

SMART, CONNECTED BRISBANE FRAMEWORK



Dedicated to a better Brisbane

Lord Mayor's Foreword



Brisbane is a great place to live, work and relax. It's a safe, vibrant, green and prosperous city, valued for its friendly and optimistic character and enjoyable lifestyle.

As Lord Mayor, I'm determined to make the Brisbane of tomorrow even better than the Brisbane of today. That's why we're working hard to get you home quicker and safer, while growing your Brisbane lifestyle with more to see and do in a city that's clean and green for future generations.

We are a Smart, Connected Brisbane, and our goal is to explore how innovation, technology and data can help accelerate the city's progress towards achieving our broader goals of liveability, sustainability and prosperity. This means we aren't driven by the latest technology, but rather by what will deliver a better Brisbane for residents, visitors, workers and businesses.

Using smart, connected thinking to make our city better is nothing new for Brisbane. Delivering free public Wi-Fi, using intelligent transport systems, installing smart watering devices and releasing Brisbane City Council data to the public, are all ways we have been using technology and data to deliver more community-focused outcomes for the city.

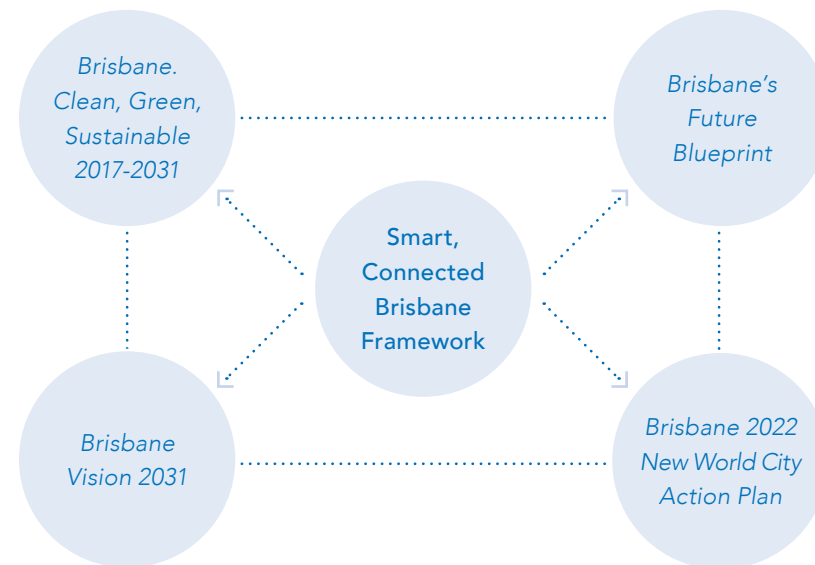
We know there's more to be done and we are committed to exploring how smart, connected opportunities can ensure Brisbane continues to prosper, while providing the services and infrastructure required to meet the needs of future generations.

Adrian Schrinner
Lord Mayor

Smart, Connected Brisbane Framework

Smart, connected thinking should underpin everything we do and how we do it. Smart, connected solutions can improve liveability through more personalised customer services, more efficient commuting and greater accessibility. These solutions can also enhance sustainability through more efficient asset management and environmental monitoring, and accelerate our city's prosperity by supporting local businesses, fostering innovation and sharing data for public and private use.

The concept of a 'smart city' is ever evolving, and the opportunities brought forward by new technology and innovation are always changing. We want the flexibility to explore new solutions as they arise. That's why we've taken the approach of this framework, setting four guiding principles that will direct our areas of focus and help us make smart decisions as new challenges arise and new solutions are found. We have also included criteria that we will use to identify, advocate for, and support the smart, connected projects that are going to deliver the greatest value to our city.



Brisbane's smart, connected journey so far

From developing a 3D modelling tool in 2009, to launching our Open Data website in 2015, Council has been delivering smart, connected projects for many years. Below is a snapshot of some of our key achievements so far.

- 1990**
 Began rolling out real-time telemetry gauges to monitor flood levels and rainfall across Brisbane and send information via radio waves.
- 2004**
 Developed the FloodWise Information System to provide Council officers with real-time rainfall and water level data to allow for timely and effective response in disaster management and flash flood response.
- 2009**
 Launched Virtual Brisbane, Council's digital 3D urban modelling and analysis tool.
- 2010**
 First Australian city to implement a functional large-scale Bluetooth system to monitor the road network in real time.
- 2012**
 First Australian city to appoint a Chief Digital Officer, and second in the world.
- 2012**
 Delivered Brisbane's first electric vehicle charging station.
- 2013**
 Released the *Digital Brisbane Strategy*.
- 2014**
 Launched Council's interactive mapping tool, allowing residents to see what planning scheme elements apply to their property.
- 2015**
 Launched Council's Open Data website.
- 2015**
 Began the roll-out of free Wi-Fi in the inner city and key suburban precincts.
- 2015**
 Launched Better Brisbane Proposals, Council's procurement platform that supports collaboration on ideas that help make Brisbane better.
- 2015-2019**
 Began installing centralised irrigation water monitoring systems at Council's sports grounds. In 2016, Council committed to delivering centralised irrigation water monitoring systems at 20 sports grounds a year for four years, to be completed in 2019.
- 2016**
 Opened The Capital, Brisbane's start-up and innovation hub.
- 2016**
 Held the inaugural Brisbane Innovate event, an open innovation platform that encourages collaboration to solve civic challenges.
- 2017**
 Established the Smart, Connected Brisbane Steering Committee and the Smart, Connected Brisbane Office.
- 2017**
 Released *Digital Brisbane 2.0* to empower residents and businesses to thrive in a globally connected, digitally enabled world.
- 2017**
 Introduced the Emergency Vehicle Prioritisation initiative in partnership with Queensland Government, giving emergency vehicles a green light corridor on the way to emergencies.
- 2017**
 Released *Smart, Connected Brisbane*.
- 2018**
 Announced the establishment of the Brisbane Innovate Lab to support innovation and collaboration to solve civic challenges.
- 2018**
 Launched a mobile-friendly version of City Plan interactive mapping, allowing customers to access the interactive maps wherever they are.
- 2018**
 Undertook 'Plan your Brisbane' citywide engagement, including 270,000 interactions with the community and more than 100,000 residents providing feedback to create *Brisbane's Future Blueprint*. Engagement included a digital tool that had greater reach than any previous tool of its kind, played by more than 82,000 Brisbane participants.
- 2019**
 Built a publicly accessible, trial Low-Powered Wide-Area Network (LPWAN), comprising six gateways covering approximately 200 km² of Brisbane.
- 2019**
 Committed to installing 20 smart poles in Brisbane. The smart poles will have the ability to collect real-time data such as pedestrian and cyclist traffic, noise levels, rising flood waters and air quality.



Guiding principles

As we continue to mature in our capabilities, we need clear guiding principles to ensure we remain focused on using smart, connected thinking to achieve our broader citywide goals and aspirations. We also need to make sure we have the internal foundations in place to achieve these outcomes.

Each guiding principle is underpinned by access to sustainable funding. While internal funding will continue to be made available, Council will also look to sources of external funding such as Queensland and Australian government grants, and private partnerships to support the delivery of smart, connected projects.



1. Creating a better place to live, work and relax

Everything we do is to make Brisbane a great place to live, work, relax and do business – whether that’s maintaining our local parks and waterways, upgrading local roads, delivering new transport options or creating vibrant public spaces and events in our city.

Council has worked with the community to develop plans and strategies that set clear goals and aspirations for our city – *Brisbane Vision 2031*, *Brisbane 2022 New World City Action Plan*, *Brisbane. Clean, Green, Sustainable 2017-2031* and *Brisbane’s Future Blueprint*. We don’t want to set separate goals for Smart, Connected Brisbane, but rather use smart, connected thinking to support and accelerate our progress under these existing strategies.

This means we aren’t interested in technology for technology’s sake. Our smart, connected projects will focus on the people at the heart of our city and how we can use data, technology and innovation to preserve and enhance Brisbane’s liveability, sustainability and prosperity into the future.

Enablers

- Clear goals and aspirations for our city’s future
 - *Brisbane Vision 2031*
 - *Brisbane 2022 New World City Action Plan*
 - *Brisbane. Clean, Green, Sustainable 2017-2031*
 - *Brisbane’s Future Blueprint*
- A focus on **user-centred** design
 - Building capacity in design-thinking methodology
 - Utilising personas in service design
- An **outcome-first** approach
 - Delivering ICT roadmaps to understand business priorities and challenges and identify appropriate IT solutions



2. Partnering with others to innovate, test and trial, and drive city progress

We know we don't have all the answers. By working in partnership with universities, start-ups, other levels of government and private industry, we can harness the power of the collective, explore new solutions and make a real difference for Brisbane. Adopting a collaborative model will also deliver economic benefits for our city by supporting local start-ups and established businesses.

We also need to foster a city culture that supports testing and trialling new solutions. It will be through testing, trialling, learning and refining that we can uncover innovative, unique solutions to our city's problems and drive real progress.

Where possible, we will also look to other cities and organisations that have implemented smart city initiatives and learn from their challenges and success.

Enablers

- Pathways to collaboration
 - Supporting Brisbane Innovate and the Brisbane Innovate Lab, led by Brisbane Marketing
 - Exploring ways to partner with universities and private industry to test new solutions and ideas
 - Establishing strategic relationships with other regional, national and global cities to learn, share experiences and explore opportunities to work together





3. Optimising city assets and services through data and technology

From free Wi-Fi to city lighting, roads, waste collection, libraries and public spaces, Council delivers infrastructure and services that make our city a great place for residents, businesses, workers and visitors.

A key characteristic of a Smart, Connected Brisbane is 'Efficient'. Through our smart, connected projects, we will look for ways to use technology and data to improve our city's assets and services, making them more efficient for both Council and our customers.

We will be cognisant of the rate at which technology is evolving and will look for ways to future-proof infrastructure to ensure long-term value and benefit. We will explore opportunities to use our assets to learn more about our operations and drive business efficiency.

Enablers

- **Fit-for-purpose** data infrastructure
 - Trialling Internet of Things (IoT) sensors and networks to assess their suitability for capturing data on assets and services
 - Exploring 'as-a-service' models to support organisational agility
 - Embedding clear data standards and requirements for transmission and storage
- **Future-proofed** infrastructure
 - Exploring potential for digital tools to support infrastructure maintenance and operation
 - Considering future applications and innovation in procurement activities





4. Turning information into intelligence to drive informed decisions

Collecting data isn't enough. We need to analyse that data to understand what's happening now and what's likely to happen next. By using data to understand how our city works, what our citizens want and how our assets perform, we can continually improve our services and do better with the resources we have.

Key to this is making sure we're building the skills and capabilities to analyse data, draw insights and use these insights to make informed decisions. We will invest in data platforms and software that support business intelligence and advanced analytics, and we'll look to private industry to help us explore more complex data science initiatives.

We will continue to make city data available to the community to drive civic innovation and ensure transparency of Council's services.

Enablers

- **High-quality data**
 - Implementing a robust data governance framework
 - Embedding information governance processes and skills across Council to improve data literacy
- **Business intelligence** and data analytics
 - Building internal business intelligence and analytics capabilities
 - Investing in visualisation and analytics tools and software
 - Establishing a data analytics Community of Practice to share learnings and ideas
 - Harnessing the skills of private industry for advanced data science initiatives
- **Open and shared data**
 - Delivering open and shared data and promoting its availability for community use

Smart, Connected Brisbane criteria

The opportunities provided by technology and innovation are endless. That's why we have developed criteria to help us identify, advocate for, and support the smart, connected projects that will deliver the best outcomes for the city and Council. We will continue to review and evolve these criteria in the years to come, as our smart city maturity and capabilities grow.

- **Contribute to an existing goal or target**
Projects help to achieve existing goals under *Brisbane Vision 2031, Brisbane 2022 New World City Action Plan, Brisbane. Clean, Green, Sustainable 2017-2031* and *Brisbane's Future Blueprint*.
- **Advance social equity and inclusiveness**
Projects make Brisbane a more accessible and inclusive city for people of all ages, abilities and backgrounds.
- **Scalable and sustainable**
Projects have the potential to be scaled and replicated across more than one service area, asset class or business model, and have viability beyond a pilot or trial.
- **Harness, utilise or communicate insights from data**
Projects capture or make use of data to improve our services and give the community access to the information they want, while maintaining privacy and security.
- **Align with the characteristics of a Smart, Connected Brisbane**
Projects help build an insightful, efficient, prosperous, transparent, inclusive and personalised Brisbane.
- **Solve a problem or build capabilities**
Projects solve a key city or Council challenge or build our skills and capabilities to do so.
- **Accelerate, enhance or extend our services**
Projects give us the opportunity to do what we do quicker, better or on a wider scale.
- **Involve partnerships and collaboration outside of Council**
Projects combine resources, leverage expertise and support co-ownership of solutions to deliver more innovative outcomes.



Governance

The Smart, Connected Brisbane Steering Committee and office will continue to provide guidance and support to drive the city towards a smarter, more connected future. The committee and office will play a lead role in identifying and prioritising projects, building our Smart, Connected Brisbane profile, identifying funding sources, and building internal capability and skills so we can continue to deliver smart, connected projects.



Dedicated to a better Brisbane

SMART, CONNECTED BRISBANE FRAMEWORK

Council is committed to nurturing innovation and supporting emerging businesses with programs such as Digital Brisbane and Better Brisbane Proposals as well as start-up spaces like The Capital.

Brisbane City Council
GPO Box 1434
Brisbane Qld 4001

CA18-875208-06-4357
© 2019 Brisbane City Council

 brisbane.qld.gov.au
 3403 8888

 /BrisbaneCityCouncil
 @brisbanecityqld
 @brisbanecitycouncil