Overview and Scrutiny Committee

Bulletin Summary – Smart Devices and improvement to Council services

Overview: At the work programme workshop at the start of the civic year, Members asked "How could the internet improve service delivery and reduce costs". Dr Catherine Howe from the CfGS (https://www.curiouscatherine.info/publications/) who has published a number of papers in relation to transformational social and digital change, was approached by the Scrutiny Officer to seek her advice on how the Council could actively influence social change digitally to improve the delivery of its services. To date, no response has been received so the Scrutiny Officer has conducted her own research and pulled out some points that may be of interest to Members to scrutinise further.

The following information is what other councils are doing to influence social change digitally.

A summary of the key issues: Members asked "How could the internet improve service delivery and reduce costs".

Summary of observations:

According to the Government Office for Science, "The Internet of Things" describes a world in which everyday objects are connected via sensors to a network that can share data to improve individuals' lives and enable goods to be produced more imaginatively, services to be provided more effectively and scarce resources used more sparingly.

 The IoT says this transformative approach is about technologies "which could allow billions of everyday objects to communicate with each other .. has the potential to have a greater impact on society than the first digital revolution".

Cheap sensors mean that almost any object can be made "smart" providing councils with data on air quality temperature, noise footfall etc. With applied analytics, physical assets can be managed such as bins, streetlights and roads more efficiently and delivered more targeted or new services provided.

The following is a look at some of the approaches taken by Councils nationally:

Milton Keynes: smarter streets – have installed parking sensors that aim to improve parking infrastructure and provide real-time information on the availability of parking spaces across the city, which drivers can access and reserve via a smartphone app (this it is said, reduces congestion and means people are less likely to park illegally). The council also uses the data on average parking time to fine-tune parking restrictions. E.g. the sensors revealed that an average stay in the train station drop off zone was 16 minutes so the wait limited was shifted up to 20 minutes.

Milton Keynes - has also installed sensors in large recycling bins that let the council know when they are full. The council then only sends out collection crews when necessary (and this provides direct savings from not having to buy additional vehicles).

Glasgow "Future City Programme" – Smart street lights can record air quality, noise and movement. E.g. if the light senses a cyclist approaching they automatically adjust their brightness from 40% to 100%. At other times the streets lights are dimmer, saving energy. Glasgow's integrated operations centre works with the community safety team that monitors the city's CCTV that monitors traffic lights and cameras which can detect unusual activity. The downside of this is more public surveillance which in the South East was challenged by the City of London which felt that this breached people's privacy.

Impact on the NHS – low cost - wearable devices and telehealth (remotely delivered health services) could reduce the need for face to face appointments and allow people to return home sooner from

hospital. Some companies are working on pill bottles that can notify healthcare professionals if a patient forgets to take their medication (helping people with dementia to remain at home longer).

Middlesbrough Council – is offering more support to residents when it comes to digital independent living with a range of smart devices.

Camden Council - successfully piloted helpful care technology from Oysta to allow residents to return from hospital three days faster on average and be fully supported to recover at home.

Transport – sensors around bus stops can detect the number of people nearby allowing councils to gauge transport demands and perhaps develop an on-demand services, and greater flexibility and reactivity in relation to scheduled bus services.

In Glasgow, data collected by people who walk or cycle is used to identify the most common routes around the city and barriers that discourage people from cycling. This information is used to influence future spending on cycling in the city and determine what measures are needed to address safety and accessibility.

Evidence from research comments that public consent for the roll out of sensors as well as transparency around how this will be used is vital to avoid potential privacy challenges.

Bristol - In 2013 and 2014 funding from Building Digital UK's Supper Connected Cities Programme Bristol funding was used to establish multiple communications technologies to enable smart city research, development and innovation. Technology companies, research organisations and small businesses will be able to use council owned fibre optics network, the University of Bristol's Supercomputer and sensor technology to trial innovative solutions to urban problems from driverless cars to monitoring energy usage.

Officers' Comments / Observations:

As can be expected, there is a wealth of information on the internet and examples from other councils about how they have used the technology.   Should Members wish to explore the topic further, the Scrutiny Officer has detailed sources below that were relied on to produce this paper which in turn provide the links to other sources.

Scrutiny Officer

Ext 2172

Sources of Information:

[Local councils turn to IoT to improve their services (government-transformation.com)](#)

[How the internet of things could revolutionise council services | Public Leaders Network | The Guardian](#)

[Council highlights its new support service for smart and digital assistive tech devices - AT Today - Assistive Technology](#)

[The Internet of Things: making the most of the Second Digital Revolution (publishing.service.gov.uk)](#)

[Bristol is Open](#)