

AGENDA ITEM: 25.2.1

REPORT TITLE: City of Palmerston Smart Cities and Suburbs Program Application

REPORT NUMBER: C9/0033

MEETING DATE: 19 June 2018

Author: Director City Growth and Operations, Gerard Rosse

Approver: Chief Executive Officer, Luccio Cercarelli

PURPOSE

This report seeks Council approval to submit an application under the Australian Government's Smart Cities and Suburbs Program and to secure Council's level of associated funding contribution.

Municipal Plan:

4. Governance & Organisation

4.1 Responsibility

- 4.1 We are committed to corporate and social responsibility, the sustainability of Council assets and services, and the effective planning and reporting of Council performance to the community.

KEY ISSUES

- The Australian Government has established a \$50 million competitive Smart Cities and Suburbs Program to support innovative technology-based solutions to challenges in the delivery of collaborative Smart City projects that deliver improved liveability, productivity and sustainability.
- Round 2 of the program is now open and Council staff have been working with various stakeholders to investigate a possible application for the City of Palmerston.
- It is proposed that Council lodge an application for a \$2 million project with a collaborative partnership between the Australian Government, Northern Territory Government (NTG) and the City of Palmerston.
- Round 2 of the program has tight timeframes closing 2 July 2018. City of Palmerston has commenced preliminary work on an application which is suitable and meets the program criteria.
- It is recommended that Council's contribution be \$500,000 with \$500,000 from the NTG and \$1 million to be requested from the Australian Government.
- This report seeks Council endorsement to submit an application and Council's level of financial contribution.

RECOMMENDATION

1. THAT Report Number C9/0033 entitled City of Palmerston Smart Cities and Suburbs Program Application be received and noted.
2. THAT Council approve an application to the second round of the Smart Cities and Suburbs Program up to \$2 million, consisting of financial contributions as follows:
 - a. \$1 million from the Australian Government
 - b. \$500,000 from the Northern Territory Government
 - c. \$500,000 from the City of PalmerstonAs outlined in Report Number C9/0033 entitled City of Palmerston Smart Cities and Suburbs Program Application.
3. THAT Council, pursuant to Section 32 (2) of the Local Government Act 2008 (as amended), hereby delegates to the Chief Executive Officer, the power to finalise and make an application to the second round of the Australian Government's Smart Cities and Suburbs Program as outlined in Report Number C9/0033 entitled City of Palmerston Smart Cities and Suburbs Program Application.
4. THAT a further report be prepared on the final funding model and formal agreement should the City of Palmerston Smart Cities and Suburbs Program application be successful.
5. THAT this decision and report be moved into open on 3 July 2018.

BACKGROUND

On the 20 February 2018, Council resolved the following:

13.1.12

Strategic Initiatives

8/1421

THAT Council endorses the development of a City of Palmerston Smart Cities Strategy and program to inform future implementation options add a basis to such estimated funding opportunities, and that:

- i. This work be funded from the Strategic Initiatives Reserve to the value of \$80,000 (GST exclusive).*
- ii. A further report on the outcomes be presented to Council in June 2018.*

CARRIED 8/3034- 20/02/2018

The Australian Governments Smart Cities and Suburbs Program is supporting the delivery of innovative smart city projects that improve the liveability, productivity and sustainability of cities and towns across Australia.

The Australian Government has stated that, "Smart Cities are created by and for people with the help of smart technology. For the purposes of this program, smart technologies generate, store, communicate and process data. Smart technologies enable local governments and their communities to work together and make better decisions about designing, delivering and using public assets, services and spaces. Smart technology can help local government to:

- Actively engage the community in planning and policy decisions;
- Address economic, social and environmental challenges; and
- Increase the efficiency and effectiveness of urban service delivery.

Local Governments are at the frontline of smart city innovation. The program will foster smart cities capability through collaborative projects involving one or more communities."

On 17 November 2018, the successful projects of Round One of the Program were announced. A total of 49 projects will benefit from a total of \$27.7 million in Australian Government funding across all states and territories.

In the Northern Territory and as part of the first round the Australian Government provided the City of Darwin with \$5 million for a \$10 million project and Alice Springs with \$251,401 for a \$502,821 project.

In May 2018, the Minister for Urban Infrastructure and Cities, the Hon Paul Fletcher MP, announced the opening of a second round of the Program, with around \$22 million of funding available through a competitive grant process. Round Two encourages applications for collaborative projects, let by local governments, which apply innovative technology solutions to urban challenges, delivering economic, social and environmental benefits. Round Two of the Program will be open for applications until 2 July 2018.

DISCUSSION

The City of Palmerston has been investigating the feasibility of making an application for Round Two of the Australian Government Smart Cities and Suburbs Program. An opportunity has been identified to make an application for a smart city trial project worth \$2 million that proposes a range of Smart City initiatives.

Council's executive has engaged with senior NTG staff who have expressed a positive and supportive approach to City of Palmerston's application, including the consideration of financial support whereby the Chief Minister has provided in principle support of \$500,000 contribution from the NTG to a potential project.

Consideration is being given to a wide range of opportunities which require further exploration during the submission development stage regarding desirability, viability and feasibility.

It is noted that the City of Palmerston Digital Strategy 2021 also has relevance to the proposed bid whereby the principles of the digital strategy are around:

- Safe and Sound – “Deliver A Safer Community”;
- Connect and Enable - “Not Connected Is Not an Option”; and
- Interact and Engage - “Facilitate Better Outcomes for The Community”.

In developing a concept submission, consideration has been given to a variety of factors including grant guidelines, economic feasibility, existing infrastructure and services, variety of usages and opportunities, existing or proposed complementing programs (i.e. street lighting and the digital strategy) and concentration of services to maximise the benefits of a potential trial program. A key aspect for consideration was to identify the challenges and opportunities that would provide an opportunity for greater benefit that relate to key criteria that the application would be assess against. The Australian Governments merit criteria that a grant proposal would be assess against include the following:

1. The extent to which the project is innovative and uses smart technology and open data;
2. The scope of social, environmental and economic benefits your project will deliver;
3. The extent of the project's community focus and impact on the liveability of the cities, suburbs and towns; and
4. The organisations capacity, capability and resources to carry out the project.

To understand the ability of an application to address the above criteria, an initial analysis of Palmerston's urban challenges and opportunities to improve the municipalities liveability as a municipality was undertaken. The identified potential elements are:

Crime and antisocial behaviour:

Recent crime statistics released by the Northern Territory Police reveal for the 12-month period ending March 2018 compared with the 12-month period ending March 2017, that crime in particular assault related crime, increased by 22%. For the same period, it was revealed that Commercial break-ins in Palmerston increased by 28.3% (<http://www.pfes.nt.gov.au/Police/Community-safety/Northern-Territory-crime-statistics.aspx>).

Although addressing crime is not the primary responsibility of a Local Government, the above statistics directly impacts on the residents of Palmerston and it is in Council's interest to provide support to improve this situation where possible. Initial discussions with the NT Police and Council's Executive Leadership Team have revealed an opportunity to work together to improve Smart infrastructure to address the above concerning statistics.

Waste Management:

It is acknowledged that Council incurs significant expenditure to fund essential waste management services annually and this is a direct cost passed onto the ratepayer via the Waste Levy Service Charge. A large component of waste management costs is associated with waste collections and associated transportation and waste vehicle operations costs. Through continual contract review, an opportunity has emerged to improve our waste collection practices to move to trial a more "live" monitoring and collection environment. That is, rather than undertake waste collection on a scheduled basis, Council could use smart technology to improve bin monitoring and alerts to significantly reduce the transportation and vehicle operation costs of waste collection.

Sustainability of environment resources:

Through collaboration and liaison with the NTG and development industry across various projects, the utilisation practices and understanding of our water resources has emerged as key theme for further investigation. Officers have identified an opportunity to better understand and improve the utilisation and extractions of our ground water resources that relate to our recreational lakes and associated irrigation. By utilising smart technology, Council could improve monitoring of water extraction and water monitoring with an aim to improve our water management practices and associated draw on finite natural resources.

Engaging with our community to improve service level outcomes:

In an age of digital technology and rapidly evolving community engagement methods and technology, Local Governments have traditionally lagged behind best practice community engagement and service delivery. At a time when smart phone utilisation is a key engagement interface with the community and real time data access is a community expectation, an opportunity exists for Council to progress into an era of improved community engagement and organisational transparency.

Through progressively mapping Council assets and key elements in recent times onto an internal GIS interface, a plethora of potential open data sources now exists in Councils GIS System. From the location of roads and footpaths, to the location of bins and streetlights, Council has a suite of data, that if utilised in the right format could become a key engagement tool to the community. The implementation of smart city program will only add to this data source and the associated communication networks present an opportunity to utilise a "live" environment where, for example, our streetlights can notify us when they need maintenance, or a bin can notify a contractor when it needs collection.

Whilst the potential Open Data source provide a foundation for engagement, the greater opportunity that exists is one where these data sources become open data that interacts with the community. That is one where the community can also tap into the data and notify council when a footpath needs repair or a road pothole has emerged and Council can better engage and respond to the community needs.

Potential Smart Technology Trial Solutions:

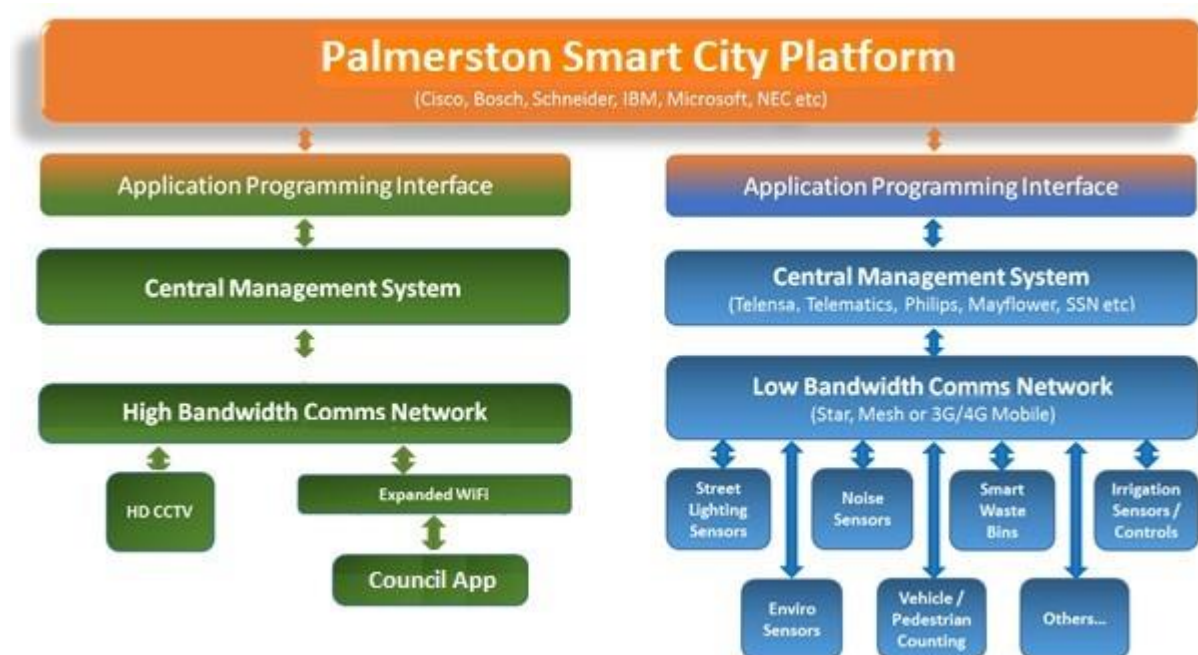
Council staff have engaged Next Energy consultants and Smarter Technology Solutions, a smart city specialist consultancy to assist in understanding what potential smart city solutions could be incorporated into a trial program to address our urban challenges and improve our liveability as a municipality.

Based on the above potential elements and discussions with key stakeholders, the following potential components that could form a basis of a project have been identified:

1. Discussions with NT Police has identified the opportunity to improve the safety of the municipality via a range of technology improvements. These include HD CCTV and associated analytics, sensor technology and improved LED and Smart lighting with a focus on crime “hotspots” in the municipality.
2. To improve our waste management, the opportunity exists to trial “Smart Bins” in our parks. Sanctuary Lakes and Marlow Lagoon are possible options for a pilot program.
3. Utilising smarter technology to better understand, monitor and utilise our water infrastructure and use. This is particularly focused around environmental monitors and smart telemetry technology implemented across our recreational lake and irrigation networks.
4. The establishment of an open data platform and Smart phone application interface with the community to improve Council's engagement and transparency with the community. Through a smart phone application that links with an open data platform that includes customer service software, the creation of Palmerston Community App could progress the Council into a more engaging, transparent and responsive relationship with our community.

All the above opportunities have been identified as potential elements that could significantly improve the liveability of the municipality and improve the levels of services Council provides to the community. A detailed application based on the above four elements would be finalised in the coming weeks to lodge to the Australian Government Grant Program.

The figure below provides an indication of a potential Smart City IT framework for the City of Palmerston which outlines the IT systems, communication systems and field devices that could occur along with some of the potential suppliers at each level.



A list of potential smart technology and potential outcomes and benefits is included in **Attachment A** to this report.

If Council endorses an application, support for the application will be sought from the NTG Department, various authorities and Parliamentary members such as, but not limited to:

- Department of Chief Minister
- Northern Territory Government
- NT Police
- Tourism Top End
- Property Council of Australia (NT)
- Urban Development Institute of Australia (NT)
- Charles Darwin University
- Chamber of Commerce (NT)
- Palmerston Regional Business Association
- Local MLA's
- Federal Members for Solomon and Lingiari

SUMMARY

It is recommended that Council make a second-round application to the Australian Government's Smart Cities and Suburbs Program to the value of \$2 million for pilot programs, as described in the body of this report.

It is noted that the NTG has provided in principle support to the value of \$500,000. The City of Palmerston's contribution will be \$500,000 and options for funding will be considered, if successful.

If Council endorses that a second-round submission be made to the Smart Cities and Suburbs program, delegation to the Chief Executive Officer will be sought to finalise the submission, in accordance with the intent of this report.

This is an emerging space and the submission is complex. External expertise will be utilised to ensure the submission is robust, feasible, viable and provide the greatest opportunity for success for the Palmerston community. Smarter Technology Solutions in close conjunction with the Director of City Growth and Operations and key stakeholders will undertake the development and finalisation of the City of Palmerston submission, to be made by 2 July 2018.

CONSULTATION PROCESS

Council has commenced discussions with the NTG and major industries. If Council endorses an application, support will be sought from various stakeholders.

If the application is successful, the implementation process will involve engagement with various stakeholders, the community, city centre property owners and businesses, and broader communication. A specific engagement plan will be developed at that time.

In preparing this report, the following External Parties were consulted:

- Northern Territory Government Agencies
- Next Energy
- Smarter Technology Solutions

POLICY IMPLICATIONS

This application will reflect relevant Council policies, procedures and strategies, including the City of Palmerston Digital Strategy.

If successful, procurement and implementation will be in accordance with Council policy and procedures. Consideration may be required regarding policies relating to open data.

BUDGET AND RESOURCE IMPLICATIONS

The current order for magnitude of costs for the proposed City of Palmerston submission is \$2 million. The funding model proposed is as follows:

- | | |
|---------------------------------|-------------|
| • Australian Government | \$1 million |
| • City of Palmerston | \$500,000 |
| • Northern Territory Government | \$500,000 |

Councils draft 2018/19 Municipal Plan does not contain funding for this program. Given that Council may or may not be successful, it is being recommended that for making the application, Council endorse the project to be funded via an internal loan from its reserves, of up to \$500,000. This commitment is required to ensure that Council can demonstrate it can and will find the project, if successful.

Should Council be successful in its application, it can at that time consider the final funding model which could include:

- External loan
- Internal loan
- Funding from existing programs or reserves over numerous years
- A combination of the above

By way of example, a \$500,000 external loan over 20 years will result in an annual loan repayment of approximately \$38,000 per annum, at an assumed rate of 4.5%.

Given the likely timing of the project and funding approvals, it is expected that the funding would not be required until 2019.

The process will also create a resource plan and budget for the delivery of the project, should Council be successful. It is envisaged that given the nature of this project, external expertise will be required as part of the implementation.

The cost to fully develop an application for \$2 million is estimated at \$40,000. This will be funded from previously approved funding of \$80,000. If unsuccessful, this will result in a road map to inform Council on how it could become a Smart City over time and form the basis of future applications.

A successful application would result in an expedited transformation of the City of Palmerston as a Smart City. Investment in smart technology is likely to provide Council with a good return on investment if applied to current activities which are either labour intensive or result in a better management of energy resources (power and water) and ultimately will improve liveability in the municipality.

RISK, LEGAL AND LEGISLATIVE IMPLICATIONS

The Australian Government has tight timeframes on both the application and commencement of implementation, if the submission is successful.

Council would be required to conform to the Australian Government grant conditions.

If successful, procurement and implementation will be undertaken in accordance with appropriate governance, legislative and policy requirements, including procurement processes.

No final agreement will be entered into until all funding, including Council's contribution, is secure and any such agreement would be considered at a meeting of Council.

NTG have advised that they will contribute \$500,000 should a grant be successful.

This project is a pilot of various smart innovations and technologies. As a pilot, it must be recognised that there will be success as well as elements that do not perform as expected. Measures will be developed to monitor the performance of the elements undertaken.

Given the competitive nature of the Australian Government funding program, it is recommended that Council's submission detail and conditions remain confidential until after the closing date of submissions.

This item is considered "Confidential" pursuant to Section 65 (2) of the Local Government Act and 8(c)(iv) of the Local Government Administration Regulations, whereby the public may be excluded while business of a kind classified as information that would, if publicly disclosed, be likely to prejudice the interest of the council or some other person is discussed.

ENVIRONMENT SUSTAINABILITY IMPLICATIONS

The introduction of technology-based solutions will result in improved liveability, productivity and sustainability of the City of Palmerston.

COUNCIL OFFICER CONFLICT OF INTEREST DECLARATION

We the author and approving officer declare that we do not have a conflict of interest in relation to this matter.

ATTACHMENTS

Attachment A: Possible Applications of Smart Technology – Outcomes and Potential Benefits

Possible Applications of Smart Technology – Outcomes and Potential Benefits

Smart City Element	Outcomes and potential benefits
Sensors - Environmental monitoring, Weather, Noise	<ul style="list-style-type: none"> • Inform planning. • City heat reduction and measurement • Improved public safety • Reduction of antisocial behaviour • Weather inputs to enable city decisions (eg increase lighting in poor visibility) • Noise sensors inform council and emergency services of potential issues.
Smart Waste Management	<ul style="list-style-type: none"> • Greater capacity in rubbish bins due to compacting. • Understanding of bin usage and service effectiveness. • Reduced overflows due to 'almost full' alerts • Reduced over-servicing (emptying when it isn't required) • More appealing park aesthetics due to decreased loose litter.
Water Quality Monitoring	<ul style="list-style-type: none"> • Health benefits – water safety • Preventative treatment of algae and pollutants.
Water pump/bore monitoring	<ul style="list-style-type: none"> • Preventative maintenance, alert to address maintenance issues. • Water and energy usage tracking. • Pattern detection and proactive treatment for pump overuse (pump burn out) or underuse (stagnant water).
CCTV and Video Analytics	<ul style="list-style-type: none"> • Improved public safety • Reduction of antisocial behaviour • Increase insight for emergency services personnel (eg Police) • Planning tool to understand vehicle and pedestrian traffic
Low-Medium Bandwidth Networks	<ul style="list-style-type: none"> • Enabling Smart City elements and low-cost connectivity • Digital infrastructure to enable the creation of new opportunities.
Smart City Platform	<ul style="list-style-type: none"> • Data management and integration • User friendly portal to present information to council • Identify and understand trends and data collected • Open Data enabler • Automation tool to make things more efficient
App Development (Community Applications)	<ul style="list-style-type: none"> • Community communication tool • Equitable access to services • Enhanced public engagement • Information sharing
Open Data Platform	<ul style="list-style-type: none"> • Transparent Government • Enhanced public engagement • Promotion of innovation initiatives with open data • New business opportunities
Smart Lighting and Smart Controls	<ul style="list-style-type: none"> • Energy efficiency – LED + Smart Controls • Better asset management • Proactive maintenance • Public safety improvements – better visibility and to create a deterrent • Lighting dark/unsafe areas (such as alleys/laneways) • Enhanced CCTV visuals due to increased sight/clarity

Smart Parking	<ul style="list-style-type: none">• Information sharing – parking availability• Usage metrics/informed planning• To better understand parking consumption, trends and usage• Congestion/Traffic reduction by directing people to available parking• Emission reduction due to decreased time looking for parking
Wi-Fi	<ul style="list-style-type: none">• Information sharing• Service accessibility• Data to inform planning• Business support tool• City usage profiles (worker, visitor etc)• Understand people movement throughout the city