Data Deliberation 4: 'Building Healthier, Fairer Places: Why Data Matters'

Date: Saturday 13th December 2025

Time: 09.00am – 13.00pm followed by Lunch

Location: Conference Rooms 1 & 2, Riddell Hall, Queen's University Belfast.

EquiPlace

Engineering Health Equity through Inclusive Transport, Housing, and Environmental Systems in Northern Ireland

engage - Instant Report

Ulster University

engage

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This 'engagement' real-time e-participation engage event was facilitated by Professor Jonathan Wallace from Ulster University and Brian Cleland.

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Table of Contents

The Engagement

What is an 'engagement'?

An 'engagement' has evolved out of the concept of a Town Meeting. A Town Meeting is a form of participation in local government practiced in the U.S. region of New England since colonial times, when an entire community was invited by government officials to gather in a public place to formulate suggestions or provide feedback on policy actions.

In its modern version, the electronic Town Meeting (eTM) and now an 'engagement', the most fundamental features are that information on the discussion topics are provided thanks to electronic means and the stakeholders can participate in debates and express themselves individually on those issues.

The main features

The method combines the live aspect of small-scale discussion with information and communication technologies: on one hand it allows rapid transmission of work-group results to a plenary assembly, while on the other it permits surveys of individual participants' opinions through a polling system.

The 'engagement' consists of four different work steps; all aimed at facilitating the participants' discussion of the themes at issue:

- Information and in-depth investigation, allowing the participants to gain confidence with the topics of discussion;

- Discussion in small groups, allowing reciprocal listening and the confrontation between different perspectives;

- Reflection, during which the results of group work are summarised and sent back to the whole assembly; and

- An optional polling step, in which participants may be asked to individually answer questions generated during discussion.

How it works

The overall organisation of the engagement session is entrusted to a Central Facilitator, who guides the participants through the various steps and prompts guests to intervene. Participants debate in small groups at round tables, each with a Facilitator / Rapporteur whose task is to moderate the discussion.

Every table is connected through a tablet and a local wireless network to a central server so that the participants' comments and the individual preferences of the polling sessions may be recorded after each discussion by a team of people facilitating the engagement.

The 'engage' team will work on integration of collective outputs so as to give feedback to participants. At the end of the engagement workshop, an instant report developed in real-time during the engagement, with the main results of the work performed, will be produced and distributed to all participants.

Context for the Roundtable Discussions

About the proposed EquiPlace project

Where we live profoundly shapes how well we live. Across Northern Ireland, poor-quality housing, unreliable transport and environmental pressures such as air pollution and flooding are driving long-term health inequalities, among the widest in the UK. Yet the data needed to understand and address these challenges remain fragmented across systems and sectors. The EquiPlace Hub seeks to change that. By connecting and cocreating with engineers, data scientists, health researchers, policymakers and communities, we aim to integrate housing, transport and environmental data to reveal how infrastructure decisions affect health and inequality. This public data panel explored how better evidence, data linkage and AI-enabled modelling can empower local councils, health services and citizens to co-design healthier, fairer and more sustainable place - helping us cocreate how Northern Ireland can lead the way in data-driven, preventative solutions that provide healthier and fairer places to live for all.

Improving the data foundations that link housing, transport, environment and health is vital for the NIPDP and the public. These systems shape everyday health and wellbeing, yet their data are collected in silos, preventing joined-up understanding of how interdependencies and intersections in infrastructure can drive health inequalities. The public are directly affected through poor-quality housing, fuel poverty, long travel times, air pollution and flooding; issues that are known to increase illness, reduce quality of life and strain public services.

We invited NIPDP to consider: How can Northern Ireland create a trusted, interoperable data infrastructure that enables safe, equitable use of linked housing, transport and environmental data to reduce health inequalities and improve health related outcomes?

NIPDP's expertise was critical to ensuring transparency, public trust and inclusion in this process. Its guidance will help shape governance frameworks, privacy standards and data-sharing agreements that support innovation while protecting citizens.

Stakeholders include local councils, the Department of Health, Department for Infrastructure, Department for Communities, Department for Agriculture, Environment and Rural Affairs, NI Housing Executive, Public Health Agency, academia, Digital Catapult, and community organisations.

This NIPDP engagement discussion will inform policy and service design by embedding public values in data use, guiding equitable investment in housing and transport, and strengthening community confidence in data-driven decision-making for healthier, fairer and more sustainable places.

Building on prior participatory research, including citizen juries on transport, public deliberation panels on outdoor safety, and community co-design on healthy ageing

and accessibility, the proposal embeds lived experience throughout. These activities have validated our participatory systems and deliberative methods, ensuring the programme is grounded in community priorities and trust.

Given the nature of the large, consortium scale of the EquiPlace application, it is built on a foundation of multiple research and PPIE events over a couple of years that have brought us to this stage of being able to put this large project proposal together. This prior work has helped inform important background pilot, feasibility and PPIE for EquiPlace, and shaped its overall direction, highlighted important knowledge gaps and possible solutions. This NIPDP engagement event is then a specific focus on key aspects of EquiPlace that we would like feedback on, particularly around linking specific data types (transport, housing, environment) with health – this will directly support a Stage 2 (full bid) of EquiPlace (should we successfully get through Stage 1). If the current EPSRC bid is not successful, we will be seeking other funding opportunities to further the proposed work and the important insights and outcomes of this session will alternatively directly feed into that.

All of our prior PPIE research work is publicly available:

- **Citizen jury report on reducing car dependency:**
  https://www.qub.ac.uk/sites/cardep/pubs/#citizen-jury-report-how-can-car-dependency-and-levels-of-car-use-in-belfast-be-reduced-report-on-the-citizens-jury-on-car-dependency-in-belfast-january-2023-1693036-2

- **Public deliberation panels on outdoor safety:**
  https://www.qub.ac.uk/sites/groundswell/Filestore/Safer%20Streets%20Shared%20Voices.pdf

- **Community co-design on accessibility:**
  https://www.qub.ac.uk/sites/groundswell/Filestore/CCG%20Accessibility%20and%20Inclusion%20Report.pdf

- **Community co-design on healthy ageing:**
  https://www.qub.ac.uk/sites/space/Filestore/Healthy%20Ageing%20in%20Rural%20and%20Coastal%20Areas%20of%20Northern%20Ireland%20Challenges%20and%20Solutions.pdf

- **Community climate and nature action:**
  https://www.qub.ac.uk/sites/groundswell/Filestore/ClimateNatureAction_VisionforCCG_231023.pdf

For the full bid, we will be conducting three participatory systems workshops using Ulster University's 'engage' platform to co-develop research goals, consent frameworks, and case study priorities. Governance includes a Community Steering Committee co-chaired by a community representative and academic PPIE Lead and Lived Experience Fellows embedded across work packages. Fellows will be paid, trained, and supported to influence data practices, interpretation, and dissemination.

A Lived Experience Fellow is a formal role within a research team held by someone who has direct, personal experience of the issues being studied, such as transport

poverty, housing insecurity, disability, chronic illness, or other forms of social or health disadvantage.

Core Functions

- Co-produce research by working alongside academics to shape research questions, study design, and interpretation of findings.
- Represent community perspectives in governance structures (e.g., Steering Groups, Ethics Committees, Work Package boards).
- Support engagement with participant groups, ensuring methods are accessible, inclusive, and ethically grounded.
- Contribute to knowledge translation, helping ensure that outputs are meaningful and usable for communities and practitioners.
- Provide reflexive insight into how lived realities intersect with system-level factors such as transport, housing, and environmental constraints.

How It Differs From Traditional PPI Roles - a Lived Experience Fellow is:

- appointed through a transparent process,
- paid for their time,
- embedded within the Hub, and
- given decision-making power, rather than being consulted only at discrete points.

The Fellow will receive training, mentoring, or professional development to support their role, recognising their contribution as equal to that of academic and policy partners.

NIPDP's consideration will complement these activities by providing independent, public scrutiny and guidance on data ethics, transparency, and interoperability. Its input will ensure community-informed governance principles are aligned with broader public data standards such as those promoted by the Responsible AI Hub of the AI Collaboration Centre (AICC), which was covered as part of the introductory presentations ahead of the engagement session on the day, strengthening legitimacy, accountability and impact. Together, these engagements create a robust foundation for equitable, trustworthy data use in health and infrastructure planning across Northern Ireland.

Engagement Topics

The engagement discussions were divided up into the following 4 main topics:

- **Discussion 1: Icebreaker - What is your understanding of the impacts of housing, transport and environment on health; we would need to link your personal health data such as medication use, GP visits, hospital admissions, with the housing / transport / environment data. What is your perspective on this?**

- **Discussion Topic 2: Data capture may involve use of sensors/devices in the home, such as for mould, indoor pollution. What is your perspective on this and what data from housing, transport and the environment do you think is important to capture for health?**

- **Discussion Topic 3: What level of information would attendees like to see about health impact pathways?**

- **Discussion Topic 4: If the EquiPlace Hub is established in Northern Ireland, how would participants like to see outcomes and data solutions disseminated?**

Format of the Engagement

The topics above formed the basis for discussion on the day. The overall structure of the engagement was as follows:

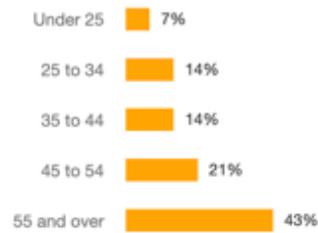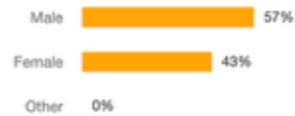| 09.00 – 09.30	Welcome & Registration Tea & Coffee	
09.30 – 09.45	Seat Panel for 09.45am start	Frances Burns, John Wilson, Liz Nelson
09.45 – 09.50	NIPDP Introductions	Frances Burns
09.50 – 10.00	Overview of NIPDP engagement session & Discussion Guide	Jonathan Wallace (Ulster University)
10.00 – 10.15	Introduction to Equiplace Proposed Project and its Objectives - Presentation	Ruth Hunter(Queens University)
10.15 – 10.45	'Responsible AI: What is it, Why does it Matter? - Presentation	Tadgh Hickey - Head of AI and Digital Ethics Policy, AICC
10.45 - 10.50	engage Initial Polls – audience demographics & Initial Audience Understanding Gauging Poll	Jonathan Wallace
10.50 – 11.10	**Discussion 1: Icebreaker** - What is your understanding of the impacts of housing, transport and environment on health, we would need to link your personal health data such as medication use, GP visits, hospital admissions, with the housing / transport / environment data. What is your perspective on this?	
11.10 – 11.15	Feedback on Icebreaker Discussion	Jonathan Wallace
11.15 - 11.35	**Mid-Morning Break**	
11.35 – 11.55	**Discussion Topic 2:** Data capture may involve use of sensors/devices in the home, such as for mould, indoor pollution. What is your perspective on this and what data from housing, transport and the environment do you think is important to capture for health?	
11.55 – 12.00	Feedback on Topic 2 Discussion	Jonathan Wallace
12.00 - 12.20	**Discussion Topic 3:** What level of information would attendees like to see about health impact pathways?	
12.20 – 12.25	Feedback on Topic 3 Discussion	Brian Cleland
12.25 – 12.45	**Discussion Topic 4:** If the EquiPlace Hub is established in Northern Ireland, how would participants like to see outcomes and data solutions disseminated?	
12.45 – 12.50	Feedback on Topic 4 Discussion	Brian Cleland
12.50 – 13.00	Closing Comments / Wrap up ahead of Lunch	Jonathan Wallace, Frances Burns
13.00	Close & Lunch	

Engagement Demographics

What is your age range

Under 25	7%
25 to 34	14%
35 to 44	14%
45 to 54	21%
55 and over	43%

What gender do you identify with?

Male	57%
Female	43%
Other	0%

What county do you live in?

Antrim	43%
Armagh	14%
Derry/Londonderry	7%
Down	36%
Fermanagh	0%
Tyrone	0%
Outside Northern Ireland	0%
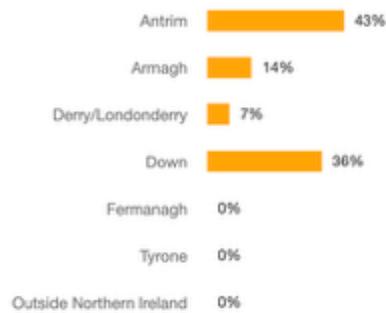
Do you live in a rural or urban area?

Rural	50%
Urban	50%

Discussion Outcomes

Discussion 1: Icebreaker - What is your understanding of the impacts of housing, transport and environment on health, we would need to link your personal health data such as medication use, GP visits, hospital admissions, with the housing / transport / environment data. What is your perspective on this?

Discussion 1 Synopsis:

Impact of Housing Quality on Health: The quality of housing, including issues like toxic mould, dampness, and accessibility to services, significantly affects the health of residents. Poor housing conditions can lead to respiratory illnesses and other health problems.

Transport and Isolation: The availability and quality of transport, especially in rural areas, impact mental health and overall well-being. Limited access to public transport can lead to isolation and difficulties in accessing essential services.

Environmental Factors: Environmental factors such as pollution, proximity to motorways, and the presence of toxic substances in the air can have severe health implications. These factors are particularly detrimental to individuals with respiratory diseases.

Health Data and Privacy Concerns: There are concerns about the use of personal health data linked to housing, transport, and environmental data. Issues around consent, anonymisation, and the potential misuse of data by "bad actors" are significant.

Policy and Resource Allocation: Effective policies need to be implemented to manage data properly, ensure fair service delivery, and address the specific needs of vulnerable populations such as older adults and those living in rural areas.

Table1

- Quality of home
- Access to water
- Damp
- Gas, spillages
- Access to services
- Isolated
- Off the beaten track
- Poor rural transport
- Less access to services in rural areas
- Poorly connected transport
- Poor night-time provision of public transport
- Limited frequency of public transport in evening
- Poor communication re: changes to transport timetable
- Need better understanding of de-identified data
- Worry of people knowing your location
- Worry of 'bad actors' use of data
- Could lead to displacement of funding of high need areas
- Transparency over use of data

Table2

- Living in a house with mould and respiratory illness
- Dry, safe housing
- Morbidity
- Availability of transport
- Rural isolation
- Accessibility of places I want to go based on where I live
- Mental impact of isolation
- Car pollution
- Mental health impacts
- Access to parks and impact on mental health
- Types of accommodation
- Stress level impact
- Proximity to parks
- Cost of transport
- Cost of housing in rural areas
- Availability of housing
- Mental health
- Proximity to city centres
- Proximity to social amenities
- Connected amenities
- Closeness to health services
- Pollution
- Diet and inherited health impacts alongside environment, transport and housing
- Policy makers responsibility for balancing
- Individual responsibility
- Enablers and choice
- Education and awareness
- Good health and bad health factors
- Anonymisation of data
- For the good of society
- Policy needs to be put in place to manage data properly
- Why is data being used?
- Who is accessing?
- Industrial usage of data
- Where data is being used and how it is being used
- Air quality data
- Noise pollution
- Light pollution
- Tailpipe emissions

Table3

- Transport and location make it difficult
- Quality of accommodation impacts health
- Affordability of services impact wellbeing
- Services are impacted by location; you can be asset rich but poor based on availability of services
- Outsourcing services - potential to underserve communities
- Rural is underserved based on remote basis
- Mould in housing
- Cost of heat
- Fair spread of service delivery
- Articulation of services
- Poor signposting for services
- No service increases health and wellbeing deterioration
- Support is limited
- Complexity means you can be limited to services
- Special abilities require a fight for service or representation
- Who can support the accessibility?
- Transport - governments ask for public transport use, but it's not good enough / reliability and network.
- Electric cars are not suitable for the current infrastructure
- Access to electric
- Electric outages
- Transport routes are poor and unusable
- Mortality issues, fear
- Mistrust in data use and recording
- Does consent leave you vulnerable for anything
- Changing your housing facility
- Is the house fit for purpose for the person in the home?
- Changing house setup for people with health issues
- Limited accommodation for specific circumstances
- Legacy housing poorly considers the needs of occupants
- Pollution vs necessity
- What's the cost effectiveness of monitoring?
- Transport monitoring, stats need to be improved
- Home working vs office push - traffic difference
- Data visibility pre, during, and post Covid
- Air quality improved during Covid
- Stress impact

Table4

- Impact of life
- High possibility of toxic mould
- Who is responsible for this?
- Families are getting benefits within social housing situation
- What is their responsibility?
- Social Housing - highest
- Is it the housing executive who is responsible?
- Older housing - costs associated
- In social housing - there are plans to maintain those renting but they miss the houses that are owned in these settings.
- Mould - implications on respiratory diseases asthma / COPD
- Seems to be more instances in social housing of respiratory disease
- For those living rurally they need a car due to poor public transport network / availability / reliability.
- Isolation
- However, the air seems cleaner
- For older people - there are worries of not being able to drive and access to services and shops etc. which may be an issue
- How do farmers and those who live rurally ensure houses are maintained?
- There should be transport services for those living rurally, in particular for the aging population
- Elderly who are not connected to the Internet and can become isolated very quickly
- Require neighbours to help each other
- Congestion in cities has gotten worse in past few years
- People are getting worse in relation to respiratory disease
- Living close to motorways houses are covered in black particles
- Air purifiers needed
- Those with respiratory diseases are getting worse as the pollution is getting worse
- Aging and access to services and in particular rural settings
- Finances - lot of money being spent on the wrong things
- Impact of weather and flooding
- Money not being spent on the drainage system
- When we have issues with flash flooding the drains are blocked and that impacts on traffic and journey times etc. - we come to a standstill
- The city of Belfast comes to a standstill with the traffic light patterns that bring in traffic and locks them in.

Discussion Topic 2: Data capture may involve use of sensors/devices in the home, such as for mould, indoor pollution. What is your perspective on this and what data from housing, transport and the environment do you think is important to capture for health?

Discussion 2 Synopsis:

- **Privacy and Data Security Concerns:** Participants expressed significant worries about the collection of data from sensors in homes, including fears that this information could be misused or invasive. They emphasise the need for transparency about what data is being captured and how it will be used, as well as concerns over who has access to this information.

- **Health and Environmental Monitoring:** The discussion highlighted the importance of capturing specific data points such as temperature, humidity, air quality, and moisture levels to monitor health risks like mould, dampness, and pollution. This data can help inform targeted support for vulnerable populations.

- **Legal and Ethical Considerations:** There were discussions about the legal framework surrounding data collection, including who will have access to the data and how it can be used. Participants raised concerns about potential misuse by insurance companies, landlords, or the government and stressed the importance of consent and understanding from participants.

- **Equity and Access:** The conversation touched on the importance of ensuring that data collection efforts are equitable, with access to sensors and technology not limited by socioeconomic factors. Rural settings were highlighted as underserved areas, and there was a recognition that different types of housing (private vs. social) may require different approaches.

- **Purpose and Benefits of Data Collection:** Participants emphasized the need for clear communication about why sensors are being used and what benefits they will bring. There was a strong belief that the data collected should lead to actionable insights and improvements in health outcomes, particularly for vulnerable populations.

Table1

- How do we stop people misusing the system? (e.g., purposefully not putting on heating to 'cheat' the system
- In favour of better data and knowledge from sensors re: pollution/mould in the home
- Want access to the data so that they can do something about it themselves
- Who has access to the data? (e.g., if I want to sell my house and mould has been detected)
- Can insurance companies access the data?
- Dampness a growing issue
- Older housing stock and dampness
- Data on water quality
- Already have 'smart' thermostats that report back to Google
- Integration of smart home devices (thermostat; lighting etc.)
- Concerns re: knowledge of location
- Concern that it might come a form of surveillance if too much monitoring
- Not ok with cameras
- 'Bad actors' and possible misuse of data e.g. insurance; access to funding/services)
- Issues of risk with location

Table2

- Depends on the type of sensor
- Video/sound/temperature/humidity - type of sensor is important
- Private or social housing, privately owned and rented - does the type of housing matter when setting rules?
- Legality
- Already CCTV everywhere so do more sensors matter?
- Sensors in home, particularly for social housing, should be part of the contract
- Good communication on why sensors are there
- Invasion of privacy - how to manage understanding of what it is for?
- Messaging on why monitoring is there
- Big brother is watching - how to overcome this feeling?
- Why the sensors are installed is important
- High lands and lowlands in Belfast - tendency for lowlands in Belfast to have mould issues - this is known.
- Smoke alarms required already. It needs to be clear that these are for the good of the person
- Individual preference with the right to refuse
- Would everyone be happy to provide statistics?
- Individuals need to understand why this is important and what the positive outcomes of participating would be
- If interventions are in place, safeguards to understand if properties are occupied or second homes
- How different bodies work together to get the necessary outcomes (NIHE, Clanmil, etc.)
- Lots of moving parts
- Collecting air quality, particulate matter
- Capturing data on personal movement - capturing personal car usage statistics
- Messaging on how to use different transport modes more effectively driven by data
- Users should need to provide data as part of their entitlement to use public roads and services
- So long as sensor data is anonymised
- Clear messaging on why transport data is needed and how it links to service provision
- Link of data to insurance?
- Every situation needs different data sets
- Is there enough made of data that is currently available and how is it stored
- Walking/cycling sensor data would need to be opt-in
- Concerns about how personal data may be used to determine NHS services
- Ensuring data cannot be used to discriminate based on data
- Ensuring sensor data is population based for health decision making
- How do you ensure that data is representative of everyone
- Do all socioeconomic data groups have equitable access to sensors or able to provide data
- Education across all demographics
- Urban versus rural and availability of assets to share data from
- How information is disseminated

Table3

- Temperature
- Moisture levels
- Impact of heating on wellbeing
- Need for explanation
- Data use transparency
- Sceptical
- What are the rules for selecting the areas
- Areas of deprivation
- Rural setting is underserved
- Permission and consent for householder
- Difference between heating source, gas versus electric
- Rates agency as a data informer
- Occupancy transparency
- Census as a data source for choosing housing
- Indoor pollution unclear
- Control of internal burning
- Fireplace in old versus new houses
- Electoral register linked to people
- Transport still needs to connect for use
- What about public places versus home sensors
- Pushing people outside the home may be better
- Need understanding of existing data
- Working doesn't translate to payment of housing heat
- Meters are everywhere
- Not everything should be metered
- Proximity to car pollution impacts health
- Divide between pensions receivers
- Pensioners don't need to travel as much, so are home more
- Devices are intrusive
- Benefit versus feasibility
- Time spent on house impacts need for need
- Need for data
- Monitoring of asbestos is important
- Surveys for buying are too late to change anything
- Sensors for what?
- Your job impacts your home health
- Is home intervention too late (need to control work)
- Pollution is more frequent outside the home
- Accountability
- Who is going to be in charge of it?
- Who is responsible for it?
- Put money into public transport and other areas first
- Mould and damp is concern
- Monitoring which areas is unclear
- People are their own issues
- Radon exposure and other areas
- People discount their own danger
- Pylons and masts are taking away from real issues
- Type of sensor depends on it

- Health capture is important
- The data is insightful
- Home environment is limited as the instigator of issues
- Home is more personal and should be protected
- Giving your information for more
- Rural life has more 'acceptable things'
- Life is harder in rural living, including housing
- Data is already everywhere, why not in the home?
- Water sensors in the home for quality
- Data already exists in other places, why the home?
- Too much changing needs, can't keep up with sensors and devices
- Hard to change peoples' opinions and views
- Issues are more common
- Life expectancy is not going down, is this a problem?
- Treatment is better, are we focusing on the right area
- More older people than ever, need to protect them
- Older people are harder, maybe don't need as much
- House location impacts your need for data
- Proactive health service control and management
- Proactive management
- Correlation statistics
- Does sensorising the home include wellbeing monitoring?
- Wellbeing monitoring is harder, like diet
- Need to provide better transport for data collection
- If transport is not better, does it actually matter on the data capture?
- Education on data capture matters
- Education matters for service and impact
- Heating is the biggest issue

Table4

- Concerns over what information is being captured
- Who will be using this information? Could it be used against you?
- How to ensure it is being used for 'good'?
- If the data being collected if it is non-personal non-identifiable should be ok
- If it's a recording then its invasive
- Alexa listens - who can we guarantee the government or private companies don't listen in?
- How can you trust them when they say they aren't listening or collecting personal private information?
- We recognise we are already giving our information for free every time we use the Internet etc. anyway
- Need to understand the value or benefit in the long run
- If it's a mould or humidity sensor - are they then going to solve the issue and provide a dehumidifier?
- This can help social housing to target their help
- It could be an issue for people who own their own houses as they won't get the help and it will develop inequalities
- We accept things like mould too easily

- If in rented accommodation and paying rent and could well afford to get the mould fixed, why should they get the benefits handed to them? Assessments are needed because people working may not have the spare money to sort mould issues for example.
- Issues around inequalities and who is getting the support
- Location data is important to enable analysis and decisions to be made
- Understand the demographic in each area
- Targeted support required underpinned by the right data
- Using the right data to make the decisions
- There is a perception that data is being collected but with no understanding of what it is being used for
- The motorways have signs showing the pollution levels but what is being done about it?
- Clean air zones around the UK in selected hours and drivers having to pay - congestion charges.
- The clean air zones are creating dirty air zones around them!
- Detection of mould is one of the most important things that could be measured. It's not always down to humidity.
- Sensors need to be placed in the right place in a house
- Predicting the potential for mould or other issues is as important
- If the collection of data is done right it will support the services to provide the information to the citizen so that they know what's happening and with advice as to how to resolve it.
- Gathering data should always lead to action otherwise people will be left with information that is worrying and no way forward
- Data could be collected from sensors in the bricks to identify problems with brick built buildings this information could be used by the government to analyse degradation over years and to predict and get ahead of the issue
- Personal health information together with collecting data about mould and housing conditions can be really powerful to understand individual issues needs and resolutions required.
- By uncovering the issues puts an onus on the government or landlord or owner to then resolve the issue.
- Litigation issues responsibility of authorities to sort issues that are affecting peoples quality of life and outcomes
- The device itself doesn't have to transmit the data but it can be shared - however needs to be clearly visible if the citizen is sharing it via the serial number or whatever - use of a portal with citizen passwords for consent to the sharing of information?

Data Sources Ranking By Table

Table1

1. Temperature
2. Indoor/outdoor air pollution
3. Access to technology/internet moderation

Table2

1. Heat/humidity house
2. Air pollution and particulate
3. Noise pollution

Table3

1. Heating & house standard quality information
2. Access to transport
3. Access to digital infrastructure and communication
4. Reliable utilities

Table4

1. Location data
2. Age data
3. Health data

Discussion Topic 3: What level of information would attendees like to see about health impact pathways?

Discussion 3 Synopsis:

Personalisation and Consent: The level of information shared about health impact pathways should be personalised based on individual needs and consent. People want to decide what information they receive, and this should be balanced with the need for accurate and timely alerts.

Trust and Transparency: Building trust through transparent communication is crucial. People need to understand the source of data, how decisions are made, and be assured that their privacy is protected. Misinformation and disinformation are major concerns.

Severity-Based Notifications: The severity of the impact and urgency should determine the level and type of notification. Different risk levels (low, medium, high) require tailored information delivery methods to avoid overwhelming recipients.

Practical Utility of Information: The information should be actionable and relevant to the individual's situation. People want data that helps them make informed decisions about their health and safety, such as knowing pollution levels or traffic conditions.

Balancing Over-Information: There is a delicate balance between providing enough information to be helpful and not so much that it leads to paralysis or mistrust. Ensuring notifications are reliable, timely, and personalized while avoiding 'crying wolf scenarios is essential.

Table1

- Important not to scaremonger
- Hard to balance what is too much information
- Depends on level of severity
- Want access to data so can do something about it themselves but don't want to be told what to do
- Personal level info would mean that data has to be de-identified which privacy causes concerns
- Depends on trustworthiness of source of data
- Lack of trust in government
- Want internet and electricity personally targeted so know when there are issues/delays in services
- Personal data on electricity use (financial impact)
- Concerns over who owns the data - water companies/other utility services
- Concerns over use of media on dissemination of information
- But use of this information can also lead to a reaction and people doing something about it
- Need to use data to be proactive rather than reactive!

Table2

- What are health impact pathways and why do they matter?
- The more personalised the data ask, the more consent required from the individual
- Depends on severity of impact and urgency (i.e. flood incoming, text to all residents needed)
- How does the data fit into the pathway?
- Three levels of warning - low, medium, high risk outcomes and delivery of information dependent on risk level

- NIDirect - all NI citizens could decide how they wanted government information provided to them and what information (non-complete project)
- Citizen to decide what information do they want to receive based on their personal circumstances
- No one-size-fits-all solution
- Citizen needs to be involved in determining what information they need!
- Create information bands for severity/impact of outcome based on personal circumstances
- CPR number in Denmark - access to all systems. We need a centralised system built around a single reference, but there may be privacy concerns
- Making it easy for the individual to access data that is useful to them
- How to ensure that data is shared in a way that doesn't create panic or distrust?
- How to create and nurture trust in government?
- High levels of trust in policy makers and transparency in how data decisions are being made
- High level risks need a higher level of information on the reason this particular issue is high risk
- Every individual situation will require different information. Sensitivity of the individual
- Balancing the risk of the data to be shared with the risk to the person of sharing that data
- BCC rates bill summary showing how data has been used each year - your data has been used to inform X,Y,Z at a top level
- Quick and easy to access data sets
- How this data is used by third party (insurance, etc.)
- How to deal with commercially sensitive data and how this may be misused?
- Each use case for the data needs to be clear and documented!
- Users should be monitored and registered
- Citizen consent and options are crucial
- Covid app was a good example of information dissemination from government
- Needs systems linked up to make it easy to navigate

Table3

- Downstream impact is important to articulate at an accessible level
- Depends on the impact
- Need to tell me why
- Want to know if impacts individual health
- Need to understand the degree of impact
- Need to localise messaging to be relevant
- Notification is helpful, but could lead to paranoia
- What's the enforceability of these things?
- Would people learn from the past?
- Look at the Covid example, people just started ignoring alerts and rules
- How do you communicate the impact better?
- Personal responsibility and autonomy
- Educating people about smart choices
- Public Information should be about learning / education
- The balance is too difficult
- Everything else is personalised, why wouldn't these alerts be?
- What information do you need to give the correct level of alert / personalisation?

- Enforceability is difficult and complex
- Changing views on health interventions (vaccinations for example)
- Information sharing is not on legacy channels
- The information and notifications need to be on the right areas
- Medical based risks are worth notification, but must be limited
- Examples from the sources, for example lakes and natural resource indication on water quality
- Granular information from multi-modal sources improve your information
- It depends on the impact
- Saving lives, individual, if not then generalised
- The mechanism for sharing is important
- Any notification still requires a communication channel for personalisation
- Public forums are less invasive
- Risk levels - opt in an out of levels
- Unintended consequences (general notification may impact vulnerable groups, women experience in violence with safe phones)
- Information is good, and being better informed leads to better decisions
- Danger of 'crying wolf' at the risks of AI, over-sharing
- Impact on mental health
- Mental health and correlation of over information
- Personal relationship as a predetermined factor (link to doctor)
- If a public pathway exists, why create another mechanism?
- Information pass-through needs to be reliable
- Misinformation and disinformation are too common; how do you prove reliability?
- More sharing, requires better education
- Underserved groups
- Grey levels which depend on the impact
- Impact includes analysis of personal and social impact
- Context matters
- How do you inform the impact basis for the notification or intervention?
- The consequences may be the better form of communications, not the personalisation
- Communication delivery matters
- Traditional communication and media channels are growing less relevant
- Mistrust of data sources
- Difficult to draw line when you don't know the source of truth
- Over information is overwhelming
- Digital divide impacts engagement
- Does personalisation and intervention come at cost
- Society is changing, but the personalisation doesn't mean it's better
- The generational divide impacts the channels for communication
- How do you navigate individual trust?

Table4

- Pollution levels in the city at different times of day
- How the pollution settles in the air and where within the city so that people can decide when best to come into the city
- Traffic levels and at different times of the day - linked to pollution and respiratory conditions
- Receiving information about pollutions levels so that an individual can manage health issues
- Information can be opted into or out of
- How Granular should the information be?
- During Covid people were informed of being in contact with someone who was infected. So, there's a model already that we could learn from and could replicate
- Need to ensure there are walls between data, i.e. you don't want the transport or housing guys to know anything about your personal health data
- Health service clinicians - provision of data as provided by the citizen rather than authorities sharing information themselves
- Opting in and out of receiving information and sharing information is paramount
- Too much noise if receiving messages and information about everything - you then start ignoring it. You become desensitised to the amount of information available.
- Formation should be shared on the issues and benefits of issues such as congestion etc. and increase awareness with the public and to enable them to make better personal decisions.

Discussion Topic 4: If the EquiPlace Hub is established in Northern Ireland, how would participants like to see outcomes and data solutions disseminated?

Discussion 4 Synopsis:

Data Dissemination Methods: Participants highlighted various methods for disseminating data, including online portals, personalised apps, large screens in cities, and public health information through new communication channels. There was a strong emphasis on ensuring that the information is accessible to all, including those without digital tools.

Transparency and Trust: Building trust is crucial for the success of the EquiPlace Hub. This involves ensuring transparency in data usage, clear communication about who has done what, and a non-profit, non-commercial stance. Participants also emphasised the importance of independent analysis to avoid government bias.

Actionable Outcomes and Impact: The hub should focus on providing actionable insights and tangible outcomes. This includes having clear metrics of outcomes, linking data to actionable interventions, and ensuring that the information gathered leads to positive changes. Participants also stressed the need for agile action plans and clear communication of results.

Collaboration and Communication: Effective collaboration with various agencies, academics, and other stakeholders is essential for improving messaging and ensuring that the hub's objectives are met. Participants suggested regular updates, targeted marketing, and clear communication with leadership to ensure maximum impact.

Accessibility and Inclusivity: Ensuring that the information is accessible to all, including vulnerable groups like older people and those with reading difficulties, is vital. This involves providing information in multiple formats (e.g., video, paper documents) and considering different levels of detail required by various groups. There was also a concern about the potential misuse of data and the need to ensure that information is not sold for commercial gain.

Table1

- Needs to also have an action plan attached to the results of the data
- Needs results coming from a recommended source and the recommendations of the findings
- Need to be succinct
- Let the individual decide what they want to find out more about
- Give 1 page summary that then provides links to further information
- Sceptical about use of AI in research
- Video and different formats
- Let people's curiosity lead them through the information/document
- Transparency in terms of funding spent and what was their outcome/impact

Table2

- App or online portal is probably the easiest
- Consider access for those without digital tools
- NIDIRECT
- Ensuring access for older people
- Ensuring that if sensors are being deployed that the participants know how their data was used
- Paper information/documents would still be needed with summary data
- One pager summaries
- Teaser information
- Once a year update to be circulated
- Metrics of outcomes
- You said… we did…
- Good that academia is involved rather than straight to government department

- Good to have analysis undertaken independently so there is no government skewing
- Trust in academia versus trust in government
- Academic influence to help steer direction
- Needs to be clarity on who has done what and that the hub is completely non-profit non-commercial to build trust
- Making sure that no one is in it for financial gain and that information will not be sold for commercial gain
- Articulate real life benefits from other countries having done this before

Table3

- Positive if it impacts people fairly and equitable
- Depends which departments and bodies sign up to it (Housing Executive)
- Requires input and resources to be connected (which sounds positive but complex)
- How do you prove value from the use of this type of solution?
- Information gathering is good, but what is the buy-in?
- Can you actually calculate the costs benefit analysis?
- Potential is good, but what is the tangible outcome
- Public health information must be communicated in new channels
- New channels for communication need to be opened (non-traditional methods)
- People need more than just text (think of reading population and ability)
- Need for more education rather than later intervention
- Need to think about the disease acting across different age groups (intervention early, versus working, versus pensioners)
- Need to select the most appropriate means of intervention
- Need to connect to social media and media outlets for better dissemination
- Public Service Broadcasting might need to reinvent itself for public dissemination
- Not enough to just have the information, need to communicate the action
- Need to collaborate with agencies and others to improve the messaging
- Targeted marketing and messaging makes it meaningless, cannot become a personalised marketing campaign
- Cannot overload, so needs more conscious and targeted to specific groups / scenarios
- Can you link the data and impact to an actionable intervention (action path to address)
- Action plans need to be agile to inform and serve the messaging with actionable component
- Fear of information availability, but no action or tangible outcome off the back of it
- Personalised apps can support communication, but open up the risk of mis or disinformation
- People are less likely to speak to each other, digital channels are more frequently used
- Direct approaches to communications, short and succinct for impact and risk
- Need to think about what you are communicating, different levels may require single, or multiple channels
- Need to communicate the results and impact to leaderships, where can the insights prove the greatest value and impact
- If we don't connect the insights upwards to make real change, the impacts of the hub will not be met

- Need to be clear on the reliability of the data sources when delivering the message (safe spaces vs public spaces for communication)
- Need to create trusted groups, so that others can also share the information is different groups

Table4

- Online portal
- Through personalised apps
- Large screens coming into cities and regionals
- Targeted groups - voluntary groups
- Housing groups (not personal information). Transport companies. Health clinicians.
- Need secure walls between datasets unless agreed by the individual
- Information flows should be clear and transparent
- Access controls at different levels
- Should be easy to consent and also withdraw consent
- Need to show impact of gathering the data though to positive outcomes
- Need to be aware of the potential link of new data to peoples benefits being reduced
- Some people would like human interaction - many don't
- Just like Google/WhatsApp journeys can give you your personal journey and the information around pollution, mould, humidity, etc. is calculated tailored to the citizen and can give them a risk score or information on what you have been exposed to
- Consider sharing this information with SMEs and digital companies to develop innovation products and services tailored to citizens through apps etc

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