8th | CITY UPDATE

Welcome to the **8th City Update** newsletter #19. This issue covers programme activity and developments during the period from March to May 2021.

This is the fifth issue of the newsletter produced during the COVID-19 pandemic and serves to highlight that much has been achieved by programme partners despite very challenging circumstances.

Overleaf is a summary of the status of the 41 projects across the 8th City programme (phase 1 & 2). Many of these projects have produced case studies outlining key aspects of project initiation, development and delivery - with a number of these available on the Scottish Cities Alliance website.

Two summary case studies, on Data activity in Glasgow and Stirling, are included here. Full form versions, including Obstacles & Issues and Lessons Learned, are available from 8th City PMO.

The newsletter also highlights low carbon activity being delivered across the 8th City programme in support of Scotland's journey to net zero carbon.

An overview of Edinburgh's 8th City phase 2 projects and Smart City ambition is outlined on page 4.

A selection of Smart City events are also highlighted - as well as news of recent awards made to 8th City projects in Glasgow and Perth.

Nicola McPhee, Programme Manager

ERDF 2014-20 Operational Programme

Strategic Intervention: Scotland's 8th City - the Smart City

smart cities scotland

European Union
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European Regional Development Fund
Investing in a Smart, Sustainable and Inclusive Future

2 | UPDATE ON 8th CITY PROGRAMME

There are currently 41 projects within the 'Scotland's 8th City - the Smart City' ERDF Strategic Intervention.

The 15 projects for 8th City Phase 2 complement 26 projects in Phase 1; of these, 20 projects have been completed, with the remaining six Phase 1 projects scheduled to end in 2021.

The tables below show the range and status of projects being delivered across the cities.

PHASE 1 (26 PROJECTS)			
PHASE 1 - OPEN PROJECTS		**PHASE 1 – COMPLETED PROJECTS**	
ABERDEEN			
PROJECT	**END DATE**	**PROJECT**	**END DATE**
		Infrastructure ISL	Sept 2019
		Infrastructure DDD	December 2018
		Data	March 2020
DUNDEE			
Public Safety	Dec 2021	Waste	June 2019
Mobility	June 2021	Data	Sept 2019
EDINBURGH			
		Waste	June 20
GLASGOW			
Infrastructure Water	Dec 2021	Data	March 2019
Mobile Working	June 2021	Waste	June 2019
		Infrastructure ISL	Jan 2020
INVERNESS			
Mobility	June 2021	Data	Dec 2020
		Waste	March 21
PERTH			
Public Safety	June 2021	Infrastructure ISL	Dec 2018
		Data	Dec 2019
		Innovation Lab	Dec 2019
		Waste	June 2019
		Mobile Working	Dec 2019
STIRLING			
		Energy	June 2019
		Mobility	Dec 2018
		Data	March 2019
		Waste	March 2019

PHASE 2 (15 projects)
DUNDEE
Data
Mobility
EDINBURGH
Intelligent Infrastructure
Public Safety
Driving Operational Efficiency
GLASGOW
Infrastructure ISL
Mobile Working - 1
Mobile Working - 2
Data
Smart Cities Co-ordinator
INVERNESS
Intelligent infrastructure (four components)
Road Network Vehicle Messaging
PERTH
Data
Waste
STIRLING
Data

Projects are required to deliver outputs against the following indicators: Innovative Services Developed in Cities; and Data Sets Open for Innovation. Cities are on track to achieve Phase 1 output targets, with 40 (of 63) Innovative Services and 184 (of 250) Data Sets already achieved.

The output targets for Phase 2 are 62 Innovative Services and 173 Data Sets - leading to an overall programme target of 125 Innovative Services and 423 Data Sets to be delivered by the 8th City partners.

Total investment across Phases 1 and 2 of the programme is currently £48.8 million, including ERDF support of £20.5 million and SCA Cities Investment Fund of £500k.

3 | SMART AND GREEN - 8th CITY CONTRIBUTIONS TO LOW CARBON ACTIVITY

The Climate Change Act 2019 commits Scotland to net-zero emissions of all greenhouse gases by 2045. This is tougher than a net-zero carbon target, which commits only to balancing carbon dioxide emissions.

Net zero differs from 'carbon neutral' as this can be achieved by simply offsetting the carbon emissions of a business or home; whereas net zero means reducing emissions to their lowest amount through energy efficiency measures and then using offsetting as a last resort to balance remaining hard to remove emissions.

Net Zero Week is the UK's National Awareness Week and, for 2021, takes place from 17th - 23rd July. This provides an opportunity for individuals, businesses, and wider stakeholders to review and consider actions that contribute to achieving net-zero emissions.

Scottish cities and local authorities have a very significant role to play in supporting activities and initiatives which support the aim to be net zero by 2045. By collaborating in the ongoing development and delivery of the 8th City ERDF programme, Scottish cities seek to collectively become more liveable and resilient through the use of data and digital technology.

The 8th City programme is funded as a 'Sustainable Growth' Strategic Intervention (SI) within the 2014 -2020 ERDF operational programme and low carbon activity is threaded throughout projects.

The programme is aligned with the Green Infrastructure SI in support of Scottish Government's policy action of 'Ensuring our communities are healthy and sustainable'. In working towards this policy action, the 8th City programme aligns to Scottish Government targets to reduce emissions of greenhouse gases to net-zero by 2045.

Some of the ways in which 8th City projects contribute to this ambition are as follows:

Intelligent Street Lighting (ISL): Projects in Aberdeen, Glasgow, Inverness and Perth are using LED lamps with central management systems to achieve efficiency savings of 70%. Glasgow notes CO_2 reduction of approx. 700T per year.

Smart Energy: Stirling Council's deployment of energy dashboards to track and monitor energy demand, carbon emissions and renewables performance across 35 key Council sites.

Smart Mobility: Dundee's focus on Mobility as a Service (MaaS) activity reduces the need for private vehicle ownership and supports active travel and public transport. Aberdeen, Inverness and Stirling have deployed vehicle monitoring infrastructure to reduce congestion and make travel more efficient. Similar activity is underway in Edinburgh.

Smart Waste: Bin sensors enable responsive and more efficient collection (including solar-powered compactor bins) meaning less waste going to Landfill, fewer journeys made due to data-led routing and scheduling of collection services.

Smart Water: The Glasgow Smart Canal project delivers CO_2 savings of 500T per year by reducing the amount of wastewater requiring to be pumped.

These low carbon outcomes are just some of the environmental sustainability benefits being delivered across the 8th City programme. Further work will be undertaken to monitor and report on this in line with the over-arching outcomes in Scotland's National Performance Framework.

The 8th City programme's vision is to enhance Smart City activity and accelerate and transform the delivery of city services, making Scotland's cities more attractive, liveable and resilient.

The City of Edinburgh Council is delivering several 8th City projects - focusing on intelligent infrastructure, public safety, and a city operations platform. This integrated smart infrastructure and connected assets/Internet of Things (IoT) approach supports capacity and capability to respond to events and incidents, based on real-time data. Deployment of an open, flexible platform allows use of data and sensor infrastructure to better integrate key city management functions.

The deployment of intelligent infrastructure will enhance the management of Edinburgh's road network, with a focus on real-time monitoring of vehicles and journey times, as well as sensor-based information on air quality, parking, and gullies at risk of flooding.

The public safety project includes an advanced Video Management System, modern networking for city-wide data transmission and high-resolution IP cameras used as visual sensors. Installing these cameras, particularly within locations at main thoroughfares, the video analytical software can provide a much richer view of how people interact with the built environment – whether that is on foot, bicycle or vehicle. This data analysis can allow for better city planning and even data-driven flow management.

Edinburgh's plan for a Smart City Operations Centre is also benefitting from 8th City ERDF support - investment in a foundational platform and sensors to drive better insight and enable proactive delivery of services to citizens. Sensors placed in communal litter bins around Edinburgh will enable service teams to see an accurate usage of bins, predict when they will overflow and take a proactive action to mitigate that. Property environment sensors installed in social housing will enable service teams to predict, manage and prevent extensive damage to properties caused by issues including but not limited to damp conditions and related mould growth.

As well as delivering benefits to the public realm and high streets within the capital, key Smart City indicators which Edinburgh's 8th City projects will address are: productivity, environmental protection, sustainable resource management, health conditions, public and social services, and housing quality.

Edinburgh's 8th City programme is just one aspect of the city's Digital and Smart City ambitions. Much of this is informed by City of Edinburgh Council setting an ambitious target to become carbon neutral by 2030 and by the approval of a Digital and Smart City Strategy 2020-2023. This Strategy defines how Digital Technology and Smart City Innovations can support the ambition of Edinburgh's 2050 Council Vision.

For more information relating to the City of Edinburgh Council's Smart Cities programme, please contact Karin Hill - **Karin.hill@edinburgh.gov.uk**.

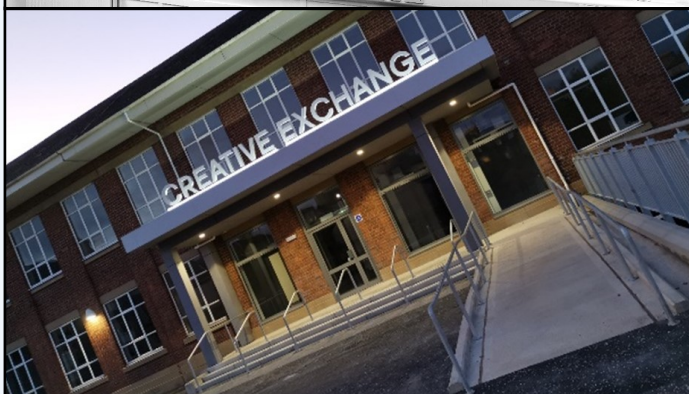## Glasgow Smart Canal and Perth Creative Exchange projects - Award Winners!

Congratulations to 8th City supported projects in Glasgow and Perth on their recent awards!

First up, the Perth Creative Exchange was chosen as the *Regeneration Project of the Year 2021* at the Scottish Property Awards on 25th March.

The Creative Exchange project is a £4.5M creative hub, developed by Perth and Kinross Council and WASPS (Workshop and Artists Studio Provision - Scotland) to boost the arts economy in Perthshire and the wider Tay Region.

Nested within the Creative Exchange, and launched in February 2020, the 8th City ERDF supported innovation lab (branded as The Famous Grouse Ideas Centre - FGIC) was incorporated as an integral part of the creative hub.

On 27th May, the Glasgow Smart Canal project was announced as the *Sustainable Drainage & Flood Management Initiative of the Year* at the Water Industry Awards 2021.

As with the FGIC Innovation Lab at the Perth Creative Exchange, the Glasgow Smart Canal project is part funded via the 'Scotland's 8th City - the Smart City' ERDRF programme.

The Smart Canal project utilises sensors and predictive weather technology to dynamically manage water levels on the Forth & Clyde Canal, allowing it to become a drainage route for excess surface water during high rainfall. The water level can be lowered by up to 100 mm, with excess water moved to the nearby River Kelvin. This has unlocked 110 hectares of previously unusable land for development and regeneration.

Congratulations to all involved in delivering the Glasgow Smart Canal & Perth Creative Exchange projects.

8th City Programme - Social Media Campaign 2021

In recent months a social media campaign has been delivered to highlight 8th City projects and smart city activity across Scottish cities.

The campaign was delivered in two phases: Part 1 took place from 22nd February to 3rd March and received a total of 32k impressions over the 10 day   period, averaging 3.2k per day. Top performing tweet was in relation to **Perth Innovation Lab** and reached a total of 77 engagements.

Part 2 of the campaign took place 22nd - 27th March.

This achieved a total of 18.1k impressions - averaging at 2.6k impressions per day. The most popular tweet was related to **Dundee's innovation incubator** engagement which received 92 engagements.

Thanks again to the Communications team at Scottish Cities Alliance and to 8th City project leads for providing information and photos.

Tweets also signpost to the SCA's new website which includes enhanced coverage of the 8th City programme and the wider Smart Cities Scotland ambitions.

scottishcities @scottishcities
As an 8th City ERDF project, **@PerthandKinross** and **@waspsstudios** joined forces to create an Innovation Lab nested within Perth Creative Exchange - a £4.25m creative hub for artists, makers, creative industry professionals and the public.

#scottishcities @scotgovESIF @tfgicentre
pic.twitter.com/eLDWpDV06g

scottishcities @scottishcities
Dundee City Council plan to stimulate **#data** demand by linking to an innovation incubator; Digital Jams will turn data into services that can be marketed world-wide.

#scottishcities #smartcitiesScotland @scotgovESIF @DundeeCouncil
pic.twitter.com/lFo4xf934D

Collaboration and information sharing are core values of 8th City programme delivery: with over 40 projects and an ongoing 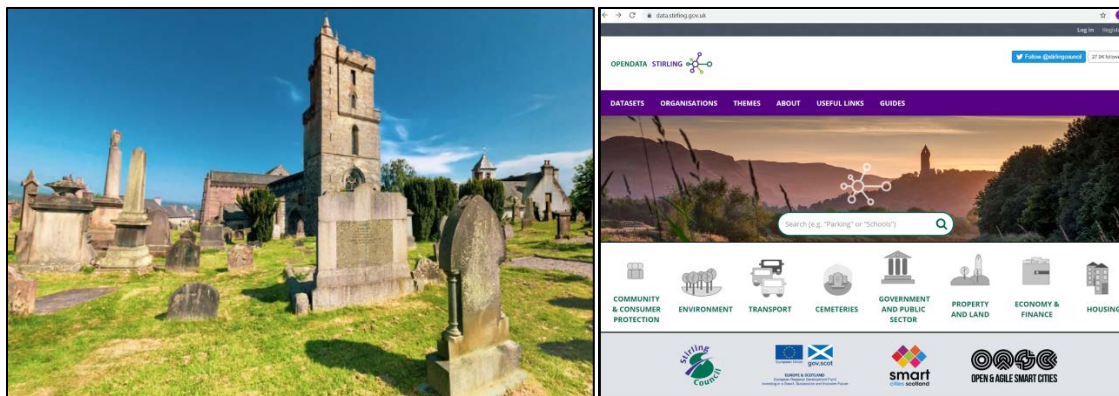commitment to delivering projects which are open, scalable, interoperable and replicable, there is a need to ensure that partners can easily and effectively share information. Knowledge Hub (KHub) is the UK's largest public service collaboration platform. It's the place where people working across public services go to exchange knowledge, experiences and ideas.

To support this, the 8th City programme has developed links with the Improvement Service - managers of the Khub Scottish Public Services Network (SPSN) - to enable access to the KHub platform and support use by 8th City partners. This is centred on the **'Scotland's 8th City - the Smart City'** KHub group. The group has 'restricted' membership, with requests approved by facilitators. Invites have been sent to all project leads and stakeholders - if you didn't receive this (or were unable to accept at the time) let me know.

The PMO has placed all programme documentation on the 8th City KHub library; we are keen to see more use of the group's forum and blog options – as well as opportunities to share project and programme info with wider partners. Like any network of this nature, the 8th City KHub group will be stronger, more useful, and most effective only when partners sign-up and get involved.

For more information contact Stephen Birrell, 8th City PMO - stephen.birrell@glasgow.gov.uk

Stirling Open Data: Digging Into the Past

Project Overview

The decision to release an extract of burial records, and update it on a regular basis, originated during the development stage of Stirling Council's Open Data Phase 1 project following discussions with the Cemeteries Service on the content of a different dataset (the Asset Register dataset) as it was being prepared for publication on the Open Data Platform.

The published version of the Cemeteries dataset is derived using a simple query against Epilog, the Council's cemeteries management application, and requires minimal intervention prior to release on the Open Data platform.

Why is it needed?

Stirling Council's Cemeteries Service manages and maintains a significant number of active and historic graveyards and other burial sites across the local authority area, all of which generate requests on the location of interred relatives, friends and notable figures from the past. However, the volume of enquiries received on a weekly basis, averaging between 12 and 15, proved time consuming and, therefore, problematic as the staff involved in searching for the relevant information were diverted from dealing with the more immediate demands on the Service.

Impact and Benefits

In publishing the extract of burial records as Open Data, the initial intended outcome was to reduce the time taken by staff to response to general enquiries on burial locations. This was achieved as Cemeteries Service staff note at least a 50% reduction in time spent processing routine location enquiries since the Burial Records' dataset was published in February 2019.

However, the unexpected outcomes have been the dataset's contribution to genealogy and its role in the growing interest in Stirling and its surrounding area's history. Positive feedback from platform users to the Open Data Team (for example, *"Well done publishing this. An invaluable resource…", "…what a great resource this is for Family history Research - well done for all the work put into it."*), comments on the Stirling Old Town Facebook page,

and links to the Open Data platform on proprietary websites (for example, FindMyPast.co.uk) the Burial Records' dataset has been promoted as a useful resource available to people tracing their ancestry.

In addition, combined with the published Asset Register dataset, which details property and land of significant interest including cemeteries, scheduled monuments, listed buildings and historic battlefields, the remains within and ownership, location and access to burial grounds provide the basis for mapping a comprehensive profile of Stirling's people, past and present.

The interest in genealogy and history extends beyond local individuals and groups to a broader international market, stimulated over the last ten years by the filming of period dramas set in this country, and a desire for those interested in both to discover and research their Scottish ancestry.

Through its Economic Development Service and exploiting the Open Data capability detailed above, Stirling Council is pursuing an initiative which aims to realise the long-term economic benefits of meeting the demands this potentially lucrative market offers.

In addition, as there are other sources of information on burials within the Stirling Council area, e.g. parish registers from the 18th and 19th centuries, users will be directed to the Archive Service in response to enquiries of a more detailed, historic nature.

For more information contact Jim Tonner, Open Data Project Officer, Stirling Council - tonnerj@stirling.gov.uk
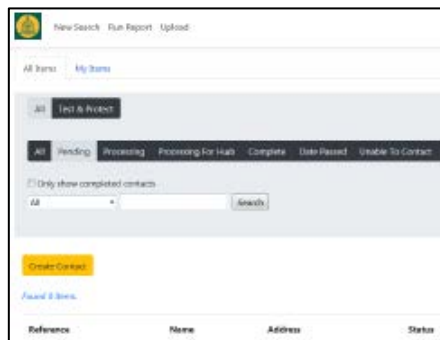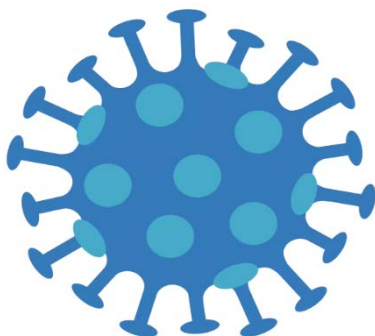
 Stirling Council's Open Data platform: https://data.stirling.gov.uk

 Stirling Council website: https://stirling.gov.uk/

Stirling Council Cemeteries Service: https://stirling.gov.uk/licensing-legal/births-marriages-death/cemeteries/

Glasgow Data Analytics: COVID-19 Test and Protect Welfare Applications

Project Overview

Glasgow's ERDF 8th City Data Analytics team has combined data with analytics to develop an innovative service focusing on the welfare of those self-isolating due to COVID-19.

The project delivered immediate support to call handlers with real-time daily data used to contact residents. A longer-term sustainable solution was also developed via an App to manage the process and enable support staff to access necessary data about isolating residents in real-time and with minimum input.

Why is it needed?

COVID-19 presented Glasgow City Council (GCC) with unprecedented challenges regarding provision of services in the city - with some having to be withdrawn, others re-designed, and yet more to be created almost from scratch.

One of the priority areas was to support those identified through the Test & Protect programme as being in self-isolation, ensuring that they were still receiving important services and, in particular, prioritizing support to those identified as being more vulnerable, such as those shielding and in receipt of income related benefits. This was also a priority given the roll-out of a support Grant to those who might lose income due to being asked to self-isolate.

Impact and Benefits

The Centre for Civic Innovation and Corporate Data Team worked at pace using data science and digital development skills to deliver a solution that improved a manual and cumbersome process.

The project proved that data analytics and digital product development could be combined to deliver a service at pace that supported service improvements for residents during a crisis.

Investment in cutting edge data science resources including Microsoft Azure tools and the use of 'R' yet again illustrated the value to the Council of supporting data analytics solutions.

The best evidence of the impact of the project is through the testimony of those using the technology to support customers. One of the call handlers noted that *…"before the implementation of the solution, my role felt quite complex … the app has taken away the worry and the administrative burden that was previously quite time consuming. It really has allowed my role to focus on the customer, and ensuring they receive the best service from the Council…"*

For more information contact Stephen Sprott, Principal Officer, Strategic Innovation & Technology, Glasgow City Council - stephen.sprott@glasgow.gov.uk

On 12th - 13th June 2021, CodetheCity will host 'CTC23 – The Future of The City' an online facilitated weekend of ideation and exploration.

The concept and character of the city has evolved through centuries. Even in the last few decades attitudes to work, leisure, transport and the environment have meant that the city, its various districts, and how people use or move between them, have been changing with ever quickening speed. The 2020 Covid Pandemic, not yet over, has if anything accelerated that process and thrown up many questions about the city dweller and worker and their relationship to retail, greenspaces, modes of transport and more. It also has created many challenges for those who run our cities, how we elect them, and how they make decisions on how the city is looked after or developed.

Join us for a weekend of exploration; an opportunity to identify the challenges (and opportunities) that these sudden, and long term, changes pose.

This event will be fully online and will offer a safe interactive space, away from our day jobs, to identify opportunities and challenges, to generate ideas, to work on those with a small team in an agile process over the two days. We'll generate prototypes of what the next generation of your city needs to be to fulfil its potential and all you and your community to flourish.

Further info and booking at https://ti.to/code-the-city/ctc23-the-future-of-the-city

IoT Tribe Connected Places Tech Games on the 3rd of July, 9.30-12pm BST
Hear how local authorities are using new tech to achieve their net zero goals and how leading investors are supporting this. The two panels are interspersed with information on new technological solutions that are ripe for adoption in cities and communities across the UK and beyond. The event will use a virtual platform that facilitates purposeful networking. Register for free here.

The next **8th City Update** will be out at the end of August 2021. Contributions (and suggestions) are welcome from across the 8th City programme. Deadline for content is Monday 16th August.

Please contact Stephen Birrell, Programme Officer, PMO, **stephen.birrell@glasgow.gov.uk**