



# GOOGONG

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## A BLUEPRINT FOR BUILDING SMART COMMUNITIES

SEPTEMBER 2020



**PEET**

# GOOGONG IS THE FUTURE OF SUSTAINABLE, SMART COMMUNITIES



SETTING A NEW BENCHMARK  
FOR FORWARD THINKING,  
INNOVATIVE DESIGN AND  
COMMUNITY FOCUS.





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# 01

## INTRODUCTION

The Googong Smart Community is embedding digital technology into the township to increase local liveability, sustainability, safety and amenity of place. This document (the Smart Community Blueprint) showcases how smart technology is making Googong a better place to live, work, and play.

Although still in its infancy, Googong's ambitious community and sustainability goals set a new benchmark for Australia. This document explores how smart technology will help realise these goals.

The Blueprint aims to:

- > highlight the opportunities to embed smart technology in new developments
- > empower other governments and private developers to create new, smarter suburbs, towns and cities.

The first section of this Blueprint (Chapters 2-5) summarises the foundations and outcomes of the Googong Smart Community. The second section (Chapters 6-10) provides guidance for those embarking on their own smart community journey.

### WHAT IS A SMART COMMUNITY?

A smart community (alternatively known as a smart city) leverages new technology, data and innovation to increase liveability, productivity and sustainability for its residents.

It uses sensors, digital networks, data management systems, intelligent control, and mobile/digital interfaces to inform better decisions, enable better local services, and deliver better community outcomes.

Citizens of a smart community are both co-designers and users in this process. Social networks, online engagement, cooperative data management, data analytics and collaborative innovation are the foundation of policy, planning and strategy in a smart community. A smart community is one that is citizen-centric.

## WHAT MAKES GOOGONG A SMART COMMUNITY?

The Googong Smart Community integrates smart technology across the lifecycle of the town, from design and construction to community building and growth. The Project is composed of three primary elements:

- 1 Smart technology and policies to improve planning and design of a new suburb.
- 2 An integrated array of smart infrastructure and services, promoting community, liveability, sustainability, and vibrancy.
- 3 An open source Smart Community Blueprint (this document) to share knowledge, catalyse partnerships and innovation, and drive smart technology deployment in new developments nationally.

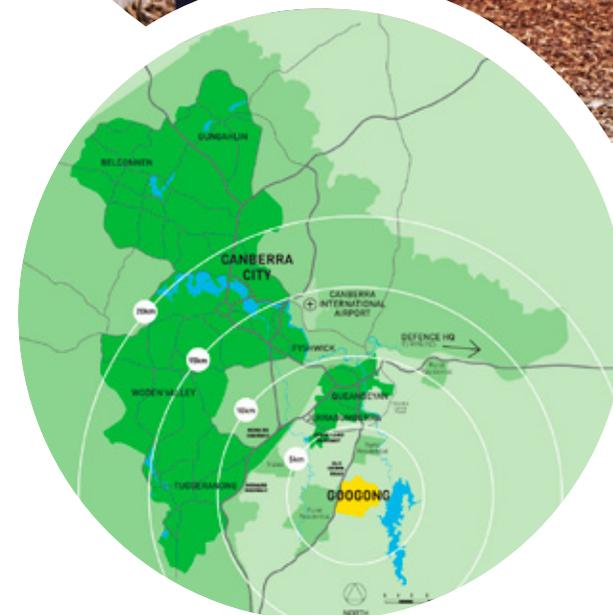
## ABOUT GOOGONG

Googong is a self-contained town in the Queanbeyan-Palerang region, located just 16km south-east of Parliament House, Canberra. It will eventually comprise five connected neighbourhoods and be home to around 18,000 people as well as schools, parks, shops and businesses – everything you'd expect to find in a thriving town.

Googong was designed and constructed with community, connection, liveability and sustainability at its core. 25 per cent of development land is reserved for public open space, including landmarks that celebrate the region's Aboriginal and colonial history and protected habitat for the vulnerable Pink Tailed Worm-Lizard.

But this is just the beginning! The community is supported by state-of-the-art services and technology, such as LoRaWAN network connectivity (explored further in Chapter 5), and the town embodies the key principles of a 'smart community'. This has been achieved through a process of design and development that focuses on innovation, sustainability and liveability (explored in Chapter 7).

The development of Googong as a smart community was made possible through a number of partnerships (explored in Chapter 6) and by a \$1.1 million grant from the Australian Government's Smart Cities and Suburbs Program.



# 02

## SMART COMMUNITY FOUNDATIONS

Digital technology and the smart city phenomenon are sweeping across the world, delivering real benefits to regions, cities, towns and communities. However, we must be careful to avoid technology for technology's sake. Smart communities and cities are built on engagement and research. They are tailored to local circumstance and community priorities.

The Googong Smart Community is an excellent example. Built on community engagement insights, local demographic and economic analysis, consultation with smart community experts, and engagement with local stakeholders.

Key plans and policies which guided the design and development of the Googong Smart Community included the Australian Government's Smart Cities Plan and the Queanbeyan-Palerang Regional Council's (QPRC) Digital Economy and Smart Communities Strategy.

### THE AUSTRALIAN GOVERNMENT SMART CITIES PLAN

The Australian Government Smart Cities Plan is built on three pillars – Smart Investment, Smart Policy and Smart Technology.

The Smart Cities Plan highlights the value of building cities and towns that are citizen-centric, liveable and make the most of digital technology.

To support the Plan, the Australian Government invested \$50 million into smart technology and innovation projects across the country through the Smart Cities and Suburbs Program. The Googong Smart Community was supported by a grant from this Program.



## QPRC DIGITAL ECONOMY AND SMART COMMUNITY STRATEGY

The Googong Smart Community aligns with and realises the QPRC Digital Economy and Smart Community Strategy. The Strategy sets out the following objectives:

### Building a Smart Economy

Solutions will drive significant operational efficiency and enhanced decision-making capability.

Solutions will facilitate economic activity with digital activation and urban amenity.

### Increasing Digital Capacity and Connectivity

Technologies will enhance access to digital connectivity in the community.

Solutions will be future-proofed and compatible with new and emerging opportunities.

### Better Local Services

Technologies will increase access, communication and convenience of local services.

Solutions will improve activation, utility and amenity of public spaces.

### Creating Vibrant Communities

Solutions will enhance the safety and amenity of public spaces.

Technologies will improve communication and the promotion of local events.

### Smart Data, Smart Planning

Smart data and data analytics platforms will improve the availability of real-time data for enhanced decision-making.

Solutions will ensure data privacy, safety and security are protected.

## GOOGONG MASTERPLAN

The Googong Smart Community supports the seven principles of the Googong Masterplan.

- 1 Improved Liveability** – greater activation of central and green spaces promoting social and health outcomes.
- 2 Support Local Economic Growth** – greater liveability through smart technology solutions and smart public safety that will encourage business enterprise within Googong.
- 3 Enhance the Environment** – improved environmental outcomes through enhanced environmental monitoring and use of energy efficient and waste reducing technology.
- 4 Enhance Safety and Security** – increased safety through smart CCTV and lighting infrastructure.
- 5 Improve Connectivity** – improved connectivity and communication through free public Wi-Fi, digital wayfinding and data dashboards.
- 6 Encourage Learning** – enhanced potential for engagement and learning through greater connectivity and data communication technologies.
- 7 Embrace our Culture and Sport** – improved promotion of Googong's natural heritage and sporting assets via digital wayfinding and smart signage.

# 03

## GOOGONG - A SMART COMMUNITY

This Chapter outlines the vision, principles and objectives of the Googong Smart Community.

### VISION

**GOOGONG WILL BE A TOWN THAT DELIVERS ENHANCED LIVEABILITY, CONNECTIVITY, SAFETY AND ENVIRONMENTAL OUTCOMES FOR ITS COMMUNITY, BUILT ON A FOUNDATION OF DIGITAL TECHNOLOGY, DATA AND INNOVATION.**



## PRINCIPLES

### Liveability

Googong will build on its unique characteristics and leverage smart technology to become an ideal location to live, work and play.

Smart community solutions in Googong will aim to improve the quality of life of our residents and visitors.

### Sustainability

The Googong Masterplan emphasises open space and the unique natural surroundings of the town. Smart technology will be deployed to help maintain and protect the natural environment and enhance sustainability.

### Connected Community

A smart community connects its citizens not only via digital skills and connectivity but through intelligent design and active participation. Googong will employ digital technology to enhance the accessibility and safety of our public spaces and keep our community informed and engaged.

### Scalability

This Project aims to promote scalable smart community solutions, not only for Googong but for the wider region and across Australia.

## OBJECTIVES



PROMOTING ECONOMIC GROWTH



ENHANCING LIVEABILITY



ACTIVATING CENTRAL SPACES



IMPROVING CONNECTIVITY



IMPROVING PUBLIC SAFETY



ENHANCING SUSTAINABILITY OUTCOMES



DEVELOPING SMART SYSTEMS, PROCESSES AND POLICIES



ENCOURAGING COMMUNITY COLLABORATION, PARTICIPATION AND ENGAGEMENT



INCREASING HEALTH AND RECREATION OUTCOMES



PROVIDING A BLUEPRINT FOR FUTURE SMART DEVELOPMENT IN GOOGONG AND WIDER AUSTRALIA

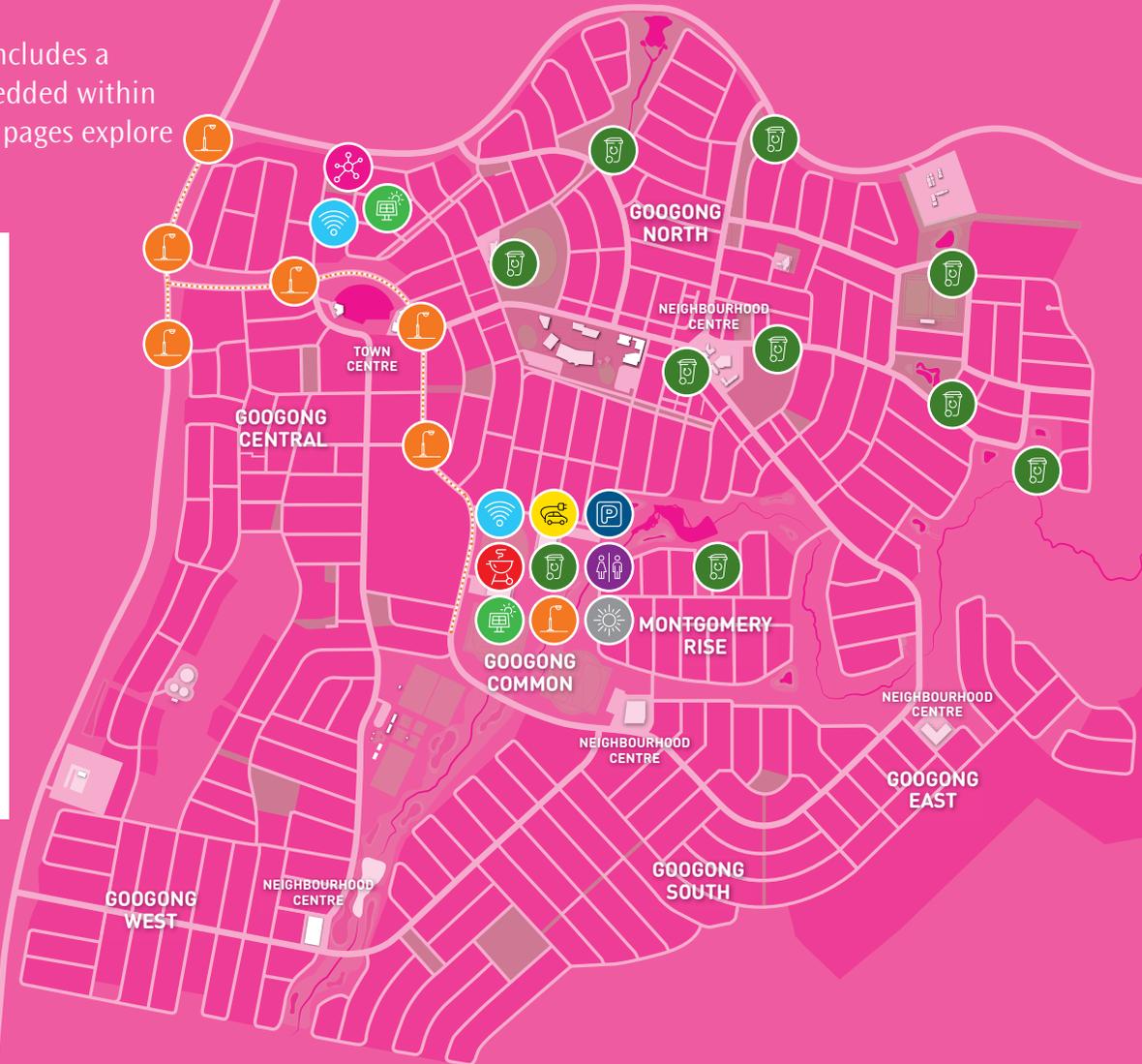
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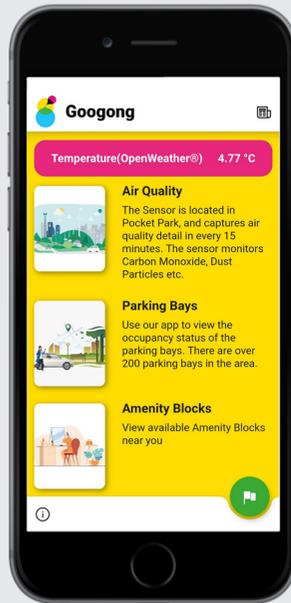
## SMART COMMUNITY ELEMENTS

The Googong Smart Community includes a range of smart technologies embedded within the town. The map and following pages explore these technologies.

### KEY

-  Smart Poles & Lighting
-  Smart Parking
-  Electric Vehicle (EV) Charging Stations
-  Public Wi-Fi
-  Environmental Monitoring
-  Smart Waste
-  Smart BBQ
-  Remote Toilet Locking and Monitoring
-  LoRaWAN (Long Range Wide Area Network)
-  Weather station





### Googong App

A mobile and desktop app will provide access to information on the smart community services available in Googong.

Provides consolidated information about:

- > Parking availability
- > Toilet occupancy
- > BBQ availability
- > Environmental data
- > EV charging locations and availability
- > Future smart community services.



### Electric Vehicle Charging Stations

Universal charging points for electric vehicles to provide Googong residents and visitors with sustainable transport options.

- > Supporting sustainable transport options
- > Ability to monitor and report on electricity consumption
- > Ability to set customisable tariffs to reward sustainability.



### Public Wi-Fi

Access to free Wi-Fi in selected locations.

- > Enhanced public space amenity
- > Improved digital connectivity
- > Improved digital inclusion and accessibility.



### Smart Poles & Lighting

Smart poles and lighting provide additional functionality including: light trimming and dimming, energy efficient globes, fibre connectivity and future sensor interoperability.

- > Improved energy efficiency
- > Optimised lighting levels
- > Enhanced safety
- > Improved city activation and wayfinding.



### Environmental Monitoring

Collection, analysis and visualisation of local environmental data including CO<sub>2</sub>, temperature and humidity.

- > Insight into local environmental information in real-time
- > Enhanced environmental decision making
- > Data on trends and policy impact.



### Smart Parking

Parking Overstay Detection Systems provide actionable insights into occupancy patterns, infringements and provide information about parking availability in real-time.

- > Access to real-time parking availability
- > Improved operational efficiency
- > Enhanced parking insights and decision-making.



### Smart Waste

Sensors are retrofitted within existing public waste and recycling bins and solar powered Big Belly Compactor Bins are deployed to deliver real-time waste insights.

- > Improved waste collection efficiency
- > Increased public place amenity
- > Enhanced asset management.



### Smart BBQ

Built-in technology that reports on faulty BBQs and monitors usage patterns to pinpoint hotspots. System also provides updates to the community about BBQ availability.

- > Identify usage patterns to determine over/underutilisation
- > Improved asset management and amenity
- > Access to real-time availability information
- > Improved asset decision-making.



### Digital Wayfinding

Interactive digital tools for visitors and residents that makes it easy to find local businesses and amenities within a precinct.

- > Provides local updates and news
- > Business directory.



### Remote Toilet Locking and Monitoring

A CCTV camera and motion detection sensor to establish real-time occupancy of public toilets.

- > Improved asset management
- > Enhanced operational efficiency
- > Improved safety and hygiene.



### Integrated Smart City Platform & Public Dashboard

The Dashboard integrates data and information from smart technologies across the town.

- > Visualisation and analysis of suburb data
- > Access to real-time information
- > Enhanced decision-making
- > Improved asset management.



### Custom Integration Solutions into Internet of Things (IoT) Platform

Integration of all smart technology controls and data into a consolidated IoT platform.

- > Improved data and smart control access
- > Coordinated data analytics and decision-making opportunities.



### LoRaWAN (Long Range Wide Area Network)

A low power, low frequency network that supports the evolving smart city services in Googong, providing connectivity to sensors and devices across the town.

- > Reliable, long-range, secure communication link between devices and data collection point.



### Fibre Network

Foundational fibre infrastructure to future-proof and connect smart technology throughout the town.

- > NBN connectivity
- > Future-proofed investment
- > Critical backbone for smart community services
- > Reduced need for retrofitting.



### Data Governance Framework

A framework to guide the collection, utilisation and analysis of data, including: data privacy and security, access to data, utilisation of data for operational efficiencies and transparency, innovation and open data platforms.

- > Robust data privacy and security
- > Improved data quality and availability
- > Improved utilisation of data and technology.





**INTEGRATING THIS  
INFRASTRUCTURE INTO  
THE FOUNDATIONS OF  
THE TOWNSHIP SIMPLY  
MAKES GOOD SENSE**

# 05

## SMART PARTNERSHIPS

Successful smart communities throughout Australia and the world are dependent on partnerships, collaboration and the sharing of knowledge. The Googong Smart Community is no different. Googong and QPRC have leveraged a network of partnerships to help realise the smart community vision for Googong. The project draws upon expertise from the community, government and the private sector. Key partners included:

### Australian Government



To support digital technology and innovation projects across Australia, the Australian Government launched the Smart Cities and Suburbs Program.

Googong Smart Community and Smart Town Blueprint received over \$1.1 million of the \$50 million grant pool. Project partners, Googong Township Pty Ltd contributed an additional \$1.2 million.

QPRC and Googong Pty Ltd's partnership with the Australian Government was invaluable in ensuring that the Googong Smart Community is:

- > Innovative and makes use of smart technology and open data
- > Geared towards social, environmental and economic benefits
- > Community-focussed and improves the liveability of Googong
- > Scalable and demonstrates success.

### Queanbeyan-Palerang Regional Council



The Queanbeyan-Palerang Regional Council area encompasses 5,319 km<sup>2</sup> of regional NSW, just outside the ACT border. Googong is a self-contained town within the Queanbeyan-Palerang region, located just 10 kilometres south of the Queanbeyan Central Business District.

QPRC helped shape the overall vision, direction and action of the Googong Smart Community by driving the project forward, ensuring quality and providing critical local knowledge.

### Googong Township Pty Ltd



Googong Township Pty Ltd is a joint venture between Peet Limited and Mirvac Group.

Peet is responsible for the vision behind Googong, having worked on the planning and design of the township since 2000. Peet is Australia's largest specialist residential land developer, creating quality residential communities across Australia for more than 125 years.

Mirvac is one of the leading brands in the Australian development and construction industry. It has produced some of Australia's most renowned residential projects. Like Peet, Mirvac has a proven track record of innovative and sustainable development.

Their combined experience and skillset, along with their commitment to innovation and excellence, were employed to successfully establish the Googong Smart Community.

### OneWiFi & Infrastructure



OneWiFi is Australia's leading end-to-end smart city solutions provider. They were engaged by QPRC and Googong Township Pty Ltd to deliver the technical components of the Googong Smart Community.

OneWiFi's smart city solutions are proven and tailored to the unique needs of the community, delivering tangible benefit to cities, suburbs and communities across Australia.

### Delos Delta



Delos Delta is a management consulting company specialising in smart community development, technology, and innovation. Delos Delta played a key role in planning and designing the smart technology dimensions of Googong.



# 06

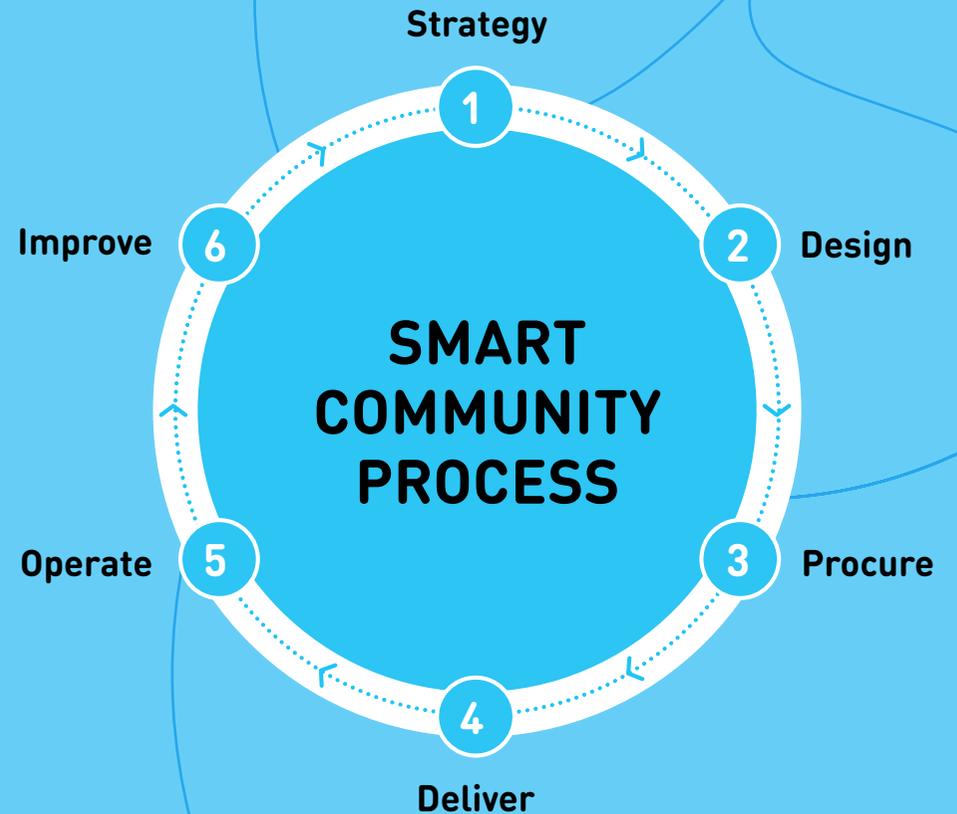
## THE SMART COMMUNITY PROCESS

The first section of this Blueprint highlighted the importance of partnerships and taking a citizen-centric approach to smart community design. The following pages outline the process by which smart communities are imagined and realised.

For Googong, this process starts with an overarching strategic framework that informs design, procurement, delivery and ongoing operations.

The strategic framework embeds local, regional and national priorities into Googong's Smart Community development.

Ongoing review and evaluation of initiatives feed back into the framework to ensure smart technologies will continue to meet the needs of the community.



A man and a woman are jogging on a grassy field. The man is in the foreground, wearing a red t-shirt and blue shorts. The woman is behind him, wearing a light blue tank top and black leggings. A dog is running alongside them. In the background, there is a modern building with large windows. The entire image has a blue overlay.

**WE HAVE BUILT A SMART  
FOUNDATION THAT  
CAN BE BUILT ON AND  
IMPROVED AS COUNCIL  
AND THE COMMUNITY'S  
NEEDS CHANGE**



## 1 STRATEGY

The Googong Smart Community is directed by a strategy that informs investment in digital technology and innovative solutions. It encourages a strategic, coordinated and targeted approach to smart infrastructure.

An effective smart community strategy should clearly articulate direction. It communicates to residents, stakeholders and investors a commitment to providing tangible benefits to the community.

A strategy should be informed by stakeholder and community consultation, and draw upon local demographic and opportunity analysis. This will ensure smart community activity meets the unique needs of the community and avoids the trap of deploying technology for technology's sake.

To ensure action remains coordinated, a successful smart community strategy should align with local, regional and national priorities. The Googong Smart Community builds upon the Australian Smart Cities Plan, and leverages the QPRC Digital Economy and Smart Communities Strategy as a local anchor.

### **An effective Smart Community Strategy will:**

- > Provide clear direction and priorities in the form of values, principles and objectives
- > Help to inform prioritisation of initiatives
- > Take a citizen-centric approach
- > Value and protect privacy and security
- > Encourage modernisation of current regulation, governance and funding models
- > Support data-driven decision-making and planning
- > Promote a culture of innovation
- > Be agile and receptive to new ideas and technologies
- > Encourage multi-use digital infrastructure and interoperability
- > Take a holistic approach.

## 2 DESIGN

The design process to develop the Googong Smart Community followed four parallel principles, which turned strategic aspirations into smart solutions. This approach took particular care to ensure that action is aligned with community priorities.

### Build Smart Foundations

- > Integrate operational smart city infrastructure (e.g. fibre, IoT Networks, Wi-Fi) in planning, to ensure the foundations of the town are geared for smart technology solutions.

### Embed Smart Technology

- > Develop a culture/framework that considers smart technology solutions as a matter of course in planning.

### Protect Privacy & Security

- > Develop robust privacy and security policies that meet international, national and regional standards and protect the interests of residents.
- > Ensure privacy and security measures are regularly reviewed and updated in line with best practice.

### Be Data Driven

- > Embed data collection, metrics and analysis capabilities to ensure smart solutions meet their objectives.
- > Strengthen future decision-making and planning with data.

### Establish Interoperability & Connectivity

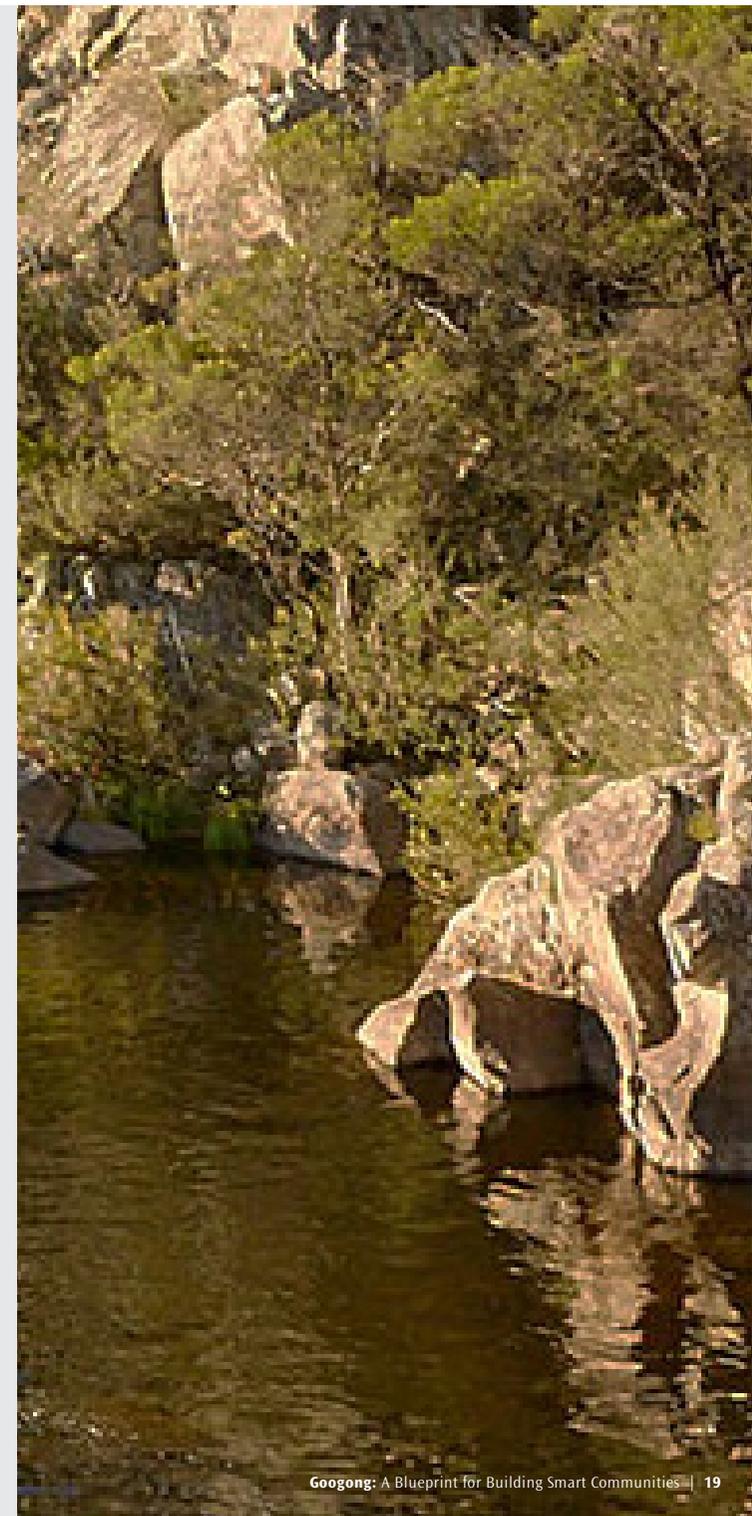
- > Ensure connection and technologies are ubiquitous and future-ready.

### Multi-Use Infrastructure

- > Select technologies that can provide multiple solutions now and into the future.

### Seek Expert Advice

- > Receive up-to-date advice on technology options and solutions.
- > Approach technology with an outcomes-focus to ensure solutions are tailored.
- > Seek best practice, objective procurement expertise.



### 3 PROCURE

A robust procurement process that leverages up-to-date expertise and takes an outcomes-focused approach is crucial to smart community success.

High-value actions during this process include:

- > Initiating procurement processes with a clearly defined and agreed need: *“what outcomes will improve the community’s liveability?”*
- > Reducing risk by developing open dialogue with technical experts to provide up-to-date industry knowledge
- > Approaching the market with clear and focussed objectives/ outcomes and a well-defined scope, inviting vendors to suggest the best solutions for them
- > Encouraging innovation and expressing openness to new ideas during the procurement process
- > Working with experts in smart community design to prepare RFQ material and assess proposals, to ensure liveability and tangible service improvements remain paramount
- > Assessing responses using a triple-bottom-line approach to ensure holistic considerations are taken into account.

### 4 DELIVER

Successful delivery requires a holistic and consistent implementation plan. Implementation is not just about delivering technology solutions; it should also focus on building capability, ensuring interoperability and future-readiness and assessing and improving process.

Implementation plans should include the following core elements:

- > Detailing a short-term action plan with medium and long-term action plans that remain agile and open to changing technologies
- > Clearly defining areas of responsibility and accountability
- > Defining processes of accountability, review and improvement
- > Ongoing communications plan to build awareness and excitement and avoid potential for misinformation
- > Integrating training and capability building programs for relevant staff and interested residents
- > Developing a risk management plan to address current and future challenges.

## 5 OPERATE

The following smart community operational principles ensure effective operation, utilisation and maintenance of technical applications:

- > Starting small, only installing what you need, before scaling up
- > Ensuring adequate resourcing and expertise within implementation and operational staff
- > Regularly reviewing operations to ensure they are meeting smart community objectives
- > Continuing to focus on deploying interoperable, multi-use infrastructure and solutions.

## 6 IMPROVE

Consistent review, evaluation and adaptation are critical to ongoing smart community success. Smart technologies are constantly evolving, adapting and improving, requiring an agile and forward-looking review process, involving:

- > Developing a regular and well-communicated review process
- > Regularly consulting or seeking feedback from residents, staff and key stakeholders
- > Keeping up-to-date and well informed of new and emerging technologies
- > Making use of data to assess successes and identify gaps
- > Evaluating performance based on primary objectives – targeting opportunities for service improvements
- > Assessing areas to scale-up/expand initiatives.



# 07

## LESSONS & CRITICAL ACTIONS

Although Googong is still at the beginning of its smart community journey, many lessons have emerged that will guide the project going forward.

These lessons will also prove valuable to other cities, developers and the diverse array of players in the smart city space. The lessons below can be applied in the design, delivery or operation of a smart community.

|                        | <b>Planning and Alignment</b>  | <b>Scale-Up</b>   | <b>Resourcing</b>   | <b>Clear Objectives</b>  |
|------------------------|--|---|---|--|
| <b>LESSON</b>          | <ul style="list-style-type: none"><li>&gt; Prior planning and alignment with broader strategic frameworks ensure a coordinated and cohesive approach.</li></ul>  | <ul style="list-style-type: none"><li>&gt; Start with pilot programs and small installations to test operations and performance.</li></ul>  | <ul style="list-style-type: none"><li>&gt; Inadequate resourcing, in terms of staffing and skills, inhibits the success of pilot programs.</li><li>&gt; This can reduce operational effectiveness, functionality and interoperability of projects and programs.</li></ul> | <ul style="list-style-type: none"><li>&gt; Communication of clear, holistic objectives with all stakeholders will ensure a shared understanding of desired outcomes.</li></ul>   |
| <b>CRITICAL ACTION</b> | <ul style="list-style-type: none"><li>&gt; Planning upfront – start with essential infrastructure (<i>get the plumbing in first</i>).</li><li>&gt; Implement in clusters/precincts to overcome delays and perform pilots.</li><li>&gt; Follow an integrated approach to design, aligned with the broader strategic framework.</li><li>&gt; Ensure solutions are interoperable and future-proofed to maximise useability.</li></ul> | <ul style="list-style-type: none"><li>&gt; Target and install only what is necessary.</li><li>&gt; Evaluate effectiveness and then scale up or increase functionality.</li><li>&gt; Start with a community masterplan and investigate which items/functions can be improved through smart technology.</li></ul> | <ul style="list-style-type: none"><li>&gt; Ensure adequate resourcing of pilot projects to reduce subsequent costs.</li><li>&gt; Ensure staff have appropriate training and understanding, or are supported by highly experienced individuals.</li></ul>                  | <ul style="list-style-type: none"><li>&gt; Start all endeavours with the question, ‘what outcomes are we aiming for, and what problems are we trying to solve?’</li><li>&gt; Clear objectives and outcomes will assist in the management and coordination of all stakeholders.</li></ul> |

### Robust Procurement

- > Procurement processes must include adequate preparation and expertise.
- > Avoid time-pressured decision-making and ensure you have a robust and cohesive plan.

- > Involve all partners in the procurement process to guarantee interoperability and shared understanding.
- > Utilise experts to assess submissions during procurement.

### Partnerships and Collaboration

- > Partnerships and collaboration are critical to successful smart community development.

- > Bring partnerships to life via co-design, innovation, and knowledge-sharing.
- > Seek to maximise benefit realisation when presented with implementation and planning challenges.

### Consultation

- > Consultation not only identifies high-value priorities and outcomes, but also builds awareness and excitement around smart community initiatives.
- > Ongoing consultation with stakeholders, consultants, developers, vendors and relevant governments encourages a cohesive, collaborative approach to planning and delivery.

- > Maintain communication with all partners and stakeholders throughout design and delivery processes.
- > Engage with technical experts in open and constructive dialogue during procurement and design to get up-to-date industry knowledge.

### Business as Usual vs. Smart Opportunities

- > Integrate smart community opportunities in your business as usual systems.
- > Look for opportunities to integrate smart community initiatives that benefit the community in all capital projects.
- > Take a holistic approach (triple bottom line) to smart community opportunities and business cases.

- > Take a holistic approach to greenfield deployments – the marginal cost of business as usual vs smart can sometimes be insignificant, but the operational benefits are significant.

# 08

## SMART COMMUNITY INTERVIEWS



**Martin Darcy**  
Service Manager,  
Business and Innovation

### QPRC

#### What makes Googong special?

*“Googong is a unique, masterplanned township that is being developed with a focus on achieving strong sustainability outcomes. The introduction of smart technology to the township continues to build on this foundation and will enhance Council’s service delivery by providing the community with better access to information and data.”*

#### What are the benefits of smart technology to QPRC?

*“Googong’s smart city infrastructure will provide more effective, data-driven decision-making opportunities and deliver efficiencies in lighting, waste management and facilities and asset management services. Additionally, smart technology ensures residents will enjoy improved amenity, and access to local information and data.”*

#### How did the Australian Government help make this project possible?

*“The Australian Government’s commitment to smart city projects and financial support helped ensure this project was delivered to the highest standard and continued to have a community focus.”*

### GOOGONG TOWNSHIP PTY LTD

#### Why are smart communities important?

*“Smart communities create efficiencies, improve sustainability, create economic development, and enhance quality of life factors for people who live and work in these towns. At Googong, integrating this infrastructure into the foundations of the township simply makes good sense and will improve outcomes for all stakeholders, especially our residents.”*

#### What makes you most proud about the Googong Smart Community project?

*“Googong has been recognised for delivering strong sustainable outcomes and was awarded the Green Building Council of Australia’s first 5-Star Green Star – Community rating. We are enormously proud of our achievements across the board in delivering one of the most sustainable and liveable cities in the country. The integration of smart city technology is a continuation of these founding principles and will deliver enormous benefit to the wider community over the life of the project and beyond.”*

#### What does the future hold for Smart Googong, e.g. next steps, innovations, additions, improvements?

*“Googong will continue to explore new and innovative ways to deploy smart infrastructure across the remaining open spaces and streetscapes at Googong to bring new benefits to the community.”*



**Malcolm Leslie**  
Project Director



## ONEWIFI & INFRASTRUCTURE

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### Why are smart communities important?

*“Smart communities improve activation and social cohesion and increase community engagement and the utility and amenity of public facilities.”*

### How does Googong set new benchmarks for smart communities?

*“Googong sets a new benchmark for the number of smart community services integrated into the foundations of the town, and the accessibility of services through the Community App.”*

### What makes you most proud about the Googong Smart Community project?

*“The level of cohesion of applications that will foster technology adoption across the community.”*

### What does the future hold for Smart Googong, e.g. next steps, innovations, additions, improvements?

*“Limitless – we have built a smart foundation that can be built on and improved as Council and the community's needs change. Smart community delivery will continue to be rolled out as the town grows. Data collected will inform future infrastructure planning for the town, and provide a growing series of social, economic and sustainable benefits for the community.”*



**Mevan Jayatilleke**  
Managing Director

# 09

## GOOGONG'S SMART FUTURE

Googong Smart Community partners will continue to evaluate and evolve the program to deliver genuine sustainability and liveability outcomes for the community and program stakeholders. This process will focus on strengthening, improving and scaling up the benefits that already exist in the foundation initiatives.

### **Smart Googong Benefits for the Community**

- > Increased utility and amenity of public spaces
- > Greater community services and access to information
- > A low-carbon footprint
- > Enhanced decision-making with tangible benefits
- > Integrated smart technology for the future.

### **Smart Googong Future Objectives**

- > Improved place activation
- > Greater social cohesion, community interaction and participation
- > Increased utility and service provision
- > Enhanced community engagement and digital democracy
- > Better town-specific information and opportunities.

### **Smart Googong Next Steps**

The Googong Smart Community will continue to challenge itself to find new ways of deploying smart infrastructure in the Township. It will strive to find smarter, more innovative technologies and solutions that address local issues and provide greater community benefit.

Googong Smart Community was successfully built on a solid foundation. Now we must:

- > Evaluate the performance
  - what services and functionality are currently provided?
  - at what level?
  - which initiatives need further improvement?
  - which initiatives should be scaled up and where?
- > Aim higher and deliver more
  - What does our community need?
  - How can Googong further improve liveability outcomes?
  - What emerging technologies should we explore?



# 10

## WHAT'S NEXT FOR SMART COMMUNITIES?

As the smart cities and communities phenomenon sweeps across Australia and the world, it is natural to ask, 'What's next?'. In general we will see a rapid increase in the planning and development of smart communities, towns, suburbs, precincts and buildings. Accompanying this will be an increase in the range, functionality, complexity, and interconnection of smart technologies within these communities.

In the first instance, this expansion of smart community development should be guided by the suite of existing smart city policies and standards, including:

- > the Australian Government's Smart Cities Plan (2016)
- > the smart technology strategies of the various state and territory governments, such as the NSW Government's Smart Places Strategy and Smart Infrastructure Policy
- > the smart city/region/community strategies and plans of the relevant local government
- > local planning processes and requirements, especially as they relate to smart technology
- > smart city/community/technology standards and best practice guidelines.

To accelerate the planning and creation of smart communities, suburbs, towns and cities, Australia will need a comprehensive, multi-lateral strategy, including:

- > modernisation of planning processes and legislation to encourage smart technology integration

- > ongoing reforms enabling appropriate access to infrastructure (such as street-lights) as a platform for smart technology deployment
- > continued improvements to digital security and privacy to ensure public trust and confidence
- > frameworks and policies to support innovation and the testing and trialling of smart technology
- > enhanced data management policies and practices to promote effective data collection, analysis, access and decision-making
- > an integrated approach to spatial planning and development, leveraging smart technology to address critical policy challenges (such as climate change, traffic congestion, and economic resilience).

The future of smart communities depends on ongoing conversation and dialogue with the people that call these suburbs, towns and cities home. The technology which is prioritised must help achieve the people's vision for the place where they live, work and play.



## FURTHER READING

### **The Department of the Prime Minister and Cabinet**

Smart Cities Plan

*“To succeed in the 21st Century economy our cities need to be productive and accessible, but they also need to be liveable with a clear focus on serving their citizens.”*

### **Smart Cities Council Australia and New Zealand**

The Code for smart Communities

*“A critical framework for government and private sector policy makers, planners, designers, developers, and operators, identifying and highlighting the scope of a smart community, the core principles, and suggested metrics.”*

### **NSW Department of Planning, Industry & Environment**

Smart Places Strategy

*“Smart Places bring the physical and digital together, meaning citizens, businesses, partners and the public service workforce can go Beyond Digital...”*

([www.dpie.nsw.gov.au/our-work/strategy-and-reform/smart-places](http://www.dpie.nsw.gov.au/our-work/strategy-and-reform/smart-places))

### **Future Cities Collaborative & The United States Studies Centre at the University of Sydney**

How Smart are Australian Cities?: Local approaches to adopting smart city strategies

*“This report aims to provide new insights into the implementation of smart cities in Australia – how these initiatives are being implemented in cities, whether they are fulfilling their promises, the challenges involved and how cities can learn from each other.”*

### **CSIRO Data61 (Neil Temperley)**

Future Cities Thinking – Future Cities and Communities by Design

*“This white paper outlines the case for taking a fresh look at ‘future cities and communities’ (or ‘smart cities’) and provides a methodology for doing so. A common frustration of citizens and other city stakeholders is the fragmentation and lack of interoperability or connectivity between otherwise innovative services and solutions.”*

### **Churchill Trust (Brook Dixon)**

Building the Digital City: the People, the Smarts, the Buzz

*“The digital revolution is ablaze in cities around the world... But what is the object? How can cities most effectively engage with digital? And what lessons from international experience are there for Australian cities?”*





