# AUSTRALIAN SKART CITIES AVARDS

Smart Cities Council<sup>®</sup>

## WINNERS PORTFOLIO 2019

## **ABOUT US**

The Smart Cities Council Australia is the world's largest network of smart cities companies, practitioners and policy makers, embracing technology, data and intelligent design to accelerate liveability, workability and sustainability in our cities and towns.

We have staff in the worlds major smart cities markets – North America, India, Australia and New Zealand, Europe and South East Asia.

Our members - who we call our partners - enable us to do the work that we do to inform, educate, convene and advocate everything smart cities. Our members in the Australia and New Zealand Region are listed here.

Further information about the Smart Cities Council can be found <u>here</u>.

### **OUR PARTNERS**





## THE 2019 SMART CITIES AWARDS

Every year the Smart Cities Council rewards smart cities excellence through the Australian Smart Cities Awards. The awards recoginise those organisations who demonstrate the highest level of leadership across the following categories:

- 1. Digital City Services
- 2. Smart Cities Strategy
- 3. Built Environment
- 4. Social Impact
- 5. Research and Innovation
- 6. Regional Leadership

- 7. Smart City Policy
- 8. Smart City Partnership
- 9. Smart City Organisation Transformation
- 10. Leadership City
- 11. Smart Cities Leader (Government, Industry, Emerging)

2019 Australian Smart Cities Awards sponsors:





#### AWARD CATEGORY

**Digital City Services** 

**Smart Cities Strategy** 

**Built Environment** 

**Social Impact** 

**Research and Innovation** 

**Regional Leadership** 

**Smart City Policy** 

**Smart City Partnership** 

Smart City Organisation Transformation

Leadership City

**Government Leader** 

**Industry Leader** 

**Emerging Leader** 

#### RECIPIENTS

Winner: City of Melbourne

Winner: Wyndham City Council Highly Commended: City of Canterbury Bankstown

**Winner:** City of Prospect, City of Burnside, City of Playford, City of Port Adelaide Enfield, Campbelltown City Council, University of Adelaide and Meshed

Winner: City of Melbourne

Winner: University of Newcastle

Winner: Southern Grampians Shire Council

Winner: Local Government Association of South Australia

Winner: City of Canterbury Bankstown Highly Commended: City of Newcastle Highly Commended: Sunshine Coast Council and Stockland

Winner: City of Canterbury Bankstown

Winner: City of Melbourne

Winner: Daniel High, City of Perth Highly Commended: Daniel Adams, City of Prospect

Winner: Chris Isles, Place Design Group

Winner: Ashby Martin, SAGE Automation

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## **2019 WINNER:** Digital City Services

City of Melbourne, Victoria



City DNA is a break-out concept that raises the bar both nationally and globally by demonstrating how City of Melbourne uses emerging technology to engage its community, explain future scenarios and options and encourage active community participation in framing the future of the city.

It is a physical collaborative space which facilitates interactive access and use of the City of Melbourne's rich data, modelling and analytical resources.

It merges the physical and digital worlds using 3D printed models of the whole city with data projections and mixes reality tools so that users and visitors can understand complex concepts in a highly visual setting.

It provides for a new kind of narrative which looks to promote empathy for others as well as telling the story of the city. To help tell the City of Melbourne's story, the City has brought to life its many datasets in Melbourne City DNA. It includes analytics and interactive data visualisations as well as data projected over our 3D printed model of the city. Data generated from real-time sensors enables visitors to see the city as an urban ecosystem.

It literally shows the pulse of the city in its current level of activity, feel and behaviour. City DNA is a permanent platform and service offering located in Melbourne Town Hall.

The space will be open to the public but also configurable so that the Future Melbourne Committee (FMC) will conduct its meetings in the same space as City DNA. FMC is a special committee of Council and oversees the implementation of strategies and activities across 12 portfolio areas of Council. It is envisaged that City DNA will become an indispensable analytical and visualisation capability to help FMC with its deliberations and decisions.

**City DNA focuses powerful** modelling and analytical capabilities which enables users to see and understand our city in new ways."

#### Winner: Digital City Services



#### 2019 WINNER: Smart Cities Strategy

Wyndham City Council, Victoria

Smart Cities Council<sup>®</sup> The Wyndham City Council led *Smart City Strategy 2019-2024* provides the blueprint for deploying emerging technology that meets the current and future needs of Wyndham citizens.

To deliver a relevant and community-focused strategy, the Smart City Office sought to understand the opportunities, priorities, concerns and demands of the community and other stakeholders when using technology and data to address its urban challenges.

Wyndham has developed this strategy not only to create opportunity, but to provide new solutions to challenges facing cities all around the world.

The development of the *Smart City Strategy 2019-2024* focused on both information sharing and collaboration. A forward-thinking communication campaign reached more than 108,000 touch points across various social media channels. This reach was pivotal in ensuring extensive consultation. It was adopted at the Ordinary Council Meeting in June 2019 and released to the public. This official document ensures long term support of the council and identifies clear commitment. "It cannot sit on the shelf and be ignored", Council says.

The measurement and assessment of Wyndham's smart city evolution is important. Annual progress reports will highlight achievements, successes, lessons learned and key insights. The biennial benchmarking reports will show its Smart City Maturity Assessment.

The Strategy is underpinned by a highly-detailed Implementation Plan that allocates roles, responsibilities and accountabilities to the relevant directorate, to ensure that the right people oversee the right tasks. Council has also established a robust smart city governance structure that enhances coordination and collaboration across council departments/directorates, and maintains accountability, momentum and efficiency.

The Smart City Strategy ... is our commitment to promoting innovation, leveraging new technology, and welcoming collaborative partnerships to help build our city of the future." Winner: Smart Cities Strategy



#### **2019 Highly Commended:** Smart Cities Strategy

City of Canterbury Bankstown, New South Wales

The Smart CBCity Roadmap is Council's way of exploring how data and technology can be used to improve the lives of residents, workers and visitors to Canterbury Bankstown, and identify what is required to create a thriving, dynamic and real City of the future.

Written in-house, with no outsourced support, the Smart CBCity Roadmap is a unique and fresh approach to Smart Cities strategy that ensures the heart and soul of our city is not left behind, while we are busy developing the brains.

While technological solutions will change and community concerns will alter, Council's strategy identified that it is important that the organisation follows a clear set of underlying principles to guide all of it's decision making to use smart thinking to deliver real improvement.

The Roadmap has been successfully embraced by every business unit and department across the City, increasing the opportunity to deliver its actions successfully. The Smart CBCity Roadmap is not a plan, rather a conversation starting point. The purpose of the roadmap is to:

- Provide a public declaration of what is important and will remain at the heart of all decision making
- Identify how the City uses 'smart thinking' to deliver its community vision
- Set out actions that Council needs to do now and do next to advance its journey
- To guide Council when it reaches a fork in the road.

As part of the City's commitment to equity, inclusion and compassion, Mayor Asfour pledged his support for the United Nations Digital Rights Coalition, demonstrating this commitment when developing smart city and broader city management approaches for one of Australia's most diverse communities.

Like all journey's, we need a clear direction to start with, and that is what this Smart CBCity Roadmap is."

### Highly Commended: Smart Cities Strategy

# SOUTH AUSTRALIA

#### **2019 WINNER:** Built Environment Category

City of Prospect, City of Burnside, City of Playford, City of Port Adelaide Enfield, Campbelltown City Council, University of Adelaide and Meshed

Connected Cities is a South Australia metropolitan-wide open access low powered wireless network spanning across eastern, western and northern Adelaide covering at least 35 per cent of the metropolitan area and focused on enhancing the overall liveability, sustainability and customer experience of places.

The Project was developed by five South Australian Councils (Prospect, Burnside, Playford, Port Adelaide Enfield, Campbelltown) and the University of Adelaide's Smart City Consortium with funding from the Australian Governments Smart Cities and Suburbs Program.

This project will help South Australians to access this growing sector. Leveraging local talent and a desire to outwardly source best practice in smart cities, IoT, data models, AI and smart governance, the project has resulted in an unprecedented public and private collaboration designed to bolster grass roots innovation and put Adelaide on the map globally as one of the world's smartest regions. The Project supports the following key principles:

- The data generated from the smart devices is owned by the Councils
- The data collected by the project cannot identify any individual, nor be used to identify an individual
- An open-ecosystem approach to attract local enthusiasts as well as third party smart cities and environmental devices to be able to connect to the network easily
- Encourage data sharing arrangements between the Councils as well as the broader community.

Each of the five councils prioritised Smart Cities and IoT use cases ranging from people counting in parks, to determining where playgrounds and seating should be placed, environmental sensors and smart bins to improve maintenance, and smart parking sensors to help the community identify free spaces, as well as weather stations located in parks and community gardens, informing the public and outside maintenance staff about everything from pollen counts to humidity.

Accurate real time information to councils will enable us to plan and manage our assets more efficiently and, in turn, this should increase efficiency." Winner: Built Environment Category



#### 2019 WINNER: Social Impact Category

City of Melbourne, Victoria

#### The City of Melbourne's Smart City Office ran three Open Innovation Challenges with their community between 2017-2019 to solve a series of city problems.

The first was the 'Transport Congestion and Social Disconnectedness' challenge in 2017. The purpose of this challenge was to identify innovation solutions to two unwanted consequences of rapid urban development in metropolitan Melbourne: transport congestion and social disconnectedness.

The second was the 'City Accessibility' challenge in 2018. Its purpose was to make Melbourne more accessible for people with a disability, by enhancing the provision of information to help people with a disability participate in all aspects of life within the city, and to ensure the people and places of Melbourne better address the access needs of people with a disability.

The final challenge was in 2019 and focused on 'City Safety'. The purpose of this challenge was to deliver 'safe mobility' across all modes of transportation (walking, cycling, driving and public transport) whilst experiencing the city at night-time, navigating public spaces and during city disruption.

Each challenge involved short exercises designed to stimulate new ideas, solutions and perspectives to solve city problems. It tapped into the creativity and expertise of a community and was based on the premise that the best answer to a problem will often come from outside an organisation, rather than from inside it.

City of Melbourne has subsequently published a 17 page "How to Guide" for other local government agencies to run their own Open Innovation Competitions, which includes practical steps around identifying resource requirements, framing the problem, selecting an online platform, evaluation criteria and assessment processes.

The Open Innovation "How-to Guide" was co-released with the Rockefeller Foundation, which has helped City of Melbourne promote the document to a global audience." Winner: Social Impact Category

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#### **2019 WINNER:** Research and Innovation

University of Newcastle, New South Wales

With a bold 2025 vision to stand as a global leader, University of Newcastle today is distinguished by its commitment to equity and excellence, serving as Australia's largest provider of enabling programs, and through the work of it's Indigenous staff, communities and Elders, has led Indigenous education for more than 30 years.

In collaboration with the City of Newcastle, a research program called Smart Move Newcastle (SMN) explored and tested emerging norms in Smart City thinking in order to advance the evidence base and provide relevant and Newcastle-specific data that will inform future city planning and other Smart City initiatives in the City.

The core activities within the SMN research program included:

**Smart Trees** – a project focused on data collection of ambient and surface temperatures at 8-10 data points across each of three agreed locations in the city; associated data visualisation and spatialisation; development of a decision matrix (cost and time) and production of a toolkit of mitigating strategies for UHIE.

**Smart Transport Choices** – involving the analysis of tap-on and tap-off bus ride data in Newcastle merged with census and weather data and experimental study querying Newcastle commuters about transport preferences using two complementary methods to bypass some of the common biases experienced in regular surveys.

**Measuring City Transformation** – an analysis of social influencers who can make or break the success of urban interventions and assessment of what indicators best measure their behaviours and influence; development of a suite of smart city indicators, drawing on a program logic model for the suite of Smart Moves programs and development of a prototype indicators dashboard with data visualisation capabilities.

**IoT based Distributed Traffic Management System** - the development of a low cost IoT traffic monitoring system that can be easily deployed in city areas; low cost system design including hardware design, energy storage module design and sensor module; software/algorithm development; field deployment of prototypes and system performance monitoring and analysis.

The Smart Move Newcastle research demonstrates how UON is advancing the benefits of smart city solutions in our cities with a clear path to post-research investment and deployment." Winner: Research and Innovation Category



#### 2019 WINNER: Regional Leadership

Southern Grampians Shire Council, Victoria

Southern Grampians Shire Council (SGSC) is building a local digital ecosystem to transform its rural, aging and declining community into a thriving Smart Connected Rural Community.

Like many smaller rural councils SGSC has challenges around investment attraction, population growth and providing its community with the same opportunities and connectivity as larger metro councils.

Council is working hard to invest and build a local digital ecosystem to support and boost its economy and community. Their key initiatives have included:

**Foundational connectivity infrastructure implemented** - including eight LoRaWAN gateways within the shire, providing one of the largest LoRaWAN coverage areas in rural Australia.

**Implementation of connectGH** (connect Greater Hamilton) – which is SGSC's free public WiFi solution. There is at least one connectGH hotspot in each of the nine surrounding townships in the Shire.

**Self-walking tour and tourist app** - providing a boost to tourism with an engaging digital solution.

**Parking sensors providing usage data** - which have been installed in the Hamilton CBD, and are now enabling the Economic Development team to use the data to help drive a key CBD revitalisation project.

**Weather stations installed in each township** - providing localised real time weather data, which is released via the 'SGSC Smart Community and Open Data Platform'.

**Technology to optimise water quality at all six outdoor pools** allowing staff to remotely view pool water quality and change chemical dosage remotely from a smartphone.

The highlight in SGSCs smart community journey thus far occurred in May 2019 when SGSC hosted the inaugural **Digital Innovation and Smart Agriculture (DISA) 2019 Festival.** The three-day festival showcased smart agriculture and how IoT is transforming farm management, smart community solutions and insights from industry leaders on data driven decision making.

Our community, which are always our hardest critic, have been positive and supportive of Council's Digital Transformation goals."

#### Winner: Regional Leadership



#### 2019 WINNER: Smart City Policy

Local Government Association of South Australia



The Smart Cities Framework coordinated through collaborative efforts by the Local Government Association of South Australia (LGA SA) was launched in May 2019, with Mayors and CEOs of the 19 Metropolitan councils in the state.

The framework was one of three key initiatives which also included:

- Secondment from the City of Adelaide of a two-day per week Smart Cities Project Officer to assist councils on their individual smart cities' journeys.
- Establishment of a metropolitan local government smart cities officers' network to identify and act on collaborative cross-council boundary smart cities projects.

The Smart Cities Framework makes the LGA SA the first local government association to develop such a collective strategy by collaboration of 19 Councils and the input of Universities, the private sector and State Government departments.

As a result, some of the outcomes for the councils using this framework include the following:

1. Lifted local government capabilities by enhancing the interface with citizens by making it easier to access services through innovative IT architecture across metropolitan communities

2. Focused on projects that were collaborative and crossjurisdictional, innovative, evidenced-based and fully business-cased

3. Enabled highly connected communities and businesses that promoted economic development and social inclusion

4. Driving costs down via the use of data analysis to provide economies of scale opportunities for councils in terms of procurement and purchasing

5. Better decision-making by using open, big and shared data promoting better understanding, engagement and partnership within and across the local government sector

6. Attracting investment from the federal government, through the Smart Cities and Suburbs program, on a dollar for dollar basis.

they [the Council's] are embedding smart technology to deliver better services to the community and collect data that provides valuable insights into people using the precincts." Winner: Smart City Policy



#### 2019 WINNER: Smart City Partnership

City of Canterbury Bankstown, New South Wales

Future Street Canterbury Bankstown (FSCB) is at the heart of this award and was the physical manifestation of various organisations collaborating to reach new frontiers of smart city excellence in coordination, project delivery and realized outcomes.

FSCB was used as a tool by Canterbury Bankstown's community engagement team to get the community's thoughts and create excitement around two of CBCity's major projects that were out for consultation; the 'Smart CBCity Roadmap' and 'Bankstown Complete Streets Transport and Place Plan'.

The activation was only possible through partnerships between a local government, a planning and design consultant and multiple smart technology product suppliers.

The product suppliers have smart technology solutions, but don't often have the opportunity to display their products in such a public forum. They also procure work largely in isolation from other non-competitive smart technology suppliers. This activation project also had the goal of helping shift the mindset on pre-procurement engagement between government and the private sector. The activation is an outcome that could not be achieved individually by the partners. CBCity had the projects to showcase, a space available, the funding to implement, and the community networks to tap into; but didn't have the industry contacts or resources available to set up an activation of this scale in such a short time frame – only three weeks.

FSCB sets a precedent for how local governments across Australia and New Zealand can deliver their own version of the 'Future Street' activation, a powerful tool in supercharging discussions around the future of our cities.

Canterbury Bankstown believed it was critical to explain to the community what smart cities means and that getting them engaged is essential to being able to implement smart city solutions quickly.

And from an outcome's perspective, the partnerships have demonstrated that embedding green and smart infrastructure alongside emerging principles of complete and future streets, has contributed to the advancement of smart cities action and investment opportunities for the city.

...it is the first time in the world that a to-scale demonstration street has been built by a local government!"

#### Winner: Smart City Partnership



### **2019 Highly Commended:** Smart City Partnership

City of Newcastle, New South Wales



As at June 2019 the City had worked with 15+ partners across 50 projects in the past 3 years. Many of these projects have been interdisciplinary in nature and touch on more than one of the six themes articulated in Newcastle's Smart City Strategy: Smart Environment, Smart Governance, Smart People, Smart Mobility, Smart Economy and Smart Living.

The Smart Mobility projects demonstrate 'how new frontiers in coordination, governance and outcomes' have been achieved.

The current mobility projects (and associated partners) include:

- Autonomous Vehicle (AV) trial Keolis Downer (KD) and Transport for NSW (TfNSW)
- E-Bike Share Bykko and TfNSW
- · Smart Bus Stops KD
- Precincts on Demand KD and TfNSW
- Smart Transport Choices University of Newcastle (UON) and KD
- Intelligent Roadways Hi Vis, UON
- Accessibility in the City App AiTC.

The City's vision was to initiate multiple projects concurrently which demanded that solutions begin with integration in mind. This approach contrasts with the more prevalent, historical approach of staggering pilots which can sometimes result in spot solutions that do not talk to each other.

Knowledge and data sharing has allowed Council to assess the impacts and benefits of multi-partner projects from an aggregated view to provide more complete feedback to inform government policy and processes. Examples include:

- Tri-partite collaboration agreement encompassing sharing data and knowledge on the AV Trial to support Transport for NSW to carry out its regulatory assessment and approval functions, as well as contribute to the development of AV policy and processes in NSW
- Tri-partite agreement for the Smart Transport Choices research project to enable sharing of detailed Opal data
- Liaison with the Transport for NSW's Smart Innovation Centre in relation to the AV Trial to learn from and build upon concurrent trials in other NSW locations regarding the data, security and communications capabilities required.

This up-front investment in negotiating and making sure visions were aligned will ultimately realise greater benefits for the end users..."

#### Highly Commended: Smart City Partnership



#### **2019 Highly Commended:** Smart City Partnership

Sunshine Coast Council and Stockland, Queensland

Sunshine Coast Council and Stockland have entered into a smart city partnership at Aura, with an initial focus on Baringa which has been designed to showcase a range of smart technologies.

Aura comprises 2,360 hectares of greenfield land located south of the established Caloundra urban area and is intended to be developed over 30- 40 years accommodating up to 50,000 residents in 20,000 dwellings.

At the heart of the Baringa Central Village and District Centre is the award winning Baringa Town Square, one of Australia's first smart city parks.

The partnership represents a 50-50 share of costs, not just for the initial infrastructure but also the operational costs over the next 15 years to provide the community with maximum benefits and outcomes.

The park includes a fibre optic network, WiFi stations, smart poles, electric bicycle and vehicle charging, pylons, environmental sensors and weather station, Bluetooth speakers, CCTV, water efficient landscaping and smart irrigation.

A digital community display screen collates information from environmental sensors throughout Aura plus other real-time data to provide live information to the public on weather, environmental quality, public transport, local events and community announcements.

Baringa has been designed to showcase smart city technologies, guided by the Aura Smart City Foundation Framework. This Framework is a roadmap that Aura, Stockland and Sunshine Coast Council use to guide the deployment and decision making around Smart City solutions and technology advancements as the city develops and grows over time.

With this partnership and framework in place, smart outcomes can be delivered sooner and with higher value results by incorporating the delivery of these solutions within existing capital works programs and organisation-wide operations.

By engaging with the private sector, Council is sharing the costs and making it cheaper to install smart solutions when construction is occurring in new communities..."

#### Highly Commended: Smart City Partnership



#### **2019 WINNER:** Smart City Organisation Transformation

City of Canterbury Bankstown, New South Wales

Smart Cities Council® To deliver on its Smart City Roadmap CBCity is advancing a number of initiatives to develop and up skill staff, build a smart cities culture and debunk some of the myths around smart cities.

These initiatives include the following:

**Smart City Taskforce -** The CitySMART taskforce consists of one volunteer member from each unit within Council, oftentimes running a merit-based process to secure the role. The smart cities taskforce plays a big role internally creating a culture of innovation and delivering organisational transformation.

**Smart City Champions -** Due to the overwhelming interest from staff in the Taskforce, the Smart City Champions were established to act as a conduit between the CitySMART team and the broader organisation.

The Champions help produce the monthly Smart Cities newsletter which highlights what initiatives are being worked on, external resources available and news pages. The newsletter also includes team highlights and booking schedule to use or work in the Smart Cities hot desk and hub. **Innovation Month -** Guest keynotes, future scoping exercises, learning lunches, redefining failure talks, site visits to innovation hubs and innovation master classes were just some of the activities coordinated for Innovation Month (July 2019). This City-led activity had a goal to deliver a month of capacity building, upskilling and general knowledge sharing on smart.

**SMART Tank -** The SMART Tank program is an internal innovation seed funding program aimed at supporting the organisation through a period of transformation while they investigate new technologies, data sets and processes which create real improvements. This program demonstrated the City's commitment to supporting the organisation through a complex transformation agenda.

And as an overarching smart cities leadership building strategy, the City has built a '**Smart Conductor**' methodology that works to empower all staff to be 'part of the band'. This includes the definition and building of numerous roles for both City staff and external stakeholders, including Strategists, Facilitators, Connectors and Testers.

Most smart cities are built with 'brains.' This is important, but I want to make sure that we focus on developing our city's heart and soul, ensuring that no one is left behind on our journey to becoming a smarter city." Winner: Smart City Organisation Transformation



#### **2019 WINNER:** Leadership City

City of Melbourne, Victoria



City of Melbourne's Smart City Approach was co-designed with 100 staff in 2017, prioritising nine key smart city 'products.' Today, the strategy is delivered by 50 people working in the city's dedicated Smart City Office.

In 2017 the Intelligent Community Forum (ICF), a global think tank based in New York, rated Melbourne as the World's Most Intelligent City. In 2018 Melbourne was rated #8 smart city government in the world by Eden Strategy Institute, reflecting the breadth of City of Melbourne's smart city capabilities including CityLab.

Among its numerous smart city transformation projects, the following five initiatives demonstrate the City of Melbourne's national and international leadership.

City of Melbourne's Census of Land Use and Employment (CLUE) is a critical city resource that has been in place since the 1960s. CLUE is used by developers, investors, corporations, small businesses, researchers and all layers of government to inform city investment decisions, such as planning and policy around spatial development supporting investment decisions by business and leveraging funding. Throughout 2017-2019 City of Melbourne's Smart City Office facilitated three Open Innovation Challenges with the community to solve city problems around city safety, city accessibility and transport congestion and social connectedness.

In addition, the Melbourne Innovation District is a bold collaboration between City of Melbourne, University of Melbourne and RMIT University to strengthen the innovation ecosystem in Melbourne.

The MID partnership has selected City North as the first of its innovation districts because of its long and successful history of innovation, and the concentration of knowledge institutions and investment in the area.

And finally, in a first of its kind, City of Melbourne has launched a 5G and IOT Testbed in Carlton. The purpose of the Testbed is to work with business and industry leaders and the community to trial emerging technologies including 5G and the Internet of Things (IOT) to explore how they can benefit Melbourne.

Melbourne has the opportunity to position itself as one of the world's foremost new knowledge economies, enabled by digital and data solutions, and powering the next generation of economic growth in Australia."

#### Winner: Leadership City

#### Winner's Individual categories

#### **GOVERNMENT LEADER**

Winner: Daniel High, City of Perth Highly Commended: Daniel Adams, City of Prospect

**INDUSTRY LEADER Winner:** Chris Isles, Place Design Group

EMERGING LEADER Winner: Ashby Martin, SAGE Automation





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