style-type: none"> <li>• They make it to their destination on time and enjoy not having to worry about parking.</li> <li>• The positive experience makes them consider using buses more often.</li> </ul>

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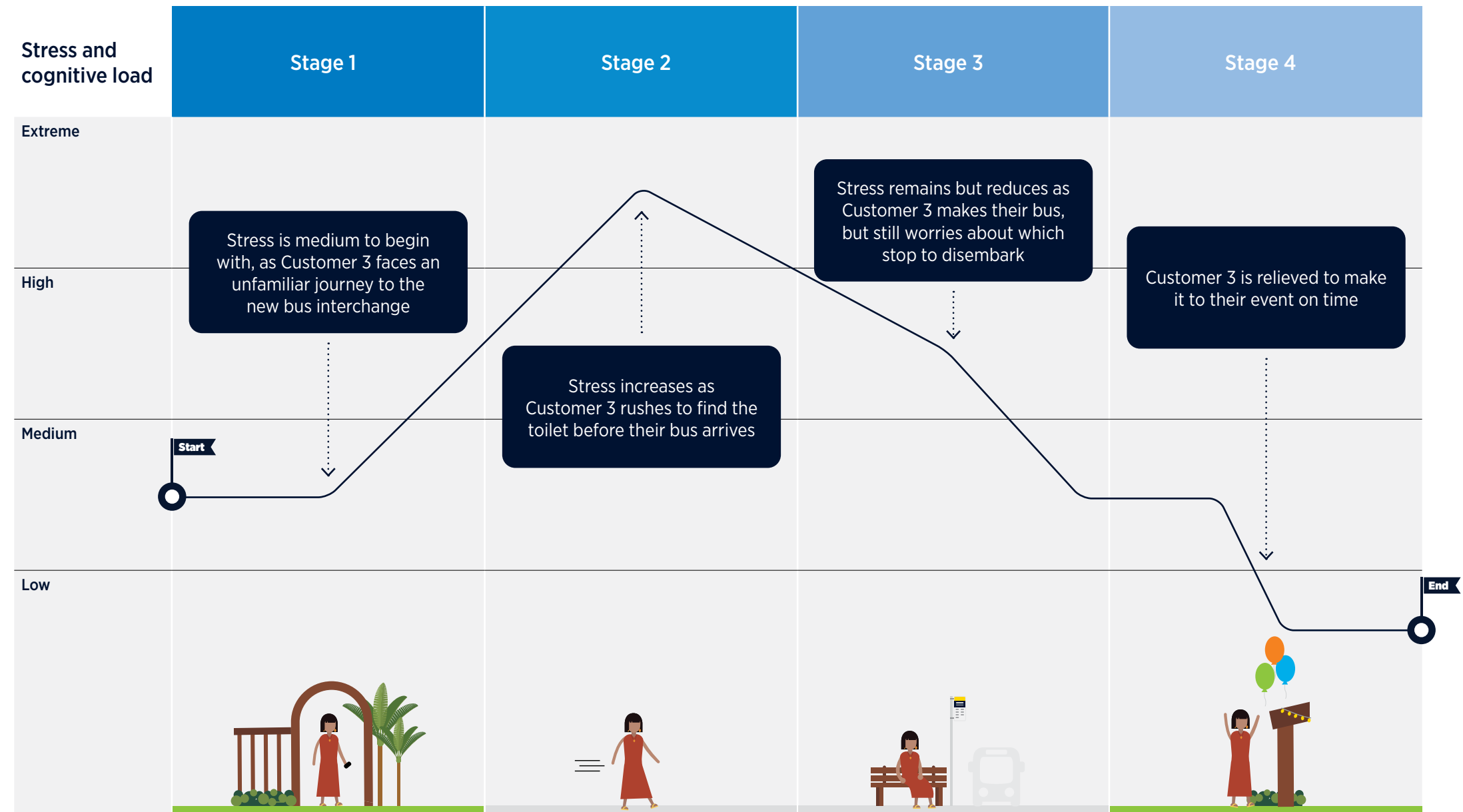
### Insight tools overview: Customer journeys

Customer journeys provide us with the opportunity to map different metrics as they travel. This might be levels of satisfaction or moments of stress. We can then track these metrics as customers interact with the network across their journey.

We can look at the impact of each data point on customer needs across a journey—what was the state of mind of the customer when confronted by a decision or when they interact with a particular piece of infrastructure? We can use these data points to establish findings and respond to unaddressed needs.



Customer 3 Journey



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## 7.3 Insight tools

### Insight tools overview: Synthesising data into insights

Once data points have been contextualised by journey stage, we can then start grouping, analysing and shaping findings into actionable insights. This can be a highly statistical process of analysis or a quick exercise on a whiteboard. A CX specialist will manage this process, but they may seek project involvement to help validate useful themes.

**Grouping findings**

Frequently occurring findings may be the most obvious to address, however, it's crucial to work hard to remove our own biases.

- Are the findings frequent enough to meet our project benchmark for action?
- Is the problem AT, public transport in general or something else?
- Are the patterns inherent to the data, or influenced by participant perspectives or our interpretation?

**Analysing data**

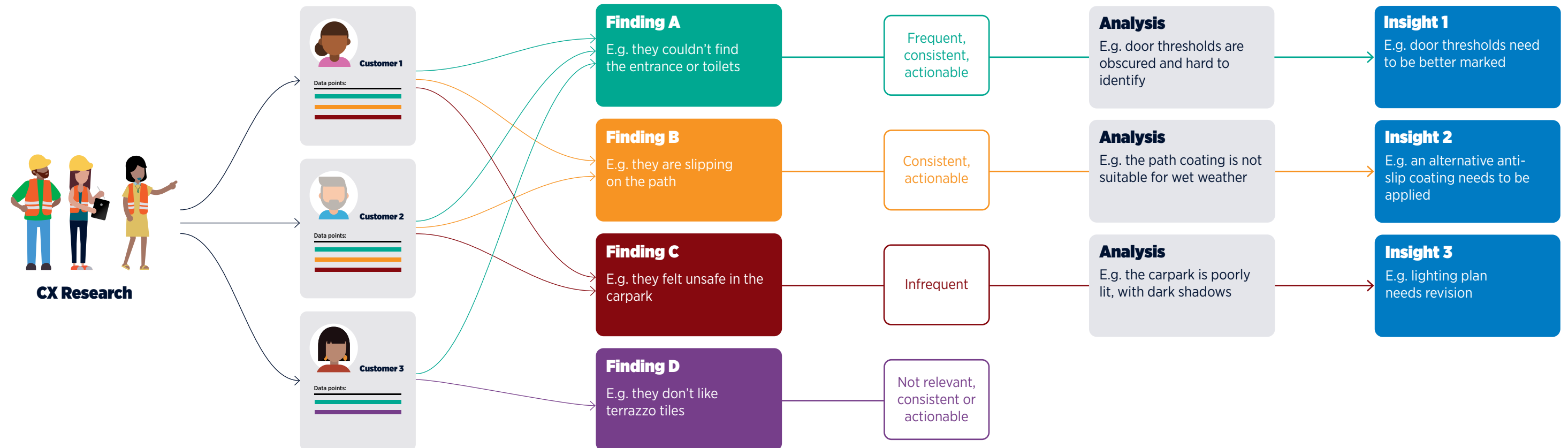
We interrogate our findings to understand how they impact our project. During this process, it's important that we are careful in how we critique the data as we filter and sort it.

- Are the findings best addressed by infrastructure or do they point to different solutions?
- Are the findings in agreement or do they contradict?
- Do the findings challenge assumptions?
- Do different tools reveal consistent patterns?

**Distilling insights**

Findings alone don't provide actions for the project to resolve. By analysing findings, we determine the drivers of customer satisfaction, which become actionable insights.

- Insights that are applicable to our scope must be addressed.
- Insights that are one-off, non-representative or out-of-scope might indicate a change in scope, or at the very least a requirement to document for a later scope to address.



# 8

## Te mahi i runga i te māramatanga Acting on insights

Insights provided by customer research have varying degrees of importance to project outcomes, from those that impact widely across its scope, to those that have only minor significance.

Not all insights should be used by the project without careful consideration; AT's CX specialists balance the scale of impact that insights present. This section provides background on how

CX specialists will turn insights into action items for project designers, feeding into the project as indicated in Part 2.

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## 8.1 Defining a priority

### How you can expect data to be used for the project

Prioritisation is the process of ranking insights based on project priorities to create actionable recommendations. All insights by default reflect some kind of customer need. However, insights still need to be rationalised for the project.

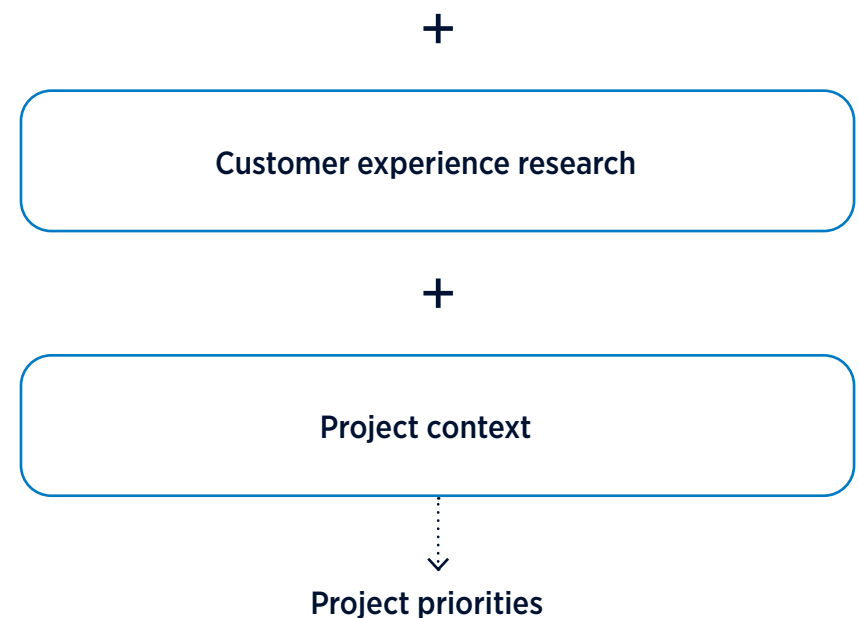
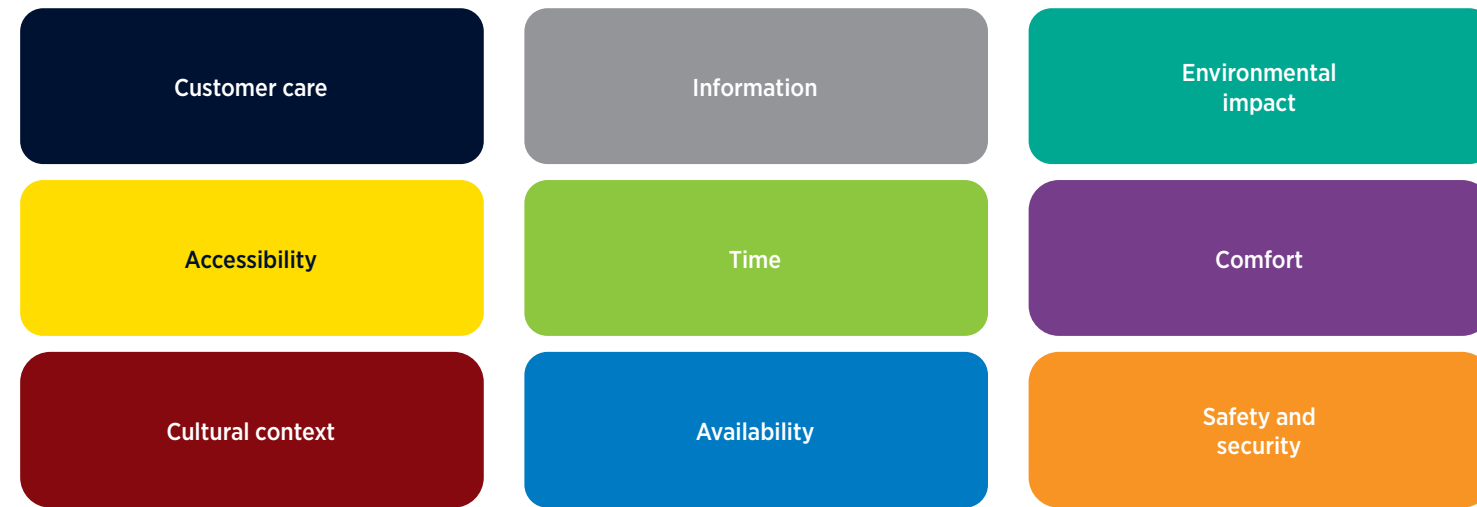
This section gives project managers an overview of the considerations and language used by CX specialists as they prioritise design inputs for the project. Additionally, these priorities can then form metrics for validation during design iterations or after project close-out.

**De-risking projects through prioritisation**

In CX, priorities are used to de-risk in several ways. They ensure that customer issues are caught early in the design process when they can be cheaply addressed, rather than later, when cost to remediate may become excessive.

The project must demonstrate it is responding to customer needs as demonstrated by customer standards and relevant frameworks. Through a prioritisation process, the CX specialist will guide the project to ensure it is spending money addressing needs in the right way.

Relevant customer standards (minimum requirements)



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## 8.2 Priority fundamentals

### Where change is viable, feasible, desirable

The scale of the project defines how CX specialists address design priorities; the more impactful the change for customers, the more robust customer insights need to be. CX research considers the impacts of design choices beyond the immediate project.

#### Prioritising impacts

A CX specialist will balance the work needed against the value for customers: *does the work justify the disruption caused to enact it? Does the scope provide for any low-hanging fruit?* There may be many low impact changes that can cumulatively improve customer outcomes. Grading insights based on scale, viability and impact helps build the case for change. This process occurs before project initiation, e.g. as part of a business case, as well as during a project as targeted research is conducted.

#### Whole of life

Beyond the initial build, AT considers the whole-of-life cost of a project outcome. This includes the ongoing operational and maintenance cost, and how this is borne across the network.

#### Factoring in cost of the change

There are three aspects to cost that explore value from both the customer's and AT's perspective:

- Does the business case provide scope to address emerging insights that evidence a need for change? Is it viable?
- Does the customer benefit evidenced by the insight justify the financial expense for AT either within the existing project or by challenging its scope? Is it feasible?
- Where business case and customer need align, can change actually be made in a way that is responsible for AT or aligns with AT's long-term goals? Is it desirable?

The answer to each aspect posed can be used as part of the project validation process, i.e. customers and/or AT received benefit from the change that justified the expense.

#### Justifying the impacts of change:

##### Is it viable?

Does the business case allow for the required change to be factored in? Does the change align with the business case?

##### Is it feasible?

Does the project scope allow for the required change? I.e. what is the cost to build, disruption to customers, reputation risk of not doing it?

##### Is it desirable?

What is the long-term benefit for customers? I.e. there is improved patronage; what is the cost to maintain; are there improvements to customer satisfaction?

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## 8.3 Priority methodologies

### Methodologies for prioritisation of insights

There are a number of ways to help align CX insights with design priorities. The approaches listed here are not prescriptive or exhaustive, but provide an overview of some of the most commonly applied techniques used by a CX specialist to filter the right insights for a project.

A project cannot build everything that customers could possibly need or want. Insights help align the design to customer needs. Prioritisation helps align insights to project realities by categorising them against project priorities. This ensures project investment occurs in the places most likely to achieve success for customers within its scope.

**Project priorities or customer outcomes**

The primary lens through which insights are prioritised is that of agreed customer outcomes for the project—its priorities (as documented in the business case and maintained in the customer plan).

**Organisational or customer-focused risk management: satisfaction, equity and inclusion**

Prioritise addressing insights that, if ignored, pose the greatest risk of system failure or customer dissatisfaction. Or alternately, prioritise attending to insights that elevate issues that disproportionately affect vulnerable or undeserved groups, acknowledging that those needs can be unpredictable and change over time.

In both cases, risk is the defining factor that can be utilised to rank or prioritise insights.

**Financial lens, or the cost matrix**

Similar to managing risk, cost can be used as a practical factor when prioritising customer insights. Insights can be ranked in this regard, as large numbers of small, quick wins can provide benefits that outweigh smaller numbers of big ticket items.

**Other prioritisation methodologies**

Other methodologies that may be encountered:

- **Customer journey mapping**  
Understanding a customer’s journey can help identify locations and journey stages where pain points and opportunities for positive intervention cluster.
- **Kano model**  
The Kano model helps prioritise change based on impacts to customer satisfaction. Insights are categorised into basic needs, performance needs and unexpected value uncovered by research.
- **MoSCoW prioritisation**  
**M**ust have, **S**hould have, **C**ould have, **W**on’t have. The MoSCoW method helps prioritisation of insights when project resources are limited.

**Layering methodologies**

Similar to the layering of testing and research methodologies, each prioritisation methodology will have gaps that can be moderated by overlaying more than one approach. A project manager or designer may expect to see design priorities ranked more than one approach.

Insights are systematically prioritised based on either typical methodologies or project considerations:



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## 8.4 Risk factors

### Managing risk

There are a number of baseline AT-specific considerations that must be accounted for beyond standard prioritisation frameworks. A risk-based framework ties prioritisation to AT’s organisational commitments.

Risks shown on this page are exemplar; actual project risks to outcomes are identified and developed over time for the project.

**AT’s organisational commitments**

AT has strategic organisational commitments that must be considered as part of any customer insight prioritisation. Does an insight risk undermining AT’s organisational values or commitments if it fails to be addressed? Does the insight place AT’s reputation at risk? Does it impact on service adoption or usage, particularly in relation to project objectives?

**Universal design and equity**

Insights may evidence disproportionate impacts on those who are in a typically under-served group, such as customers with low vision or mobility needs. Does the insight evidence negative impacts to those priority customers with specific accessibility needs, be they permanent or temporary?

**Financial risk**

Does ignoring or down-prioritising an insight increase the likelihood of remedial work later? What are the financial impacts of putting an insight off till later?

Financial risks are twofold for external or tightly scoped projects, where over-focus on current scope may inadvertently out-scope insights that lead to remedial or other works beyond the current scope.

**Mana whenua**

Does an insight place AT’s partnerships with iwi and hapū at risk?

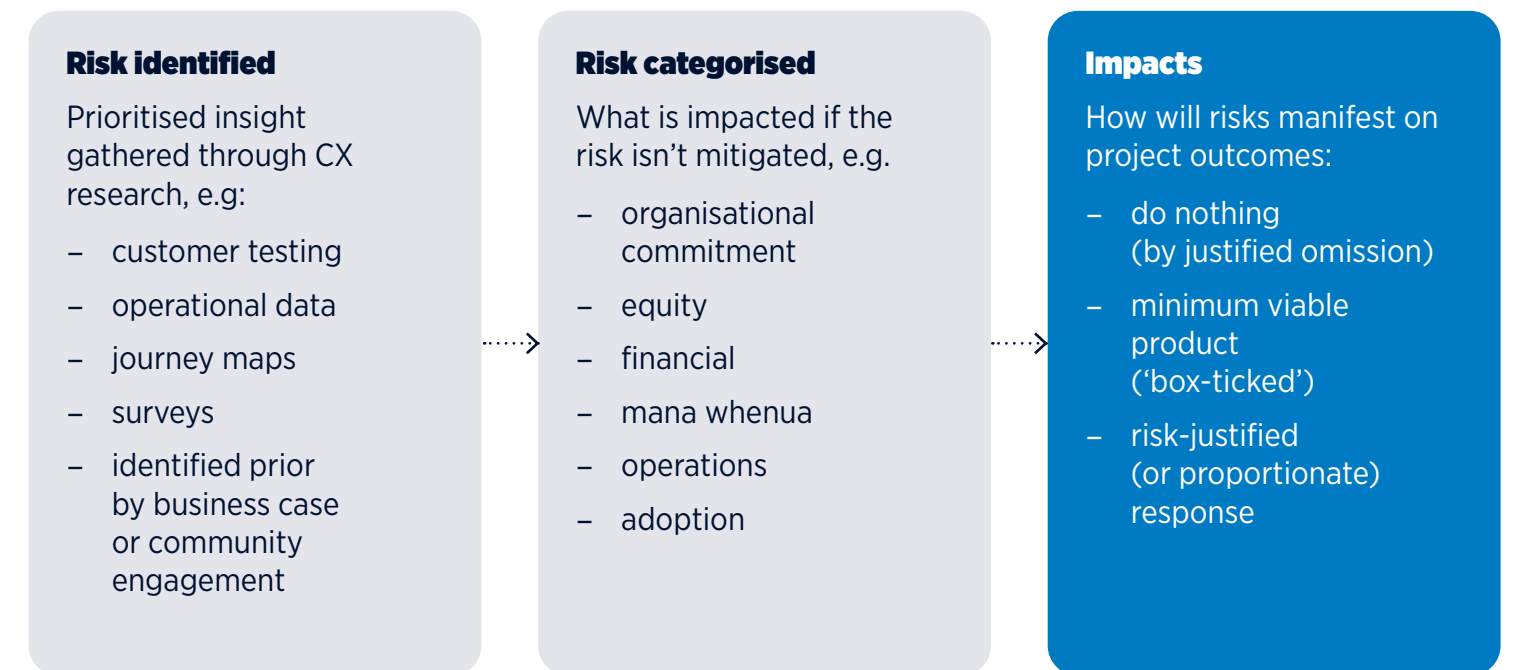
**Operations**

Does not responding to an insight increase the likelihood of service or network failure? Does the insight place strains on operations or delivery requirements? Does an insight indicate risks to safety?

**Adoption rate**

Does the insight place projected adoption rates at risk, or undermine patronage expectations for the project?

**Risks are rationalised by project CX requirements:**



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## 8.5 Navigating established norms

### When gaps between design standards and customer needs occur

The world is challenging, but sometimes standards don't reflect this. What we understand is a positive outcome for customers may differ over time due to societal, technological and environmental changes. One of the most important functions of CX is to validate that best design practice is still, in fact, just that: best practice.

When we research with customers, we eventually encounter data that contradicts our design practice. This establishes risk for the project—that it will fail to address the customer need it was designed for, potentially leading to additional reputation cost and remedial works.

For this reason, we always formulate a response to misalignment between the project and customer needs. The way in which we respond depends on the nature of the contradiction and the type of requirement it challenges.

**Considerations when responding to gaps between customer needs and established standards;**

- What customer need was the standard addressing, and does the current project context still align with this?
- Has the standard been appropriately applied to the project?
- Has the design solution for customers been superseded by global practice? E.g. does a current local standard align with international best practice?

**How do we incorporate challenges to project requirements into the project?**

Prior to design phases, conflicts between customer needs and standards may have been identified and documented in the business case the design is responding to.

During design phases, CX priorities are documented in the CX Plan and provided by direct recommendation. They have been:

- evidenced through customer research
- documented as potential risk(s) to project outcomes

Designers can then coordinate an appropriate design response through project delivery.

When customer needs conflict with current standards			
Standard	Nature of standard	Example standards	CX recommendation
<b>Informal or voluntary</b>	The requirement is a norm that has grown out of typical design processes or industry practice	<i>'We do this because it has always been done this way'</i>	Design must be iterated to align with validated customer needs.
<b>Advisory</b>	The requirement is formally recognised and respected, but not legally binding	ISO, NZ/AU standards, CPTED, design methods	Consult with AT to evaluate whether design must be iterated to align with validated customer needs.
<b>Contractual</b>	A formal requirement for AT projects	ISO, NZ standards written into tender/ scope, AT's Transport Design Manual	Consult with AT to evaluate whether design must be iterated to align with validated customer needs. May require formal variation to initial project scope.
<b>Legal</b>	Requirements either directly or indirectly written into law	The New Zealand Building Code, fire safety regulation, discrimination law	Document validated customer needs, investigate alternatives within law. The project shouldn't directly challenge legal requirements.

# 9

## **Papakupu whāiti** **Glossary of terms**

There are many terms used throughout the design process, often to describe the same things. The terms in this section form a standardised vocabulary for CX.

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## 9.1 General terminology

### Describing people:

#### Customers

Formal term to describe individuals who engage with AT services, whether paid or not. Use in place of terms like: people, users, citizens, passengers.

#### Community

Used to describe customers in a local area when engaged as a group.

### Describing journeys:

#### Door to door, end-to-end journeys, whole of journey

AT accounts for customer journeys as they naturally occur—from the moment a customer decides to make a journey, through their pre-planning, until they reach their intended destination. Our project scope is usually only a small part of a wider journey.

#### Interchange

Customers transfer between AT-supported travel modes, typically bus, train or ferry.

#### Integrated journeys

This means a customer's journey treated holistically, not as individual components. Within a journey, a customer may walk or ride to a bus stop, transfer between bus and train, and walk some more. We consider the whole integrated experience as we plan to help customers across the length of their journey. For example, we align timetables where logically connected services interchange.

#### First and final leg

AT supports customers over the length of their journey. That includes how they connect to transport modes from their departure point, be that walking, riding or other.

### CX methodology:

#### Universal design

A design approach, creating services, environments and content that are usable by the widest possible range of people, accounting for age, ability and unforeseen circumstances. Auckland Council and Auckland Transport prescribe a universal design approach to work.

#### CPTED

CPTED, or Crime Prevention Through Environmental Design, is about designing spaces that by default discourage crime and increase people's sense of safety.

#### SiD

Safety in Design works to identify and mitigate risk to customer safety through deliberate design choice across the life cycle of an asset.

#### Human-Centred Design

A design methodology, whereby design is performed in response to people's needs.