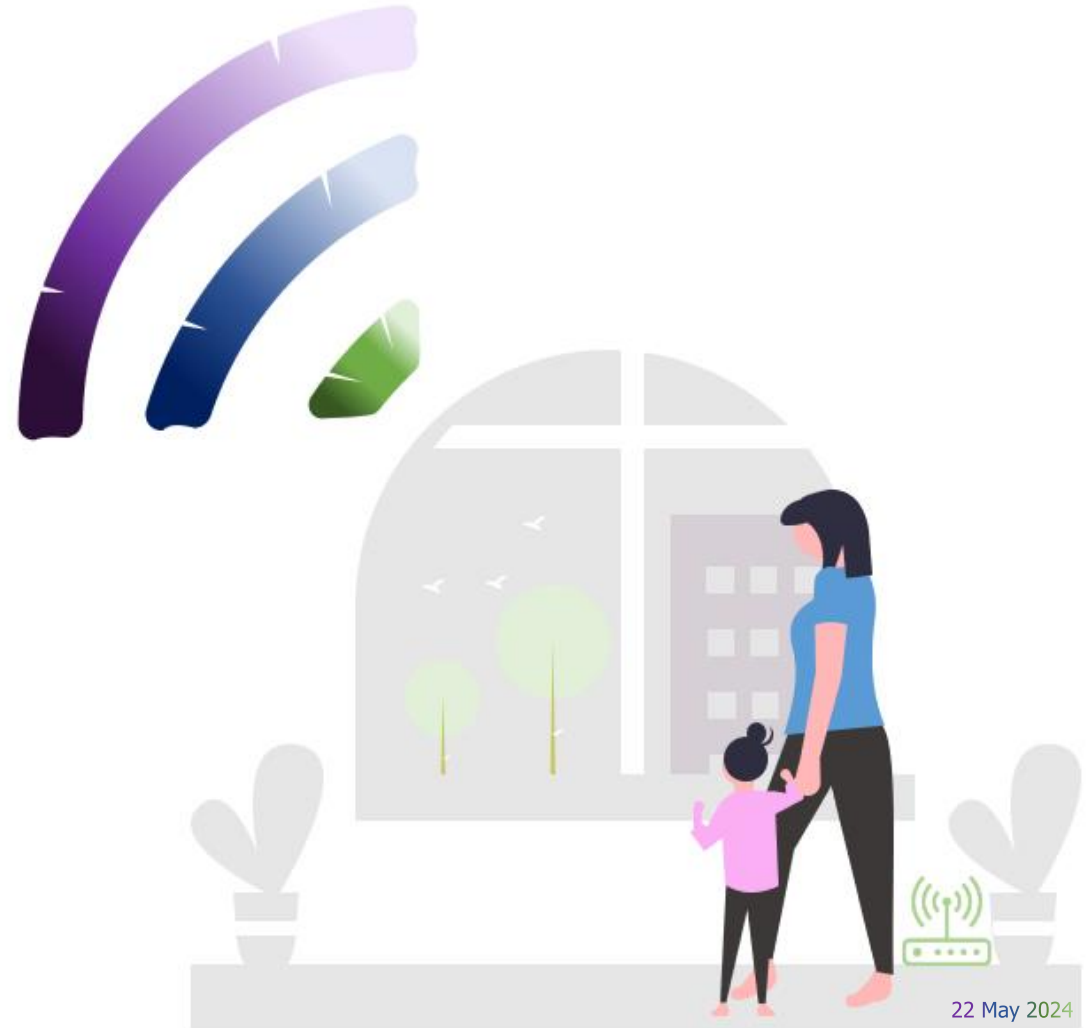# Smart & Connected Social Places

Keeping people safe, well, and socially connected in their own homes and local communities by bringing innovation and harnessing the power of connectivity, digital, and data to transform services and improve lives

A High-Level Overview: UKTIN Clusters

Innovating | Connecting | Improving Lives

Iain Macfarlane
Programme Director
Glasgow City Region
M: 07834 658 980
E: iain.macfarlane@glasgow.gov.uk
L: Iain Macfarlane | LinkedIn

GLASGOW CITY REGION

22 May 2024

Our STRATEGIC CONTEXT & PRIORITIES

PROBLEM STATEMENTS

"We work in a system that is unsustainable, lacks coherence and isn't delivering the outcomes we need."
– Scottish Government, Care & Wellbeing Portfolio Board, 'Problem Statement', May 2022

"Right now, we face a combination of social and financial challenges never seen in modern times."
– COSLA Strategic Plan 2022-27, October 2022

MISSION

To think differently, to be relentlessly person-centred, to **innovate at scale**, and to push the boundaries on how connectivity, digital, and data can enable smart and connected social places that **transform services and improve lives** across the Glasgow City Region and provide a blueprint to accelerate step-changes in outcomes across Scotland and the UK

PRIORITIES

TACKLING INEQUALITIES HEAD-ON & SUPPORTING SERVICE SUSTAINABILITY AT WHOLE SYSTEM LEVEL

- **Connecting People & Places**: closing connectivity gaps ('To' & 'Through') as foundation for deploying needs-led digital and data solutions into social homes or other social assets (care homes, day care centres, community hubs, etc)

- **Improving Health of Living Environments**: using sensors to measure temp, humidity, and CO_2 to provide early warning of damp, mould, or air quality issues; highlight fuel poverty; and improve the living environment

- **Enabling Right-Time & Right-Place Interventions**: deploying digital and data solutions where they are most needed to provide actionable BI, improve care and support, change flows, and enable changes to how services can be delivered

GLASGOW CITY REGION

The DIGITAL POVERTY Context

"The inability to interact with the online world fully, when, where, and how an individual needs."
– Definition of Digital Poverty, The Digital Poverty Alliance, Nov 2022

1 in 2 people living in low or no income households are in digital poverty and face exclusion every day

The unemployed are 2-3 times more likely to be living in digital poverty than the employed

In Scotland the biggest drivers of digital poverty are connectivity and access to devices

20% of children in the UK are impacted by digital poverty every day

AFFORDABILITY
To be and to stay online

CONNECTIVITY
To the online world

SKILLS
To fully engage online

DEVICES
To connect through

The Domains of Digital Poverty

- **Connectivity to Social Asset Map** to identify gaps 'To' social assets and 'Through' social assets so priority gaps can be identified, solutioned, and closed

- Connectivity provides the **foundation for deploying digital solutions** to capture and share data, providing 'Actionable BI' or secondary data to different teams

- In Renfrewshire this includes an **Invest to Save** deployment of IoT sensors into 10,000 social homes and the deployment of **free high fibre broadband** into each home

"A lack of digital skills and access can have a hugely negative impact on a person's life, leading to poorer health outcomes, a lower life expectancy, increased loneliness and social isolation, and less access to jobs and education."
– The Good Things Foundation, June 2023

GLASGOW CITY REGION

The HEALTH, CARE & WELLBEING Context

"Although the health of individuals is influenced by genetics and health behaviours, at population level we know that wider determinants of health such as economic, social and environmental factors are much more important."
– *Chief Medical Officer, Annual Report, Scottish Government, March 2021*

Helping to make the GCR's 244,000 social homes as safe, healthy, efficient, and sustainable as possible

Targeting inequalities in life chances and life expectancy in the GCR, which are the widest in Western & Central Europe

Harnessing connectivity, digital, and data to deploy holistic, needs-led and scalable solutions is our priority

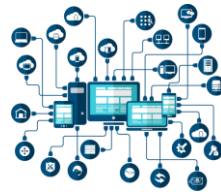**HOUSING & PLACE**
Living & Social Assets

CARE & SUPPORT
Right-Time & Right-Place

PEOPLE & ASSETS
Connected & Empowered

DIGITAL & DATA
Needs-Led & Enabling

Bring innovation at GCR scale and test new solutions to **shared 'Problem Statements'** where connectivity, digital, and data can change ways of working and improve outcomes

Keep people safe, well, and socially connected in their homes and local communities by closing connectivity gaps and deploying **needs-led solutions into homes or other social assets** ('Digital Care Bundles')

Actionable BI to **link health of home & health of tenants**, focusing on high-demand presentations into the whole system – respiratory, falls, and social isolation and loneliness

"Health inequalities and the social determinants of health are not a footnote to the determinants of health. They are the main issue. Why treat people and send them back to the conditions that made them sick?"
– *Sir Michael Marmot, Professor of Public Health, University College London*

GLASGOW CITY REGION

Our PROJECT & INNOVATION Focus

Data Aggregation & BI
Project

- Health of Home & Health of Person Data (push & pull)
- Actionable BI to improve health of person & home
- Secondary population health & response data

Net Zero Social Assets
Project

- Asset on Asset sensors to test carbon reduction solutions
- Efficiency & effectiveness of different point solutions
- Intelligence for new homes investments & retrofit

Connected Care & Wellbeing
Project

- Consumer products in the home to keep people well
- Alexafication of telecare & social connectedness
- TV as primary digital device for older people

Smart Social Assets
Project

- IoT at-scale – Environment, Net Zero, Compliance
- Housing as a Social Determinant of Health
- Right-Time, Right-Place interventions

Asset-Based Connectivity
Project

- Connectivity to Social Asset Mapping
- Solutions & Commercials to close 'To' & 'Through' gaps
- Invest to Save models as a key consideration

Connectivity Innovation & Scale Up

Smart Social Assets Innovation & Scale Up

Care & Wellbeing Innovation & Scale Up

Net Zero Innovation & Scale Up

Data & BI Innovation & Scale Up

GLASGOW CITY REGION

Our WHOLE SYSTEM Focus

Priorities Accelerated (Outcomes?)	Reducing Inequalities	Sustaining Services	Enabling Compliance	Balancing Budgets	Building Resilience	Improving Pop'n Health	Scaling Innovation	Improving Lives

Benefits Enabled (Why?)

Housing	Social Care	Health Care	Citizens	Communities
▪ Reduce Voids ▪ Avoid Damp/Mould ▪ Reduce Repair Costs ▪ Release Time ▪ Ensure Compliance	▪ Digital Telecare ▪ Smart Device Assist ▪ Reduce Home Visits ▪ Medication Reminders ▪ Social Connectedness	▪ Hospital at Home ▪ Virtual Wards ▪ Remote Consultation ▪ Right-Time & Right-Place ▪ Digital Care Bundles	▪ Tackle Digital Poverty ▪ Reduce Inequalities ▪ Improve Life Chances ▪ Enable Social Inclusion ▪ Healthy Social Places	▪ Connected Social Places ▪ Peer to Peer Networks ▪ Social Prescribing ▪ Reduced Isolation & Loneliness ▪ Empowered Communities

Digital & Data Solutions (What?)

Smart Devices	IoT Sensors	Safety Solutions	Health Solutions	Care Solutions	Consultation Solutions	Connection Solutions	AI/ML/BI Solutions

Needs-Led Data (Who?)

Where are the localities or neighbourhoods with greatest need? What does the Scottish Index of Multiple Deprivation (SIMD) data tell us about priority areas for intervention? Where are the high-need, high-complexity, and high-demand citizen/patient groups living or receiving care and support in the community?

Social Assets (Where?)

Mapping of social assets (social housing, sheltered housing, nursing homes, care homes, day care centres, health centres, hospitals, schools, community hubs, etc). What connectivity exists into each asset to support right-time, right-place, person-centred care and support interventions? What are the priority gaps to close?

Connectivity (How?)

Mapping of 5G, 4G, 3G, LoRaWAN, High Fibre so we understand what connectivity infrastructure is in place and can assess how it is being used, where there are connectivity gaps, and what solutions could be used to close the gaps, including assessing the feasibility for any Invest to Save business case.

GLASGOW CITY REGION

Our Focus on INNOVATION #1

Our Early Innovation Ideas	Rationale & Scale-Up Opportunities
WHOLE SYSTEM INVEST TO SAVE BUSINESS CASES: use a hypotheses-led approach to accelerate whole system engagement at a strategic level to identify, validate, and prioritise savings from deploying connectivity, digital, and data solutions so the investment pays for itself whilst improving strategic outcomes	▪ Public funding and service sustainability pressures demands different thinking and investment planning at a whole system level – organisational barriers must be removed and whole system ROI models adopted as the norm ▪ Provide a repeatable hypotheses-led model to replicate at scale, including for providing Free Connectivity At Scale into Social Homes & Social Assets ▪ Shape a Stage 0 Diagnostic to help organisations assess the likelihood of a full ROI ('Wash It's Face') Business Case given their As-Is position
IN-THE-HOME DIGITAL CARE BUNDLES: design a model for bundling connectivity, digital, and data solutions that are person-centred and needs-led and designed to keep people safe, well, and socially connected in their own home	▪ Whilst care teams can bundle and deploy the required physical equipment to keep people safe and well in their home, they can't bundle and deploy connectivity, digital, or data solutions as part of a care package ▪ The prevalence of 'As A Service' models in other market areas provides examples to follow in shaping this needs-led solution bundling
CONNECTIVITY & SOCIAL ASSET MAPPING: create As-Is maps of connectivity in each local authority area across 5G, 4G, 3G, LoRaWAN, and High Fibre. Map the coverage and add strategic layers such as social housing (Council & HA), SIMD data zones, and social asset locations (care homes, nursing homes, sheltered housing, day care centres, etc) to identify and prioritise needs-led gaps to close	▪ Provides a needs-led and strategic framework for connectivity planning and wider digital and data investment plans, as the connectivity provides the foundation for deploying digital and data solutions into homes and other social assets ▪ Provides a framework to consider how well the existing connectivity assets are being utilised for social, economic, and environmental good ▪ Invest to Save cases could be created for closing the priority connectivity gaps ▪ The first Mapping will be completed in RENS and will then be replicated across the other 7 GCR regions – the value generated will inform the scale-up potential

GLASGOW CITY REGION

Our Focus on INNOVATION [#2]

Our Early Innovation Ideas	Rationale & Scale-Up Opportunities
AGGREGATED DATA TO MAKE HOUSING AS A SOCIAL DETERMINANT OF HEALTH REAL: aggregate and present data on health of home to inform care plans, especially for tenants/patients with respiratory and other environmental conditions – provide basis for identifying 'at risk' tenants/patients and necessary 'health of home' actions	▪ Data aggregation and actionable BI on health of home (damp/mould, fuel poverty, etc) to support person-centred health and care interventions ▪ NHS/HSCP can flag need for sensors to monitor the living environment and/or increase the focus on reporting and escalating environmental changes ▪ Link to priority groups such as children with asthma or older people with respiratory conditions as part of alleviating Winter Demand Pressures
SOCIAL ASSET (HOUSING+) REGULATORY COMPLIANCE SOLUTIONS: IoT, AI, ML and Data Aggregation solutions can be designed and deployed to monitor assets and report against their regulatory standards linked to safety, quality, efficiency, +. Reports and dashboards can provide assurance that early warning controls are in place	▪ IoT sensors can measure the effectiveness and safety of property assets (lifts, lights, boilers, electrical systems, +), the quality of environments (air, water, damp, mould, +), and net zero/energy efficiency (solution efficacy, retrofit solution effectiveness, +) ▪ Dashboards can be developed by aggregating data to provide real-time reports ▪ NG Homes is testing this approach, and we will collaborate with them via our Innovation Networks to share insights and learning for replication at scale
SOCIAL HOUSING CARBON OFFSET OPTION FOR CORPORATES: shape a carbon offset solution for CO_2 generating corporates that allows them to achieve their offset obligations by investing in Net Zero social housing in the GCR rather than via 'green washing' environmental investments overseas	▪ Delivers ESG outcomes for the corporate entity given the dual investment in environmental and social outcomes ▪ Create win:win outcomes at UK scale as corporates invest in Net Zero solutions to achieve scale beyond the reach of stretched public finances whilst gaining carbon credits in return ▪ Make it easy for corporates to invest in social housing in the communities where they operate or at least in Scotland and across the UK

GLASGOW CITY REGION

CONCLUSION

- We're focused on making the **biggest impact possible for those who need it most** in our communities

- We're lifting ambitions on the impact that connectivity, digital, and data can make to **disrupt and transform services**

- We're assessing all opportunities to **make the unaffordable affordable** given increasing demand and cost pressures

- We're driving innovation to **solution shared Problem Statements** to maximise scaled adoption and commercial innovation

- We're here to chat, share or meet (Event on 25 June in Glasgow City Chambers) so **reach out as we're here to help in any way we can,** and we clearly need all the help we can get as our challenges are massive!

Iain Macfarlane
Programme Director
Glasgow City Region
M: 07834 658 980
E: iain.macfarlane@glasgow.gov.uk
L: Iain Macfarlane | LinkedIn

Innovating | Connecting | Improving Lives

GLASGOW
CITY REGION