

MOUNT  
PANORAMA  
BATHURST

# SMART BATHURST



A Smart Community Strategy for the Bathurst Region 2020-2025



# ACKNOWLEDGEMENT OF COUNTRY

Bathurst Regional Council acknowledges the Wiradjuri people  
who are the traditional custodians of the land  
and pays respect to Elders both past and present.

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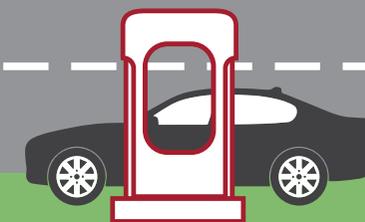
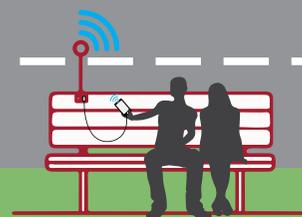
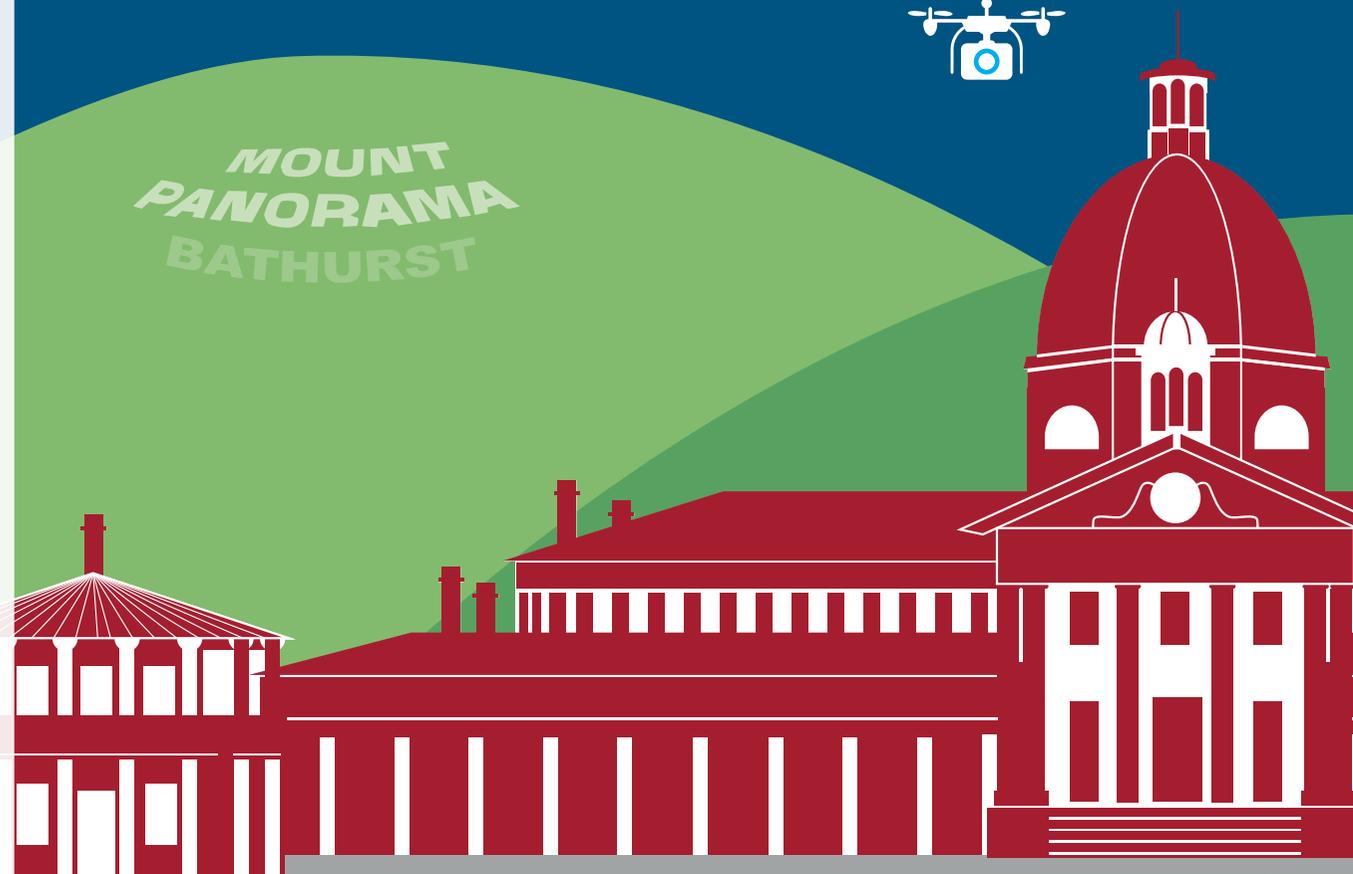
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# A SMART COMMUNITY: INTRODUCTION



Bathurst Regional Council has embraced the Smart Communities movement, giving it a whole-of-region focus. We have worked hard over the last three years to implement Smart Community initiatives across our region and within our own organisation.

This Smart Community Strategy has been informed by key Council planning instruments and consultation with our community to ensure the vision and objectives are people centred. The strategy brings together a series of objectives and actions. This will ensure the Bathurst region remains at the forefront of smart technology, new ideas and is a leader in developing innovative solutions to issues facing regional Australia.

We can already see smart technology in action with free public Wi-Fi available in thirteen public recreation spaces, the opening of the Tesla and NRMA universal electric vehicle charging stations, the introduction of smart water meters to a number of rural residential areas and investment in mobile blackspot areas to improve connectivity. We will also see the replacement of existing street lighting with smart LED lights and infrastructure to support sensor technology.

This Smart Community Strategy will provide a blueprint to encourage business investment and industry initiatives to drive the economy. It will also guide how we as a Council will deliver services in the future and ensure that all members of the community are able to participate in the digital age.

This strategy aligns with key planning documents including the Community Strategic Plan - Bathurst 2040 and the Bathurst Region Economic Development Strategy 2018-2022 highlighting community support for Smart Community initiatives.

Council will be seeking support from State and Federal governments, business and industry as well as the broader community to deliver projects from this strategy.



Cr Bobby Bourke  
Mayor of Bathurst



David Sherley  
General Manager

A MESSAGE FROM  
BATHURST REGIONAL COUNCIL



This Smart Community Strategy formally states the intention for Bathurst Region to be a Smart Community, one where technology, data and people are used to drive economic activity, improve connectivity, meet the changing needs of the community, accelerate innovation and better manage resources, energy and services.

This strategy serves as a 5 year roadmap guiding Council's actions to meet challenges and capitalise on opportunities presented by changes in technology. This roadmap incorporates Bathurst and surrounding villages within the Bathurst Region Local Government Area, and values relationships with neighbouring regions for collaboration in growth and shared costs, knowledge and experience.

Technology is increasingly embedded in our everyday lives, influencing communication, shaping our social, cultural, and business interactions and decision-making, and impacting on all aspects of our environment.

Smart communities recognise this trend of increasing application of technology and use it to explore and capitalise on opportunities to deliver desirable outcomes.

The Bathurst Region is recognised in NSW as an emerging Smart Community. It is the aim of this strategy to confirm the Region as a leading Smart Community and to extend this recognition to the national level.

This strategy aligns with the Bathurst Region Community Strategic Plan 2040 and works to deliver on the vision stated therein for a vibrant and innovative region that values our heritage, culture, diversity and strong economy and to develop Bathurst as a Smart Community.

Further to this, the people-centred approach and the vision, principles, themes and actions contained within this strategy have been influenced by objectives stated within the Community Strategic Plan 2040, the Cultural Vision 2036, and the Bathurst Region Economic Development Strategy 2018-2022, and by contributions drawn from consultation with the community from July - November 2018.

Bathurst Regional Council is committed to building our digital economy and leveraging emerging technology to improve service delivery and liveability in our community.



A SMART COMMUNITY: CONTEXT 

In Australia, the Federal Government has invested in Smart Community focused funding programs and actions aimed at driving growth founded on innovation, supporting knowledge-based industries, and leveraging opportunities presented by technology. The term 'smart city' is used to describe an urban area that uses technology, with high integration capacity through an Internet of Things (IoT), and generates data using sensors, to guide community and economic activities.

This strategy uses the term 'community' in place of 'city', thus highlighting Bathurst Regional Council's commitment to whole-of region when defining smart objectives, actions and outcomes. Council's focus goes beyond city-centric projects to a broader regional context, identifying and addressing the varying service standards across the region.

For the purpose of this strategy and actions derived from it, Bathurst Region's Smart Community is one where technology, data and people are used to drive economic activity, improve connectivity, meet the changing needs of the community, accelerate innovation and better manage resources, energy and services.

Bathurst Region's Smart Community aspires to keep pace with technological advances and ensure equitable access to smart facilities and services into the future.

WHAT IS A SMART COMMUNITY?





### POPULATION GROWTH

43,206 TO 53,361  
2018 TO 2036



### 20,454 JOBS IN BATHURST FULLTIME WORK

60% Bathurst  
59% Regional NSW  
63% NSW



### GROWTH BETWEEN 2011 AND 2016:

Empty nesters and retirees (60 to 69)  
**(+722 people)**  
Seniors (70 to 84)  
**(+701 people)**  
Young workforce (25 to 34)  
**(+680 people)**  
Older workers and pre-retirees (50 to 59)  
**(+298 people)**



90% OF HOUSEHOLDS HAVE AT LEAST ONE CAR

76% DRIVE TO WORK

### BATHURST REGION COVERS

3,820km<sup>2</sup>

Includes villages of Perthville, Raglan, Eglinton, Peel, Sunny Corner, Yetholme, Georges Plains, Trunkey Creek, Rockley, Sofala, Hill End and Wattle Flat.



### UNIVERSITY QUALIFICATIONS

Bathurst Region 16.1%  
Regional NSW 14.5%  
NSW 23.4%

### VOCATIONAL EDUCATION QUALIFICATIONS

Bathurst Region 23.7%  
Regional NSW 23.6%  
NSW 18.1%



GRP  
\$2.13 billion



### TOURISM

1,282 people employed in sector  
902,000 visitors p.a.  
419 tourism businesses

16.3%  
BORN OVERSEAS

5.8% of households  
SPEAK A NON-ENGLISH LANGUAGE

5.4% ABORIGINAL OR TORRES STRAIT ISLANDER



### INTERNET CONNECTION

Bathurst 74.9%  
Regional NSW 73.1%  
NSW 78.2%



Employment (FTE)  
Health Care and Social Assistance

**(13.9%)**  
Education and Training  
**(12.1%)**

Retail Trade **(9.9%)**  
Manufacturing **(9.8%)**  
Construction **(9.8%)**

### UNEMPLOYMENT RATE

Bathurst Region 5.3%  
Regional NSW 5.6%  
NSW 4.3%

In order to develop the Smart Community Strategy, Council invested in targeted community consultation activities, focusing on gaining an understanding of community needs, wants, and desires regarding smart technologies and how these might be best applied for the benefit of residents in the Bathurst region.

The community consultation process was conducted online and face-to-face to ensure a broad cross-section of the community was targeted with the opportunity to contribute their ideas.

Specifically, the engagement consisted of:

- Face to face workshops;
- Online feedback forum via the YourSay platform on the Bathurst Regional Council website; and
- Engagement with village residents at village meetings.

These consultation activities allowed individuals, businesses and organisations to learn about and contribute their insights into the potential efficiencies and benefits of smart technologies.

In addition, this valuable consultation ensured community needs and expectations were cemented into the foundations of the Smart Community Strategy.



***“A sensor that would determine if the wrong item was placed in the wrong bin”***

NOT-FOR-PROFIT SECTOR

***“Use smart traffic lights to sense jams and adjust times”***

PRIMARY SCHOOL STUDENT

***“Fitness parks with machines connected to an app for daily challenges”***

HIGH SCHOOL STUDENT

***“An app that tells you how much energy is being used – and which appliances are on”***

PRIMARY SCHOOL STUDENT

***“App that inspires people to make meals based on the products they buy”***

HIGH SCHOOL STUDENT

***“Google maps with overlay of key information - accessibility, facilities”***

NOT-FOR-PROFIT SECTOR

***“A building at the green spaces that you can rent equipment such as balls - GPS trackable to prevent theft”***

HIGH SCHOOL STUDENT

***“Bathurst to establish more solar and wind energy”***

HIGH SCHOOL STUDENT

***“Buses in the main streets and no cars”***

PRIMARY SCHOOL STUDENT

***“Vivid – spread more across the cities”***

PRIMARY SCHOOL STUDENT

***“More Wi-Fi in hot spots”***

HIGH SCHOOL STUDENT

***“App which can monitor your monthly energy usage”***

BUSINESS PARTICIPANT

***“App that could provide alerts for the deaf community”***

ONLINE PARTICIPANT

***“Fast and reliable internet is essential for business in Bathurst”***

BUSINESS PARTICIPANT

***“There is a strong appetite in Bathurst for developing the technology park”***

BUSINESS PARTICIPANT

***“Addressing the black spots in the mobile coverage on the train line to Sydney would assist with working from the Bathurst Bullet”***

BUSINESS PARTICIPANT

***“Technology to help with short and long term parking in the CBD would help with customers”***

BUSINESS PARTICIPANT



Participants in the workshops were asked to work together in groups to develop ideas and solutions to some key issues and problems that currently exist and those that will become increasingly important in the near future, within Bathurst and the broader community. The emphasis of the workshops was to “think big” and to challenge each other to explore technology to find solutions to some of the issues that are currently, and will be in the future, impacting on the way we go about our lives.



## WASTE

### WASTE MANAGEMENT

- Sensors that could weigh bins and perhaps charge people for their waste.
- Communication via apps and notifications on items such as recycling days and bin collection days.
- Increase the options for reduction of waste including community sharing apps that allow people to collectively purchase in bulk, sharing of garden surplus or scraps that people could collect.
- Ideas around items that go into the bins.
- Sensors that could identify if the wrong item was placed in the wrong bin to avoid recycling material being spoiled.
- Sensors that could tell if any item was recyclable.



## MOBILITY

### TRAFFIC MANAGEMENT

- Traffic lights that can sense the movement of traffic and adjust to meet demand.
- Notifications that can be sent to drivers via apps, their phones or their car GPS to alert them to traffic conditions and suggest alternate routes.
- Notifications that can appear on smart road signs alerting drivers to road conditions similar to those in major cities – so many minutes to travel, traffic stopped ahead.
- Roads that can be adjusted to meet traffic demand - similar to cities.



## HEALTH

### IMPROVED PERSONAL HEALTH AND FITNESS

- Cafés that provided nutritional information about their food via an app.
- Fitness apps that are connected to daily challenges, linked to parks, outdoor gyms and other people within the community that encourage participation in fitness activities.
- Exercise monitoring systems within communal gyms (outdoor).
- Notifications and communication about exercise and food options that are available within the community.



## HOME

### FOOD WASTE

- Smart fridge or smart pantry concept that can analyse what is in the fridge or pantry, the date it was put in, when it expires and linked to an app that can suggest meals that can be cooked using the food that you have.
- App linked to shopping to prevent you from purchasing food that you do not need.
- Apps that could connect organisations to excess food from restaurants/cafes to lessen wastage of food.



## ENERGY

### IMPROVED ENERGY EFFICIENCY

- Apps that can monitor and notify energy use thereby adjusting use.
- Sensors that can recognise when energy is not needed, i.e. lights on when someone has left the room, the heating/cooling is left on etc and can be adjusted.
- The need to use and invest in latest renewable technology including wind, solar and hydro electricity.



## WATER

### CONSERVE WATER RESOURCES

- Sensors that can limit the water usage to households.
- Apps that could notify how much water the household has consumed each day or on-going.
- Sensors that could be incorporated into soil to measure moisture and report accurately and then inform water allocation.



## HEALTH

### ENCOURAGING HEALTHY ACTIVITY

- Technology activities in the parks including Wi-Fi, charging stations, technology hubs so students could plug in laptops and study.
- Communication and notifications that could inform the community about the facilities within the green spaces and any events or activities that are occurring.
- Outdoor gyms that link to apps on phones that provide interesting challenges.
- Technology based game i.e. Pokémon Go.
- Light sensors that could improve safety and make parks accessible for longer periods of the day.



## INDUSTRY

### BUSINESS AND TECHNOLOGY

- Health: Lost productivity with having to attend or drive ageing relatives to appointments in Orange. A communication or notification system that could coordinate travel to Orange.
- Transport to Sydney: Black spots with mobile coverage on the train network to Sydney as well as the inability of planes to land during fog. Technology could be used to solve these issues.
- Resources: Accurate recording of water and electricity usage is essential for business. Monitoring and on-going notification of charges would improve budgeting for business.
- Parking: A method of notification about the parking around the CBD could improve parking options for customers.
- Technology park: Development of a technology park in Bathurst and the opportunity this could provide for employment of the youth within the community. A technology park was seen as an opportunity to differentiate Bathurst from other regional cities.



A SMART COMMUNITY: STRATEGY 

The Bathurst Smart Community Strategy serves as a five year road map guiding Council's actions to meet challenges and to capitalise on and generate opportunities presented by changes in technology. This strategy encompasses the city of Bathurst and surrounding villages within the Bathurst Region Local Government Area, and values relationships with neighbouring regions for collaboration in growth and shared costs, knowledge and experience.

This strategy is designed to be read in conjunction with the Community Strategic Plan Bathurst 2040 (CSP) and other key Council plans, including the Economic Development Strategy 2018-2022 (EDS) and the Cultural Vision 2036 (CV) and has been developed within the context of a range of government and industry plans and priorities.

Bathurst Region's Smart Community initiatives are people-centred and driven by our community's needs. Underlining this point, the objectives identified in the CSP 2040 are used to theme or group the objectives, related activities and projects within this strategy. This alignment demonstrates a high level of collaboration and coordination, cost effective investment of resources, and integrated strategic implementation.

The vision and principles of this Smart Community Strategy guide the objectives and actions.

The six themes give central purpose to the related objectives, actions and projects. A table format is used to link the objectives and activities to timelines and intended partners.

**Themes:**

- 1. Our Sense of Place & Identity**
- 2. A Smart & Vibrant Economy**
- 3. Environmental Stewardship**
- 4. Enabling Sustainable Growth**
- 5. Community: Health, Safety & Wellbeing**
- 6. Community Leadership & Collaboration**

**SMART COMMUNITY VISION** - Bathurst Regional Council will use technology, data and people to drive economic activity, improve connectivity, meet the changing needs of the community, accelerate innovation and better manage resources, energy and services.

## PRINCIPLES

The following principles will be used to guide Council's decision making and investment in Smart Community initiatives to achieve the Smart Community vision.

**People-centred** We design and develop smart community plans and related activities with our community, for our community.

**Innovative** We investigate, encourage and enable innovative technologies for the economic growth and competitive advantage of our community.

**Collaborative** We work collaboratively with community, industry and government to deliver a smart future for our region.



A SMART COMMUNITY:  
THEMES, OBJECTIVES & ACTIONS 

The theme of **Our Sense of Place & Identity** looks at how our Council and the community can make the Bathurst Region an even better place, a place of strong community spirit that celebrates our heritage and cultural diversity.

**Objectives:**

- I.1 Celebrate diversity**
- I.2 Protect heritage, knowledge and assets**
- I.3 Support our creative and cultural industries**

## OUR PROJECTS

### **Illuminate Bathurst**

This innovative digital media/laser light show is a key feature of the annual Bathurst Winter Festival and is continuously evolving in content and style to showcase Bathurst Region's commitment to smart technology and drive pride in the community.

### **National Motor Racing Museum**

At the National Motor Racing Museum video presentations and projections are used to share personal experiences of racing legends and spectators and tell the history of motor racing in the Bathurst Region. An expansion on the use of smart technology to tell these stories is planned as part of an upgrade to a more immersive, interactive 4D experience.

### **Collections Facility and Museum Systems**

A range of visitation, facility business management, collections management and building management systems have been implemented across all museums and into the design for the new Central Tablelands Collections Facility.

Objectives		Actions	Timeframe	Partners
I.1 Celebrate diversity	I.1.1	Showcase the diversity of our region using digital media – LED digital signage, smart displays at Visitor Information Centre and on social media platforms – and manage literacy and language challenges using smart technology	Short term	Tourism businesses
	I.1.2	Develop apps to share Bathurst Region’s heritage – Indigenous and European	Medium term	IT industry, community groups
I.2 Protect heritage, knowledge and assets	I.2.1	Continued investment into emerging smart technology solutions for recording, management and security of heritage, knowledge and assets, including those in Council’s museum collections	Medium term	IT industry
	I.2.2	Use smart technology to showcase the unique heritage street lighting assets of Bathurst – e.g. LED/coloured light show during events	Medium term	Energy Industry, government
	I.2.3	Investigate 3D modelling technology to demonstrate value of sympathetic heritage building design	Medium term	Industry, NSW Spatial Services
I.3 Support our creative and cultural industries	I.3.1	Increase proportion of technology-based arts and sciences as content in Council-owned cultural facilities	Medium term	Arts community, Arts Outwest, CSU
	I.3.2	Enhance attractiveness of cultural facilities and public spaces using technology e.g. decorative lighting, digital displays/art (Illumination during Winter Festival)	Short term	Arts Outwest, cultural community
	I.3.3	Continue inclusion of digital platforms in cultural exhibitions – Cultural Vision	Short term	IT industry, cultural community

# I: OUR SENSE OF PLACE & IDENTITY



A **Smart and Vibrant Economy** looks at how Council, together with other levels of government and our partners can attract investment, facilitate job diversity and growth, and encourage local workforce skills and training.

**Objectives:**

- 2.1 Nurture and support start-ups, entrepreneurs and innovation within the region**
- 2.2 Promote Bathurst Region as a smart and innovative region**
- 2.3 Promote Bathurst as a test location for emerging technologies**
- 2.4 Use technology to support economic growth and prosperity in the region**

## OUR PROJECTS

### UPSTAIRS Start Up Hub

Council is a founding partner in an innovative business incubation facility that supports entrepreneurs working across a diverse range of industries to develop creative solutions.

### Driverless Vehicles

A relationship between Transport for NSW and Council has drawn interest in Bathurst as a key location for testing driverless vehicles. Mount Panorama's extensive motorsport facilities coupled with the proximity of Spatial Services NSW makes Bathurst Region an ideal location for this testing opportunity.

### SMART Infrastructure Facility - UoW

Council has formalised an agreement with the University of Wollongong to collaborate on smart sensor innovations and to be a preferred testing location for smart technology.

### Hybrid Vehicle Fleet Test

Council has purchased an energy efficient plug-in hybrid vehicle (electric and petrol) and is testing it for possible rollout in the Council fleet. The livery installed on the outside of the vehicle promotes it as a Smart Community initiative of Bathurst Regional Council and educates the audience on key advantages and functions of the vehicle – e.g. electric charging is via solar generated energy.

Objectives	Actions	Timeframe	Partners
2.1 Nurture and support start-ups, entrepreneurs and innovation within the region	2.1.1 Promotion and support of innovative practices from local industry (such as Gunthers Lane tech hub, and Upstairs Start Up Hub) and encourage the attraction of technology related businesses and industries to Bathurst – EDS 6.8*	Short term	Reliance Bank, industry, government agencies, Central West Business HQ, Bathurst Business Chamber, CSU
	2.1.2 Develop a digital guide to assist and encourage start-ups and entrepreneurs to establish innovative working spaces and creative workshops	Medium term	Business community
2.2 Promote Bathurst Region as a smart and innovative region	2.2.1 Embed promotion and demonstration of Bathurst Region's smart technology assets into existing and future events to build a profile with international reach	Short term	Industry, government agencies
	2.2.2 Represent and provide presentations at key international networks, organisations and events to further build the profile of Bathurst as a smart and innovative region	Short term	Industry, business community

\* Bathurst Region Economic Development Strategy 2018-2022

Objectives	Actions	Timeframe	Partners
2.3 Promote Bathurst as a test location for emerging technologies	2.3.1 Continue to investigate the development of the ACSTEI (Australian Centre for Science Technology and Emerging Industries) technology park – EDS 6.11*	Medium term	Industry, government agencies, Central West Business HQ, Bathurst Business Chamber, Central West RDA, CSU
	2.3.2 Leverage relationship with University of Wollongong's SMART Infrastructure Facility to promote Bathurst as a test site to trial new technologies	Short term	UoW, Industry, government agencies
	2.3.3 Continued investigation of energy efficient vehicle options for possible introduction as Council fleet vehicles	Short term	Auto industry, energy suppliers, government
	2.3.4 Investigate opportunities to integrate smart technology into development activities at Mount Panorama	Medium term	Motor racing industry, IT industry, government, community
	2.3.5 Investigate the use of virtual reality applications in town planning visualisations and engineering	Medium term	Spatial Services
	2.3.6 Engage a consultant to complete an interoperability review across all implemented smart technology to see how they can leverage from one another	Medium term	IT industry

\* Bathurst Region Economic Development Strategy 2018-2022

Objectives	Actions	Timeframe	Partners
2.4 Use technology to support economic growth and prosperity in the region	2.4.1 Install Bathurst Free Wi-Fi network in the CBD and selected parks with accompanying analytics software that informs planning decisions	Short term	Government agencies, industry
	2.4.2 Work with local business community to leverage the benefits of advertising, marketing and analytics through the Bathurst Free Wi-Fi network, ie. push notifications, foot traffic	Long term	Government agencies, industry
	2.4.3 Facilitate and fund the creation of industry cluster groups including a technology cluster – EDS 4.1	Medium term	Industry, government agencies, Bathurst Business Chamber, Central West Business HQ, CSU
	2.4.4 Consult with targeted sectors to identify priorities for technology infrastructure and innovation	Medium term	Industry, business community
	2.4.5 Install sensors to track pedestrian and vehicle traffic around key locations, particularly event precincts	Medium term	UoW, IT industry
	2.4.6 Use technology to identify and communicate parking availability within the CBD	Long term	IT industry, government, Spatial Services
	2.4.7 Establish a mixed open/restricted-access data sandbox (test environment) to encourage business problem solving activities/innovations	Long term	Industry
	2.4.8 Install a Council-owned fibre-optic network in the CBD to improve connectivity and encourage new innovations	Medium term	IT industry, government
	2.4.9 Investigate smart technology systems to track aircraft arrivals at the aerodrome for safety, security and revenue and improved invoicing accuracy	Medium term	Aviation industry, IT industry, UoW, government

\* Bathurst Region Economic Development Strategy 2018-2022

In this theme, **Environmental Stewardship**, Council recognises the need to balance population growth, protect our environment, support agriculture and build on our local fresh food production and other rural activities. Acknowledging that our world's resources are finite, it is important that we are able to manage them efficiently, with present and future generations in mind.

**Objectives:**

- 3.1 Use smart technologies to engage the community in sustainable environmental behaviours**
- 3.2 Use technology and data to monitor and improve Council's management of the region's natural environment**
- 3.3 Apply technology to Council's existing operations to monitor and improve sustainable outcomes**

## OUR PROJECTS

### Smart Water Meter Readers

Council has introduced smart water meter readers into a number of rural residential estates to improve efficiency in meter reading and allow for generation of data on realtime water consumption. Smart meters have also been installed at key Council water junctions to facilitate early identification of unexpected flow variations.

### Smart LED Street Lighting Controls and Sensors

In collaboration with Essential Energy, Council will commence replacement of all street lighting with low energy LED assets in 2019. Simultaneous to the street lighting replacement project will be the installation of smart sensors to accurately record real-time energy consumption and fault identification. Infrastructure will also include a port for future sensor hardware.

### Drone Technology for Compliance Monitoring

Council utilises authorised drone technology to support compliance monitoring of large development sites and industry.

Objectives	Actions	Timeframe	Partners
<b>3.1 Use smart technologies to engage the community in sustainable environmental behaviours</b>	3.1.1 Develop rate-payer account dashboard to communicate desirable sustainable practices and enhance access to details of Council's waste management practices (garbage collection schedule)	Medium term	IT industry
	3.1.2 Develop content for digital presentation of preferred environmental behaviours	Short term	Government, business community
	3.1.3 Promote the uptake of emerging technology practices to the agricultural sector – inclusive of test farm sites (moisture sensors, drone use/applications, automation)	Medium term	Agricultural industry, NSW Dept Primary Industries
	3.1.4 Promote sustainable transport options to assist in improved environmental footprint (e.g. car pooling)	Medium term	Community groups,
<b>3.2 Use technology and data to monitor and improve management of the region's natural environment</b>	3.2.1 Expand the use of drone technology to monitor environmental matters and issues	Short term	IT industry, government, business community
	3.2.2 Continued roll-out of smart water meter sensor technology and associated dashboard to allow improved resource management	Short term	Industry, business community, community
	3.2.3 Map and monitor the Council's green infrastructure, including tree canopy – investigating drone use and GIS capability	Long term	NSW Spatial Services
	3.2.4 Investigate how smart technology may be used to offset the impact of climate change	Long term	NSW Dept of Primary Industries

Objectives	Actions	Timeframe	Partners
3.3 Apply technology to Council's existing operations to monitor and improve sustainable outcomes	3.3.1 Investigate ownership arrangements of CBD street lighting and the installation of smart lighting controls – EDS 6.7*	Short term	CENTROC, industry, government agencies, Essential Energy, Australian Smart Communities Association
	3.3.2 Expand smart street lighting (LED roll-out) to monitor and manage energy consumption	Medium term	Essential Energy, government
	3.3.3 Investigate smart sensors for installation/integration into the Smart LED lighting infrastructure, to be used to monitor environmental conditions	Medium term	Energy industry, government
	3.3.4 Increase the use of solar and other renewables and battery and vehicle-to-grid technology to power Council-owned assets – tapping into technological advances in renewable energy	Medium term	Industry, business community, community
	3.3.5 Investigate the development of a community-based app to connect community needs to hospitality industry food waste – reducing waste, improving access to food, promoting composting services	Long term	Food industry, local not-for-profit agencies, community groups

\* Bathurst Region Economic Development Strategy 2018-2022

The theme of **Enabling Sustainable Growth** encompasses activities that protect our rural and natural lands, respect our heritage and provide housing that meet our community's needs without compromising the character and amenity of our neighbourhoods. These activities include transport, housing, parking, recreation, and services and facilities infrastructure.

This theme recognises Council's role in encouraging and regulating high quality development and ensuring the necessary investment in infrastructure and services. It also recognises the role surrounding villages play in the growth of our region.

**Objectives:**

- 4.1 Install smart technology infrastructure across the region to make life easier for residents and visitors**
- 4.2 Use technology and data to support sustainable transport modes**
- 4.3 Invest in smart technology to improve Council's planning processes and facilitate sustainable design**

## OUR PROJECTS

### **Villages Mobile Blackspot Infrastructure**

Council has facilitated grant funding to address identified mobile blackspot zones throughout the region, assisting villages to access quality communication amenity.

### **Licence Plate Recognition**

Council introduced smart technology to manage parking use across the CBD, keeping traffic moving to facilitate access to local businesses by a greater number of people.

### **Smart Benches and Seats**

Council will introduce smart benches and seats at key tourist sites through the CBD, providing rapid device charging facilities and delivering an inclusive amenity for community members and visitors.

Objectives	Actions	Timeframe	Partners
<b>4.1 Install smart technology infrastructure across the region to make life easier for residents and visitors</b>	4.1.1 Investigate the installation of mobile device and electric vehicle (EV) charging stations at various Council-owned facilities and CBD precincts – EDS 6.6*	Short term	Tesla, NRMA, EV vehicle manufacturers, industry
	4.1.2 Investigate an App to allow residents to access information on their utilities use (e.g. energy, water, gas) and waste generation	Long term	Energy providers, IT industry
	4.1.3 Install smart benches to provide charging points and free Wi-Fi at key locations in the region	Short term	IT industry, government
	4.1.4 Install electric wheelchair charging stations/benches in key locations – in consultation with community disability groups and reference to Council's Disability Inclusion Action Plan 2017-2021	Short term	IT industry, government, community groups, advocates
<b>4.2 Use technology and data to support sustainable transport modes</b>	4.2.1 Investigate smart sensor technology to improve safe transport movement around schools	Medium term	Roads Maritime Services, IT supplier, NSW Police, local school communities
	4.2.2 Investigate alternative sustainable transport methods, routes and options	Medium term	Roads Maritime Services, NSW Police, local communities
<b>4.3 Invest in smart technology to improve Council's planning processes and facilitate sustainable design</b>	4.3.1 Investigate emerging technologies and their interoperability with other Council systems to facilitate a personal user portal, with access to sustainable development information and systems support	Long term	IT industry, design industry
	4.3.2 Build the capacity for all technology to work within an Internet of Things (IoT). Integrating technologies from design phase onward, ensuring optimum functionality and efficient use of assets, IT and expertise	Short term	IT industry, government, business community

\* Bathurst Region Economic Development Strategy 2018-2022

The theme of **Community: Health, Safety and Wellbeing** focuses on the importance of encouraging health and well-being, as well as community pride, a sense of belonging and inclusiveness, which have been identified as key reasons why residents choose to live in the Bathurst Region. Council seeks to build social inclusion and foster creativity and lifelong learning, encourage the participation and contribution of all people in the region and plan and respond to demographic change.

**Objectives:**

- 5.1 Use smart technology to nurture digital inclusion of all residents in the region**
- 5.2 Improve citizen and business digital safety and security**
- 5.3 Upskill the community to enhance participation and sense of inclusion in an evolving community**
- 5.4 Use smart technology and data to monitor and enhance the health and wellbeing of residents and visitors**

## OUR PROJECTS

### CBD CCTV

Council has installed Closed Circuit Television (CCTV) infrastructure and technology into a number of locations through the CBD of Bathurst, responding to business security and community safety concerns.

### Free Public Wi-Fi

Council has installed a free public Wi-Fi service across thirteen zones – a mix of recreational spaces and business areas in and around Bathurst. This free service delivers inclusive amenity and is aimed at encouraging increased visitation of recreational spaces and improved access to information on business and event activities in the region.

### Technology and Skills Sessions in the Library

Council has upgraded technology assets in the Bathurst Library to improve community members' access to cutting edge hardware and software. Accordingly, library visitors now have access to a suite of technology tools at no cost, as well as numerous free upskilling sessions such as 'how to use your tablet or smart phone', and 'learn how to use an e-book'.

5: COMMUNITY:  
HEALTH, SAFETY AND WELLBEING



Objectives	Actions	Timeframe	Partners
5.1 Use smart technology to nurture digital inclusion of all residents in the region	5.1.1 Identify digital disadvantage and address with accessible solutions including the Bathurst Free Wi-Fi service	Medium term	Business community, community groups, Village Progress Associations
5.2 Improve citizen and business digital safety and security	5.2.1 Install a CBD CCTV network and explore how it may enable other smart initiatives (e.g. people counting)	Short term	Industry, government agencies, UoW
5.3 Support the community to enhance participation and sense of inclusion in an evolving community	5.3.1 Provide a series of open, free workshops – covering simple technology skill topics focused on improving uptake of Council-owned technology (Bathurst Free Wi-Fi, Council’s SMART website and portals). Work with other providers to improve inclusion and outcomes (e.g. accessible transport providers and car sharing groups)	Short term	Services NSW, Not-for-profit sector
5.4 Use smart technology and data to monitor and enhance the health and wellbeing of residents and visitors	5.4.1 Use technology to identify accessibility facilities and encourage use of recreational spaces, equipment and facilities for all abilities (e.g. toilet locations, fitness equipment location tracking and booking, location of accessible pathways, light sensors for evening recreation)	Medium term	IT supplier, health businesses, Spatial Services, Disability Action Group
	5.4.2 Encourage and lead (where appropriate) the development of apps that improve community wellbeing and safety, access to services and tourism – EDS 6.15*	Short term	Industry, government agencies, reference groups
	5.4.3 Install smart entertainment infrastructure to enhance inclusion and improve community wellbeing (liveability) of the region – e.g. outdoor cinema, interactive sound, art installations	Long term	IT supplier, community groups agencies, reference groups

\* Bathurst Region Economic Development Strategy 2018-2022

# 5: COMMUNITY: HEALTH, SAFETY AND WELLBEING



Through the theme of **Community Leadership and Collaboration Council** is focused on coordinating leadership and collaboration across government, industry and business, demonstrating by example how to effectively connect with the community.

This theme highlights the decision-making processes of Council that are expected to be reflective of the community's interests and aspirations today and into the future.

**Objectives:**

- 6.1 Build Bathurst Region's capacity to be a leading Smart Community**
- 6.2 Enable informed decision-making**
- 6.3 Enhance collaboration and communication with community**
- 6.4 Enhance Council's operations and service delivery**
- 6.5 Ensure best practice in Council's management of confidential data**

## OUR PROJECTS

### Open Data and Location Analytics

Council has installed data access points across thirteen separate zones through the CBD and recreational spaces of Bathurst, facilitating the capture of anonymised data on pedestrian traffic movements - time and motion studies. This anonymised data will be made available to business and industry organisations to inform decision-making.

### Showcase Bathurst's Smart Credentials

Council's Economic Development team has presented at numerous conferences – sharing our Smart Community initiatives and evidencing our credentials as a leading Smart Community. The team has applied for and been successful in receiving grant funding to implement a wide range of smart initiatives.

### Electric Vehicle Charging Stations

Council has secured industry investment in the installation of both Tesla and universal electric vehicle charging facilities in multiple locations in the CBD of Bathurst. Plans are underway to expand these facilities into regional villages.

Objectives	Actions	Timeframe	Partners
<b>6.1 Build Bathurst Region's capacity to be a leading Smart Community</b>	6.1.1 Roll out a Smart Community Strategy and establish a Smart Community Project Group – EDS 6.1*	Short term	Australian Smart Communities Association (ASCA), industry, Bathurst Business Chamber, community groups
	6.1.2 Actively seek State and Federal funding to support various smart communities projects – EDS 6.2*	Short term	Government agencies, industry
	6.1.3 Become a member Council of the leading Smart Communities research associations and grow local, state and national awareness of Bathurst as a Smart Community – EDS 6.5*	Medium term	Australian Smart Communities Association (ASCA), Future Ready, government agencies, Smart Cities Research Institute, Smart Cities Council
	6.1.4 Pursue funding for smart parking and sustainable transport solutions within the CBD – EDS 6.10*	Medium term	Industry, government agencies Roads Maritime Services
	6.1.5 Apply for funding to increase the uptake and extension of NBN-mixed use technologies in the Bathurst Region as population and industrial precincts grow – EDS 6.11*	Medium term	Industry, government agencies
	6.1.6 Ensure the Mobile Blackspot Database is up-to-date and seek funding to upgrade mobile base stations to address mobile blackspots (especially in the villages) – EDS 6.14*	Long term	ACMA (Australian Communications and Media Authority), Central West RDA, community groups, Village Progress Associations, Industry, government agencies
	6.1.7 Work to address all Wi-Fi network blackspots encountered on transport links to/from major metropolitan areas allowing uninterrupted work travel	Medium term	NBN co, government, Transport NSW

\* Bathurst Region Economic Development Strategy 2018-2022

## 6: COMMUNITY LEADERSHIP & COLLABORATION



Objectives	Actions	Timeframe	Partners
<b>6.1 Build Bathurst Region's capacity to be a leading Smart Community</b> <i>(continued)</i>	6.1.8 Lobby key IT and communication service providers to ensure continuous delivery of highest quality of product/service to the Bathurst Region.	Medium term	IT and communication providers, NBN co, government
	6.1.9 Investigate Federal Government's City Deal as an opportunity to work collaboratively with neighbouring LGAs and gain funding for smart projects for the region	Short term	Government, industry, regional community
	6.1.10 Develop communication and planning processes to facilitate and promote integration of new technologies, aiming to capitalise on previously unexplored opportunities for deriving rich information from cross-pollination of data from separate systems	Short term	Industry, regional community, energy provider, business community
<b>6.2 Enable informed decision-making</b>	6.2.1 Continue development of open data systems and information sharing opportunities to provide business and industry with information to guide improved decision-making	Medium term	Industry, business community, government
<b>6.3 Enhance collaboration and communication with community</b>	6.3.1 Investigate emerging technology to facilitate communication with community, expanding on platforms such as Your Say Bathurst	Medium term	IT industry, government, business community, community groups
<b>6.4 Enhance Council's operations and service delivery</b>	6.4.1 Continued installation and investigation of renewal energy technologies in Council-owned facilities to reduce pressures from rising energy costs – EDS 6.9*	Long term	Renewable energy providers, industry, government
<b>6.5 Ensure best practice in Council's management of confidential data</b>	6.5.1 Introduce training to ensure common high standards of data protection	Medium term	Industry, government

\* Bathurst Region Economic Development Strategy 2018-2022

## 6: COMMUNITY LEADERSHIP & COLLABORATION *Continued*

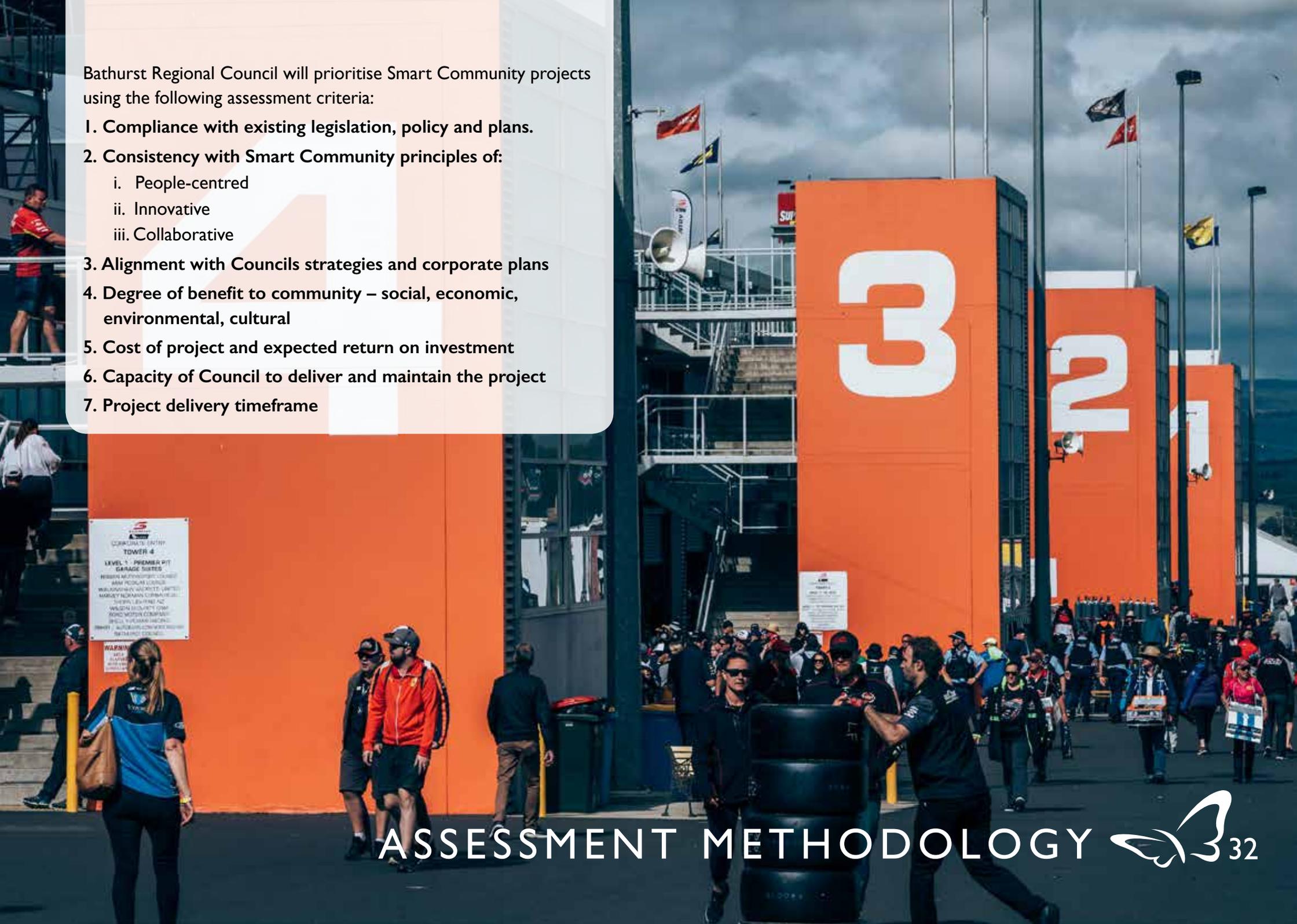




A SMART COMMUNITY: NEXT STEPS 

Bathurst Regional Council will prioritise Smart Community projects using the following assessment criteria:

1. Compliance with existing legislation, policy and plans.
2. Consistency with Smart Community principles of:
  - i. People-centred
  - ii. Innovative
  - iii. Collaborative
3. Alignment with Councils strategies and corporate plans
4. Degree of benefit to community – social, economic, environmental, cultural
5. Cost of project and expected return on investment
6. Capacity of Council to deliver and maintain the project
7. Project delivery timeframe



# IMPLEMENTATION

Council's Economic Development team will coordinate the implementation of the Smart Community Strategy in collaboration with the Smart Community Project Group.

However, everyone has a role to play in the implementation phase and Council invites all parties to assist in the development of the Bathurst Region as a leading Smart Community.



Council will lead by example, rolling out digital transformation through services.

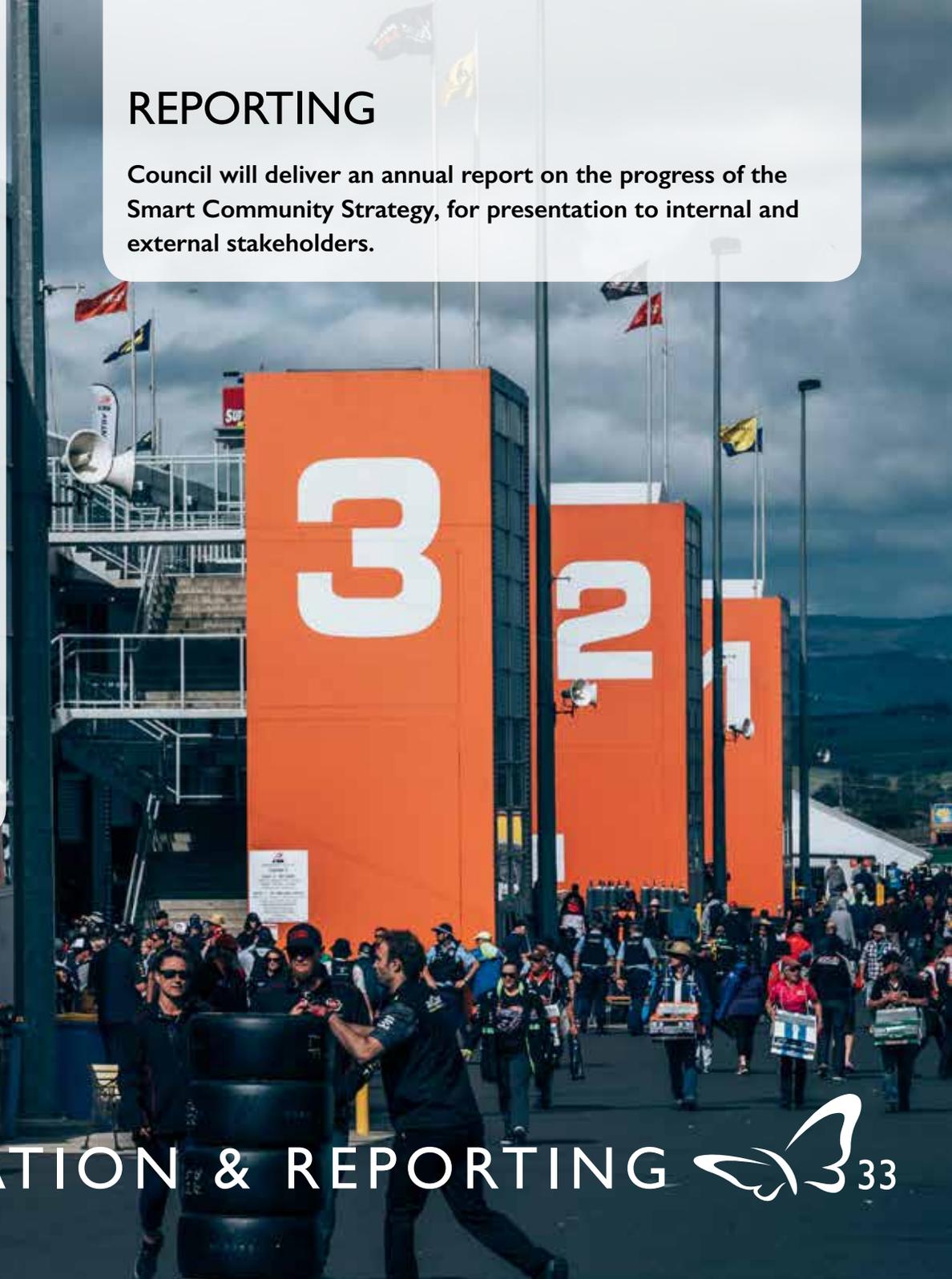
Council will monitor, measure and report progress of the implementation phase against this strategy's objectives and actions.

Council will communicate, promote and advocate for projects within this strategy.

Council will collaborate with individuals, businesses and community groups to generate creative, innovative ideas.

# REPORTING

Council will deliver an annual report on the progress of the Smart Community Strategy, for presentation to internal and external stakeholders.



OPEN DATA



INNOVATION HUBS

SMART STREET LIGHTING

FREE PUBLIC WIFI  
WIRELESS NETWORKS  
INTERNET OF THINGS (IoT)

SMART ENERGY

SMART COUNCIL

SMART SENSORS

SMART SECURITY

GATEWAY TRANSMITTER & RECEIVER

SUSTAINABLE TRANSPORT

FUTURE EDUCATION

SMART ENVIRONMENT MANAGEMENT

ELECTRIC VEHICLE CHARGING STATIONS

ENERGY EFFICIENT VEHICLES

MOUNT PANORAMA BATHURST

UNDERGROUND FIBRE OPTIC CABLING

SMART BENCHES

# A SMART COMMUNITY: INITIATIVES

