

**Table 1.** Smart initiatives in Leicester categorised by area of city responsibility.

Category	Initiative	Organisation	Description
<b>Built Environment</b>	<b>Using Buildings Better</b>	<b>LCC</b>	The Using Buildings Better scheme optimizes building use by creating joint service centres and using space more efficiently through hot-desking and smarter working.
<b>Energy</b>	<b>DYNAMATlite</b>	<b>LCC</b>	DYNAMATlite is an energy and water monitoring system which records consumption at half-hourly intervals, allowing users to better manage their energy and water use. The system is currently installed in 90 Leicester schools and 152 LCC buildings.
	<b>SMARTSPACES</b>	<b>LCC &amp; DMU</b>	SMARTSPACES is an energy and water management system which compares actual building consumption to expected baseline figures on a half-hourly basis. The system then provides detailed feedback on the performance of individual buildings in order to help reduce wastage. Currently the system is installed in 20 LCC buildings and 5 De Montfort University buildings. There are plans to roll this out to a further 185 buildings through EDI-Net (see below).
	<b>EDI-Net (Energy Data Innovation Network)</b>	<b>LCC &amp; DMU</b>	EDI-Net is a project which uses smart meter data, local campaigns and networking to increase the capacity of public authorities to implement sustainable energy policies. EDI-Net will make energy and water data more visible to building users, and will work towards educating and changing behaviour to make buildings more efficient. This project will build on the previous SMARTSPACES project and will be implemented in both Leicester City Council and De Montfort University buildings.
	<b>SET-UP smart grids</b>	<b>LCC</b>	SET-UP is an INTERREG funded project which aims to improve energy performance through the use of smart grids which manage energy demand and consumption. The Leicester Energy Agency is involved in looking at the economic case for smart grid implementation. While this project is not smart itself, it is hoped it will help enable future smart projects.
	<b>Remotely controlled street lights</b>	<b>LCC</b>	The new LED streetlights are run on a central management system and are remotely controllable. This allows streetlights to be dimmed at night, to over 50% in some areas, thus saving energy.
	<b>Green BELLE</b>	<b>LCC</b>	Green BELLE is an ERDF funded project working with SMEs within Leicester and Leicestershire. Green BELLE will provide grants for energy efficiency, low carbon and smart initiatives. The project will be launched shortly, following the final sign-off from the ESIF Low Carbon Committee. Green BELLE could support businesses to embrace smart solutions in Leicester.
<b>Telecommunications</b>	<b>Channel Shift Strategy</b>	<b>LCC</b>	The aim of the Channel Shift Strategy is to change the way LCC interacts with customers and service users, moving away from face-face and phone contact to online access to services, digital reporting and online self-service.
	<b>Free City Centre Wi-Fi</b>	<b>LCC</b>	Free city-centre Wi-Fi has been rolled out across Leicester (using the existing CCTV network) in order to promote wider digital access and make information about Leicester more accessible.

	<b>Love Leicester</b>	<b>LCC</b>	The Love Leicester app and website allows users to report issues, such as graffiti or fly-tipping, in Leicester. The City Wardens then respond to reports to rectify the issue.
	<b>Microsoft Platform</b>	<b>LCC</b>	Microsoft became the principal technology supplier for LCC, replacing the old Novell system with a more efficient, integrated technology platform.
	<b>Direct Access</b>	<b>LCC</b>	The Direct Access system gives LCC employees remote access to the council network, allowing more flexible working away from the office on secure networks.
	<b>Gigabit City</b>	<b>LCC</b>	Gigabit City Soft Market testing is currently underway.
	<b>Broadband voucher scheme</b>	<b>LCC</b>	Businesses offered broadband vouchers to give them access to better Broadband.
	<b>Superfast Leicestershire</b>	<b>LCC &amp; LCoCo</b>	Superfast Leicestershire is a joint project between the County and the City. The aim is that by March 2017 99% of people in Leicestershire (100% in the City) will have access to superfast broadband (24Mbps).
	<b>UoL Open Data</b>	<b>UoL &amp; LCC</b>	Leicester City Council is currently working with the University of Leicester on the subject of open data.
<b>Transportation</b>	<b>SCOOT</b>	<b>LCC</b>	SCOOT (Split Cycle Offset Optimisation Technique) is a smart traffic light system which automatically adjusts the traffic signal delay according to traffic conditions detected by on-street sensors.
	<b>Micro simulation of traffic</b>	<b>LCC</b>	Road traffic micro simulation models are computer models which 'map' the movements of individual cars. This information can then be used to inform road traffic management.
	<b>Trackers on fleet</b>	<b>LCC</b>	Tracking devices have been fitted to 600 fleet vehicles to monitor fleet activity and to improve efficiency in vehicle utilisation. The trackers also monitor speed, acceleration and braking and generate monitoring reports for managers on officer performance.
	<b>uTRAQ</b>	<b>LCC</b>	uTRAQ (Urban Traffic Management and Air Quality) is a traffic management system designed to optimise the use of the road network while maintaining high air quality standards. The system monitors traffic and air quality data in real-time and uses this information to inform traffic management strategies for improved air quality and traffic flow.
	<b>Urban NOx exposure reduction through connected vehicles</b>	<b>LCC &amp; UoL</b>	Urban NOx exposure reduction through connected vehicles is a Leicester City Council, University of Leicester, and Cenex project funded by the Department for Transport. The project aims to create a map of pollution on Leicester roads by fitting electric vehicles in the LCC fleet with air quality monitors. The data collected by the vehicles will be wirelessly transmitted and analysed to identify pollution hot spots and times of peak pollution. Two cars have already been equipped with the monitors, with a further three being fitted next week. It is hoped that seven electric vehicles will be fitted in total.

	<b>Air Quality Hot Spot Mapper</b>	<b>LCC &amp; UoL</b>	The Air Quality Hot Spot Mapper has been developed by the University of Leicester in partnership with Leicester City Council. The system collates data from a number of sources (including in-situ sensors and traffic flow data) to identify and visualise air quality hot spots and sources of air pollution in near-real-time.
	<b>Legible Leicester</b>	<b>LCC</b>	Variable message signs are being installed as part of Legible Leicester to provide real-time information on available parking spaces and to direct drivers to the most appropriate car park.
	<b>Real-time bus information</b>	<b>LCC</b>	Real-time bus information is available for services in Leicester online, at bus stops and stations (including at the new Haymarket bus station) and by smartphone App.
	<b>CHYM Travel Portal</b>	<b>LCC</b>	The Choose How You Move (CHYM) Travel Portal contains easily accessible information about travel options in Leicester and Leicestershire. The portal also includes a journey planner which uses real-time information to help users plan their journeys and choose the most appropriate mode of travel.
	<b>LeicesterShare</b>	<b>LCC &amp; LCoCo</b>	LeicesterShare is a car share scheme designed to reduce the number of single occupancy journeys into the city. The website matches users to potential drivers/passengers for one-off or regular journeys.
	<b>Electric Bike Share Scheme</b>	<b>LCC</b>	An electric bike share scheme is currently being piloted with local businesses. GPS trackers are being used to monitor demand.
<b>Water and Wastewater</b>	<b>DYNAMATlite</b>	<b>LCC</b>	DYNAMATlite is an energy and water monitoring system which records consumption at half-hourly intervals, allowing users to better manage their energy and water use. The system is currently installed in 90 Leicester schools and 152 LCC buildings.
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	<b>TELEmatics flood management</b>	<b>LCC</b>	Real-time telemetry data (data that is automatically recorded and wirelessly communicated from remote locations) is used to manage flood risk in Leicester.
	<b>POWER</b>	<b>LCC &amp; DMU</b>	POWER (Political and sOcial aWareness on water EnviRonmental challenges) is a joint project with De Montfort University and several European partners designed to optimise the sharing of flood information through the development of a digital social platform.
	<b>River flow and Rainfall monitoring</b>	<b>LCC</b>	River flow and rainfall is monitored as part of the Flood Risk Management Strategy.
	<b>SWIMS</b>	<b>LCC &amp; LCoCo</b>	SWIMS (Severe Weather Impact Monitoring System) is an online system that is activated if a severe weather event is issued in the County and City. The system sends a message to all bodies involved in dealing with the event and gathers information on how they have dealt with the event

			with the intention of learning lessons so actions can be taken to improve future responses to such events and therefore reduce cost, damage, loss of life etc
	<b>CCTV monitoring of river levels</b>	<b>LCC</b>	A bid has been submitted to Trent Regional Flood and Coastal Committee (RFCC) for funding to use CCTV to monitor river levels at known problem points.
<b>Health and Human services</b>	<b>AccessAble - Leicester</b>	<b>LCC</b>	The AccessAble – Leicester application provides detailed accessibility information for Leicester.
	<b>Adult Social Care ‘Citizen Portal’</b>	<b>LCC</b>	The Citizen Portal allows customers to access information and advice about services and uses interactive tools to provide customised information regarding available services, eligibility and cost of support. One such interactive tool is the online self-assessment toolkit.
	<b>iCare</b>	<b>LeicesterCare &amp; LCC</b>	iCare (intelligent care) monitors the daily activity of users through sensors installed on household items and movement sensors. If the sensors record unusual behaviour – lack of movement for example – an alarm is triggered and the appropriate response is arranged.
	<b>Telecare</b>	<b>LeicesterCare &amp; LCC</b>	LeicesterCare provides a Telecare service designed to enable people to live safely and independently in their own homes for longer. The service provides users with high tech items such as ‘fall sensors’ and ‘epilepsy sensors’ which are monitored 24 hours a day. If an alarm is activated LeicesterCare work with nominated family & friends and the Integrated Crisis Response Service to provide a prompt and appropriate response.
	<b>Telehealthcare</b>	<b>LeicesterCare &amp; LCC</b>	Adult Social Care and LeicesterCare are looking into providing telehealth services which monitor user’s vital signs and symptoms via easy to use technology in their home.
	<b>Smart homes</b>	<b>LeicesterCare &amp; LCC</b>	Adult Social Care and LeicesterCare are in discussions with Tynetec and Tunstall to create an exemplar “smart home” which incorporates a number of telecare, telehealth and IoT technologies.
<b>Public Safety</b>	<b>Sentinel ASB</b>	<b>Leicestershire Constabulary &amp; LCC</b>	The Leicestershire Constabulary, in partnership with LCC, introduced a piece of software: Sentinel to record instances of anti-social behaviour (ASB) in Leicestershire. Sentinel can be accessed by multiple agencies (including LCC) allowing better management, investigation and monitoring of instances of ASB; and the ability to identify ASB hotspots and ‘triggers’.
<b>Smart Payments and Finance</b>	<b>Online transactional services</b>	<b>LCC</b>	Online transactional services for paying things such as: fines, council tax, housing rent, business rates, and fees are available within Leicester City Council.
	<b>OneCard</b>	<b>LCC</b>	The OneCard is a smart payment card which can be used to purchase bus tickets and passes for the Town Hall Bike Park.

	<b>ASC- Direct payment pre-paid cards</b>	<b>LCC</b>	Persons deemed eligible for domestic care services by a council assessment are able to request direct payments in order to allow them to arrange and choose their own care and support, rather than having services arranged by the council. Direct payments are in the form of pre-paid cards.
<b>Waste Management</b>	<b>Anaerobic Digestion Energy Recovery</b>	<b>LCC</b>	Organic waste generated in Leicester is fed into an anaerobic digester which generates electricity from the methane gas that is produced. This recovered electricity is then fed into the national grid.

\* Projects in **orange** are still in the pilot or planning stages rather than fully operational.