Transport
for NSW

Information Session

5 February 2025

transport.nsw.gov.au

NSW
GOVERNMENT

Hello, thank you for joining us today to talk through our latest innovation challenge, Context Aware Travel. My name is Brandon, and I am an Innovation Lead at Transport for NSW.

Our goal with this challenge is to get your help transforming how passengers' access and use transport information during unplanned disruptions.

In this session we will be hearing from experts who will guide us through the challenge of communicating unplanned disruptions, the impact to customers and what information we have available to share.

During the session, please add any questions you might have to the chat and we will answer them during the Q and A.

Transport pays respect to Elders past and present, and recognises and celebrates the diversity of Aboriginal peoples and their ongoing cultures and connections to the lands and waters of NSW.

The information session today will provide you with valuable insights into the challenge of communicating with customers as unplanned disruptions unfold from identifying and evaluating a disruption, right notifying customers and their choices.

Before we get into the details, let's explore what's involved in an innovation challenge.

The first step in the Innovation challenge is to submit your idea through our website, explaining to us how your idea works, what support you need and what a trial would look like. We then assess your ideas choosing 5 solutions to pitch.

This brings us to our next stage pitching. Applicants are invited to present a 5-minute pitch of their idea to a panel of experts. These experts will ask questions and decide which solutions address the challenge the best.

The best solutions then take part in our Incubate stage. This is when we will help you with getting your solution ready for testing, making sure it meets government standards and will work in a test environment.

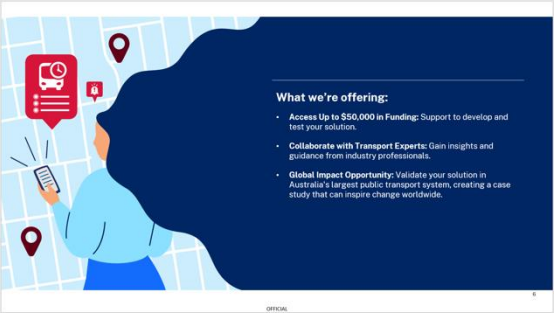
Achieving this we will deploy your solution for 10 weeks inviting test groups to use it and provide feedback. During the trial you will run experiments to collect data on your solution testing different hypothesis.

The final stage of this process is to evaluate the trial, receiving feedback and insights to see if the solution met the challenge. You'll then be asked to remove the solution and make good any changes you made during the trial.

A technology trial is a short-term test run of a new technology or digital solution. This trial allows both the innovators and TfNSW to see how the technology performs in a real-world setting. It's a way to evaluate whether the idea is practical, effective, and worth investing in further.

For this challenge you'll be designing a proof-of-concept (PoC), a short-term experiment, that aims to validate the fit between the challenge and your proposed solution.

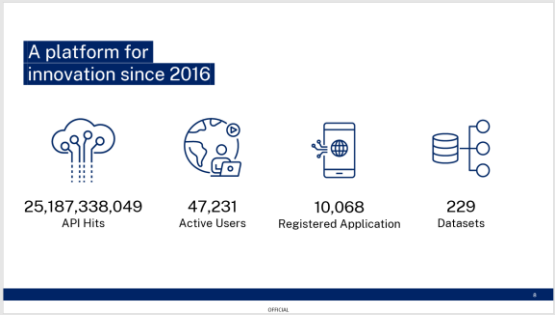
A successful PoC does not result in an endorsement or a guarantee that the solution will be implemented on a larger scale. Instead, the PoC serves as a stepping stone to build a stronger business case for further exploration and development.



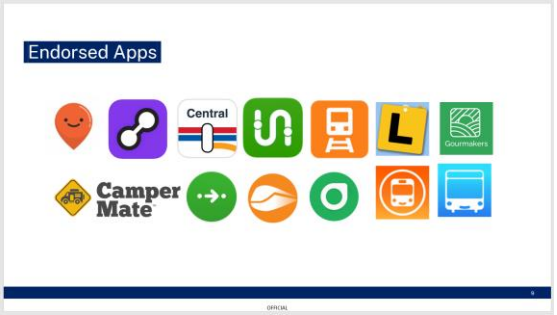
If your solution is chosen to trial, we will provide you with up to $50,000 in Funding, the opportunity to collaborate with transport experts and the chance to demonstrate your solution on Australia's largest public transport system, helping you build a case study to grow your business.

To dive deeper into the Open Data hub, I would like to invite David Phillips from the Open Data team to talk through Transports Open Data program.

Hi everyone, my name is David Phillips, Data and Apps program lead in the Open data and innovation team at Transport for NSW. I'm here to give you a brief overview of Transports open data program.

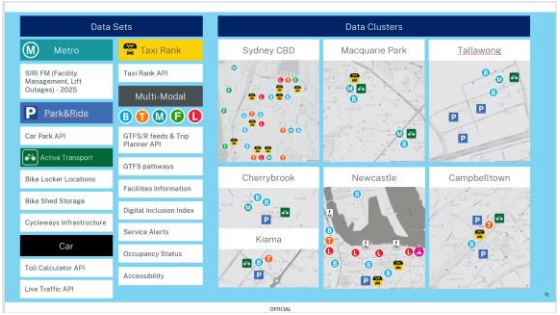


The Transport Open Data Hub is an initiative that provides free and Open Access to a wide range of transport-related data. This hub serves over 47,000 active users including citizens, communities, partners, industry, developers and academia. These users can access more than 200 different data sets through the hub.



The data from the Transport Open Data Hub is used in several ways. First, it is fed directly into various transport operational centres and provided to frontline staff to help with operations. We also use the data in Transport for NSW owned products like TransportNSW.Info Trip Planner, and the Opal Travel App. The hub also provides data feeds to partners and 3rd party apps such as TripView, AnyTrip, Google Maps and the apps you can see on screen. These apps use the data to provide real time journey information to over 1.5 million customers monthly.

Transport Open Data runs regular innovation challenges. These challenges are designed to address a need of the community or trial an emerging technology. We have run 22 innovation challenges to date. Our most recently completed challenge was the bus boarding assistant trial, where we tested if an API could be used to remote hail a bus improving the travel experience for blind, visually impaired and disabled passengers.

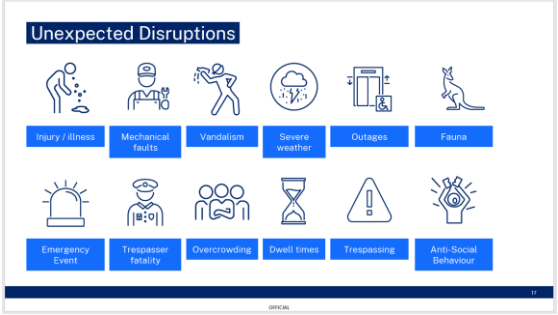


For this innovation challenge, we're encouraging participants to look at opportunities where multiple data sets can come together into a single solution. To help you get kicked started we've identified where multiple open data sets coexists by place and topic. You can find out more about these locations in the Innovation Challenge Toolkit on our website.

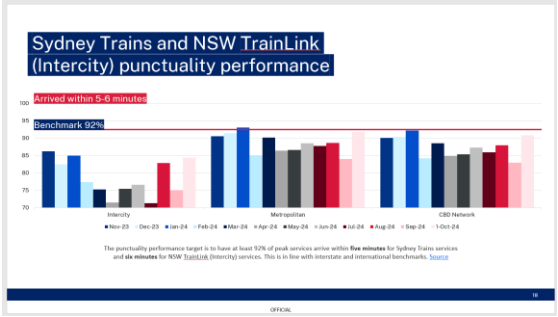
Now that you're all a little more familiar with the Open Data Hub and what we have to offer, we can start to unpack the challenge, starting with the opportunity we have identified.

To walk you through the challenge of communicating unplanned disruptions we've invited Brendan Rabbitt Director, Surface Transport to discuss this opportunity to innovate.

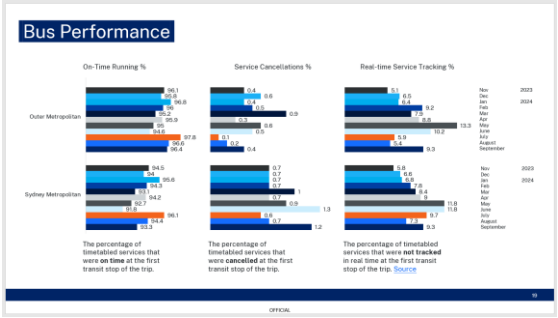
Hi everyone, I'm Brendan. I work in the Traffic Management Centre, where I help manage disruptions and changes to the transport network.



Every day there are a range of unplanned disruptions that could have an impact on customer journeys. For example, on average, an incident involving an ill customer affects 20 trains or up to 20,000 customers. Some disruptions can be over very quickly enabling customers to continue their journeys. On other occasions disruptions can halt services from operating for several hours. All these potential disruptions displayed on the screen can have a significant impact on the journeys of everyday customers.



What is the impact of all this disruption on our network? In the graph we can see how it's affecting trains. Our target is to have at least 92% of peak service arrive within 5 minutes for Sydney trains and 6 minutes for intercity services. Every month below 100% is a month where we had service delayed more than 5 minutes most likely due to unplanned disruptions.



These graphs show the impact on buses. On the far-right graph we can see the percent of monthly services where a bus was not tracked in real-time. In the middle when services were cancelled and on the left when buses were delayed.

We all know how difficult it is to plan for the unplanned and unfortunately there is not much we can do to mitigate against some disruptions, such as sudden severe weather, an emergency event or a passenger becoming ill on a service. We've just explored how it impacts on Transport but how do unplanned disruptions affect customers?

We've invited customer expert and service design lead Elise Loeuille to shed some light on this.

Hi, I'm Elise and I help Transport for NSW to understand how customers use our services. Today I'm going to be walking you through the journey of Ritkia whose trip is disrupted by the unexpected. As we work through her story, consider when and how your solution could help Ritika navigate an unplanned disruption.

Ritika lives a short 5- minute walk from the train station.

Ritika is taking her daughter to her ex-partner's house.

Ritika decides not to worry about journey planning and opts to head straight to the station.

Arriving at the platform, Ritika checks the digital display for the next train. She's delighted to see that her train will arrive in just one minute.

As Ritika approaches Central Station, she notices some smoke outside the train window.

Ritika takes out her phone to check for news or updates on the situation but finds very little information on news websites or the transport information app.

She's hesitant to get off the train but other customers don't look worried, so she follows them.

She's surprised that there is no announcement made at the station about the situation.

Ritika arrives at the crowded bus stop. The heat is intense, and she's worried about Asha, her daughter staying out in the sun.

People around her begin speculating about the cause of the building fire — some even suggesting it might be a terrorist attack.

The tension is high, and no one seems to know what to do next.

Ritika is trying to find the best alternative route but gets confused as she navigates through different apps.

She calls 131 500 for help, but the operator doesn't have specific information about the diversion.

They only inform her that her current bus stop is closed and that she'll need to catch a bus near Redfern.

Ritika feels stressed and deflated.

She tries to hurry to the other bus stop, but since she's unfamiliar with the area, she struggles to find her way.

Finally, Ritika reaches the bus stop.

A bus from a different route arrives, and she asks the driver about her service.

Unfortunately, the driver has no information on what's happening.

Finaly, her bus arrives. It is overcrowded, and she can't see out the window easily to find her location.

Ritika gets distracted while trying to calm Asha in the crowd and misses her stop.

Ritika has to walk even further to reach her ex-partner's place.

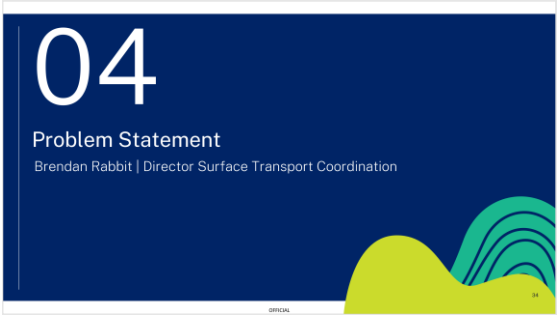
When she finally arrives, they get into an argument about her being late.

Frustrated, she cancels her dinner plans with friends and starts looking for a way to get home.

From the very beginning of the disruption, the frontline teams are actively engaging with anxious customers, even though they lack information about the situation. They are doing their best to manage the chaos and provide support despite the uncertainty.

The operational teams are doing their best to identify and resolve the issue, gathering information from emergency services and specialist teams.

The communication teams are waiting for verified information to update customers. In the meantime, the frontline staff and customers are doing their best to manage the situation.

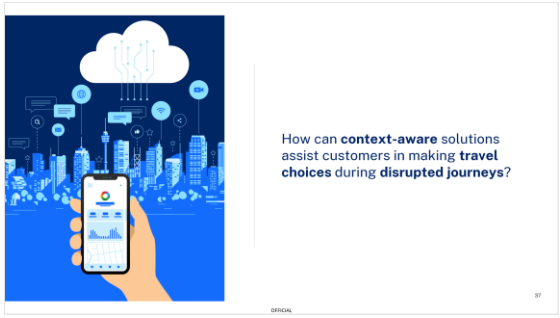


Thanks, Elise, for sharing those insights. Ritika's journey really highlights the impact of an unplanned disruption on everyday customers.

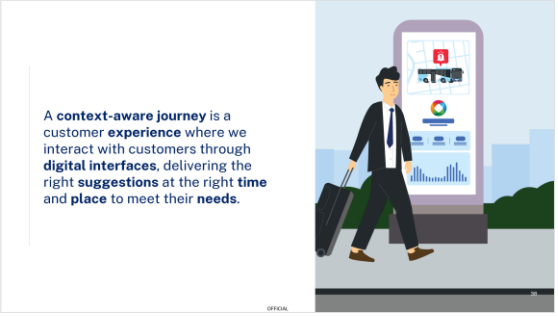
Ritika's story showed how customers are often unaware of the scale and impact of an incident as its being classified and immediately following an alert.

A great example of the unpredictability of disruption is when wildlife such as a kangaroo enters a rail corridor and explores the track. We have no way to predict the actions of the animal and whether it will significantly delay services. How do we give customers awareness of this?

Navigation Apps and GPS are a great example of a context aware solution in action. For example, when using Waze it might alert you that a vehicle is stopped in the shoulder of the motorway or a police vehicle is near. What about on google maps when it warns you of an incident or delay ahead and suggests mitigations. But importantly it doesn't notify everyone using the app just drivers approaching these incidents. This is an example of how digital solutions can forewarn customers about possible disruption based on their context.



Realising the scale and complexity of this issue we've decided to enlist your help in answering the question How can context aware solutions assist customer in making travel choices during disrupted journeys?



What do we mean by context-aware? A context-aware journey is a customer experience where we interact with customers through digital interfaces, delivering the right suggestions at the right time and place to meet their needs.

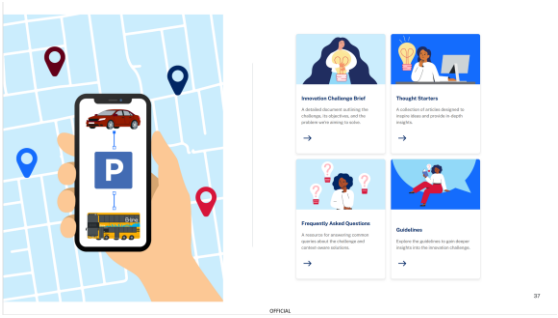
We need you to solve how we facilitate this customer experience.

You could suggest a new digital interface, a way to determine a customer's context or new tools
for getting the right information to customers.

An innovation challenge is an opportunity for us to explore all solution possible. If you have an idea we'd like to hear from you.

Thanks, Brendan, for walking us through the challenge of communicating unplanned disruptions to customers.

I'd like to welcome Sabrina to the screen who will be moderating our Q and A session.

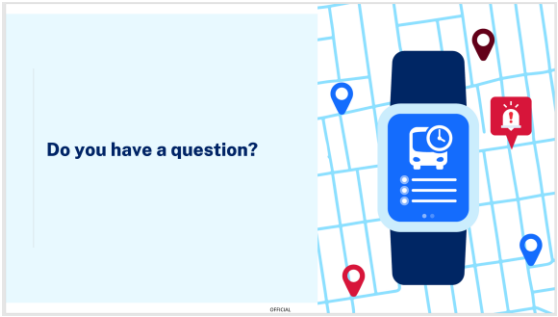


Thanks Brandon

Our experts will all be joining us on screen to answer the questions you've shared in the chat, and to discuss the challenge statement.

We're going to focus our conversation on the problem this innovation is attempting to solve. We want to make the most of having our experts here to delve deeper into the customer, unplanned disruptions and data.

If you have a question about the challenge process, please post it on the open data forum or refer to the guidelines on our website. The guidelines are a detailed document that step you through every stage, step and deliverable of the challenge.



To kick start our Q and A I'd like to welcome our speakers back on screen. Please remember to ask your questions in the chat. Any questions we don't get to will be answered after the session and added to the FAQ section of our Innovation Challenge landing page. Thanks, everyone. That Q+A concludes today's session.

I'd like to thank all our presenters for taking the time to be part of this information session and sharing their insights.

You can still ask question via our open data forum, which you can find on our website.

Applications for the innovation challenge will close at midnight Wednesday 19 February. You can find the application form on the open data hub website.

We look forward to seeing your ideas!

Thanks everyone.

© Transport for NSW

Users are welcome to copy, reproduce and distribute the information contained in this report for non-commercial purposes only, provided acknowledgement is given to Transport for NSW as the source.

NSW GOVERNMENT