

Digital Innovation and Efficiency Committee

Report title:	Smart Lighting Upgrades
Date of meeting:	13 March 2019
Responsible Chief Officer:	Tom McCabe – Executive Director, Community and Environmental Services
Strategic impact One of the key principles in our strategic approach is 'being business like and making best use of digital technology to ensure value for money.' Teams across highways are always looking to make best use of emerging technologies to save money and create efficiencies. One such initiative, the installation of smart street lighting, is outlined in this report.	

Executive summary

Norfolk County Council is responsible for over 52,000 street lights which have been maintained by Amey as part of a PFI contract. Since 2008 when the contract began, we have made over £3 million in energy savings, despite accruing more streetlighting assets through developments etc.

Norfolk County Council has been able to reduce energy used and reduce costs in street lighting due to a variety of initiatives. One such approach is through the installation of Light Emitting Diodes (LEDs) which can be further enhanced by installing a Central Management System (CMS). We have almost 10,000 LED streetlights at present and a programme of upgrades is underway to install a further 13,500 LED streetlights on residential roads.

Smart technology such as CMS allows us to manage these assets remotely. We can identify faults, monitor usage and increase (or decrease) lighting levels without leaving the office.

This month, a Streetlighting Review report has gone to the EDT Committee which provides more details of these initiatives including how they help us reduce our CO2 emissions and save money in the long run. A copy of this report has been attached.

Recommendations:

To support the proposals outlined in the attached report in Appendix A, which provides an update on our initiative to install more smart lighting to save energy and reduce costs.

1. Proposal

- 1.1. To receive an update and note the content of the attached report, which has been recently been taken to EDT Committee.
- 1.2. To acknowledge the progress made with regards to the adoption of smart street lighting and support future installation.

2. Evidence

2.1. New technology in Street lighting

2.1.1. LEDs (Light Emitting Diodes)

Many of us will be familiar with LEDs as they are now readily available for use in our homes. Often marketed as 'energy efficient' bulbs this technology has a longer life and is more energy efficient than traditional bulbs. This is no different for our streetlights and using them helps reduce energy and maintenance costs. The light they provide can also provide better contrast in lit areas, so a lower intensity light can be used without sacrificing visual quality or safety.

Although not new technology it is becoming more accessible. The main barrier to the use of such technology is the initial cost. However, over the years the price has reduced significantly to make the technology more accessible to local authorities as they make their case to 'invest to save'.

2.1.2. Central Management System (CMS)

A Central Management System allows us to connect remotely to our street lighting assets. It allows us to control street lights using computer software enabling us to control the way a light or groups of lights operate.

Connecting to our assets in this way allows us to identify issues, help with maintenance and have better control over when lights can be dimmed or switched off. It can help us reduce our energy usage and costs. It also saves time and money in maintenance costs.

2.1.3. Future Rollout

The EDT Committee previously approved the proposal to install a further 13,500 LED streetlights in residential areas, agreeing in the invest to save approach. The programme is currently underway and is being carried out by Amey as part of the PFI contract. Please see attached EDT Committee report in Appendix A for more details.

3. Financial Implications

- 3.1. There are no financial implications to this report. Please see attached EDT Committee report in Appendix A for more details on financial implications.

4. Issues, risks and innovation

- 4.1. The adoption of this new technology is not unique to Norfolk and we closely monitor what is happening in the industry. This includes developments to both hardware and software which could potentially improve the way we work.
- 4.2. We have been able to mitigate the risk by monitoring approaches taken elsewhere and by rolling out the technology in certain areas. This has allowed us to minimise the cost of initial investment and better evidence the savings and efficiencies that can be made before rolling out at a larger scale.

5. Background

- 5.1. [Our Street Lighting - YouTube video](#)

Officer Contact

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

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