MARCH 2019

CONNECTED HOBART

SMART CITIES ACTION PLAN

City of HOBART

Smart Cities
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Connected Hobart will allow our city to improve and enhance the way we sense and respond to, then predict and act on, today's challenges – and those awaiting us in the future. The data and information provided by the Connected Hobart program will allow us to measure and report our way to success like never before, helping become Australia's most economically, socially and environmentally connected community by 2030.

Smart Cities
CITY OF HOBART

HELPING US ACHIEVE CONNECTED HOBART

We welcome all ideas. So what can you do if you have an innovative or Smart Cities idea for Hobart?

First, read the Connected Hobart Smart City Framework. You will see that each part of the framework has three questions to consider (in the boxes marked with lightbulbs).

Once you've satisfied yourself that you've answered those questions, share your thoughts! If you're a member of staff, get in touch with the City Innovation Division. If you're an industry stakeholder or community member, send your idea to the team at **yoursay.hobartcity.com.au/smart-city**.

CONNECTED PLACES & SAFETY

	INITIATIVE	DESCRIPTION	OBJECTIVES
CPS01	Connected Retail and Suburban Precincts	Hobart's communities are as diverse as they are unified and have undergone beautiful urban design upgrades in recent years. But they still tell us little about the communities using them. Regardless of their differences, every precinct contains a mixture of 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 that will benefit from an improved operational understanding.	To digitally connect Hobart's retail and suburban precincts through the installation of power, network and sensor technologies, enhancing our unique suburban beauty with modern technologies.
CPS02	Hobart City Watch Security Operations Centre	Hobart City Watch will provide a service to support residents, retailers, traders and partners wherever CCTV cameras operate in Hobart's connected precincts. City Watch will include establishment of a central facility to monitor the city's urban and crowded spaces for both special and daily operational events and the development of an on-demand and user-pays digital information service for the community to source incident data about events that affect them, such as traffic incidents, and support the city's overall social inclusion and crime prevention initiatives.	To improve incident response and on-demand video request services to enhance the social inclusion and public safety of the city.
CPS03	Video Analytics Trials	Video is a key data source for any contemporary or capital city. It not only substantially improves security; it delivers meaningful insights into how best to achieve Hobart's strategic vision. 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 and future capital investments.	To analyse various city video information including pedestrian footfall, crowded spaces, and multi-modal travel and destination data for public and private vehicles.
CPS04	CASA Accreditation and Drone Emergency Management Trials	Aerial mobility – more specifically Unmanned Aerial Vehicles (UAVs, better known as drones) – are synonymous with Smart Cities. Rather than just taking amazing photos, 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. But before cities can even manage the tremendous use of drones within their local government areas, they must first secure federal CASA drone accreditations including Remote Operators Certificates (ROC), and key staff Remote Operations Pilots Licences (RePL).	To build public confidence in the application of UAVs through extended drone and remote drone trials.
CPS05	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.	To support the safety of temporary events, and deliver community planning data collection for specific projects.
CPS06	Crime Prevention Through Environmental Design (CPTED) Trials	Crime Prevention Through Environmental Design (CPTED, pronounced 'Sep-Ted'), requires the use of both analogue and digital place-making infrastructure such as smart bollards and smart lighting to develop crowd-friendly spaces in modern cities.	Development of intelligent crowded spaces programs including after-hours, anti-social behaviour and night-time economy services.
CPS07	Cyber Security 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. While each of these step-changes has required new levels of skills, the connectedness of the modern city requires high degrees of vigilance to ensure the vast array of inter-connected systems are kept operational and safe. In Smart Cities, first among these new-age capabilities is cyber security.	To ensure that any new digital services are secure.

OUTPUTS	OUTCOMES	19/20	20/21	21/22	22/23	23/24	PARTNERS
Technology infrastructure homogenously integrated into buildings, streets, and environmental amenities.	To extend and capitalise on planning investments in the built environment, improve operational and future planning, and establish a baseline for digital and social equity across Hobart.						
An operational Security Operations Centre capable of supporting multi-agency, major incident teams.	To maintain high levels of public safety for the communities interacting with Hobart.						
Benchmark information to improve community and urban planning and security including enhanced allocation of capital works funding to areas of targeted needs.	To reduce community exposure to anti-social behaviour, and better management of commuter activity and economic growth across Greater Hobart.						
Regulatory accreditations and the establishment of a CBD drone port to support a kunanyi and Queen's Domain early warning fire detection system.	Initially to enhance the management of fire – Greater Hobart's primary risk.						
The protection of critical infrastructure through the use of mobile trailers equipped with CCTV services integrated with the city's primary Security Operations Centre.	To strengthen the capability of Hobart and its local community organisations to address crime and anti-social behaviour.						
Automatic smart bollards and integrated smart lighting and other fixed infrastructure.	A safety improvement by better securing major events and locations from external vehicle intrusion and lighting dark spaces across Hobart.						
A permanent role to manage the Hobart City Watch Security Operations Centre together with improved security governance and policy services appropriate to significant 21st century businesses.	Critical response capabilities against cyber security threats and incidents, mindful of the nature of the events being undertaken, and the community in which they are being held.						

CONNECTED LIVING

	INITIATIVE	DESCRIPTION	OBJECTIVES
CLI01	The Connected Lounge or Smart City Studio Public Showing Room	At the centre of all communities is the home. Similarly, Smart Homes or e-Homes are a key part of any Smart City because, for many of us, our daily interactions with the city start and end at home. Many of the technologies finding their way across the city first appeared in the home: smart lighting, smart fridges, smart TVs. The list is endless. But there are a lot of questions about what 'Smart Home' devices are on the market and how they work. The Connected Lounge will give people a chance to experience them and other technologies appearing across the city.	To work with a number of community members to develop and deliver digital and social inclusion across the community by showcasing the City of Hobart's various Smart City services in a convenient location.
CLI02	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 solutions on our smartphones provides the opportunity for every business to help improve customer service wait times and deliver better experiences for their customers. Just imagine getting fast and easy access to a range of 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?'	To improve the delivery of information services to Council's significant and diverse customer base without significantly increasing operational costs to the community.
CLI03	Opt-In Pet Locate-Track-Monitor Trials	Hobart residents love their pets. And everybody else knows that dog and cat videos are among the most watched on the internet. Why? Because whether as social companions for the elderly, support assistants for treatment of medical and accessibility conditions, or just as an extension of our human families, they are an integral 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.	Enhancing the gross domestic happiness of Hobart families by ensuring the safety of pets, their owners and the broader community.
CLI04	Opt-In City Wearables Panel Social Infrastructure Program Trials	The consumer Internet of Things refers to the range of smart devices like watches and fitness trackers, glasses and monitors, and even shoes that are internet enabled and available to everybody through retail or online businesses. The sort of de-identified information that these technologies provide show much about how people move around a city, where they congregate, at what times, and for how long. When combined with existing information sources, this sort of information can provide great impetus, beyond traditional methods such as petitions, to new service priorities across the city.	To leverage the wisdom of crowds across a range of social demographics to better respond to the pulse of the city.
CLI05	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. The Smarter Hobart Challenge will engage community members in the design and planning of new services. Community involvement and co-design are wonderful opportunities that many Smart Cities are embracing. And Hobart is too!	Community-driven innovation through real projects and services defined and built by the community.
CLI06	Smart Language Translation Trials	Walking through any part of Hobart on any day of the year 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. As custodians of the city, this creates new challenges in engaging with such a diverse range of communities who speak a first language other than English.	To provide equitable levels of inclusion through service and information to all city stakeholders.
CLI07	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 to measure commuting distances in order to award riders a fee per kilometre for bike journeys undertaken between home and work, with capped per person monthly payments managed by bank transfer.	Reduction in cars on the road among commuting employees (our only really congested times!).

OUTPUTS	OUTCOMES	19/20	20/21	21/22	22/23	23/24	PARTNERS
A physical drop-in centre displaying a mix of smart home and Smart City services currently being used or planned for use in Hobart.	Inform the community and other councils about Hobart's Smart City program and services.						
Develop a Council Voice Assistant Services Program through the trial of Google, Apple and Amazon voice assistant skills platforms.	On-demand improvements to customer service performance, the virtual extension of Council operating hours to meet changing society demand and financial benefit through, for example, reduced printing and mailing costs.						
Data portlet within the Connected Hobart Smart City webpage to identify the location of pets (refer Connected Government CGO01) public data service.	Improved pet safety and peace of mind plus the digital and social inclusion of those in society who may not always be able to be home to ensure their pets are where they left them.						
Data portlet within the Connected Hobart Smart City webpage (refer Connected Government CGO01) public data service.	Citizen-centric design for Hobart's capital works programs and Council's new service offerings.						
An annual prize of $25,000 awarded to the best community-driven solution to be trialled in the Hobart City Labs innovation precinct (see Connected Industry CIT06).	Direct community engagement in the realisation of the vision and strategies of Greater Hobart.						
Artificially Intelligent-powered language translation trials in both the Customer Service Centre and Tasmanian Tourism and Information Centre.	Improved multi-language service capabilities for Greater Hobart's culturally and linguistically diverse communities.						
Activation of key commuter routes for improved pedestrians and bicycle infrastructure planning.	Supporting changed behaviours to assist in the management of both operational traffic congestion, and longer-term realisation of a commuter-friendly Greater Hobart.						

CONNECTED COMMUNITY & CULTURE

	INITIATIVE	DESCRIPTION	OBJECTIVES
CCU01	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.	Provide a scaled virtual version of the city to encourage enhanced youth engagement with traditional civil discourse.
CCU02	Smart Street Furniture	How people experience and interact with a city is often based on their experience of certain places and spaces. Do they feel safe? Are the seats and shade and play equipment functional? 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.	To understand how communities are using street furniture within the public realm.
CCU03	Develop 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.	To integrate a range of social apps and services into a single user experience.
CCU04	Technology Free Zones Trial	We heard you Hobart. Everything has a time and a place. None of us wants a city overrun by tech. We understand that, and that 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.	To identify designated technology-free zones in heritage, bushland and urban areas. Appropriate public safety measures will still be necessary.
CCU05	Integrated Multimedia and Digital Public Art Infrastructure	Human beings are creative by nature. Since time immemorial, societies have used symbolism, stories and art to express themselves, connect with others and make sense of their surroundings. Art is not an optional part of being human; it is core to who we are. It is not nice-to-have but essential. Hobart has creativity and the arts in spades. So we should look to integrate them into our city. Into our playgrounds. Into our parks and buildings and streets. But there are even more stories to tell, to both residents and visitors. Shared and curated experiences are finding new canvases in many cities, helping communities to stay engaged and city managers to do more of what the community loves.	To integrate art and culture into the fabric of our Hobart society and its civic assets. Integrating all these elements into traditional infrastructure projects is key to delivering the community's vision for our future. The City of Hobart has a part to play over the whole life of the project: from funding, design and engagement to construction and maintenance.
CCU06	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. And if there are a few things that social media has taught us, it is that people are interested, they have ideas (and are willing to share them!), and they are incredibly creative. A bright future of civic innovation requires a strong focus on empowered citizens with access to information that can help the city solve its own problems.	Establish a citizen advisory panel comprised of a group of citizens, designers, and developers who can use the City's public data to help present and solve civic and social problems.
CCU07	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 incentives and rewards to people who make active and sustainable travel choices.	The development of a gamification app to promote sustainable and active travel choice to encourage people to walk, cycling and use public transport and be reward for it.

OUTPUTS	OUTCOMES	19/20	20/21	21/22	22/23	23/24	PARTNERS
The Minecraft Hobart base-map, accompanying school and youth gamification and engagement programs.	Allow students and other youth to participate in innovative design thinking for Greater Hobart by modelling ideas and initiatives.						
Activation times and periods for critical city assets and places.	Better informed design and planning.						
City of Hobart's Smart City App.	Minimised number of mobile apps required by the community to interact with the City of Hobart.						
Technology-free and quiet zones free of mobile signals, Wi-Fi, satellite and Bluetooth frequencies.	Enhanced experiences of those stakeholders seeking to interact with or indeed protect traditions, cultures or natural values crucial to Hobart's identity.						
Integrated app- and other multimedia-based experiences including augmented reality.	Great user experiences for the community, social and demographic equity across Hobart, and enhanced user-focused operational management of critical city assets.						
innovate.hobart data portlet within the Connected Hobart Smart City webpage (refer Connected Government CGO01) public data service.	Using public data, the community and new technologies to improve City of Hobart services.						
A new app (or adaption of an existing app)	More active and sustainable travel, increased amount of 'incidental exercise' for more people and improved health outcomes for the community through healthier, active people.						

CONNECTED INDUSTRY & TOURISM

	INITIATIVE	DESCRIPTION	OBJECTIVES
CIT01	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 to share real-time route, transit and closure information, public notices, weather, language, events and even relevant local business information.	To digitise the City's 80+ physical wayfinding signs.
CITO2	Smart Locker Trials	For most of us, the city is a multi-experience destination. There is rarely just one thing we do. 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 half-way through your chores and need to temporarily store that dry-cleaning. Maybe some groceries need to sit in a refrigerated locker while you finish some chores. 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!	To establish services that recognise the growing role of Hobart as a commuter city within the Greater Hobart metropolitan area.
CITO3	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 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.	To engage community in augmented Hobart experiences through their own mobile devices.
CITO4	Reserve Tracks 'Traffic Light' Notification Trials	Council operates a huge number of walking, cycling, mountain biking, and horseriding tracks and trails. All typically with an entry (and exit) point. But we are also a city subject to the whims of cold and inclement weather, or the threat of bushfire brought on by our proximity to some of the most pristine world heritage areas on the planet. Closing all our trails and simultaneously notifying the public is an impossible physical task. But smart technology puts it within our reach.	To automate opening and closing notifications at the specific reserve and trailhead locations across the city.
CITO5	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, or be fraught with unforeseen challenges. Hobart City Labs will be a living lab where citizens, industry and technology stakeholders can co-design and support the trial of solutions to address significant strategic planning and city challenges before taking the significant step of adoption for Hobart. It will support the underlying premise of innovation – that sometimes great ideas just don't work.	To ensure innovation is not departmentalised or compartmentalised within Council but rather open to all users and custodians of the City.
CITO6	Smart City and Internet of Things Partner Supplier Panel	The City of Hobart will establish and manage an approved supplier panel of appropriately qualified Smart City specialist consultants and suppliers to facilitate the effective and timely procurement of Smart City products and services.	Contracted suppliers across the following categories: network services, data platforms, Smart City hardware and software, and professional services.

OUTPUTS	OUTCOMES	19/20	20/21	21/22	22/23	23/24	PARTNERS
An integrated digital wayfinding platform and new integrated digital screen information kiosks incorporating a curated city-wide multimedia content platform.	To extend the value of existing assets and expand the service to incorporate other Hobart assets and amenities.						
Facilities for commuters including CPTED compliant Smart Lockers and services.	Making it easier for commuters, shoppers, tourists and students to spend longer in the city, resulting in improved economic opportunities in our retail precincts and enhancing our international reputation as an inviting place to just spend time.						
Augmented reality maps and installations.	Memories. Education. Youth engagement. Social equity (take experiences across the city not just in tourist spots).						
Remotely operated Internet of Things digital trail-head signals to advise of recommended use.	Improved notification services installed at each Greater Hobart trail and park entry points. Efficient use of staff resources and enhanced public safety.						
Launch Hobart City Labs and public LoRA Internet of Things network to support the Connected Hobart Challenge (refer CLI05) and innovate.hobart.	Designated innovation precinct within Hobart to test initiatives before scaling across the city.						
Objective-based procurement.	Improved time to delivery of community and Council projects.						

PILLAR 5: MOVEMENT AND CONNECTIVITY

CONNECTED TRANSPORT

	INITIATIVE	DESCRIPTION	OBJECTIVES
CTR01	Automated Vehicle & Associated Technology 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. They are part of the transport infrastructure that will help us steer a course to the digital age.	To work collaboratively with city partners on public AV trials that underpin preparedness for the future of autonomous transport in Tasmania.
CTR02	Smart Parking *Broader City of Hobart Parking Strategy to be developed in 2019-20.	Hobart no longer behaves like 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 used will ensure both social and economic equity as well as the efficient operation of traffic within, through and around our growing city.	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.
CTR03	Social Mobility Community Engagement Program	If there is one saying which 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 comment on and contribute to the continual improvement of their communities. Public social media platforms including Waze, Strava, Populus and Uber Movement, Facebook, Twitter, and even Instagram are providing cities with new opportunities to share data on how they are interacting with the city, which in turn provides real-time information to Council about how best to prioritise the development of new parks and paths and precincts.	To support the delivery of real-time traffic information to residents and commuters and assist in the prioritisation of ongoing traffic engineering and city planning initiatives.
CTR04	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 car-pooling to car- and ride-sharing, and using existing market apps, it's so much smarter when we work together. Why go alone when you can go with friends?	To maximise the use of existing transport infrastructure to accommodate short-to-mid-term demand growth.
CTR05	Cycle-to-City Bicycle Smart Locker and Membership Trial Destination Facilities	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 landscape of last mile travel in and around the city. Member-based end-of-trip facilities in Council's off-street parking facilities will provide an additional option for commuters without cars, allowing workers to arrive fit and fresh every day.	Improve the equity and experience of commuter and casual cyclists in the CBD and inner suburbs.
CTR06	Contemporary Road Monitoring Data Trials	Today Council 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 would 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.	To map the road network in order to better understand level of services, improve road quality and decrease the investment required by ratepayers into annual road maintenance.
CTR07	Last Mile Micro Mobility and Data Trials	Evidence of micro-mobility mania is abundant. Everything from dock-less electric bikes and scooters and rentable share vehicles to private demand–response bus services can today provide a personalised and unique experience for getting round the last mile. But these are disruptive devices and their downstream impact needs to be carefully considered – like on the emergency department and health system!	To trial the management, use and integration of emerging mobility services and technologies.
CTR08	A 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 to address the increasing demand can help to improve the productivity of our transport system.	To work with our partners to actively manage the way the transport network operates and identify opportunities to give priority to various modes (e.g. pedestrians, bikes, buses, emergency services) at signalised intersections through smarter traffic signal technology, starting with trial locations.

OUTPUTS	OUTCOMES	19/20	20/21	21/22	22/23	23/24	PARTNERS
Establishment of a Hobart-based AV trial, AV precinct and associated EV infrastructure.	Test of the benefits of emerging last-mile AV technologies, incremental community education, and insights for legislative change.						
Car park occupancy data portlet within the Connected Hobart Smart City webpage (refer Connected Government CGO01) public data service.	Commuters to access better information about where car-parking is available. Improving traffic congestion within Hobart's city limits.						
Corporate social data accounts with primary social technology companies and data-sharing partnerships with the Tasmanian State Government.	Safer streets, improved congestion management, and better quality of life through real-time data analysis and notification systems for multimodal transport options.						
Establishment of ride-sharing and carpooling incentive services and Council staff trials via the City of Hobart employee travel pilot.	Improved traffic congestion and social cohesion.						
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.	Contribute to the start of solutions to address mobility-congestion problems by eliminating sole-reliance on cars.						
Installation of road condition and other IoT environmental sensors under all Council fleet vehicles.	Opportunity to extend the reach of Hobart's annual capital works budget into cycle and other non-car road management programs.						
Identify a range of smart micro- and shared mobility providers for trial of a small fleet of docked and parked bikes, e-bikes, e-scooters, and cars within the city's off- and on-street parking facilities.	Contribute to the start of solutions to address mobility congestion problems. Provide shared transport options for inner-city residents who live in apartments without car parks (more under the new planning scheme).						
New traffic signal operations that detect and respond to traffic conditions – be it slower moving pedestrians or prioritising buses running late or travelling during peak periods.	Safer streets (especially for vulnerable road users), improved travel times and better access for public transport and emergency service.						

PILLAR 6: NATURAL ENVIRONMENT

CONNECTED ENVIRONMENT

	INITIATIVE	DESCRIPTION	OBJECTIVES
CEN01	Environmental and Weather Sensing and Monitoring	Many cities are embracing the insights that the integration of old and new approaches to environmental management can provide. Far from being the sole domain of a climate change officer, in Hobart the security and resilience of our city's natural environment is critical to everyone. From understanding the impact of cruise ship bunker fuels, to where people are smoking, identifying litter in open spaces, detecting heat in mulch piles, heat and soil dryness in parks, or water quality and levels in fountains and catchments, working cooperatively with city partners to deliver open insights to the public is the new benchmark in environmental responsibility.	Development of a last-mile data program to complement and enhance existing climate change and flood modelling but including noise pollution, motion sensors and fire detection.
CEN02	Suburban Electric Vehicle Charging Network	Electric vehicles will change the mobility industry – and not just for cars. Consider scooters, bicycles and other lightweight or micro-mobility technologies. "EVs" will also create many challenges and opportunities for new types of refuelling infrastructure across our city, including for how Hobart residents could be connected at home.	Preparing the city for an alternative and cleaner mobility future starts now.
CEN03	Smart Grid Blueprint	From the cars on our roads to the lights on our streets and to the solar panels on our roofs, innovation continues to disrupt the energy sector and digital transformation is leaving nothing untouched. Where Council may have previously focused on different general-purpose assets in isolation (like street lights), new approaches to digitally enabled infrastructure provides a new impetus to integrate multiple programs into one information system. This is allowing cities to move from demand-driven climate change investments to fully closed loop data-driven resilience funding into new smart grid assets.	Decarbonisation, digitalisation, decentralisation and democratisation of the city's energy grid.
CEN04	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 in which 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 and continues to invest in energy-saving projects and programs by officers who are responsible for the management of the city's buildings and assets. But we can always do more.	Ongoing implementation and integration of solar, metering and sub-metering across Council's asset portfolio.
CEN05	Smart Bins Program	We're going ultrasonic baby! Through a combination of solar compactor bins for high-use areas that offer hundreds of litres' capacity to lower density areas with bins that send a message to our officers when they are 85% full, the City is using smart sensor technologies to adopt even more efficient waste collection practices. That means an even cleaner city.	Experiment, monitor, and measure community use of city assets to better inform operational planning and customer behaviours.
CEN06	Smart Waste Sorting Program	The City of Hobart Waste Management Strategy 2015-2030 aims to achieve zero waste to the Hobart Landfill by 2030 and 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 council strategies.	Apply emerging innovations and technology to advance the no-waste-to-landfill strategy.

OUTPUTS	OUTCOMES	19/20	20/21	21/22	22/23	23/24	PARTNERS
Publication of eco-office targets through data portlet within the Connected Hobart Smart City webpage (refer Connected Government CGO01) public data service and development of a cooperative flood warning and alert system for Hobart.	To enhance and operationalise regulatory responsiveness, disaster minimisation and compliance enforcement, and improve the lives of citizens through increased awareness of Hobart's and Tasmania's environmental and sustainability goals.						
The low rate requirements of lightweight EVs makes the installation of charging stations inside existing light poles for on-street suburban charging ideal.	A sustainable and cleaner future by minimising the reliance on cars and fossil fuels as the primary means of travel around Greater Hobart.						
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 evolving end-to-end operational climate change agenda.	Creation of greater value for Hobart through economies of scale in the physical and service connections in Council's own energy grid as well as directly supporting the carbon reduction initiatives of Council's climate and resilience sustainability programs.						
Public availability of energy dashboards and access to City-wide fee-for-service GPOs to assist in city activation e.g. markets, food vans, and street parties.	An energy-aware Hobart community with the added benefits of lower cost of operations.						
Rollout of sensor enabled waste bins with an underlying on-street waste data management platform.	More efficient delivery of services and the remote management of sustainable growth.						
Automation technology to help scan material on walking floor to help resource recovery.	Accelerated achievement of less waste to landfill.						

PILLAR 7: BUILT ENVIRONMENT

CONNECTED INFRASTRUCTURE

	INITIATIVE	DESCRIPTION	OBJECTIVES
CIN01	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 from the pool shop 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.	Preparing for new and more efficient operational delivery models in the face of rapidly increasing requirement for services.
CIN02	Smart City Amenities Automation Trials	Today's cities are more complex than ever before. They have more people, more roads, houses, parks, lights and just about anything you can think of. 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.	Moving from a 5-day, 7-7 service provider to a 24/7 service provider model.
CIN03	Street Lighting and Smart Poles	Some Smart City technologies are general purpose, like lighting. 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 citizens. Beyond opportunities to simply reduce the city's energy bill, street, park and building lighting provide a new backbone to anchor the key technologies required to better manage the city. Low light in winter a challenge? No problem. Noisy street party? Let's take a look at that for you.	Progressive asset replacement and activation.
CIN04	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 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 sought to do more with less through sharing the collective resources of the community. But what is the real impact of these social and service changes?	To highlight the quantifiable impact of the gig economy by working collaboratively through data-sharing partnerships.
CIN05	Extended Public WiFi Rollout	Hobart needs no other reason for the City to embrace the delivery of online services to our community than the facts that 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!	A WiFi enabled city.
CIN06	Installation of Mobile Device Charging Stations	What good is free WiFi or digital services if your device is out of juice? Sometimes all you need is the convenience of a good clean recharge.	Keeping the community connected.
CIN07	Digital Upgrades to Major CBD Bus Stops	Council is a key "middleman" in the delivery of last mile transport into and around Hobart. We sit somewhere between the City's Transit Authority (State Growth) and its Transport Operators (like Metro and SkyBus). Our inner city bus stops are not just shelters but an untapped backbone for the city. A connected bus shelter can be an integrated information and service hub that can change the city experience for thousands of commuters.	Overcome economic and demographic challenges of integrated last mile services through streamlining travel for commuters.

OUTPUTS	OUTCOMES	19/20	20/21	21/22	22/23	23/24	PARTNERS
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.	Remote operational management, improved employee safety and reduced external labour costs to Council and Hobart's ratepayers.						
Automation of city amenities including gate and door controls, sports ground lighting, and fountain lights.	Operational efficiencies and the ability to offer 24/7 services to the community where Council currently operates 5 days a week.						
Addition of smart poles and smart controllers to the city's LED lighting network.	A safer, more efficient and connected Hobart.						
Publication of a key gig economy index through a data portlet within the Connected Hobart Smart City webpage (refer Connected Government CGO01).	Enhanced risk management capabilities by integrating third-party macro and micro economic data into Hobart's strategic planning.						
Installation of public WiFi network infrastructure across 12 City of Hobart retail and urban precincts.	Social and digital equality and service benefits across Hobart to meet the needs of both resident and non-resident ratepayers.						
Free power through a range of GPOs and integrated charging stations.	The use of a smart energy grid (see CEN03) to deliver solar energy stores to the community.						
Agreements with Metro for the upgrade of inner city assets from standard printed flagpole-style signs to pollution-processing LCD digital bus stop totems and connected shelters.	Help drive innovation in Greater Hobart's low-frequency mass transit services within the inner-city precinct.						

PILLAR 8: GOVERNANCE AND CIVIC INVOLVEMENT

CONNECTED GOVERNMENT

	INITIATIVE	DESCRIPTION	OBJECTIVES
CGO01	Open City Dashboard and Public Data Gallery	The Internet of Things is playing a significant role in the growth of Smart Cities. But the vast amounts of data it produces has highlighted that trust, privacy and security are extremely important to the Hobart way of life. City dashboards that make key information and "at a glance" results readily available to the city's many communities go a long way to both informing and assisting in the protection and integration of people's privacy into every Smart City initiative.	To transparently communicate key data to the community while protecting personal data and preserving individual privacy.
CGO02	Technology Architectural Blueprint	To accelerate the adoption of new technologies, provide meaningful guidance to the Council officers and industry, and be a trusted advisor to elected members, the City of Hobart must not invest in unnecessary capital infrastructure projects. We must instead develop a technical reference architecture for prototyping new technologies to enable full vertical integration of Council's industrial assets and business applications into the standard technology environment.	To control technological diversity through defined standards that promote interoperability for data, applications, and technology.
CGO03	Digital Boardroom	A Smart City replaces traditional hierarchical and divisional views of its operations with a digital backbone that delivers critical information and insights to organisational decision-makers. Whether fighting daily industry and operational inertia, or informing investment cases for discretionary spending or against unnecessary change, city executives must be able to track thousands of things in a real-time, living virtual metropolis – and support them in that process as the City's data continues to grow 5- and 10-fold.	A digital twin of the City of Hobart and its core infrastructure, service and financial structures.
CGO04	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, not within a contest of ideas. Hobart has a number of formal national and international relationships. At the core of these varied relationships is the intention to promote understanding. Our international relationships offer a means for our city to recognise and honour a number of our international communities as well as provide opportunities to engage in a variety of activities. Today our friendship city Fuzhou has found ways to collaborate with Ali Baba (Chinese Amazon) while Sister City Yaizu is already using drones for maritime rescue and L'Aquila focusing on solutions to disaster relief.	Identify one of the national CCCLM cities and international Sister Cities to progress formal Smart City collaborative opportunities based on shared or strategic alignments.
CGO05	Smart City Legislation Reviews	Inevitably, technology adoption exceeds the ability of governments to keep pace with legislative and regulatory change. For example, the word 'driver' is a key noun in numerous Transport, Roads and Highways Acts but will eventually not apply, or require reinterpretation as driverless or fully autonomous vehicles work their way into national transportation systems over coming decades. Similarly cash, coin or money has taken on new meanings in the 21st century, decades after some existing laws were last amended. These types of changes are the catalysts for Hobart's chosen approaches to trials and proofs of concept in the Smart City field.	To work with state and national regulators and legislators on the redrafting and amendments of appropriate legal frameworks from privacy to operational technologies.
CGO06	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. What is clear is that Tasmania will not be immune to the effects of globalisation and growth. Flexible gig micro-economies like Airbnb and Uber have already changed the fundamentals of work in Tasmania with significant impact. Understanding the effects of these paradigm shifts on traditional businesses and workforces is paramount.	Ensuring the Council has the skills and labour it needs to meet the future requirements of the city.
CGO07	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.	Alternative travel and work locations to help the city grow and thrive.

OUTPUTS	OUTCOMES	19/20	20/21	21/22	22/23	23/24	PARTNERS
A Connected Hobart Smart City portal that provides general information and quantifiable metrics and data from the Greater Hobart City Deal and the Smart City Framework programs.	Identify and present the priorities of the community and use data as a leverage for change.						
Development of a defined architectural standard for Connected Hobart that promotes multi-use technologies over the development of duplicative or single-use solutions.	Minimise the long-term operating costs of maintaining expertise in, and connectivity between, multiple Smart City processing environments and secure appropriate commercial models.						
An integrated, operational, real-time spatial visualisation of the city including integration of building information modelling (BIM) and precinct information modelling (PIM).	Greater focus on daily priorities and enhanced contextual decision-making capabilities in emergency management situations.						
As a first step, enter into a Statement of Intent to collaborate, and secondly to promote outcomes of local solutions developed by the Hobart community in Hobart City Labs.	Opportunities for entrepreneurial communities to benefit from national and international trade in the digital economy while sharing city-to-city knowledge and learnings.						
Open standards and contemporary legal frameworks.	To protect Hobart consumers, and ensure the ongoing and effective operation of national and global ecosystems and markets.						
A Workforce of the Future Skills Framework report.	Improved governance and operational controls over the future of the Corporation of the City of Hobart.						
Remote-working hot-desk facility outside of Hobart.	A pathway to supporting the inevitability of more mobile workforces including ongoing continuous improvement planning for future traffic management.						

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 initial aim is to strengthen management of Greater Hobart's biggest risk – bushfire.

AR HERITAGE MAPS

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, all through your mobile device at Mawson Place on Hobart's waterfront. Hobart has many more virtual stories to tell using AR. This initiative will create AR maps and installations, so residents and visitors alike can engage with and create memories of Hobart.

OPEN CITY DASHBOARD

City dashboards make key information and 'at-a-glance' results readily available to the city's many 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 Smart City Framework programs. It will help us use data to make the changes that people want to see in their city.

AUTOMATED VEHICLE TRIALS

Self-driving, autonomous or automated vehicles (AV) are part of the transport infrastructure that will help us steer a course to the digital age. 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: from understanding the impact of cruise ship bunker fuels, to where people are smoking, identifying litter in open spaces, detecting heat and soil moisture levels in parks, or water quality and levels in fountains and catchments. This initiative will be part of the City of Hobart's new Open City Dashboard, offering environmental data for a range of indicators, increasing awareness and responses to Hobart's and Tasmania's sustainability goals.


Smart
Cities
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