September 2019

CONNECTED HOBART
Smart City ACTION PLAN

TOWARDS AUSTRALIA'S MOST ECONOMICALLY, SOCIALLY, AND ENVIRONMENTALLY CONNECTED COMMUNITY BY 2030

CONNECTED HOBART

AN INITIATIVE OF

City *of* HOBART

EXECUTIVE SUMMARY

TOWARDS AUSTRALIA'S MOST ECONOMICALLY, SOCIALLY AND ENVIRONMENTALLY CONNECTED COMMUNITY BY 2030.

The Connected Hobart Smart City Action Plan is the City of Hobart's operational response to the world's latest technology revolution. It has over 50 specific projects. Some are large and some are small. All of them start to move us through this period of change, in a way that improves quality of life in Hobart.

The action plan responds to the strategic drivers influencing Smart Cities thinking, in particular, major developments in the world's communications, energy and transport technologies and infrastructures.

This response is guided by the **Connected Hobart Smart City Framework**, which provides strategic support for how Smart Cities will be applied in Hobart. It includes eight core elements:

1. **Hobart identity:** Hobart's approach is framed by Hobart identity, described in the community vision.
2. **Smart Cities definition:** Our Connected Hobart Smart City is one that combines human ingenuity with technological innovations to enhance quality of life for all.
3. **Challenges:** We need to understand the local, regional and national/global challenges communities face before enacting solutions.
4. **Partners:** We can't and shouldn't do this alone. Working closely with customers and partners is the only way to make sure the benefits of Smart City projects are relevant and shared.
5. **Principles:** All technology choices say something about what we believe and value. We have outlined 10 principles for humans (Hobart communities) and five principles about technology, to help ensure ethical technology decision making.
6. **Technology choices:** The latest and greatest is not necessarily the only or the best option. We need to consider a range of solutions to some of our most pressing concerns, and then decide how we use technology, assets and new civil infrastructure to help us.
7. **Data:** New technologies provide us with more data than ever before but we need to ask the right questions and analyse it well for it to help make positive change.
8. **Programs:** Connected Hobart projects are aligned with eight programs, which align with the eight pillars of our community vision and strategic plan. They are themes that help us ensure everything we do is relevant to a part or parts of city life.

Each action in the Connected Hobart Smart City Action Plan belongs to one of the Connected Hobart programs.

1. **Connected Places**
   Pillar 1: Sense of place
2. **Connected Communities and Safety**
   Pillar 2: Community inclusion, participation and belonging
3. **Connected Creativity**
   Pillar 3: Creativity and culture
4. **Connected Visitors and Industry**
   Pillar 4: City economies
5. **Connected Transport**
   Pillar 5: Movement and connectivity
6. **Connected Environment**
   Pillar 6: Natural environment
7. **Connected Infrastructure**
   Pillar 7: Built environment
8. **Connected Government**
   Pillar 8: Governance and civic involvement

The action plan is the Connected Hobart Smart City Framework in practice, in the real world. It is a five-year document, reviewed every 12 months.

Smart Cities is a means to an end, to enhancing quality of life for all in Hobart. That's why the goal of the Connected Hobart program is to help Hobart become: **Australia's most economically, environmentally and socially connected community by 2030.**

Anyone interested in getting involved in Connected Hobart can put forward a project or partnership idea. See page 6 for details.

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HIGHLIGHTED PROJECTS

DRONE PORT

Autonomous drones can help protect our sense of place by being where we can't, when we can't and telling us more about how the city is operating. This initiative will equip the City of Hobart with the relevant CASA drone accreditations and establish a drone port in Hobart's city centre. The first aim is to strengthen management of Greater Hobart's biggest risk – bushfire.

SMART TRANSLATION

Travelling through Hobart, it can sound like you're in any modern global city. With a growing influx of commuters, international students, migrants and tourists, our city is truly cosmopolitan. Language translation powered by artificial intelligence will help the City of Hobart engage with the diverse range of communities and visitors who speak a first language other than English.

OPEN CITY DASHBOARD

The Open City Dashboard will make key information and 'at-a-glance' results readily available to Hobart communities. They can provide fascinating information and insights into what's happening in the city, all while protecting people's privacy. This initiative will create a Connected Hobart Smart City portal that provides information, metrics and data from the Greater Hobart City Deal and the Connected Hobart programs. It will help us use data to make the changes that people want to see in their city.

HIGHLIGHTED PROJECTS (CONT.)

AUTOMATED VEHICLE TRIALS

Self-driving, autonomous, or driverless automated vehicles (AV) are a fast-emerging new part of the transport infrastructure. This initiative will establish a Hobart-based AV trial, including a trial precinct and associated electric vehicle infrastructure. It is an exciting opportunity to work with partners to test of the benefits of emerging AV technologies and to provide educational opportunities, for the community and to inform legislative change.

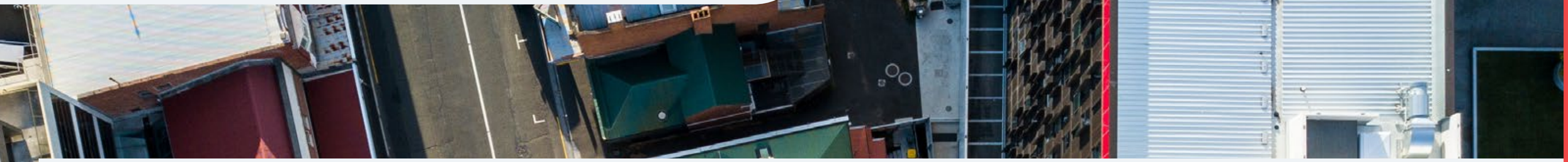
TECH FREE ZONES

Sometimes just being on your own, in a disconnected, natural environment, is all you want or need. This initiative will identify technology-free and quiet zones free of mobile signals, Wi-Fi, satellite and Bluetooth frequencies. It will enhance the experiences of those seeking to interact with or indeed protect traditions, cultures or natural values crucial to Hobart's identity.

ENVIRO AND WEATHER SENSING AND MONITORING

In Hobart the security and resilience of our city's natural environment is critical to everyone. Understanding the impact of cruise ship bunker fuels; finding out where people are smoking; spotting litter in open spaces; detecting heat in mulch piles; measuring heat and soil dryness in parks, or water quality and levels in fountains and catchments … We are working cooperatively with city partners to monitor and respond to environmental quality issues, delivering new insights to the public.

HOW TO GET INVOLVED



READ THE CONNECTED HOBART FRAMEWORK AND ACTION PLAN

The **Connected Hobart Smart City Framework** lays out the architecture for smart cities decision-making in Hobart. It provides our definitions for the important components of a Smart City and what they mean for Hobart, so people will better understand the intent behind each significant infrastructure and innovation decision the City of Hobart makes. The framework responds to both exciting and challenging trends associated with this latest industrial revolution and acknowledges the importance of dealing directly with this tension. The framework long-term, designed to guide thinking at the big picture level.

The **Connected Hobart Smart City Action Plan** – this document – is operational: the framework in practice, in the real world. It has over 50 specific projects. Some are large and some are small. All of them start to move us through this period of change and support the intent described in the Connected Hobart Smart City Framework. The action plan is a five-year document, reviewed every 12 months.

FOLLOW THE CHECKPOINTS

Successful Smart Cities are inclusive by nature. Ideas can come from anywhere – from within the city government itself or directly from partners and the community – and we welcome them all.

So what can you do if you have an innovative or Smart Cities idea for Hobart?

Each part of the Connected Hobart framework has three questions to consider (in the boxes marked with lightbulbs).

These questions cover the critical parts of Smart Cities thinking. They are interrelated and should be considered at multiple stages of a project. Responding to them all helps make sure that the actions we take are customer-focused, community first – that they will support Hobart communities and improve quality of life in our city.

Answer each question to start putting the framework into action.

HOW TO GET INVOLVED

Are you a community member with an idea for your neighbourhood?
A business or organisation with an initiative you'd like to partner on?
A member of staff interested in collaborating on a new project to serve Hobart communities?

Get in touch with the Connected Hobart team at connectedhobart@hobartcity.com.au

The team will be able to guide you on how your idea might fit with the Connected Hobart program.

HOW TO READ THIS PLAN

The Connected Hobart Action Plan includes more than 50 projects and initiatives. They belong to eight programs that align with the pillars of *Hobart: A community vision for our island capital* and the *Capital City Strategic Plan 2019–29*, which guide all of the City of Hobart's work:

1. **Connected Places**
   Pillar 1: Sense of place
2. **Connected Communities and Safety**
   Pillar 2: Community inclusion, participation and belonging
3. **Connected Creativity**
   Pillar 3: Creativity and culture
4. **Connected Visitors and Industry**
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HOW TO READ THE CONNECTED HOBART ACTIONS:

Program	The program title shows which aspect of city life the project mainly addresses (see the list on the left side of this page). It also shows how a project corresponds to the community vision and strategic plan.
Project name	Each project has a title and number for easy referencing.
Description	The project description provides general information about what the project is and how it will improve Hobart life.
Timeframe	The action plan runs for five years, and so all projects are scheduled to commence between 2019 and 2024. Exact details of timing are established through implementation planning (see initiative CGV08), which will help identify which projects are highest priority for the City of Hobart and our communities. **Current** projects are already underway. **Future** projects will commence during the life of the action plan.
City's role	We can't do this alone. Successful and liveable cities require collaboration between all kinds of people and organisations. We have to work together to create good responses to our challenges. **Lead** projects are those where the City of Hobart has initiated or has primary responsibility for a project. **Partner** projects are those where another organisation will lead but the City of Hobart has a major role to play. The City has identified these projects as bringing important benefits to the Hobart, which our support could help realise.
Goals	The goals are what we aim to achieve by doing the project. Examples include understanding how the community uses services or improving emergency response.
Product/Result	The products or results are the real-world things that the projects create. Examples include sensors installed or data collected.
Community benefits	Community benefits explain why we should do the project in the first place. This section describes the longer-term improvement people will be able to see. Examples include well-informed service planning or safe communities.

Smart Cities involve a lot of new ideas and technologies. **For definitions of important words, see the glossary on page 35.**

HOW TO RUN A CONNECTED HOBART PROJECT: FRAMEWORK CHECKPOINTS

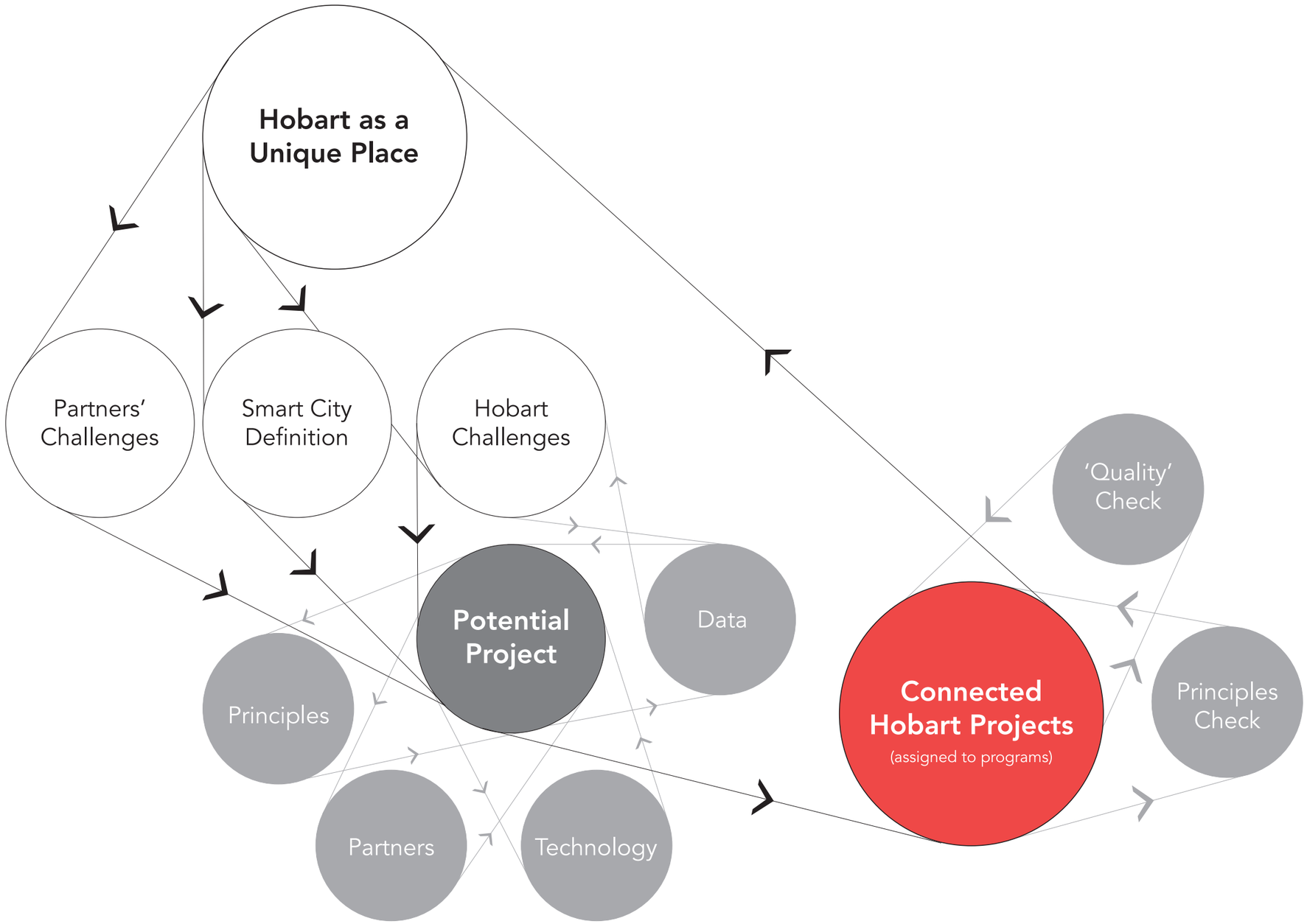
This framework guides all Smart City projects at the City of Hobart.

- It includes eight core elements of Smart Cities thinking.
- Each element has a checkpoint with questions that projects need to address as they are identified, designed, implemented and reviewed.
- The checkpoints should be used throughout the life of a project, not just at the start. The process of asking and re-asking important questions helps to make sure that projects are high-quality, safe, relevant to Hobart communities and responsive to change.

The framework checkpoints are described on page 9, including examples of how they have been considered in creating this action plan.

More information about what each checkpoint means can be found in the Connected Hobart Smart City Framework. More specific information about how the checkpoints are applied to each project is available through Connected Hobart implementation planning and project plans.

How the checkpoints work together is shown in the diagram on this page.



HOW TO RUN A CONNECTED HOBART PROJECT: FRAMEWORK CHECKPOINTS

HOBART IDENTITY

1. How does your project reflect Hobart communities' values and aspirations for the future, as explained in *Hobart: A community vision for our island capital*?
2. How does your project reinforce the objectives in the City of Hobart's strategic plan, which is the City's practical response to the community vision?
3. How does your project help Hobart respond and contribute to our Smart Cities agenda in a Hobart way?

Checkpoint considered in: program allocation, project description

SMART CITIES DEFINITION

1. How does your project apply the Connected Hobart definition for Smart Cities: 'Our Connected Hobart Smart City is one that combines human ingenuity with technological innovations to enhance quality of life for all'?
2. How does your project link to the Connected Hobart Smart City Framework?
3. How does your project consider the overall goal of helping Hobart become Australia's most economically, environmentally and socially connected community by 2030?

Checkpoint considered in: program allocation, project description, goals

CHALLENGES

1. What Hobart 'problem' does your Smart Cities project solve?
2. What global trends does it respond to?
3. How does your project think beyond the obvious to what could be?

Checkpoint considered in: goals, product/result, community benefits

PARTNERS

1. Which customers does your project serve and how?
2. Which collaborators will be involved and how?
3. How does your project bring more than one stakeholder together and solve mutual 'problems'?

Checkpoint considered in: challenges, City's role

PRINCIPLES

1. What ethical position does your project take?
2. How does your project reinforce the principles for humanity?
3. How does it reinforce the principles for technology?

Checkpoint considered in: project description, timeframe, City's role, goals, product/result, community benefits

TECHNOLOGY CHOICES

1. What technologies does your project involve?
2. How has your project balanced optimism and caution about new technologies?
3. What new problems might your project create?

Checkpoint considered in: product/result

BIG DATA STEWARDSHIP

1. What data will be collected as a result of your project?
2. What systems for analysing and protecting the data have been or will be put in place? Are they appropriate and effective for your project?
3. How will the data be explained and shared so that all different kinds of people can understand, learn from and use it?

Checkpoint considered in: product/result

PROGRAMS

1. Which Connected Hobart program does your project belong to?
2. How does your project reflect the corresponding pillar of *Hobart: A community vision for our island capital*?
3. What other pillars might it reflect?

Checkpoint considered in: program allocation

ACTION PLAN OVERVIEW

1 PILLAR 1: SENSE OF PLACE
CONNECTED PLACES

- **CPL01** Connected Retail and Suburban Precincts
- **CPL02** The Smarter Hobart Challenge
- **CPL03** Technology Free Zones Trial
- **CPL04** Data for our Bushland
- **CPL05** Smart Street Furniture

2 PILLAR 2: COMMUNITY INCLUSION, PARTICIPATION AND BELONGING
CONNECTED COMMUNITIES AND SAFETY

- **CCS01** Innovate.hobart Public Data Citizen Data Scientist Program
- **CCS02** Hobart City Watch Security Operations Centre
- **CCS03** Crime Prevention Through Environmental Design (CPTED) Trials
- **CCS04** Cybersecurity Officer
- **CCS05** Opt-In Pet Locate-Track-Monitor Trials
- **CCS06** Smart Language Translation Trials
- **CCS07** Universal or Assistive Technologies Trials
- **CCS08** Mobile Public Event Security Trailers
- **CCS09** Video Analytics Trials
- **CCS10** Connected Lounge Smart City Studio Public Showing Room

3 PILLAR 3: CREATIVITY AND CULTURE
CONNECTED CREATIVITY

- **CCR01** Virtual Hobart Minecraft Model
- **CCR02** Integrated Multimedia and Digital Public Art Infrastructure
- **CCR03** Data for Creativity Trials
- **CCR04** Hobart City Labs
- **CCR05** Extend Augmented Reality Heritage Map Program

4 PILLAR 4: CITY ECONOMIES
CONNECTED VISITORS AND INDUSTRY

- **CVI01** Smart City and IoT Partner Supplier Panel
- **CVI02** Sharing Economy Economic Index and Service Trials
- **CVI03** Digital Wayfinding and Multi-Functional Information and Service Kiosks
- **CVI04** Connected Start-Ups
- **CVI05** Smart Locker Trials

5 PILLAR 5: MOVEMENT AND CONNECTIVITY
CONNECTED TRANSPORT

- **CTR01** Automated Vehicle Trials
- **CTR02** Opt-In City Wearables Infrastructure Program Trials
- **CTR03** Social Mobility Community Engagement Program
- **CTR04** Bicycle Smart Locker and Destination Facilities Trial
- **CTR05** Contemporary Road Monitoring Data Trials
- **CTR06** Get-Paid-To-Bike Scheme Trials
- **CTR07** Active Travel and Environmental Gamification Trials
- **CTR08** Smart Parking
- **CTR09** Private Car Ride-Sharing Trials
- **CTR10** Last Mile Micromobility and Data Trials
- **CTR11** Connected and Actively Managed Transport Network
- **CTR12** Suburban Electric Vehicle Charging Network
- **CTR13** Digital Upgrades to Major City Centre Bus Stops

6 PILLAR 6: NATURAL ENVIRONMENT
CONNECTED ENVIRONMENT

- **CEN01** CASA Accreditation and Drone Emergency Management Trials
- **CEN02** Smart Bins Program
- **CEN03** Environmental and Weather Sensing and Monitoring
- **CEN04** Reserve Tracks 'Traffic Light' Notification Trials
- **CEN05** Digital Reserve Site Bookings and Notification Trials
- **CEN06** Smart and Solar Metering Program
- **CEN07** Smart Grid Blueprint
- **CEN08** Smart Waste Sorting Program

7 PILLAR 7: BUILT ENVIRONMENT
CONNECTED INFRASTRUCTURE

- **CIN01** Mobile Device Charging Station Installation
- **CIN02** Smart City Amenities Automation Trials
- **CIN03** Extended Public Wi-Fi Rollout
- **CIN04** Street Lighting and Smart Poles
- **CIN05** Instrumentation of Commercial Infrastructure

8 PILLAR 8: GOVERNANCE AND CIVIC INVOLVEMENT
CONNECTED GOVERNMENT

- **CGV01** Open City Dashboard and Public Data Gallery
- **CGV02** Technology Architectural Blueprint
- **CGV03** Smart City Legislation Reviews
- **CGV04** Council of Capital City Lord Mayors and Hobart Sister City Program and Study Tour
- **CGV05** Connected Hobart Engagement
- **CGV06** Connected Hobart Communications
- **CGV07** Connected Ethics
- **CGV08** Connected Hobart Implementation Planning
- **CGV09** Customer Service Centre Voice Assistant Trials
- **CGV10** Digital Boardroom
- **CGV11** Workforce of the Future Skills Roadmap
- **CGV12** Connected Hobart Mobile App Connected Intelligence
- **CGV13** Connected City Deal
- **CGV14** Remote and Work-from-Home Trials

Current Project

Future Project

CONNECTED PLACES

Initiatives that contribute to and are inspired by Hobart's strong sense of place, extending and capitalising on Hobart's unique attributes, targeting built environment investment and improving planning.

COMMUNITY VISION STATEMENT
PILLAR 1
SENSE OF PLACE

We are a city of unique beauty, environment, heritage and people, built on a shared sense of ownership, pride and wonder. This spirit of place has been shaped by Tasmanian Aboriginal people for tens of thousands of years and continues to be shaped by all who have called Hobart home. It is developed jointly by community, private enterprise and government, valuing and enhancing our Hobart identity.

CONNECTED PLACES

CURRENT PROJECTS

CPL01 CONNECTED RETAIL AND SUBURBAN PRECINCTS

Hobart's retail and suburban precincts have undergone beautiful urban design upgrades in recent years. But we still have a lot to learn about the communities using them. Every precinct is unique, but they have a lot in common: features like roads, streets and bridges, intersections and traffic islands, street lights and banner poles, cameras, bus stops, seats and shelters, bins, parking, loading zones, regulatory and wayfinding signs, parks and car parks. Understanding how these things are used will help the City improve infrastructure and asset management across many parts of the city, complementing community input into how precincts are managed and upgraded.

Timeframe: Current project
City's role: Lead
Goals

To digitally connect Hobart's retail and suburban precincts by installing power, network and sensor technologies, which will provide useful data for planning and management.

Product / Result

Relevant digital technology integrated into suburban and retail precinct infrastructure, in a way that provides the same type of data about each location.

Community benefits

Improved operational and future planning, helping Hobart communities know that infrastructure funding is being well-spent. Improved knowledge about a variety of neighbourhoods. Unique suburban beauty enhanced and supported with modern technologies.

CPL02 THE SMARTER HOBART CHALLENGE

There's an old saying that a good idea is 10% inspiration and 90% perspiration. Many of us have ideas and opinions about what we could do to make a change in Hobart, but having the opportunity and the stamina to make them a reality is another thing altogether. Community involvement and co-design are wonderful opportunities that many Smart Cities are embracing. And Hobart is too! The Smarter Hobart Challenge will engage community members in the design and planning of new services.

Timeframe: Current project
City's role: Lead
Goals

To support community-driven innovation through real projects and services, defined and built by the community.

Product / Result

An annual prize of $25 000 awarded to the best community-driven solution, to be trialled in the Hobart City Labs innovation precinct (see CCR04 Hobart City Labs).

Community benefits

Direct community engagement in the realisation of Connected Hobart, the community vision and other Greater Hobart strategies. Direct community contributions to resolving important city challenges.

CPL03 TECHNOLOGY FREE ZONES TRIAL

Everything has a time and a place. None of us wants a city overrun by technology. And we know that time away from screens is important for our mental, physical, emotional and community health. Innovation and technology – and the collection and use of personal and public data – is not for everyone all the time. Sometimes just being on your own, in a disconnected, natural environment, is all that is required.

Timeframe: Current project
City's role: Lead
Goals

To identify designated technology-free zones in heritage, bushland and urban areas.

Product / Result

Technology-free and quiet zones free of mobile signals, Wi-Fi, satellite and Bluetooth frequencies, in consideration of appropriate public safety measures.

Community benefits

Enhanced experiences for people seeking to interact with or indeed protect traditions, cultures or natural values crucial to Hobart's identity.

FUTURE PROJECTS

CPL04 **DATA FOR OUR BUSHLAND**

Data isn't just about big cities. The City of Hobart is fortunate to manage over 4600 hectares of bushland, which includes 28 vegetation communities and four nationally threatened species only found in Hobart – not to mention 120 km of walking and mountain bike tracks and 112 km of fire trails. Data for Our Bushland will help us collect data in the field, in real time, so we can identify and respond to issues more quickly. Proactive management and timely information for the public are big parts of protecting and enhancing the natural areas that so many Hobartians and visitors know and love.

Timeframe: Future project
City's role: Lead

Goals

To identify ways we can collect and monitor accurate, localised data, particularly about weather conditions (like snow, wind, fire, rainfall and soil moisture), traffic movements and visitor impacts.

Product / Result

Relevant technologies supporting localised, real-time data collection in bushland areas.

Community benefits

Timely and accurate information for the public on where and when people can access reserves. Increased safety of reserve users and employees. Improved bushland management, including decision making about on-ground works, such as hazard reduction burning.

CPL05 **SMART STREET FURNITURE**

How people think about and interact with a city is often based on their experiences of public places and spaces. Do they feel safe? Are the seats and shade and play equipment functional and beautiful? Are they working and suitable for all weather conditions? Are they clean and usable by all ages? From park benches to water fountains, BBQs and pizza ovens, smart and connected furniture can tell us all these things and more.

Timeframe: Future project
City's role: Lead

Goals

To understand how people use street furniture and other assets within the public realm.

Product / Result

Sensors providing data on activation times and periods for critical city assets and places.

Community benefits

Better informed design and planning. Improved community facilities for all to enjoy.

CONNECTED COMMUNITIES AND SAFETY

Initiatives that enhance social equity for Hobart communities, focusing on public safety and security, consumer and people-centred projects and community-driven innovation.

COMMUNITY VISION STATEMENT
PILLAR 2
COMMUNITY INCLUSION, PARTICIPATION AND BELONGING

We are an island capital city that is socially inclusive and coherently connected, whose people are informed, safe, happy, healthy and resilient.

CURRENT PROJECTS

CCS01 INNOVATE.HOBART PUBLIC DATA CITIZEN DATA SCIENTIST PROGRAM

Hobart is a collection of villages. A cacophony of interests. A symphony of hobby groups. A swarm of school programs. Hobart's people are interested and creative. They have ideas (and they're willing to share them!). A bright future of civic innovation requires empowered citizens with access to information who can invent responses to Hobart's challenges.

Timeframe: Current project

City's role: Lead

Goals

To improve incident response and on-demand video request services to enhance the social inclusion and public safety of the city.

Product / Result

Initiatives that enhance social equity for Hobart communities, focusing on public safety and security, consumer and people-centred projects and community-driven innovation.

Community benefits

Direct community participation in data collection and use. Opportunities for communities to engage with new technologies. Opportunities to encourage creativity and innovative community responses to important Hobart challenges. Relevant improvements to City of Hobart services.

CCS02 HOBART CITY WATCH SECURITY OPERATIONS CENTRE

Hobart City Watch will provide a service to support residents, retailers, traders and partners wherever CCTV cameras operate. It will include establishing a central facility for monitoring the city's urban and crowded spaces, for both special and daily operational events. An on-demand, user-pays digital information service will also be developed, helping communities source data about events that affect them, such as traffic incidents.

Timeframe: Current project

City's role: Lead

Goals

To improve incident response and on-demand video request services.

Product / Result

A security operations centre capable of supporting multi-agency, major incident teams.

Community benefits

Higher levels of public safety for the people and communities interacting with Hobart.

CCS03 CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED) TRIALS

Crime Prevention Through Environmental Design (CPTED, pronounced 'Sep-Ted'), uses analogue and digital place-making techniques and infrastructure to create safer public spaces. Smart bollards help protect against vehicles. Smart lighting helps increase public safety in formerly dark spaces.

Timeframe: Current project

City's role: Lead

Goals

To develop intelligent crowded spaces programs, including after-hours, anti-social behaviour and night- time economy services.

Product / Result

Automatic smart bollards and integrated smart lighting and other fixed infrastructure.

Community benefits

Improved community safety. Improved event management.

PILLAR 2: COMMUNITY INCLUSION, PARTICIPATION AND BELONGING

CONNECTED COMMUNITIES AND SAFETY

CURRENT PROJECTS

CCS04 CYBERSECURITY OFFICER

Cities used to depend on just people, paper and pens to operate efficiently. Then, from the 1980s, it was computers and data centres. Now, almost 40 years later, sensors and networks have become a critical part of the city fabric. Each of these step-changes has required new skills. The connectedness of the modern city requires high degrees of vigilance to ensure critical systems are safe and working. In Smart Cities, this means cybersecurity protecting our digital assets and data.

Timeframe: Current project
City's role: Lead
Goals

To ensure the City's digital services are safe and secure.

Product / Result

A permanent role to manage the Hobart City Watch Security Operations Centre (CCS02) and improve cybersecurity governance and policy in line with 21st century needs.

Community benefits

Critical response capabilities against cybersecurity threats and incidents.

FUTURE PROJECTS

CCS05 OPT-IN PET LOCATE-TRACK-MONITOR TRIALS

Hobart residents love their pets. Whether they are social companions for the elderly, support assistants for medical and accessibility conditions, or an extension of our human families, pets can be a big part of our lives. It's no wonder, then, that pets are not the only ones that fret when they wander away during New Year's fireworks or are stolen from their family.

Timeframe: Future project
City's role: Lead
Goals

Enhancing the gross domestic happiness of Hobart families by ensuring the safety of pets, their owners and the broader community.

Product / Result

A dedicated place (data portlet) within the Connected Hobart Smart City webpage (CGV01) to identify the location of pets.

Community benefits

Improved pet safety and peace of mind plus. Improved social inclusion through ensuring pets are returned to the owners who need them. Improved community and environmental safety through finding and returning lost pets.

CCS06 SMART LANGUAGE TRANSLATION TRIALS

Travelling through Hobart, it can sound like you're in any modern global city. With a growing influx of commuters, international students, migrants and tourists, there is no denying that our city is truly cosmopolitan. For us as the local government custodians of the city, there are new opportunities to engage with the diverse range of communities who speak a first language other than English.

Timeframe: Future project
City's role: Lead
Goals

To provide improved multi-language service for Greater Hobart's culturally and linguistically diverse communities.

Product / Result

AI-powered language translation trials in the City's Customer Service Centre and Tasmanian Tourism and Information Centre.

Community benefits

A diversity of communities are included and can participate in City services and events.

CCS07 UNIVERSAL OR ASSISTIVE TECHNOLOGIES TRIALS

Universal technologies (UT) meet the needs of all users, regardless of their background of ability. In particular, assistive technologies (AT) help people with disabilities or health conditions do tasks they might not be able to otherwise, helping people communicate, learn, navigate their environments, accomplish daily living tasks and connect with their communities. They include equipment, software programs, apps or any other system that provides practical solutions to everyday activities. The Connected Hobart program provides many opportunities for UT or AT integrations, for example in digital kiosks (see CVI03).

Timeframe: Future project
City's role: Lead
Goals

To identify and act on opportunities to integrate universal or assistive technologies into Connected Hobart initiatives and infrastructure and provide inclusive ways for people engage with the new initiatives being rolled out across the city.

Product / Result

UT or AT integrated into Connected Hobart projects where appropriate, especially those projects that focus oncommunications technologies.

Community benefits

People from a range of backgrounds and with a range of abilities are included in Connected Hobart, with a new opportunities to communicate and interact with their environments and communities.

FUTURE PROJECTS

CCS08 MOBILE PUBLIC EVENT SECURITY TRAILERS

Hobart's capital city status, growing tourism economy, and extensive major events programs make it a city of interest in Australia's national anti-terror programs. As the city's safe communities programs continue to evolve, it will be critical to ensure ongoing development of easily accessible, shared and inclusive communal spaces. Integrated mobile security systems will help.

Timeframe: Current project
City's role: Lead
Goals

To support the safety of temporary events, and deliver community planning data collection for specific projects.

Product / Result

The protection of critical infrastructure through the use of mobile trailers equipped with CCTV services, integrated with the Hobart City Watch Security Operations Centre.

Community benefits

Hobart and its local community organisations are capable of addressing crime and anti-social behaviour.

CCS09 VIDEO ANALYTICS TRIALS

Video is a key data source for any capital city. It is common knowledge that video, like CCTV, can be used to improve security. But it can also deliver all kinds of insights into how best to achieve Hobart's strategic vision, through helping the City identify how people use public spaces. The trial of advanced analytical computing will provide never-before-accessible capabilities to address Hobart's current and future challenges – like planning for growth, city traffic congestion, bushland management and future capital investments.

Timeframe: Future project
City's role: Lead
Goals

To analyse city video information including pedestrian footfall, crowded spaces, and travel and destination data for public and private vehicles and other transport modes.

Product / Result

Benchmark data to improve community and urban planning and security.

Community benefits

Reduced community exposure to anti-social behaviour. Better management of commuter activity and economic growth across Greater Hobart. Enhanced allocation of capital works funding to targeted areas of need.

CCS10 CONNECTED LOUNGE SMART CITY STUDIO PUBLIC SHOWING ROOM

Smart homes or e-homes are a key part of any smart city because, for many of us, daily interactions with the city start and end at home. Many of the technologies finding their way across the city first appeared in private dwellings: smart lighting, smart fridges, smart TVs. But there are a lot of questions about 'smart home' devices and how they work. The Connected Lounge will give people a chance to experience the home-specific Smart Cities services the City of Hobart offers, as well as other technologies appearing across the city.

Timeframe: Future project
City's role: Partner
Goals

To showcase the City of Hobart's various Smart City services in a convenient location. To provide community members with the opportunity to directly experience digital technologies that first appeared in the home.

Product / Result

A physical drop-in centre displaying a mix of smart home and Smart City services currently being used or planned for use in Hobart.

Community benefits

Communities and other stakeholders are informed about Hobart's smart city program, services and technologies.

CONNECTED CREATIVITY

Initiatives that deliver creative and interactive experiences for Hobart communities, celebrating Hobart culture and drawing on Tasmania's inventive spirit.

COMMUNITY VISION STATEMENT
PILLAR 3
CREATIVITY AND CULTURE

We are a city connected, embracing our diverse communities in cultural expression and creative and artistic participation; a city that enhances our homes, lifestyles and heritage; a city that bravely puts its people first.

PILLAR 3: CREATIVITY AND CULTURE

CONNECTED CREATIVITY

CURRENT PROJECTS

CCR01 VIRTUAL HOBART MINECRAFT MODEL

City management, transport planning and urban design are classic adult problems! Affordable housing, traffic congestion, rampant tourism, infrastructure investment, political discourse…yawn!!! Not anymore. Virtual Hobart will be a collaborative initiative to design a city Minecraft model (base-map) based on actual Tasmanian topology. It will have not only urban design but also creative, cultural and community outcomes for the city.

Timeframe: Current project

City's role: Lead

Goals

Provide a scaled virtual version of the city to encourage enhanced youth engagement with traditional civil discourse.

Product / Result

The Minecraft Hobart base-map, accompanying school and youth gamification and engagement programs.

Community benefits

Allow students and other youth to participate in innovative design thinking for Greater Hobart by modelling ideas and initiatives.

FUTURE PROJECTS

CCR02 INTEGRATED MULTIMEDIA AND DIGITAL PUBLIC ART INFRASTRUCTURE

Human beings are creative by nature. Societies have always used symbolism, stories and art to express themselves, connect with others and make sense of their surroundings. Art is not an optional, nice-to-have part of being human; it is core to who we are. Hobart has creativity and the arts in spades, so we should integrate them into our city. The City of Hobart has a big part to play in public art: from funding, design and engagement to construction and maintenance. Shared, curated, expressive and interactive experiences are finding new canvases in our city. Integrating the arts into traditional infrastructure projects is key to delivering the community's vision for our future.

Timeframe: Future project

City's role: Lead

Goals

To integrate art and culture into the fabric of our Hobart society and its civic assets.

Product / Result

Multimedia-based creative, cultural and other experiences, including augmented reality (AR), which combines computer-generated images with the user's view of the real world.

Community benefits

Creative experiences for diverse communities across Hobart. Enhanced community-focused design and management of critical city infrastructure assets.

CCR03 DATA FOR CREATIVITY TRIALS

The idea of Smart Cities data might conjure up thoughts of numbers and lines of code. But there is so much more than can be done with data, including collaborating with Hobart's creative communities. The open data created by several Connected Hobart projects provides amazing raw material for artists of all sorts, who can use it to tell stories in a range of mediums, from visual and audio works to interactive digital experiences. Data for Creativity helps support thinking with a creative lens across the whole Connected Hobart program.

Timeframe: Future project

City's role: Lead

Goals

To use the data gathered from Connected Hobart projects for creative, cultural and community initiatives, accounting for privacy and other data protections. To return the data generated by communities to communities, for their interpretation. To foster a sense of data ownership and stewardship among community members.

Product / Result

Creative and other works produced by local practitioners and community members.

Community benefits

Access to more diverse ways of seeing and understanding Connected Hobart data, and therefore the city and how it works. Increased community engagement with data.

FUTURE PROJECTS

CCR04 HOBART CITY LABS

As one of the six state capital cities and the 13th largest city in Australia, rolling out innovations to the whole city at the same time can take a long time and can be fraught with unforeseen challenges. Hobart City Labs will be a living lab where community members, industry and technology stakeholders can co-design and trial creative initiatives and solutions that might address significant city challenges – before taking the significant step of adopting them for Hobart. It will support the underlying premise of innovation: that sometimes great ideas just don't work.

Timeframe: Future project
City's role: Partner

Goals

To ensure innovation is not restricted to just the City of Hobart but rather is open to all. To ensure the City makes evidence-based technology decisions.

Product / Result

Designated innovation precinct within Hobart to test initiatives before scaling across the city, including public LoRA Internet of Things network to support the Smarter Hobart Challenge (CPL02) and innovate.hobart (CCS01).

Community benefits

Improved City responses to new tech developments – trialling possibilities for the city rather than making wholesale decisions that might not work. Increased opportunities for communities to test and engage with new technologies.

CCR05 EXTEND AUGMENTED REALITY HERITAGE MAP PROGRAM

Cities are more than bricks and mortar. They have a history, a culture. Hobart is already embracing augmented reality (AR) technology to tell these stories with the creation of a realistic 3D map that lets you explore Tasmania's coastline and rugged mountains or head off to the Bass Strait islands, all through your mobile device at Mawson Place on Hobart's waterfront. Hobart has many more virtual stories to tell using augmented reality.

Timeframe: Future project
City's role: Partner

Goals

To engage residents and visitors in augmented Hobart experiences through their own mobile devices.

Product / Result

Augmented reality maps and installations.

Community benefits

Memories. Education. Youth engagement. Social inclusion (taking AR experiences across the city, not just to tourist spots).

PILLAR 4: CITY ECONOMIES
CONNECTED VISITORS AND INDUSTRY

CONNECTED VISITORS AND INDUSTRY

Initiatives that connect commuters, tourists and merchants, creating new ways of navigating and spending time in the city and providing support to Hobart's Smart City ecosystem.

COMMUNITY VISION STATEMENT
PILLAR 4
CITY ECONOMIES

We are a city whose economies connect people, businesses, education and government to create a high-quality lifestyle in a thriving and diverse community. Our city is our workshop. We collaborate, embracing ideas, inventiveness and initiative.

CURRENT PROJECTS

CVI01 SMART CITY AND IOT PARTNER SUPPLIER PANEL

The City of Hobart will establish and manage an approved supplier panel of appropriately qualified Smart City specialist consultants and suppliers, facilitating the effective and timely procurement of Smart City products and services.

Timeframe: Current project
City's role: Partner
Goals

To create a panel of contracted suppliers across critical Smart City categories: network services, data platforms, hardware and software, and professional services.

Product / Result

Objective-based procurement.

Community benefits

Improved timing and quality of delivery for community and City projects.

CVI02 SHARING ECONOMY ECONOMIC INDEX AND SERVICE TRIALS

Despite our current prosperity, Hobart is neither a classically wealthy city, nor the capital of a wealthy state. DIY (do-it-yourself) has long been a part of our DNA. So the thought of doing more with the resources we already have in order to position Hobart for long-term growth is a fairly natural fit. Enter the gig economy where companies, like Airbnb and Uber, have created new markets for resources like spare rooms and private cars. But what is the real impact of these social and service changes?

Timeframe: Current project
City's role: Lead
Goals

To assess the impact of the gig economy by working collaboratively through data-sharing partnerships. To better understand influences on priorities such as housing affordability, homelessness and social inclusion.

Product / Result

A dedicated place (data portlet) within the Connected Hobart Smart City webpage (CGV01) displaying the index and how the gig economy affects social and economic outcomes in Hobart.

Community benefits

Enhanced risk management through integrating third-party macro and microeconomic data into Hobart's strategic planning. Improved understanding of social and economic issues.

FUTURE PROJECTS

CVI03 DIGITAL WAYFINDING AND MULTI-FUNCTIONAL INFORMATION AND SERVICE KIOSKS

If you don't know where you are, you can't get where you're going! That's easy, through digital wayfinding and multi-functional information and service kiosks deployed in strategic locations, including at bushland visitor nodes, to share important information: real-time route, transit and closure statuses, public notices, weather, equal access, language, events and even relevant local business information.

Timeframe: Future project
City's role: Partner
Goals

To digitise the City's 80+ physical wayfinding signs. To extend the value of existing assets and expand the service to incorporate other Hobart assets and amenities.

Product / Result

An integrated digital wayfinding platform. New integrated digital screen information kiosks, including the behind-the-scenes platform that supports the City to share content at kiosk locations across Hobart.

Community benefits

Residents and visitors can find their way to the places, services and businesses they need. Improved community safety and awareness through accessible information provided at key locations.

PILLAR 4: CITY ECONOMIES

CONNECTED VISITORS AND INDUSTRY

FUTURE PROJECTS

CVI04 **CONNECTED START-UPS**

Tasmania, and Hobart as its capital, is known as an inventive and creative place. Many iconic businesses, from the niche to the mainstream, have started in the Hobart region. Whether it's 3D printing or app development, Hobart's start-up ecosystem is on the rise, creating all kinds of products and services that can benefit Hobart communities and the world. Connected Start-Ups seeks ways to support Hobart's local digital and Smart City economy.

Timeframe: Future project
City's role: Partner

Goals

To investigate methods of supporting Hobart's burgeoning start-up and digital economy. To drive local innovation and economic development.

Product / Result

An approach to working with Hobart-based start-ups and other digital economy stakeholders. Support for local solutions in the City's innovation precinct.

Community benefits

Continuing culture of invention and innovation, a key part of local identity.

CVI05 **SMART LOCKER TRIALS**

For most of us, Hobart is a multi-experience place: there is rarely just one thing we do when we go into the city. But that can be logistically tough. Maybe you've finished school and want to hang out for a while but don't want to carry your bag. Maybe you want to leave something for a friend. Maybe you're only halfway through your chores and need to temporarily store your groceries in a refrigerated place. Maybe you've just checked out of your hotel and have a short layover, or are going on an extended backpacking trip in the Greater or Southern Hobart region. Whatever the reason, we want to help you stay connected to the city for as long as you need us!

Timeframe: Future project
City's role: Partner

Goals

To establish services that recognise the growing role of Hobart as a visitor centre and commuter city within the Greater Hobart metropolitan area. To help commuters, shoppers, visitors, tourists and students are able to spend more time in the city.

Product / Result

Facilities for commuters, including CPTED-compliant smart lockers and services.

Community benefits

Improved economic opportunities in our retail precincts. Enhanced national and international reputation as an inviting and convenient place to spend time.

PILLAR 5: MOVEMENT AND CONNECTIVITY
CONNECTED TRANSPORT

CONNECTED TRANSPORT

Initiatives helping to prepare Hobart for the future of transport, including contributing to ways of addressing mobility-congestion problems and reducing sole-reliance on the automobile and carbon fuels.

COMMUNITY VISION STATEMENT PILLAR 5 MOVEMENT AND CONNECTIVITY

We are a city where everyone has effective, safe, healthy and environmentally friendly ways to move and connect, with people, information and goods, and to and through spaces and the natural environment. We are able to maintain a pace of life that allows us to fulfil our needs, such as work, study, business, socialising, recreation, accessing services, shopping, entertainment and spending time with loved ones.

CURRENT PROJECTS

CTR01 AUTOMATED VEHICLE TRIALS

Self-driving, autonomous or automated vehicles (AV) are those that are capable of sensing the environment using a range of technologies including light detecting radar (LiDAR) and Dedicated Short Range Communications (DSRC), and moving with little or no human input. This initiative will establish a Hobart-based AV trial, including a trial precinct and associated electric vehicle infrastructure. It is an exciting opportunity to work with partners to test of the benefits of emerging AV technologies and to provide educational opportunities, for the community and to inform legislative change.

Timeframe: Current project
City's role: Partner

Goals

To work collaboratively with city partners on public AV trials, preparing for the future of autonomous transport in Tasmania.

Product / Result

A Hobart- based AV trial, AV precinct and associated EV infrastructure.

Community benefits

A locally-relevant test of the benefits of emerging last-mile AV technologies. Incremental community education, and insights for legislative change.

FUTURE PROJECTS

CTR02 OPT-IN CITY WEARABLES INFRASTRUCTURE PROGRAM TRIALS

The Consumer Internet of Things (CI.T) refers to the range of smart devices – like watches, fitness trackers, glasses, monitors, and even shoes – that are internet-enabled and available to the general public. The sort of de-identified information that these technologies can provide show much about how people move around a city, where they congregate, at what times and for how long. When combined with more traditional information sources, like surveys, this data can help identify service priorities across the city.

Timeframe: Future project
City's role: Lead

Goals

To learn how a range of people move around and use the city.

Product / Result

A dedicated place (data portlet) within the Connected Hobart Smart City webpage (CGV01) displaying project data.

Community benefits

Community-centric design for Hobart's capital works programs and the City's service offerings.

CTR03 SOCIAL MOBILITY COMMUNITY ENGAGEMENT PROGRAM

If there is one saying that sums up the impact of social media apps on the 21st century it is this: 'if it's not on Strava it didn't happen'. Through various social media platforms, the public is now empowered to share what they do, and to comment on and contribute to the continual improvement of their communities. Public social media and data platforms, such as Waze, Strava, Populus, Uber Movement, Facebook, Twitter, and even Instagram provide people with new opportunities to share data and stories about how they interact with the city and surrounds. This real-time information, in combination with more in-depth research, can help the City prioritise projects and services.

Timeframe: Future project
City's role: Lead

Goals

To support the delivery of real-time traffic and movement information, data analysis and notifications for residents and commuters.

Product / Result

Corporate social data accounts with primary social technology companies and data-sharing partnerships with the Tasmanian Government.

Community benefits

Safer streets, improved congestion management, and better quality of life. Improved prioritisation of traffic engineering and city planning initiatives.

FUTURE PROJECTS

CTR04 BICYCLE SMART LOCKER AND DESTINATION FACILITIES TRIAL

Being able to park and lock your bike at smart and secure bike racks, bike shelters and cycle-pods at destinations around Hobart will start to change the travel landscape in and around the city. Member-based end-of-trip facilities in Council's off-street parking facilities will provide an active transport options for commuters, allowing workers to arrive fit and fresh every day.

Timeframe: Future project
City's role: Lead
Goals

Improve the equity and experience of commuter and casual cyclists in Hobart and surrounding suburbs.

Product / Result

Bicycle and e-bike multi-functional smart hubs and destination stations in the city's off-street parking facilities for private and commercial (cycle courier) use.

Community benefits

Contribution to the start of solutions to address traffic congestion problems by reducing sole-reliance on cars.

CTR05 CONTEMPORARY ROAD MONITORING DATA TRIALS

Council currently spends over $10 million every year just on scheduled road maintenance and renewal projects. What if roads could report their own wear and tear? What kind of an impact could that have on Hobart's traffic congestion and commuter experiences? Prioritising and re-prioritising annual projects and funding could support real-time and point-of-need maintenance while also allowing for a fully equitable application of key roads funding regardless of suburb or location.

Timeframe: Future project
City's role: Lead
Goals

To map and monitor the road network in order to better understand level of services, improve road quality and decrease the annual road maintenance investment required of ratepayers.

Product / Result

Installation of road condition and other Internet of Things (IoT) environmental sensors under all Council fleet vehicles.

Community benefits

New insights into roads that need maintenance. Improved transport conditions. Opportunity to extend the reach of Hobart's annual capital works budget into non-car road management programs (like bicycles).

CTR06 GET-PAID-TO-BIKE SCHEME TRIALS

More trees and fewer cars – that's a long-term vision embraced by many Hobart communities. But it's not achievable overnight, and it needs the community to make it happen. Some cities are fitting private commuter bicycles (owned by individuals) with GPS devices that measure commuting distances. Riders are awarded a fee per kilometre for bike journeys undertaken between home and work, with capped per person monthly payments managed by bank transfer.

Timeframe: Future project
City's role: Partner
Goals

To reduce the number of cars on the road by encouraging City of Hobart employees to cycle to work.

Product / Result

GPS sensors fitted to privately owned bicycles, providing usage data to support cyclist rewards and information about employee cycling routes.

Community benefits

Supporting changed behaviours to assist in reducing traffic congestion and creating a commuter-friendly Greater Hobart. Activation of key commuter routes for improved pedestrian and bicycle infrastructure planning.

CTR07 ACTIVE TRAVEL AND ENVIRONMENTAL GAMIFICATION TRIALS

What if you were rewarded for cycling or walking to school, or for choosing to catch the bus to work? An active travel and eco-Hobart gamification program would provide in-app incentives and rewards to people who make active and sustainable travel choices.

Timeframe: Future project
City's role: Partner
Goals

The development of a gamification app to promote sustainable and active travel choice, encouraging people to walk, cycle and use public transport.

Product / Result

A new app (or adaption of an existing app).

Community benefits

More active and sustainable travel. Increased amount of 'incidental exercise' for more people. Improved health outcomes for the community through healthier, active people.

FUTURE PROJECTS

CTR08 SMART PARKING

Hobart is no longer a small country town that is the sole domain of ratepayers and residents. We have become a true commuter city. Today, tens of thousands of tourists and visitors from all over the world (and their cars!) share our small city each day. Improving the way our limited parking assets are publicised and used will support social and economic outcomes, as well as the efficient operation of traffic within, through and around our growing city.

Timeframe: Future project
City's role: Partner

Goals

Increasing service equity for non-rate-paying users of the city to support the maintenance of capital city service levels in-line with community and national expectations.

Product / Result

A dedicated place (data portlet) within the Connected Hobart Smart City webpage (CGV01) displaying parking occupancy data, showing people where to find available parking spaces.

Community benefits

Commuters have access to better information about where car parking is available. Reduced traffic congestion within Hobart's city limits.

CTR09 PRIVATE CAR RIDE-SHARING TRIALS

Solving big city problems can often involve just doing more with what you've got. Hobart commuters will be rewarded for helping the city better manage its peak traffic environments through a mix of traditional and contemporary ride-sharing trials. From carpooling to car and ride-sharing, and using existing apps, it's so much smarter when we work together. Why go alone when you can go with friends?

Timeframe: Future project
City's role: Partner

Goals

To maximise the use of existing vehicles and transport infrastructure to accommodate short to medium-term demand growth.

Product / Result

Ride-sharing and carpooling incentive services and City employee trials via the City of Hobart employee travel pilot.

Community benefits

Improved traffic congestion and social cohesion. Reduced transport costs for commuters. Improved environmental outcomes from fewer cars on the road.

CTR10 LAST MILE MICROMOBILITY AND DATA TRIALS

Micromobility includes small transport modes like e-scooters and dockless electric bikes, and evidence of micromobility mania is abundant. At the same time, rentable share vehicles to private demand-response bus services can also provide a personalised way of getting round the last mile. But these are disruptive devices and services, and their downstream impacts need to be carefully considered – like on the emergency department and health system!

Timeframe: Future project
City's role: Partner

Goals

To trial the management, use and integration of emerging mobility services and technologies.

Product / Result

Trial of a range of smart micro and shared mobility providers, including a small fleet of docked and parked bikes, e-bikes, e-scooters, and cars within the city's off and on-street parking facilities.

Community benefits

Contribution to the start of solutions to address mobility congestion problems. Shared transport options for the increasing number of city centre residents who don't own cars.

CTR11 CONNECTED AND ACTIVELY MANAGED TRANSPORT NETWORK

Why can't the traffic signals see when a pedestrian is taking a bit longer than average to cross the road? What if a bus full of people commuting to work or school was able to get a head-start when the lights go green? Or if the system was smart enough to 'wave through' emergency service vehicles when they need to get somewhere in a hurry? Actively managing the way we use our existing road space can help to improve our transport system.

Timeframe: Future project
City's role: Partner

Goals

To work with our partners to actively manage the way the transport network operates and identify opportunities to give priority to various modes (like pedestrians, bikes, buses, emergency services) at signalised intersections through.

Product / Result

Starting at trial locations, smarter traffic signal technology that detects and responds to traffic conditions and supports priority user groups, such as slower moving pedestrians or buses running late or travelling during peak periods.

Community benefits

Safer streets (especially for vulnerable road users), improved travel times and better access for public transport and emergency service.

FUTURE PROJECTS

CTR12 SUBURBAN ELECTRIC VEHICLE CHARGING NETWORK

Electric vehicles (EVs) will change the mobility industry – and not just for cars. Consider e-scooters, e-bikes and other lightweight or micromobility technologies. EVs will create many challenges and opportunities for new types of refuelling infrastructure across our city, including for how Hobart residents could be connected at home.

Timeframe: Future project
City's role: Partner
Goals

Preparing the city for an alternative and cleaner mobility future starts now.

Product / Result

The low rate requirements of lightweight EVs makes the installation of charging stations inside existing light poles for on-street suburban charging ideal.

Community benefits

A sustainable and cleaner future by minimising the reliance on cars and fossil fuels as the primary means of travel around Greater Hobart.

CTR13 DIGITAL UPGRADES TO MAJOR CITY CENTRE BUS STOPS

The City is a key mediator in the delivery of last mile transport into and around Hobart. We sit somewhere between Hobart's transit authority (State Growth) and its transport operators (like Metro and SkyBus). Our 500+ inner city bus stops are not just shelters but an untapped backbone for the city. A connected bus shelter can be an information and service hub, changing the city experience for thousands of commuters.

Timeframe: Future project
City's role: Partner
Goals

To enhance Hobart's bus shelters as places to find information. To take advantage of the number of shelters around the city to improve Smart Cities connectivity.

Product / Result

Agreements with Metro to upgrade city centre bus stops, including digital wayfinding, CCTV infrastructure, public Wi-Fi, environmental monitoring and LCD displays.

Community benefits

Improved access to information.
Improved safety at bus stops.
Enhanced environmental data.
Promotional opportunities for businesses and other stakeholders.

CONNECTED ENVIRONMENT

Initiatives that enhance and operationalise regulatory responsiveness, disaster minimisation and compliance enforcement, and improve the lives of citizens through increased awareness of the City's environmental and sustainability goals.

COMMUNITY VISION STATEMENT
PILLAR 6
NATURAL ENVIRONMENT

We are a city whose people see ourselves as part of a beautiful and unique natural environment, from the mountain to the river, which embrace us and shape our identity. We are proud custodians and advocates, ensuring resources are appreciated rather than wasted, supporting biodiverse ecosystems in honour of past, current and future generations.

PILLAR 6: NATURAL ENVIRONMENT

CONNECTED ENVIRONMENT

CURRENT PROJECTS

CEN01 CASA ACCREDITATION AND DRONE EMERGENCY MANAGEMENT TRIALS

Unmanned Aerial Vehicles (UAVs, better known as drones) – are synonymous with Smart Cities. More than just taking amazing photos, autonomous drones can help protect our sense of place by being where we can't, when we can't. They can tell us about what's happening in the city and surrounding areas. But before cities can use drones or manage them within their boundaries, they must secure federal CASA drone accreditations, including Remote Operators Certificates (ROC) and key staff Remote Operations Pilots Licences (RePL).

Timeframe: Current project
City's role: Lead

Goals

To build public confidence in the application of UAVs through extended drone and remote drone trials.

Product / Result

Regulatory accreditations and the establishment of a CBD drone port to support a kunanyi/Mt Wellington and Queen's Domain early warning fire detection system.

Community benefits

Initially to enhance the management of fire – Greater Hobart's primary risk.

CEN02 SMART BINS PROGRAM

The City is using smart sensor technologies to adopt even more efficient waste collection practices. Solar compactor bins with hundreds of litres' capacity service high-use areas. Bins that send a message to our officers when they are 85% full service lower density areas. That means waste is collected as needed, making for an even cleaner city.

Timeframe: Current project
City's role: Lead

Goals

To experiment, monitor, and measure community use of city assets to better inform operational planning and customer behaviours.

Product / Result

Rollout of sensor-enabled waste bins with an underlying on-street waste data management platform.

Community benefits

More efficient delivery of services and the remote management of sustainable growth.

FUTURE PROJECTS

CEN03 ENVIRONMENTAL AND WEATHER SENSING AND MONITORING

In Hobart, the security and resilience of our city's natural environment is critical to everyone. Whether it is knowing the impact of cruise ship bunker fuels; finding out where people are smoking; spotting litter in open spaces; detecting heat in mulch piles; or measuring water quality in catchments and soil moisture in parks, we are working with city partners to monitor and respond to environmental quality issues.

Timeframe: Future project
City's role: Lead and Partner
Goals

Data program to complement and enhance existing environmental monitoring, including noise pollution, motion sensors and fire detection.

Product / Result

A dedicated place (data portlet) within the Connected Hobart Smart City webpage (CGV01) displaying environmental data. Development of a cooperative flood warning and alert system for Hobart.

Community benefits

To enhance regulatory and disaster responsiveness. To improve environmental compliance enforcement. To increase awareness of Hobart's and Tasmania's environmental and sustainability goals and performance.

CEN04 RESERVE TRACKS 'TRAFFIC LIGHT' NOTIFICATION TRIALS

Council operates a huge number of walking, cycling, mountain biking and other tracks and trails. All typically have entry (and exit) points. But we are also a city of wild and unpredictable weather, not to mention the threat of bushfire due to our proximity to bushland and some of the most pristine world heritage areas on the planet. Closing all our trails and reserves and simultaneously notifying the public is an impossible physical task. But smart technology puts it within our reach.

Timeframe: Future project
City's role: Lead
Goals

To automate opening and closing notifications at the specific reserve and trailhead locations across the city.

Product / Result

Remotely operated Internet of Things digital trail-head signals to advise of recommended use.

Community benefits

Improved notification services installed at each Greater Hobart trail and park entry points. Efficient use of staff resources and enhanced public safety.

CEN05 DIGITAL RESERVE SITE BOOKINGS AND NOTIFICATION TRIALS

A weekend BBQ in one of the City's parks or reserves is a classic part of Hobart life. This initiative will make it even easier to enjoy our natural areas, improving the booking experience and making it simpler to gather and enjoy our many bookable sites.

Timeframe: Future project
City's role: Lead
Goals

To improve customer site booking experiences. To automate booking notifications at the specific site booking locations across the city.

Product / Result

Reserve site online booking system. Remotely operated Internet of Things digital site booking signage to advise of availability.

Community benefits

Time savings for community members seeking to use reserve sites. Improved notification services. Efficient use of staff resources.

CEN06 SMART AND SOLAR METERING PROGRAM

The City of Hobart is a frontline community in the face of climate change, and we are constantly reviewing ways that we can be more accountable to the environment. The City has achieved significant reductions in its greenhouse gas emissions and energy use in recent years. We continue to invest in energy-saving projects and programs for the city's buildings and assets. But we can always do more.

Timeframe: Future project
City's role: Lead
Goals

To improve measurement of energy consumption by tracking the performance of individual assets in addition to whole buildings.

Product / Result

Metering hardware that transmits usage information via the LoRA IoT network. Software/platform for tracking energy consumption.

Community benefits

Decreased energy consumption by City of Hobart buildings and assets. Increased financial savings. Reduced greenhouse gas emissions. Better targeted capital works investments. Increased public insights into the City's energy usage.

FUTURE PROJECTS

CEN07 **SMART GRID BLUEPRINT**

In the past, the City focused on general-purpose assets, like street lights, in isolation. Now, digitally-enabled energy infrastructure provides a way to roll multiple energy programs into one system and think about the City's energy usage more holistically. In addition to solar panels, we can help prepare the city for a lower carbon future by improving energy sustainability in our vehicle fleet and more. We can also work with residents to better link to home power generation systems.

Timeframe: Future project
City's role: Partner
Goals

Digitising the City's energy grid. Shifting to lower carbon energy technologies. Supporting residents who are producing their own energy.

Product / Result

A blueprint that outlines the integration of the city's energy asset portfolio and monitoring assets and their relation to, and influence on, Council's operational climate change agenda.

Community benefits

Creation of greater value for Hobart through physical and service connections in the City's own energy grid. Reduced City of Hobart carbon emissions.

CEN08 **SMART WASTE SORTING PROGRAM**

The *City of Hobart Waste Management Strategy 2015-2030* aims to achieve zero waste to the Hobart Landfill by 2030. It includes over 90 actions across a range of areas, such as organic waste, education, and litter. Cities are using advanced artificial intelligence to help sort household waste – a great example of how innovations are being applied to existing City strategies.

Timeframe: Future project
City's role: Partner
Goals

Apply emerging innovations and technology to advance the no-waste-to-landfill strategy.

Product / Result

Automation technology to help scan material on the walking floor to help resource recovery.

Community benefits

Accelerated achievement of less waste to landfill.

CONNECTED INFRASTRUCTURE

CONNECTED INFRASTRUCTURE

Initiatives that prepare the city for new and more efficient operational delivery models in the face of rapidly increasing requirement for services and population growth.

COMMUNITY VISION STATEMENT
PILLAR 7
BUILT ENVIRONMENT

We are a city that maintains our unique built and ecological character, where we all have a safe, secure and healthy place to live. We are a city where people and communities can access world-class services and infrastructure and provide for their social, cultural and economic wellbeing. We embrace change but not at the expense of our Hobart identity and character.

CURRENT PROJECTS

CIN01 MOBILE DEVICE CHARGING STATION INSTALLATION

What good is free Wi-Fi or digital services if your device is out of juice? Sometimes all you need is the convenience of a good ,clean recharge.

Timeframe: Current project
City's role: Lead

Goals

Keeping the community connected.

Product / Result

Free power through a range of power outlets (GPOs) and integrated charging stations.

Community benefits

The use of a smart energy grid (see CEN07) to deliver solar energy stores to the community.

CIN02 SMART CITY AMENITIES AUTOMATION TRIALS

Today's cities are more complex than ever before. And community expectations, while not new, are also greater than ever before. How can city government keep pace with this change without blowing the budget? Automation. But rather than being a new terrible thing, the slow creeping change of progressive automation has been a tenet of city life for centuries.

Timeframe: Current project
City's role: Lead

Goals

Moving from a 5-day, 7–7 service provider to a 24/7 service provider model.

Product / Result

Automation of city amenities including gate and door controls, sports ground lighting, and fountain lights.

Community benefits

Operational efficiencies and the ability to offer 24/7 services to the community where Council currently operates 5 days a week.

FUTURE PROJECTS

CIN03 EXTENDED PUBLIC WI-FI ROLLOUT

Southern Tasmania has the best available internet across the whole of Australia, and in 2016 the United Nations declared internet access a basic human right. It's time to beam me up and dial up social change!

Timeframe: Future project
City's role: Partner

Goals

A Wi-Fi enabled city.

Product / Result

Installation of public Wi-Fi network infrastructure across 12 City of Hobart retail and urban precincts.

Community benefits

Social and digital equality and service benefits across Hobart to meet the needs of both resident and non-resident ratepayers.

CONNECTED INFRASTRUCTURE

FUTURE PROJECTS

CIN04 **STREET LIGHTING AND SMART POLES**

Street lighting is an often overlooked digital infrastructure element – yet one that is critical to the health and wellbeing of the city, its commuters and community members. Street poles generally provide lighting, which brings opportunities to decrease energy usage and expenditure. But the poles themselves are useful pieces of infrastructure placed all over the city. Sensors and other digital infrastructure can be installed on them, supporting environmental monitoring and other Smart Cities initiatives. Low light in winter a challenge? No problem. Noisy street party? Let's take a look at that for you.

Timeframe: Future project

City's role: Partner

Goals

Progressive asset replacement and activation.

Product / Result

Addition of smart poles and smart controllers to the city's LED lighting network.

Community benefits

Improved environmental monitoring. Reduced energy consumption. Increased connectivity between Smart City assets. Increased community safety and amenity.

CIN05 **INSTRUMENTATION OF COMMERCIAL INFRASTRUCTURE**

How much money do you spend at home just maintaining things around the house or on your property? How about that last bill power or trying to figure out how you managed to walk out of the hardware store with all those parts? Now think about that on a city scale. In Hobart, operational maintenance is a significant line item in our (your!) annual budget. What if we could find substantial savings by improving the efficiency or simply extending the life of an asset by just a few dollars or years? Now think about the impact of that beyond the money: the environmental savings, the fuel and energy savings. Even lawn mowers and drills can use a Fitbit to help them live a longer life.

Timeframe: Future project

City's role: Partner

Goals

Preparing for new and more efficient operational delivery models in the face of rapidly increasing requirement for services.

Product / Result

Ongoing sensor and network activation of key city urban precincts and assets including IoT and fibre networks, parking, lighting, digital signage, fountains, gates, toilets and fleet assets.

Community benefits

Remote operational management, improved employee safety and reduced external labour costs to Council and Hobart's ratepayers.

CONNECTED GOVERNMENT

Initiatives that transparently communicate key data to the community while protecting personal data and preserving individual privacy, and that improve the governance and operational controls over the future of the Corporation of the City of Hobart.

COMMUNITY VISION STATEMENT PILLAR 8
GOVERNANCE AND CIVIC INVOLVEMENT

We are a city of ethics and integrity. We govern with transparency and accountability, encouraging and welcoming active civic involvement. We collaborate for the collective good, working together to create a successful Hobart.

CONNECTED GOVERNMENT

CURRENT PROJECTS

CGV01 OPEN CITY DASHBOARD AND PUBLIC DATA GALLERY

Each Internet of Things (IoT) sensor provides a huge amount of data about what's happening in the city. The Open City Dashboard will make 'at-a-glance' data from Connected Hobart programs readily available to Hobart communities. But the vast amounts of data IoT produces also remind us that trust, privacy and security are important to the Hobart way of life. The dashboard will include a solid data governance framework that protects data coming from every smart city initiative.

Timeframe: Current project
City's role: Lead

Goals

To transparently communicate key data to the community while protecting personal data and preserving individual privacy.

Product / Result

A Connected Hobart Smart City portal that provides general information, metrics and data from the Greater Hobart City Deal and the Connected Hobart programs.

Community benefits

Open data available for Hobart communities and stakeholders. Community priorities identified and shared on the platform. Opportunities to use data as leverage for change.

CGV02 TECHNOLOGY ARCHITECTURAL BLUEPRINT

The City of Hobart needs to make clear and well-informed decisions about adopting new technologies. This action will develop a standard – a technical reference architecture – for trying out new technologies that enable sound integration of Council's industrial assets and business applications. This architecture will ensure that we use fewer systems that do more things, rather than many different systems that have a single use each.

Timeframe: Current project
City's role: Lead

Goals

To control technological diversity through defined standards that promote interoperability for data, applications, and technology. To maintain expertise in, and connectivity between, multiple Smart Cities processing environments and secure appropriate commercial models.

Product / Result

Development of a defined architectural standard for Connected Hobart that promotes multi-use technologies over the development of duplicative or single-use solutions.

Community benefits

Minimised long-term operating costs. Improved operational efficiency.

CGV03 SMART CITY LEGISLATION REVIEWS

Technological advancement is, often, ahead of regulation. It is challenging for governments to amend legislation and regulations under such a rapid pace of change. For example, 'driver' is a key word in numerous Transport, Roads and Highways Acts. But it will require new interpretations (or even not apply!), as driverless or fully autonomous vehicles work their way into national transportation systems. Similarly the words 'cash', 'coin' and 'money' have taken on new meanings in the 21st century, and it has been decades since some of these laws were last amended. Regulatory change will be important to support Hobart's localised responses to global Smart Cities developments.

Timeframe: Current project
City's role: Lead and Partner

Goals

To provide input to state and national regulators and legislators on the redrafting and amendments of appropriate legal frameworks from privacy to operational technologies.

Product / Result

Open standards and contemporary legal frameworks.

Community benefits

To protect Hobart consumers, and ensure the ongoing and effective operation of national and global ecosystems and markets.

CONNECTED GOVERNMENT

CURRENT PROJECTS

CGV04 COUNCIL OF CAPITAL CITY LORD MAYORS AND HOBART SISTER CITY PROGRAM AND STUDY TOUR

Smart Cities are not just about cool new technologies. They thrive in collaborative ecosystems. Hobart has several formal national and international relationships, with intention to promote understanding at their core. Today, our friendship city Fuzhou has found ways to collaborate with Ali Baba (the Chinese equivalent of Amazon), while sister city Yaizu, Japan is already using drones for maritime rescue and L'Aquila, Italy focuses on solutions to disaster relief. Meanwhile, closer to home, other state capitals are leading the way in testing out what Smart Cities can mean in Australia. What can we learn from each other?

Timeframe: Current project
City's role: Partner
Goals

Identify one national CCCLM cities and one international relationship city to progress formal Smart City collaborative opportunities, based on shared or strategic alignments.

Product / Result

Enter into a Statement of Intent to collaborate. Promote outcomes of local solutions developed by the Hobart community in Hobart City Labs (see CCR04).

Community benefits

Opportunities for entrepreneurial communities to benefit from national and international trade in the digital economy while sharing city-to-city knowledge and learnings.

CGV05 CONNECTED HOBART ENGAGEMENT

Hearing about Smart Cities is not the same as participating. New technologies can be intimidating, and it can be tempting to defer to the experts. But Hobart communities know their city best – they live and visit it every day, and their stories and interactions make this place what it is. Community members can get involved in and influence Connected Hobart through Connected Engagement, the ongoing community engagement program that will run alongside the action plan initiatives.

Timeframe: Current project
City's role: Lead
Goals

To directly engage with Hobart community members in rolling out and reviewing the Connected Hobart program. To ensure Connected Hobart initiatives learn from people from all walks of life. To make Connected Hobart a world-leading example of a collaborative Smart City.

Product / Result

An ongoing and adaptive engagement plan, for the lifetime of the Connected Hobart program.

Community benefits

Increased community understanding and ownership of the Connected Hobart program. Improved Connected Hobart projects, relevant to and reflective of both community priorities and global leading practice.

CGV06 CONNECTED HOBART COMMUNICATIONS

What does 'Smart Cities' mean exactly? What do sensors do? What is micromobility? Or the Internet of Things (IoT)? Or open data? New technology is affecting cities in complex ways. But it's hard to engage in things we don't understand. Opportunities to experience new technologies, like through Hobart City Labs (CCR04), help. But stakeholders – from community to other cities and the tech industry – should also be able to access information about Connected Hobart in a variety of mediums, in plain English.

Timeframe: Current project
City's role: Lead
Goals

To provide accessible Connected Hobart information to Hobart communities. To increase understanding of Smart Cities technologies and initiatives.

Product / Result

A communications strategy and associated initiatives that share information about Connected Hobart in plain English, for a variety of audiences.

Community benefits

Increased social inclusion and participation in the Connected Hobart program. Increased community awareness and understanding of Smart Cities technologies and concepts. Reduction of the digital divide in Hobart.

CGV07 CONNECTED ETHICS

New technology developments have tested societies' ideas about what it means to live a good life. Values about human connection, privacy, wellbeing and governance are being debated all over the world, with big real-life implications. Smart Cities ethics decisions are made every day, about technology itself and how data is collected, managed, used and shared. Connected Ethics will help the City enact the framework principles, making sure the right questions are asked at the right times.

Timeframe: Current
City's role: Lead
Goals

To embed the framework principles in the City's technology decision making. To engage with stakeholders and community members on key ethical issues. To increase transparency and build community trust in Smart City initiatives.

Product / Result

Initially, a report on opportunities for building ethical considerations for Smart City decision making. Subject to findings, more specific work on practices that can integrate into the roll-out of Connected Hobart.

Community benefits

Increased community involvement in the public good impacts of Smart Cities, including risks and benefits. Increased stakeholder engagement in ethical challenges facing Smart Cities. Contribution to global progress on Smart Cities ethics.

FUTURE PROJECTS

CGV08 CONNECTED HOBART IMPLEMENTATION PLANNING

Connected Hobart should not be left to chance. Smart Cities involve planning, collaboration and careful consideration of the intended and unintended consequences of the City's actions. In short, implementing the Connected Hobart Smart City Action Plan should follow the guidelines set out in the Connected Hobart Smart City Framework. This means carefully considering how we work together within the City of Hobart and with partners to deliver a program that will improve quality of life in Hobart and support efficient and collaborative operations.

Timeframe: Future project
City's role: Lead

Goals

To ensure high-quality, efficient and collaborative implementation of the Connected Hobart program. To take advantage of the opportunities that smart cities presents to work across operational siloes and sectors.

Product / Result

An overall implementation plan for the Connected Hobart program. Specific project plans for each action plan initiative.

Community benefits

Improved operational efficiency. Improved relationships within the City of Hobart and with external stakeholders. High-quality implementation of the Connected Hobart program. Outcomes that reflect the community vision.

CGV09 CUSTOMER SERVICE CENTRE VOICE ASSISTANT TRIALS

The City of Hobart receives thousands of phone calls and requests for information every month. The introduction of artificial intelligence (AI) solutions on our smartphones provides opportunities for every business to help improve customer service wait times and deliver better experiences for their customers. Just imagine getting fast and easy responses to simple service questions wherever you are, or whenever you need to know: 'Alexa, tell me ... when is the next council meeting?' 'Google, when is my rubbish being collected?' 'Siri, are there any road closures today?'

Timeframe: Future project
City's role: Lead

Goals

To improve information services delivery to the City's diverse customer base without significantly increasing operational costs.

Product / Result

Develop a City of Hobart voice assistant services program through the trial of Google, Apple and Amazon voice assistant skills platforms.

Community benefits

On-demand improvements to customer service performance. The virtual extension of the City's operating hours to meet changing society demand. Financial benefit through, for example, reduced printing and mailing costs. Increased inclusion and participation options for those who use voice assistant platforms to help with a disability.

CGV10 DIGITAL BOARDROOM

A Smart City moves doesn't focus on traditional hierarchies and divisions. Instead, it uses digital platforms and data that help staff work in teams and across disciplines. The Digital Boardroom will provide real-time data to decision-makers, helping them manage and respond to urgent issues more quickly, and providing additional insights on topics that require a more in-depth approach.

Timeframe: Future project
City's role: Lead

Goals

To replace or augment Council reporting approaches with real-time data.

Product / Result

A range of information portals that provide building information modelling (BIM), precinct information modelling (PIM) and other spatial and city data.

Community benefits

Increased evidence base for city decision making. Faster reporting and decision making processes.

CGV11 WORKFORCE OF THE FUTURE SKILLS ROADMAP

Global trends like automation are slowly reshaping the world and, within just a few decades, what we do in every job will change. It is clear that Tasmania will not be immune to the effects of globalisation and growth. Platforms like Airbnb and Uber have already changed the fundamentals of work in Tasmania, with significant impacts on the local economy. And new technologies are creating new jobs and changing others. Understanding the effects of these paradigm shifts on traditional businesses and workforces is critical to the City's future.

Timeframe: Future project
City's role: Lead

Goals

Ensuring the City has the skills and labour it needs to meet the future requirements of Hobart.

Product / Result

A Workforce of the Future Skills Framework report.

Community benefits

Improved governance and operational controls over the future of the the City of Hobart.

FUTURE PROJECTS

CGV12 CONNECTED HOBART MOBILE APP CONNECTED INTELLIGENCE

Apps are designed to make life easier. Need to find a car park? Wondering when the bus will arrive? Where's the nearest toilet, NOW?! Is there an event on around here? Want to find under-utilised public or private spaces for creative social use? In every city, there is an app for every occasion. But too many choices can often ruin the experience.

Timeframe: Future project
City's role: Partner

Goals

To integrate a range of social apps and services into a single user experience.

Product / Result

City of Hobart's Smart City App.

Community benefits

Minimised number of mobile apps required by the community to interact with the City of Hobart and other city services.

CGV13 CONNECTED CITY DEAL

The Hobart City Deal is a partnership between the Australian and Tasmanian Governments and the Hobart, Clarence, Glenorchy and Kingborough councils. The City Deal provides a framework and funding model for working on regional issues, like transport, affordable housing and strategic planning. The City Deal aims to harness Smart Cities thinking for the benefit of the whole Hobart region. It includes an innovation precinct and Greater Hobart Smart City operations centre, helping all involved trail new initiatives, learn together and share data.

Timeframe: Future project
City's role: Partner

Goals

To implement regional Smart City initiatives that address issues crossing local government boundaries.

Product / Result

A Greater Hobart Smart City innovation precinct, for all councils involved to test new initiatives. A Greater Hobart Smart City operations centre, establishing a regional data hub for addressing regional community safety and transport challenges and improving disaster response.

Community benefits

More relevant responses to regional challenges. Lessons learned shared across the Hobart region. Increased collaboration between regional councils and state and federal government.

CGV14 REMOTE AND WORK-FROM-HOME TRIALS

The City of Hobart will explore ways to work with other Greater Hobart Councils to discuss shared hot-desk facilities, where staff from different councils can work from offices around the region. All staff in Greater Hobart could move towards single email and video-conferencing systems, leading to more collaboration and better services for people across the region.

Timeframe: Future project
City's role: Partner

Goals

To create alternative travel and work locations.

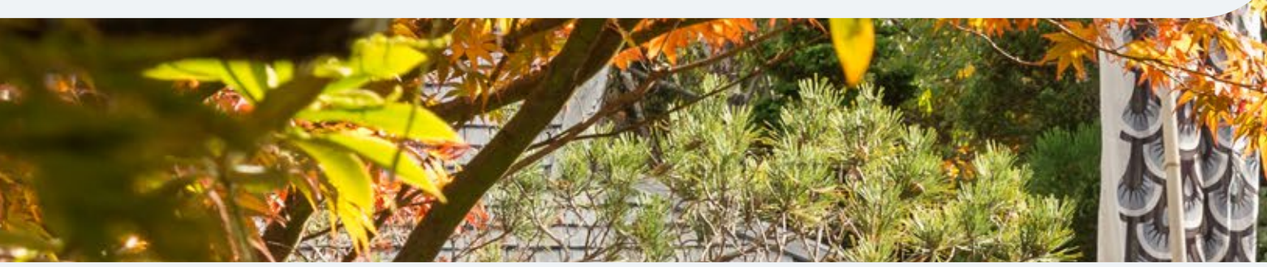
Product / Result

Remote-working hot-desk facility outside of Hobart.

Community benefits

Response to the increasing trend towards working remotely or from home. Contributing to traffic congestion solutions by providing opportunities to work for the City, outside the city.

CONNECTED HOBART RESOURCING



Part of good Smart Cities decision making is ensuring appropriate resourcing. This means finding the right human, financial and other resources to make each project a success.

The Connected Hobart Smart City Framework discusses partnerships, with communities and organisations, to make sure Smart City projects respond to global technology trends in locally relevant and appropriate ways. It also frames up how to identify challenges and other important information to ensure Smart Cities resources are directed to the most important issues.

Funding for Smart Cities projects can come from a range of sources, for example:

- re-focusing of the City of Hobart's 10-year capital works program
- the City of Hobart's Operational budgets
- the Greater Hobart City Deal
- direct partner contributions
- grants
- projects themselves, where they generate their own revenue.

Details of funding for Connected Hobart initiatives will be reflected in individual project plans and the overall implementation plan.

CONNECTED HOBART PERFORMANCE AND UPDATES

The Connected Hobart Smart City Framework is long-term. It provides strategic guidance and describes important values and ways of working. It is important to hold true to these values, which have been framed in direct response to community input. Therefore, the framework is only designed to change as these values change, which means continued conversations with Hobart communities.

The Connected Hobart Smart City Action Plan, on the other hand, is agile by nature. That means the program is designed to learn and act on lessons quickly. It also needs to respond to a fast-changing environment – Smart City technologies are being invented and updated constantly. To help the program succeed and continue to reflect community and stakeholder needs, the action plan will be reviewed every 12 months.

Specific measures for success are part of Connected Hobart implementation and project planning.

GLOSSARY

KEY TERMS ABOUT PLANNING AT THE CITY OF HOBART

Action plan

A detailed plan outlining the specific actions that will be taken to meet a goal or goals.

Checkpoint

A stage of reflection and assessment in the lifecycle of a project or initiative.

Community vision

The City's highest-level strategic document, called Hobart: A community vision for our island capital. It articulates community values about and aspirations for Hobart now and into the future based on in-depth engagement. The vision is critical for ensuring that the City's work aligns with what is important to Hobart communities.

Framework

A structure and system used to guide planning, decision-making and implementation.

Implementation plan

A plan outlining how actions will be undertaken, including details about timing, resources and other operational aspects.

Pillars

The major aspects of city life, used in the community vision and the strategic plan.

Programs

A group of projects or initiatives about the same general topic.

Strategic drivers

The forces shaping the direction an organisation chooses to take.

Strategic plan

The City of Hobart's primary planning document, outlining the outcomes we aim to achieve over a 10-year period, in response to the community vision. It is required under the Local Government Act 1993 and must be reviewed every four years.

KEY TERMS ABOUT SMART CITIES

3D printing

A method of building a three-dimensional object from a computer-aided design (CAD) model. 3D printing uses fewer raw materials than traditional manufacturing, since objects are built layer-by-layer instead of being cut from larger blocks of material. It can be used to manufacture objects ranging from furniture to musical instruments.

Algorithm

A set of instructions that tells a computer what to do, according to specific sequence of actions. They are used for performing calculations, data processing and other tasks. Algorithms can be 'trained' to improve the performance and accuracy of their calculations. See also: artificial intelligence (AI) and machine learning.

Architecture

A concrete view or outline of how different parts of a technology system fit together. Putting together a clear technology architecture helps make sure that all hardware, software, information management and other systems components work together smoothly and efficiently.

Artificial intelligence (AI)

The ability of a computer or robot to perform tasks ordinarily associated with humans, for example, reasoning and learning from past experience. AI currently performs best on clear-cut, repetitive tasks where performing the same action again and again can help AI algorithms learn and improve. Examples include medical diagnosis, voice recognition, chess and video analysis. Artificial intelligence is allowing computers to perform increasingly complex tasks. See also: algorithm and machine learning.

Augmented reality (AR)

A technology that combines computer-generated images (CGI) with the user's view of the real world. Examples are common in smartphone apps that show CGI layered over images captured by the camera. AR is related to virtual reality (VR), where the user's view is entirely made of computer-generated images.

Automation

Tasks undertaken by machines without human intervention. Automation is a step beyond mechanisation, where machines replace human labour but still require human input. With new developments in technology, automated systems can perform tasks beyond what humans would be able to accomplish, increasing performing cognitive rather than manual tasks.

Autonomous vehicles (AV)

A vehicle that can drive itself, without human intervention. Also known as automated, self-driving or driverless vehicles. Autonomous vehicles use technologies, like GPS and sensors, to navigate their environments. Although autonomous vehicles are not yet advanced enough to be available to everyday consumers, they are expected to have big impacts on transport systems.

Big data

Extremely large data sets that may be analysed using computers to reveal patterns, trends and associations.

Bluetooth

A wireless technology standard for exchanging data between devices over short distances using ultra-high frequency (UHF) radio waves. Bluetooth has point-to-point (one single device to another single device), broadcast (one device to many other devices) and mesh (many devices to many other devices) applications. Bluetooth is used in wireless headphones and speakers that connect to smartphones, for example.

Building information modelling (BIM)

A 3D, computer-aided design (CAD) approach to building design and management that can store highly accurate building information. BIM allows people working in different disciplines, for example, engineering and construction, to share one 3D model, saving time and reducing errors. BIM can be used to for helping with environmental sustainability measures, for example modelling energy usage. The concept can also be applied to precincts (precinct information modelling, or PIM).

Citizen science

The collection and analysis of data by community members or non-experts, typically as part of a collaborative project with professional scientists or subject specialists.

City analytics

The measurement, collection, analysis and reporting of data about a city for the purpose of optimising services and experiences and the environments in which they occur.

City Deal

A partnership program, led by the Australian Government, between the Australian Government, state governments and local governments. The Hobart City Deal involves the Australian and Tasmanian Governments, and Clarence, Kingborough, Glenorchy and Hobart councils. One of the focus areas of the Hobart City Deal is 'investing to support Hobart as a smart, liveable and investment-ready city'.

Cloud computing

A network of remotely-located servers used to store, manage or process data, rather than a personal computer or locally-based server.

GLOSSARY

KEY TERMS ABOUT SMART CITIES

Co-design

A design approach where the people affected by a particular project or issue have direct involvement in influencing outcomes. Sometimes called 'participatory design', co-design has a strong focus on facilitation and partnership between decision makers and the people who will be affected by the project. An example is a collaboration with community members to upgrade a precinct where they live or run a business, where they can provide input on how they use the space and other aspects.

Cybersecurity

The practice of protecting digital systems and infrastructure from malicious attacks. These attacks, or cyberattacks, are directed at obtaining personal data or other sensitive information, for financial or other gain. Cybersecurity is a critical factor in Smart Cities, which require data and infrastructure to be safe and secure.

Dashboard

A platform for viewing data and other information, especially in real-time. See also: open data, public dashboard and real-time.

Data

Information collected for use, especially to inform decision making. Data can involve numbers (quantitative) or observations that can't be measured (qualitative). Smart cities technologies collect mainly quantitative data, which can be used alone or with qualitative data to guide decision-making.

Data-sharing partnerships

Partnerships between organisations to share information that will be useful to each other or their stakeholders. See also: de-identified information and open data.

De-identified information

Information that has a person's personal details removed. De-identified data keeps the information being used or studied so that lessons can still be learned, for example about health outcomes or traffic movements, but without divulging who the information is about, or providing details that could allow identity to be ascertained.

Demand response

A management technique used to reduce demand during peak times, shifting it to times when demand is lower. Demand response is used as an alternative to increasing supply or prices at times of high demand. Its best-known use is in the energy sector.

Digital infrastructure

Foundational services necessary to the information and technology capabilities of a city or region.

E-mobility

The class of transport modes powered by electricity, rather than fossil fuels. Also known as electric mobility or electro-mobility. Examples include electric vehicles (EV), electric bicycles (e-bikes) and electric scooters (e-scooters).

Gamification

Applying elements of game-playing, like scoring points and moving up levels, to other kinds of activities. Gamification can encourage behaviours or create habits by making them more fun and engaging. Gamification is often used in smartphone apps for purposes such as language learning.

Gig economy

The sector of the economy focused on independent, part-time work. Gig work can be short-term, temporary or supplement other income, or it can be a longer-term commitment. The term most often applies to work organised through internet-based platforms, such as Airbnb and Uber.

Innovation

The translation of new ideas into reality, in ways that create value and are recognised by the community as important, relevant and timely.

Internet of things (IoT)

Objects containing sensors connected over networks, which can send and receive data. The Internet of Things involves sensors embedded in often everyday objects (such as light poles, parking spaces and smartphones), and the data that is transferred is typically stored on cloud-based platforms where the data can be viewed and analysed. The Consumer Internet of Things (CIoT) refers to the same type of systems but for private individuals, rather than Smart Cities. See also: cloud computing.

Last-mile

The final distance between individual customers and a service provider. The term is often applied to technology and transport services, especially to do with finding ways of overcoming barriers to access. Examples include internet connections and public transport.

Living lab

Places where new innovations can be trialled and tested before being fully adopted and applied to other locations or situations. Living labs typically have a co-design ethos, aiming to encourage community or stakeholder participation so that solutions are relevant and useful to those who will be using them. See also: co-design.

LoRA

Short for 'long range'. LoRA networks use long-range radio frequency bands to communicate between devices, with low power consumption. They allow long-range connectivity between IoT devices. See also: Internet of Things (IoT).

Machine learning

Rather than following a fixed set of instructions, machine learning algorithms can modify or re-write themselves as they process data, to improve their performance and accuracy. Examples of machine learning algorithms can be found in web-based services that offer recommendations based on viewing and purchase history, such as Amazon and Netflix. See also: algorithm and artificial intelligence (AI).

Micromobility

Transport provided by very light vehicles, such as e-scooters and e-bikes. See also: e-mobility.

On-demand

A product or service available any time the user wishes to access it. An example of an on-demand service is Netflix, where users can choose to watch a film or series at any time, rather than according to a fixed schedule.

Open data

Data that is made publicly available and can be freely accessed and used by anyone. New sources of open data are invaluable for solving our long- and short-term challenges. Privacy can be protected by making data anonymous as long as systems are in place to make sure that people's identity can't be discovered. See also: citizen science, de-identified information and public dashboard.

Public dashboard / data gallery

An online platform where members of the public can access publically available, open data. See also: open data.

Public realm

The streets, squares, parks, green spaces and other outdoor places that require no key to access and are available, without charge for everyone to use and should not be seen in isolation but in the context of its adjacent buildings, their uses and its location in a wider network of public and private space.

KEY TERMS ABOUT SMART CITIES

Public Wi-Fi

Wireless internet, often provided free of charge, in publicly accessible places, such as airports or city parks.

Real-time

The actual time during which something occurs. For example, real-time data is available to view as it is being collected.

Remote working

Working outside a traditional office or similar environment, communicating with colleagues via internet, phone or other technologies. Remote workers often work from home but some share office spaces with others (co-working spaces). Some co-working space offer hot desk facilities, shared desks that do not belong to a particular person but are shared.

Ridesharing

Similar to carpooling, but more often applied to situations where drivers and passengers are connected to each other using apps like Uber or Lyft.

Sense of place

People's relationships, connections and bonds with places. Sense of place evolves through culture, history, environment, economics, politics, geography and all kinds of other interactions between humans and their environments.

Sensors

A device that measures a physical property and then records and/or responds to it. Sensors require an input, such as light, heat, motion, moisture, location, pressure or other aspects of the environment. The typical smartphone contains more than 10 sensors.

Smart City Asset

A traditional city asset – like a building, a light, or a road – that uses sensors and automated controls to manage its operations.

Smart devices

An electronic device that can connect to other devices or networks, using wireless technologies such as Wi-Fi and Bluetooth. See also: Bluetooth and Internet of Things (IoT).

Spatial data

Data that is specific to a location. Spatial data is stored and displayed using natural earth or map-based systems.

User

The person or entity using a product, service or system. The term 'user' is most often associated with people or customers engaging with technology.

User-pays

A pricing model where a customer for their specific usage or consumption of a service.

Video analytics

The process of automatically analysing video, in particular using artificial intelligence. In a Smart Cities context, video analytics can be applied to CCTV footage, for example. See also: artificial intelligence.

Voice assistant

A program that uses voice recognition, natural language processing and speech synthesis to provide services to users, for example, through digital kiosks or smartphone apps. Examples include Apple's Siri, Amazon's Alexa or Google Assistant.

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