BCJC
Black Country Executive Joint Committee
Dudley, Sandwell, Walsall and Wolverhampton

REPORT OF THE CITY DEAL AND GROWTH DEAL ADVISORY BOARD

TO

BLACK COUNTRY EXECUTIVE JOINT COMMITTEE

ON

16th September 2015

BUILDING ON THE BLACK COUNTRY GREEN GROWTH PLAN TO DEVELOP A SMART CITY STRATEGY

Key Decision:	**Yes**
Forward Plan:	**Yes**

1. PURPOSE OF REPORT

1.1 The Smart Cities concept capitalises on technology and encouraging innovation, complementing existing efforts to make the Black Country more competitive and a more attractive place to live, work and invest. The European Smart Cities Framework contains six categories based around governance, economy, mobility, environment, people and living. The Black Country Green Growth Plan's key areas fit most clearly with the headings Smart Mobility and Smart Environment.

1.2 It is proposed to realign the Green Growth Plan within the Smart City agenda, thereby improving the prospect of drawing down both UK and EU funding. To adopt the Smart Cities Framework requires linking all six categories; the intention is to identify existing activities and gaps under all while focussing on the Smart Environment agenda. Reference will be included to the Smart Mobility theme which is of direct relevance to the Green Growth agenda and is being addressed through joint work with the Integrated Transport Authority (ITA). It is proposed to provide a priority programme of actions and to identify partners and organisations with which the Black Country Local Enterprise Partnership (LEP) and councils can work, enabling the prioritisation and development of projects and submission of funding bids. Links will also be made to the proposed West Midlands Combined Authority and work on-going on the low carbon economy and green growth, supported by Sustainability West Midlands.

1.3 This report asks the Joint Committee to approve that the Black Country Green Growth Plan be reviewed and rebranded as a Smart City Strategy and Action Plan, with a focus on Smart Environment and Smart Mobility initiatives and including links to other wider work areas which fit the Smart City concept

2.   RECOMMENDATIONS

That the Joint Committee:

2.1   Approve a proposal to review and rebrand the Black Country Green Growth Plan as a Smart City strategy focusing on Smart Mobility and Smart Environment themes.

3.   REPORT DETAIL

3.1   A Smart City, also known as a Digital City, utilises digital technologies to manage data in a way that helps support, inform and manage decision-making and operational tasks as well as providing new business opportunities and empowering citizens. This utilisation can enhance economic performance and quality of life, reduce costs and resource consumption and engage more effectively with a city's citizens. Key 'smart' sectors include government, transport, energy, health, waste and water. In 2013 the UK government published a report which estimated that the global smart cities industry would be worth more than $400 billion by 2020, with the UK expected to gain a 10% share. The government established a Smart Cities Forum and funded a range of initiatives, including a £42 million demonstrator project in Glasgow which, along with London and Manchester, is one of the leading UK cities in developing the smart city concept. Smart cities are also a European priority with a range of initiatives covered by the six themes of the Smart City Framework as outlined below (see appendix 1 for details). There is significant symbiosis between the smart city concept, the low carbon agenda and the concept of green growth. All provide a long term, sustainable vision of a prosperous and inclusive city with a quality urban environment and range of services which make them attractive places to live, work, visit and invest.

3.2   The Black Country has not yet proved successful in drawing down resources to support the low carbon or green growth agendas, despite discussions around them under both City Deal and the Strategic Economic Plan. Significant resources are now available for low carbon and the environment under the Black Country European Structural and Investment Fund (ESIF). This provides an opportunity to rebrand the Green Growth Strategy as a Smart City Strategy, presenting low carbon, green growth and environmental activities in a broader context to make them more focussed on job creation and thus more attractive for funding.

3.3   The Black Country's Core Strategy identifies key strategic centres and regeneration corridors and the Strategic Economic Plan (SEP) identifies the area's key economic strengths and strategic priorities. The SEP's growth strategy is based around the five transformational sectors of: transport technologies; environmental technologies; advanced manufacturing; building; and business services. These are supported by five enabling sectors which underpin the wider economy and quality of life in the Black Country: the visitor economy; retail; public sector; sports; and health. The Smart City Framework relates in varying degrees to all of these sectors and in particular to Smart Mobility and Smart Environment. A Black Country Smart City Strategy should draw out the relevant priorities and provide an action plan for exploring and developing projects, in particular those relating to the Smart Mobility and Smart Environment themes.

3.4   Smart Mobility is an area being led by the ITA's newly established Connecting Communities group, effectively a Smart Mobility group, which is due to report progress to the ITA on 16 July; it is therefore proposed to reference that group's work in the Smart City Strategy. The Smart Environment theme should address the existing themes of energy and waste in the Green Growth Plan, including key opportunities such as smart grids, biomass and waste management. It should also address the potential to capitalise on the West Midlands's engineering base in developing smart grid and energy technology in addition to its existing position as a centre for low emission vehicles technology. Existing initiatives which might benefit include those on smart grids (e.g. Black Country Smart Power), on biomass and energy from waste and on energy efficient buildings and construction methods (e.g. Energiesprong and the University of Wolverhampton's BECCI initiative). Further details are given below. These and other priority areas where partners would particularly welcome projects and funding bids should be highlighted in the programme.

3.5   The six categories of activity in the Smart City Framework are:

- Smart Governance
- Smart Economy
- Smart Mobility
- Smart Environment
- Smart People
- Smart Living

Of these Smart Mobility and Smart Environment relate most strongly to the Green Growth agenda and some local examples of activities are provided in the following paragraphs, with further details contained in Attachment 2. It should be noted that production of this report has been led by Wolverhampton City Council and therefore contains its own examples; further examples from across the Black Country will be added as the Smart City Strategy and action plan are developed.

3.6   **Smart Governance:** Activities are currently underway within individual councils which encourage and support public participation in local democracy. Walsall Council conducts numerous public consultation exercises from social services, libraries and waste to lifestyle surveys of young people, public health and the council's budget. Most questionnaires, where appropriate, are made available to complete online as well as in paper and alternative formats when requested. A recent survey of young people saw 3,400 responses collected entirely online, keeping data collection and processing costs to a minimum. In 2014 Walsall set up Walsall People's Panel. Run online, members register to receive regular online surveys on clean and green issues. There are over 500 members and regularly achieves response rates in excess of 80%. The number of responses received online is growing each year; however the limited control over open public surveys is always a consideration when planning consultations. Walsall Council uses Snap Surveys to design, administer and manage its surveys.

'Open data' is the publication of council data to be exploited by citizens and businesses and to promote transparency. Walsall Council has been running with the 'Open Data' requirement for some 4-5 years and has met 99% of the new statutory requirements for this year.

Other activities include putting consultations online, such as those on the annual budget, to improve engagement and facilitating online petitions. Civico provides a live online platform

which promotes democracy and transparency for councils by allowing live viewing of council meetings and public participation; it is based in Birmingham and currently works with both Sandwell and Birmingham councils with Walsall Council also exploring this, having conducted a live feed from one of its council meetings. Wolverhampton is one of the leading councils for social media activity with the second largest Facebook following in the country. In 2011, Walsall Council won the LG Communications Social Media Gold Award for their Walsall 24 campaign. Walsall also leads the Black Country with 15,300 Twitter followers.

3.7   **Smart Economy**: Businesses which engage customers online expect to grow 40% faster than those which do not (Booz and Co, November 2012). Local activities include the Black Country Optimising Business Technology project, which has worked with 365 businesses to encourage the take-up and utilisation of technology. The University of Wolverhampton Visualisation Centre continues to showcase the latest technology and demonstrating practical applications. Smart Economy will be covered by the Black Country Digital Strategy, which is currently under development and can promote the low carbon economy and environmental improvement through product and process innovation, reducing car journeys by encouraging businesses to work online and enabling home working.   Walsall Council is one of the delivery partners in the Black Country Optimising Business Technology project (OBT), with a number of local businesses benefitting from support through this project. Walsall also has through the ERDF Black Country GOLD project supported a number of Walsall businesses to help them optimise and take advantage of new technology, for example in the areas of E-commerce, new energy efficient machinery and improved IT systems. The Greenbridge Supply Chain grant fund has benefitted a number of businesses to overcome barriers to growth, specifically around carbon reduction.

3.8   **Smart People:** This focusses primarily around wellbeing and achieving a positive impact on education performance, chances of getting into employment and boosting lifetime earnings. It can also, however, enable people to make savings on their energy use by swapping providers and the introduction of smart meters. An innovative technology social platform, Slenky, has teamed up with Walsall Housing Group to give talented young people placements, internships and apprenticeships in areas including fashion, technology, arts, creative and music industries, starting in summer 2015. Walsall and Wolverhampton councils have also facilitated collective fuel switching initiatives to help residents reduce their energy costs. Up to end of May 2015 over 1,116 Walsall residents have switched through one of the collective switching schemes promoted by the council providing them with a total estimated £270,926 off their annual bills.

3.9   **Smart Living:** This covers a range of lifestyle, behavioural and cultural initiatives and therefore again benefits wellbeing and quality of life. Housing providers are looking at smart technology around assisted living, enabling older people to live for longer in their home. The NHS is using smart technology to enable people to control their health condition at home and be monitored remotely, reducing costs and demand for public services.

3.10   **Smart Mobility**: Smart mobility initiatives are already supported by the West Midlands Local Transport Plan and are being developed in partnership between local councils, the West Midlands ITA, Centro, transport operators and other partners. As explained above, this area is being led by the ITA's newly established Connecting Communities group. The

Green Growth Plan specifically refers to the potential of piloting new transport systems integrated into urban energy networks. Current smart mobility projects include:

Current Smart Mobility Projects	Projects under development / investigation
Urban Traffic Control: using smart technologies for traffic signals, cameras, variable message systems and automatic number place recognition for journey time monitoring.	**Ultra low emission vehicles (ULEVs)**: including submissions to Office of Low Emission Vehicles (OLEV) for funding for a range of initiatives covering areas such as installing charging infrastructure, incorporating LEV vehicles into fleets and supporting the vehicle supply chain. These are taking place either by individual councils or jointly with others and ITA/ Centro, as appropriate. Potential ERDF bid to support workplace charging infrastructure – which is currently NOT supported by OLEV.
Sustainable transport projects – councils promoting sustainable and low carbon transport, for example Wolverhampton's Staff Travel Plan and Active Travel Strategy.	Potential **Smart Mobility** project for Wolverhampton city centre encompassing the new developments by the University of Wolverhampton at Springfield Brewery & including sustainable transport links.
Smarter Network, Smarter Choices Local Sustainable Transport Fund (LSTF) project, promoting sustainable and low carbon travel along key corridors in Black Country.	Local Growth Fund (LGF) funded ***Access to Growth*** to deliver smaller schemes (above £500,000 but less than £5,000,000) which improve access to employment sites and strategic centres including sustainable transport across Black Country.
Managing Short Trips: Local Growth Fund (LGF) secured to promote walking and cycling for local journeys across Black Country in 2015-19.	Potential to build on funding secured to attract European funding under low carbon strategy. Walsall has identified potential of cycle path with heat networks utilising canal towpath. Sandwell has identified opportunities for LED street light upgrade & canal-side solar lighting, canal towpath improvements connected to Smart Grid development & green bus shelters.
Real Time Information system/journey planners via mobile phone app.	**Smart Ticketing** project currently under development through Swift smartcard.

3.11 **Smart Environment**: Smart city thinking emphasises improvements in environmental outcomes, such as a reduction in carbon emissions, increased efficiency in the use of resources and the protection and improvement of natural resources. Many such initiatives are already being pursued in the Black Country through partnerships between agencies such as councils, utilities (water, power and telecoms) and the building supply and construction industries. The Green Growth Plan identified localised renewable and low carbon energy generation and distribution as key areas for investment. These cover a range of technologies and include: demand management utilising energy efficient technologies; micro generation; smart grids; district heating schemes; local energy storage;

development of energy service companies; integrating transport and energy systems at a local level; and housing refurbishment schemes.

Current Smart Environment Projects	Projects under development / investigation
ICT enabled energy grids: funding secured from Innovate UK for Optimising Regional Clusters of Smart Electrical Networks (ORCSEN) project to test feasibility of smart grid project to develop means of managing demand for power at sub-station level, allowing locally generated power to be stored, traded and distributed locally. Project running May 2015- April 2016. Accord ERDF Smart Grid project submitted May 2015.	**Black Country Smart Power** (formerly People's Power Station): widespread deployment of energy demand management technologies and infrastructure supporting local heat and power generation and distribution. Subject of previous unsuccessful RGF bid. Sandwell has identified potential for smart energy grid development with advanced gasification plant in Oldbury. **Smart business parks/corridors**: distributed energy and waste infrastructure for existing business parks and industrial estates. Vehicle to Grid and virtual power plant using battery capacity of electric vehicles for grid balancing.
Local District heating and CHP networks **Combined Heat and Power:** Sandwell MBC has been successful in securing resources from the Heat Network Delivery Unit (HNDU) to carry out feasibility work.	**Pop up power stations** temporary use of redundant and waste land for solar parks and biomass; yet to find viable model. **Heat Pumps and micro-generation**: promoting widespread adoption of heat pump and micro-generation technologies. Potential for resource efficiency project to cover this with regard to businesses. **Biomass:** Explore potential for urban biomass in the Black Country including use of waste wood from municipal maintenance regimes and from improved management of open space such as urban forestry and green corridors
Energy management and generation in council property: In Wolverhampton a programme of energy efficiency measures including energy efficient boilers, lighting, programme of solar panels and biomass boilers are under way In Walsall energy efficiency measures in council buildings include lighting upgrades to LEDs, energy efficient boilers and small-scale solar panel installations.	Potential to bid to add value to existing activities through ERDF priority axis 4b. Output definitions currently make it difficult to use for housing schemes.
Existing Black Country Energy Services Company (ESCO) (Energy Extra) run by	**New or expanded ESCO** to manage and facilitate projects in: energy efficiency;

Black Country Housing.	smart infrastructure investment; renewable and low carbon energy generation and distribution; and energy supply.
Energy management and generation in housing: social housing providers have rolling programmes of improvements to social housing to improve their energy efficiency and have conducted a number of renewable and low carbon energy projects including installing biomass boilers and solar PV. Councils also have initiatives to tackle fuel poverty and improve the energy efficiency of private sector households. Walsall Housing Group (whg) has installed building energy monitor schemes and undertaken a range of renovation and generation schemes including solar and communal heating schemes, wining a Green Apple Award. Whg has also created Surefire, a pioneering £30 million project to improve energy efficiency in properties across the borough, which is the UK's first Energy Company Obligation (ECO) commercial delivery framework.	Potential to bid to add value to existing activities through ERDF priority axis 4b. Energiesprong is an innovative retrofit project to make houses net zero energy so a house does not consume more energy than it produces. Accord's Smart Grid project, covering energy management submitted to ERDF low carbon strand May 2015 & progressed to Round 2. Community energy storage.
Energy efficient buildings: developing new buildings with improved levels of energy efficiency and meeting standards such as Code for Sustainable Homes (CfSH) or Passivhaus. BECCI (Built Environment Climate Change Innovations), University of Wolverhampton. Accord involved in off-site manufacturing.	**Offsite manufacturing and refurbishing buildings**: improving efficiency of construction, including retrofit and modern methods of construction. ERDF low carbon strand submission for extension to BECCI made by University of Wolverhampton, May 2015.
Small scale waste to energy plants: Intervate plant in Cradley Heath, generating electricity from waste wood with potential to provide district heating.	**Small scale waste to energy plants** Initial mapping exercise carried out of existing other sites in region. Potential for network of plants using waste wood / locally grown biomass.
Urban services: including energy efficient street lighting, encouraging recycling, SUDs schemes, surface water management and improving air quality. Existing energy efficient street lighting programmes in Sandwell, Walsall & Wolverhampton.	Potential to bid to add value to existing activities through ERDF priority axis 4e low carbon strategy.
Waste management: the circular economy	Potential ERDF project.

		International Synergies with University of Wolverhampton submitted a joint Expression of Interest to ERDF Research and Innovation Call, May 2015, on Alternative Raw Material of Lower Impact (ARLI).

Further work required to identify under-utilised waste streams.

Potential bid to introduce/ expand business waste recycling services. |

3.12 Funding is available through a call for proposals funded through the European Regional Development Fund under priority axis 4, supporting the shift towards a low carbon economy in all sectors. The first call closed 20 May and another is anticipated in September 2015. A call under the priority axis 6: preserving and environment and promoting resource efficiency was issued in August with a closing date of 25 September.

Priority	Objective	What it will fund?
4b	Promoting energy efficiency and renewable energy use in enterprises	Advice, support, information and action, green diagnostics or energy efficiency audits, energy efficiency measures, processes and renewable generation capacity, deep renovations of buildings, energy efficiency in enterprises, building retrofit and energy efficiency measures
4c	Supporting energy efficiency, smart energy management and renewable energy use in public infrastructure including public buildings and in the housing sector	Households with improved energy consumption, decreased energy consumption of public buildings and Greenhouse gas reductions
4e	Promoting low carbon strategies for all types of territories	Investments in smart grid demonstration, sustainable energy plans, co-generation or CHP, renewable technologies. Integrated and sustainable transport strategies to reduce transport related air pollution, innovative technologies for environmentally friendly and low carbon technologies, innovation and multi-modal transport services, cycle paths, walkways and waterways where part of integrated approach to Greenhouse gas reductions
4f	Promoting research and innovation in and adopting of low carbon technologies	Enterprises receiving support, new enterprises supported, enterprises cooperating with research institutions, enterprises supported to introduce new to firm products, greenhouse gas reductions

BECCI (Built Environment Climate |

		Change Innovations), University of Wolverhampton

4. FINANCIAL IMPLICATIONS

4.1 Existing initiatives have already secured over £12.0 million in funding across the Black Country and others are included in existing budgets. Publication of certain kinds of Council data in line with the Code of Recommended Practice on Transparency attracts a small amount of incentive funding from the Department of Communities and Local Government. There is currently no additional funding available for additional Smart City initiatives, however resources have been identified in the Black Country European Structural and Investment Funds (ESIF) Strategy to stimulate demand and usage of ICT by businesses and to support low carbon projects. Other funds will identify funds as part of their project development.

5. LEGAL IMPLICATIONS

5.1 Initiatives that involve data-gathering may raise concerns about privacy. At this stage it is not proposed to undertake any projects of this kind

6. RISK MANAGEMENT

6.1 None at the time of drafting.

7. EQUALITY IMPLICATIONS

7.1 Some aspects of Smart City developments focus on improving access to services of all kind. Typically this is achieved through digital channels. Digital inclusion is part of the Smart People strand and aims to support disadvantaged groups to become digital included thereby reducing inequalities.

8. CONSULTATION

8.1 The report has been prepared by the Black Country Local Enterprise Partnership's Green Growth Group and consultation has taken place with partners through their representation on the Group.

8.2 The report has been endorsed by the Black Country Heads of Regeneration on 3 August 2015 and Advisory Board on 1st September.

Back Ground papers

Black Country LEP Green Growth Plan

Attachments

EU Smart City Framework

Current Smart City Initiatives

Contact Officers & Authors

Tim Johnson
Strategic Director, Place
Wolverhampton City Council
Civic Centre, St Peters Square
Wolverhampton WV1 1SH
Email: tim.johnson@wolverhampton.gov.uk
Telephone: 01902 555400

Mark Lavender
Joint Committee Programme Manager
Walsall Council
Civic Centre, Darwall Street
Walsall WS1 1TP
Email: mark.lavender@walsall.gov.uk
Telephone: 01922 654772

Attachment 1

EU SMART CITY FRAMEWORK

The EU framework comprises six categories of projects and initiatives. Below are the six categories, with explanatory comments taken from the report "Mapping Smart Cities in the EU" (RAND Corporation, for the European Parliament, January 2014): http://www.europarl.europa.eu/thinktank/en/document.html?reference=IPOL-ITRE_ET%282014%29507480

Smart Governance

• participation of citizens through ICT-enabled platforms

• transparency of city decision-making and enabling better feedback from citizens to civil servants

• citizen and business participants set the agenda

• open data strategies and platforms, crowdsourcing and co-creation platforms, etc

• open data projects

    – include citizen or user competitions to develop apps and other digital services (often reusing public data)

    – are regarded by participants and government officials as providing better Smart Governance and Smart Economy outcomes than conventional approaches

• tend to have only modest capital costs, most of which are already sunk

    – primary cost associated with such projects is the opportunity cost of time, which is provided by the participants

• joined up within-city and across-city governance, including services and interactions which link and […] integrate public, private, civil […] organisations so the city can function efficiently and effectively as one organism

• main enabling tool to achieve this is ICT (infrastructures, hardware and software), enabled by smart processes and interoperability and fuelled by data

• International, national and hinterland links are also important (beyond the city), given that a Smart City could be described as quintessentially a globally networked hub

• public, private and civil partnerships and collaboration with different stakeholders working together in pursuing smart objectives at city level

• Smart objectives include transparency and open data by using ICT and e-government in participatory decision-making and co-created e-services, for example apps

• can also orchestrate and integrate some or all of the other smart characteristics

Smart Economy

- e-business and e-commerce

- increased productivity

- ICT-enabled and advanced manufacturing and delivery of services

- ICT-enabled innovation, as well as new products, new services and business models

- smart clusters and eco-systems (e.g. digital business and entrepreneurship)

- local and global inter-connectedness and international embeddedness with physical and virtual flows of goods, services and knowledge

Smart Mobility

- ICT supported and integrated transport and logistics systems

- sustainable, safe and interconnected transportation systems can encompass trams, buses, trains, metros, cars, cycles and pedestrians in situations using one or more modes of transport

- prioritises clean and often non-motorised options

- Relevant and real-time information accessed by

    - the public, in order to save time and improve commuting efficiency, save costs and reduce CO_2 emissions

    - network transport managers, to improve services and provide feedback to citizens

- Mobility system users might also provide their own real-time data or contribute to long-term planning

Smart Environment

- Smart energy including renewables, ICT-enabled energy grids, metering, pollution control and monitoring, renovation of buildings and amenities, green buildings, green urban planning

- Resource use efficiency, re-use and resource substitution

- Urban services such as street lighting, waste management, drainage systems, and water resource systems that are monitored to evaluate the system, reduce pollution and improve water quality

Smart People

- e-skills

- working in ICT-enabled working

- access to education and training

- human resources and capacity management

- an inclusive society that improves creativity and fosters innovation

- enable people and communities to themselves input, use, manipulate and personalise data, for example through appropriate data analytic tools and dashboards, to make decisions and create products and services

Smart Living

- ICT-enabled life styles, behaviour and consumption

- healthy and safe living in a culturally vibrant city with diverse cultural facilities

- good quality housing and accommodation

- high levels of social cohesion and social capital

ATTACHMENT 2: CURRENT SMART CITY INITIATIVES RELEVANT TO THE GREEN GROWTH AGENDA

The following examples focus on Wolverhampton; further examples from across the Black Country will be added as the Smart City Strategy and action plan are developed.

Smart City Category	Project Description	Lead Organisation & Officer
Smart Mobility	**Urban Traffic Control (UTC)** As part of a £26.6 million project funded by the Department for Transport, the seven West Midlands metropolitan councils are introducing smart technology for traffic control by moving traffic signals, cameras and variable message systems (VMS) to digital technology. Wolverhampton is ahead of other councils and is due to complete the transfer by summer 2015. From 5/1/15, the management of Walsall's UTC has been merged with that for Wolverhampton and Dudley, meaning an integrated system for managing the three council's UTC will be run from Wolverhampton. Wolverhampton council is also about to introduce automatic number plate recognition (ANPR) for journey time monitoring and bus lane enforcement in the city.	Wolverhampton CC Transportation: Bob Willis
Smart Mobility	**Integrated Sustainable Transport System** The West Midlands Integrated Transport Authority (ITA)/ Centro have produced the Local Transport Plan (LTP) for theWest Midlands Metropolitan Area (WMMA), 'Making the Connections', which supports an integrated, inclusive, safe and low carbon transport system which supports use of low emission vehicles, public transport, walking and cycling. See: http://www.centro.org.uk/about-us/corporate-publications/local-transport-plan/	West Midlands ITA: Jake Thrush
Smart Mobility	**Sustainable Transport Projects - Wolverhampton** The city council has a number of initiatives to promote sustainable and low carbon transport including: 1. Staff Travel Plan – adopted September 2014 - aimed at encouraging council staff to car share, use public transport, walk or cycle to work 2. Active Travel Strategy - under development, due for completion February 2015 – aimed at promoting healthy travel within the city, in particular walking and cycling	Wolverhampton CC Transportation: 1. Linda Downing 2. Tim Philpot

Smart City Category	Project Description	Lead Organisation & Officer
Smart Mobility	**Sustainable Transport Projects - West Midlands / Black Country** 1. The West Midlands ITA/ Centro and partner councils, including Wolverhampton City Council, in March 2015 completed a three-year, £48 million programme, 'Smarter Network, Smarter Choices', funded by the Local Sustainable Transport Fund, to promote sustainable and low carbon travel, through measures such as traffic signal upgrades and cycle and pedestrian facilities, along key corridors including: • A4123/A459 between Wolverhampton, Dudley and Quinton • A41 Wolverhampton to West Bromwich • Route 4 between Walsall and Merry Hill • Walsall Road, A34 North See: https://www.centro.org.uk/sustainability/smart-network-smarter-choices/ 2. A £3 million extension to this project for the Black Country will take place during 2015-16 and will cover the A449 Stafford Road corridor in Wolverhampton See: http://www.centro.org.uk/about-us/news/2014/black-country-lstf-legacy/ 3. The Black Country councils and LEP are also developing a £4.6 million 'Managing Short Trips' programme for promoting walking and cycling for local journeys, funded by the government's Local Growth Fund for implementation over four years 2015-2019, including canal towpath improvements and off-road routes across the four boroughs	West Midlands ITA/ Centro, Wolverhampton CC Transportation: 1. & 2. Linda Downing 3. Tim Philpot Walsall Council 1. Matt Crowton 1. & 3. Adam Cross
Smart Mobility	**Sustainable Transport Projects – Sandwell** Sandwell is developing a project for canal towpath improvements, partly in conjunction with installation of cabling for a Smart Energy grid proposal	Philippa Smith, Sandwell Council
Smart Mobility	**Smart Ticketing** The West Midlands ITA/ Centro are currently developing a smart ticketing project, in partnership with public transport operators, called 'Swift'. See: https://www.centro.org.uk/projects/in-development/swift-smartcard/	Centro: Chris Perry
Smart Mobility	**Real Time Information System/ Journey Planner** The West Midlands ITA/ Centro has an Integrated Passenger Information Strategy and provides real time information and updates via its mobile phone app alongside its journey planner service, 'Network West Midlands'. See: https://www.centro.org.uk/media/17247/IPIS-1-.pdf http://www.centro.org.uk/about-us/news/2014/groundbreaking-step-brings-public-transport-information-to-google/ http://www.networkwestmidlands.com/	Centro: Chris Perry

Smart City Category	Project Description	Lead Organisation & Officer
Smart Mobility	**Low Emission Vehicles** 1. Wolverhampton and Walsall councils are variously exploring opportunities to promote low emission vehicles (LEVs) including: • Installing electric vehicle charging points in car parks, on the highway and in new developments • Including LEV vehicles in the council's fleet • Promoting joined up charging infrastructure across the West Midlands • Supporting the vehicle supply chain and the local automotive industry • Applying for grant funding to schemes run by the Office of Low Emission Vehicles (OLEV) 2. The West Midlands Low Emissions Towns and Cities Programme (LETCP) involves joint working between the West Midlands ITA/ Centro and Black Country LEP. Walsall is the lead authority for the LETCP which has produced Best Practice Guidance for low emission planning and procurement and is currently working on a Black Country Supplementary Planning Document and a Low Emission Strategy (LES) for the West Midlands. 3. Walsall plays a key role in ensuring Low Emissions has a high profile on transport strategic planning through the ITA and connected groups. 4. Dudley already requires electric vehicle charging points in new developments. 5. There is potential for a ERDF bid to support workplace charging infrastructure, an area which is currently not supported by OLEV.	Wolverhampton CC Sustainability: Ric Bravery Walsall Council: 1. Donna Cattell 2. & 3. John Grant 3. John Roseblade 2. Mike Smith 4. Dudley MBC 5. Cenex
Smart Mobility	**West Midlands Low Emission Bus Delivery Plan** Centro on behalf of the West Midlands local authorities have commissioned a study which will provide a Low Emission Bus Delivery Plan for the metropolitan area. The delivery plan will provide a strategy for the roll out of low emission buses and related infrastructure.	Centro: Steve Hayes
Smart Mobility	**Internet of Things** Government announced in July 2015 a competition for £10 million of funding for development of the capability of the Internet of Things to deliver environmental improvements, economic opportunities, and more efficient and effective delivery of services such as transport, health care and energy. A bid is proposed for the West Midlands ITA, focussing on Intelligent Mobility, Air Quality and Energy, led by the ITA's Connected Communities Group.	Coventry City Council: Mike Waters & West Midlands ITA: Adam Harrison

Smart City Category	Project Description	Lead Organisation & Officer
Smart Environment	**Smart Energy: Renewable and Low Carbon Energy and energy networks** Wolverhampton council commissioned a Renewable Energy and Carbon Reduction Study which reported in 2011: See http://www.wolverhampton.gov.uk/CHttpHandler.ashx?id=1567&p=0 This followed a regional study and has itself been followed by production of a Green Growth Plan for the Black Country Local Enterprise Partnership (LEP) which identifies renewable and low carbon energy generation and smart energy grids as key areas for investment in the Black Country. See: http://www.blackcountrylep.co.uk/place/green-growth-plan The LEP is seeking to support a range of projects in these areas to be included in proposals for funding by both the UK government (such as Growth Plan) and EU (such as European Structural & Investment Fund).	Wolverhampton CC Sustainability/ Black Country Green Growth Group: Ric Bravery
Smart Environment	**ICT-enabled energy grids** A range of opportunities exist including: • Accord Group ERDF Smart grid project (see below) • Vehicle to Grid and virtual power plant using battery capacity of electric vehicles for grid balancing.	
Smart Environment	**ORCSEN:** In support of Wolverhampton council's and Black Country LEP's aspirations, the council is involved in a smart grid project called Optimising Regional Clusters of Smart Electricity Networks (ORCSEN) which seeks to develop means of managing demand for power at a sub-station level, allowing locally-generated power to be stored, traded and distributed at a local level. This is intended to improve local economic resilience, reduce carbon emissions, reduce fuel costs and support the local economy. It is a pilot for wider smart grids across the Black Country, a project called Black Country Smart Power	Wolverhampton CC Sustainability/ Black Country Green Growth Group: Ric Bravery
Smart Environment	**Smart Energy Grid Development with Advanced Gasification Plant:** Sandwell Council is investigating a potential project at Union Road, Oldbury with potential to export electricity to power approximately 45,775 homes.	Sandwell Council: Philippa Smith
Smart Environment	**Energy management and generation in council property** 1. Wolverhampton Council has a rolling fund which supports energy improvement measures on council property including more energy efficient boilers and lighting and a programme of solar panels and biomass boilers. 2. Dudley Council has allocated funds for 'spend to save initiatives' that reduce gas and electricity consumption within council buildings: Projects have included fitting pool covers at leisure centres, LED lighting upgrades in offices and car parks, fitting Variable Speed Drives, and using AMR data in conjunction with an M&T software package to identify and reduce unnecessary consumption.	1. Wolverhampton CC Energy Service: Keith Daw 2. Dudley MBC Energy: Chris Jenkins

Smart City Category	Project Description	Lead Organisation & Officer
Smart Environment	**Energy management and generation in housing** 1. Wolverhampton Homes has a rolling programme of improvements to the council's housing, through initiatives such as the Decent Homes Initiative, to improve its energy efficiency. It has implemented a number of renewable energy projects, including installing a biomass boiler at Heath Town estate, and is investigating further opportunities. The council's Housing Service has implemented a number of initiatives, to tackle fuel poverty and improve energy efficiency for vulnerable private sector households, produces a biennial report as required by the Home Energy Conservation Act (HECA) 2. Accord Group submitted an expression of interest for a Smart Grid/ energy efficiency housing project to the low carbon strand of ESIF funding, May 2015 which has progressed to stage 2. 3. Accord and Walsall Housing Group (whg) are investigating the broader opportunities of solar power for tenants' properties. 4. Walsall Council as part of its approved Home Energy Conservation Act Action Plan (updated July 2015) is investigating a range of options to help residents take up solar PV for their roofs. 5. Walsall Council with partners whg and Accord have secured funding under a new DECC scheme to help households access gas central heating in the borough. Funding is focussed at dwellings that are 'off-grid'. 6. Dudley MBC has fitted solar PV systems to a number of residential homes (129 on the Priory estate and 11 at Jockey Field). Total generation for 2014/15 was over 186,000KWH. 7. Help and advice is given to Dudley residents through the 'winter warmth programme'. Includes advice on accessing energy efficiency grants.	1. Wolverhampton CC Housing: Kenny Aitchison 2. Accord Group: Rosemary Coyne 3. Walsall Housing Group 4. Walsall Council 5. Walsall Council/ Whg 6. Dudley MBC Housing: Debbie Cartwright 7. Dudley MBC: Jodie Pritchard
Smart Environment	**Energy-efficient Buildings** Wolverhampton council has developed a number of buildings with advanced levels of energy efficiency including: 1. New primary schools at St Lukes (biomass boilers) and Willows campus (Green Park & Stowlawn) (green roof & biomass) + Bushbury Hill, Oak Meadow & Wilkinson (all Passivhaus) 2. Green roofs at Bantock Park changing rooms and Dovecotes Nursery 3. In partnership, BREEAM very good standard at the Wolverhampton Bus Station and excellent at the Interchange Block 10 development (currently under construction)	Wolverhampton CC various 1. Education: Trevor Pringle 2: Public Realm: Steve Woodward 3. Regeneration: Marie Bintley

Smart City Category	Project Description	Lead Organisation & Officer
Smart Environment	**Urban Services** Wolverhampton City Council: 1. Has a rolling programme of introducing energy-efficient street lighting and reduction in lighting of highway signs 2. Has improved its recycling rates from domestic waste 3. Is developing a programme to improve surface water management and reduce flooding 4. Is seeking to improve air quality through the Low Emission Towns & Cities Programme Sandwell Council is developing projects including: 1. LED lighting upgrade & canal-side solar lighting in north Smethwick Walsall Council: 1. Trials have been conducted since 2010 introducing energy efficient street lights with LED and Central Monitoring Systems. Central monitoring systems allows for monitoring outages remotely, actual consumption, flexibility vary lighting levels.	Wolverhampton CC various: 1. Public Realm: Steve Woodward 2. Waste: Chris Huddart 3. Transportation: Keith Rogers 4. Regulatory Services: Anna Spinks Sandwell Council: Philippa Smith Walsall Council: Elizabeth Thomas
Smart Environment	Pilot area in Dudley Port for the **Black Country Garden City** concept under development incorporating areas such as: 1. Improved building designs that can take solar panels, reduce the potential for shading & are orientated with of windows to maximise solar gain 2. Designing in a contemporary feel to new developments, while respecting local character 3. Community integration incorporating things such as food growing, allotments, linkages to public spaces/recreation areas	Sandwell Council: Philippa Smith
Smart People	**Digital Inclusion** Walsall Library Service has linked up with a new BT and Barclays initiative to increase digital inclusion. As two of only 100 UK centres taking part in the initiative, Beechdale and Pheasey libraries have free Wi-Fi provided by BT and Barclays Digital Eagles.	Walsall Council:
Smart Living	**Smart Living – Sandwell** Sandwell is developing projects for: 1. Tree Planting from Burnt Tree Island – Dudley Port – Horseley Heath 2. Dudley Port green bus routes / green bus shelters	Sandwell Council: Philippa Smith