Digital Innovation and Efficiency Committee

Report title:	LoRaWAN bid to the New Anglia LEP
Date of meeting:	13th March 2019
Responsible Chief Officer:	Tom McCabe – Executive Director, Community and Environmental Services, Simon George – Executive Director, Finance & Commercial Services

Strategic impact

Networks of connected devices and associated systems provide new opportunities to achieve savings for the Council and improve outcomes in Norfolk.

Executive summary

The Digital Innovation and Efficiency Committee have previously approved support for trial deployments of a LoRaWAN network and the associated Things Network conference held in Norwich on the 15th/16th October 2018. The committee also received an update about the Hackathon and Winter Gritting Sensors deployment in November 2018.

Norfolk County Council has led the submission of a joint bid with Suffolk County Council into the New Anglia Local Enterprise Partnership for funding to implement the largest single public LoRaWAN network in the UK.

This network will provide the foundation infrastructure for the public sector, schools, entrepreneurs and businesses to experiment, pilot, learn and develop digital skills and solutions based on connected devices, also known as the Internet of Things (IoT) across the whole of Norfolk and Suffolk counties.

Recommendations:

1. **To note the contents of this report and consider opportunities to further promote exploitation of the network.**
2. **If the bid is not successful, to continue to support the slower roll out of the LoRaWAN network across Norfolk using social value funds from NCC's WAN contract with Capita Updata.**

1. Background on the LoRaWAN bid

1.1. The Digital Innovation and Efficiency Committee approved support for trial deployments of a LoRaWAN network and the associated Things Network conference held in Norwich on the 15th/16th October 2018.

1.2. The committee also received an update about the Hackathon and Winter Gritting Internet of Things (IoT) initiatives in November 2018.

1.3. Building on the success of these committee initiatives and working closely with colleagues in Economic Development we have submitted a bid into the New Anglia Local Enterprise Partnership (LEP) to seek funding to implement the largest single public LoRaWAN network in the UK.

1.4. The bid is a joint bid working with our Suffolk colleagues to procure, implement and test 270 LoRaWAN gateways.

1.5. The infrastructure provides the foundation for a whole ecosystem that could contribute to the transformation of our digital economy and educational opportunities.

- Enabling new ways of delivering council services and outcomes
- Teaching school children and students about the technology, increasing interest in coding careers
- Enabling entrepreneurs to develop and demonstrate their ideas, at minimal cost
- Creation of new businesses in Norfolk and Suffolk based on innovation
- Enabling business growth across the counties based on new ways of working enabled by connected, low cost sensors
- Enabling agri-tech solutions where mobile phone networks are inadequate or cost prohibitive

1.6. This project has potential to open new market opportunities to develop new products across Norfolk and Suffolk

1.7. If the bid is successful we will implement

- 110 external LoRaWAN gateways across Norfolk
- 25 Internal LoRaWAN gateways in Norfolk to be deployed in business centres, schools and other buildings
- 110 external LoRaWAN gateways in Suffolk
- 25 Internal LoRaWAN gateways in Suffolk to be deployed in business centres, schools and other buildings

1.8. The network would be promoted through existing local groups, briefings, social media tools and through future hackathons and similar events.

1.9. This IoT infrastructure would support the national government's aim to improve connectivity and productivity across the UK, as stated in the national Industrial Strategy: "The aim of the Industrial Strategy is to boost productivity by backing businesses to create good jobs and increase the earning power of people throughout the UK with investment in skills, industries and infrastructure"

1.10. NCC is expected to learn if the bid has been successful on the 27th March 2019

2. Background References

2.1. **New Anglia Local Enterprise Partnership**
https://newanglia.co.uk/

2.2. **The Things Network (TTN)**
https://www.thethingsnetwork.org/

2.3.   The Things Network is building a network for the Internet of Things by creating abundant data connectivity, so applications and businesses can flourish.

The technology used is called LoRaWAN and it allows 'things' to talk to the internet without cellular mobile or Wi-Fi networks.

It features low battery usage, long range and low bandwidth. No Wi-Fi codes and no mobile subscriptions.

Officer Contact

If you have any questions about matters contained in this paper or want to see copies of any assessments, eg equality impact assessment, please get in touch with:

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