

SYNCHRONICITY

Open Call - Manchester Priorities



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MANCHESTER
CITY COUNCIL

Sustainable Mobility

City Centre Transport Strategy Update

Jonathan Marsh, TfGM



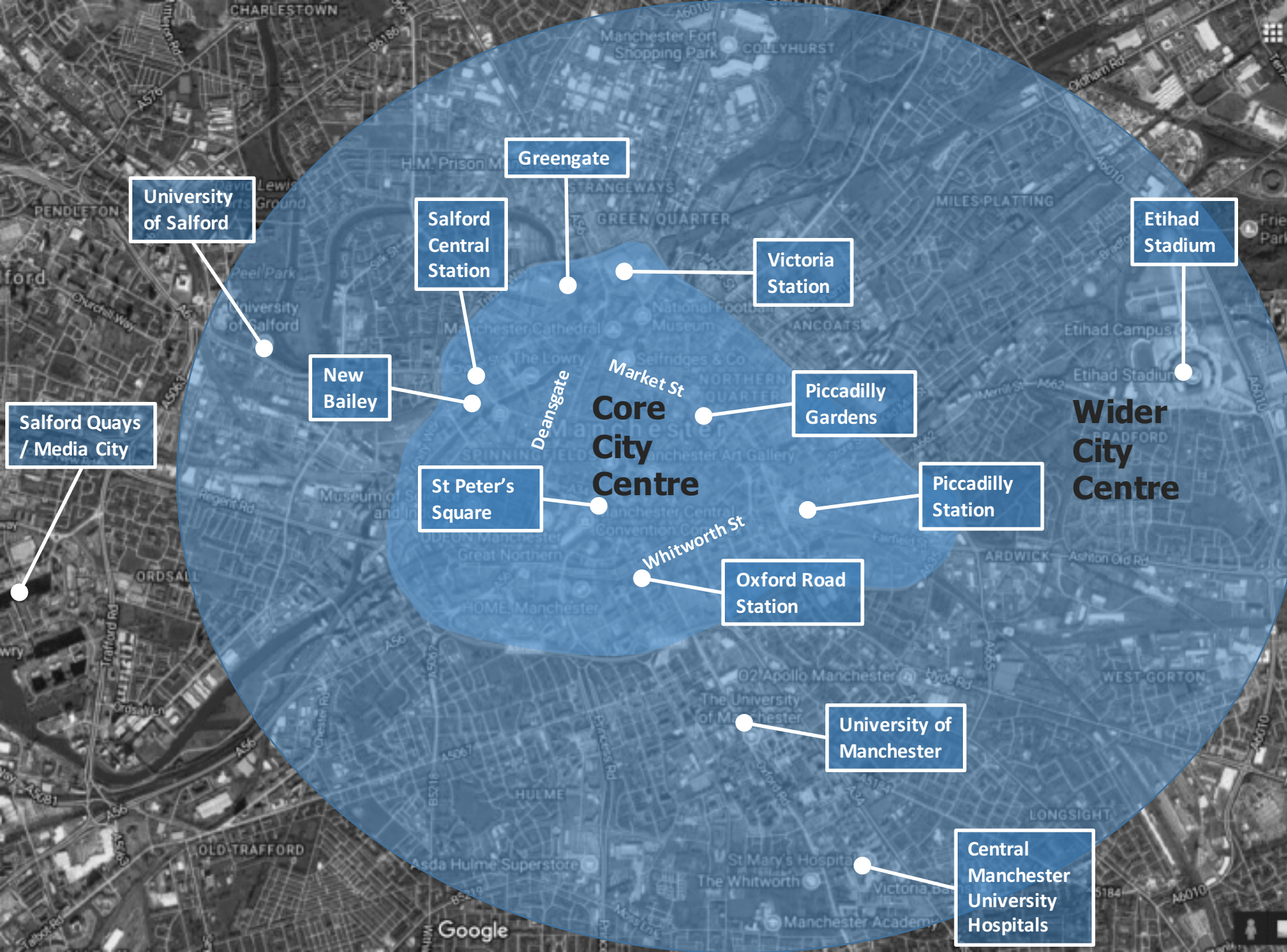
City Centre Transport Strategy Update

Jonathan Marsh, TfGM





Expanding City Centre



Key:

Core City Centre



Wider City Centre



A strategy for people and places



Theme 1:

Promoting a healthy and liveable city centre

- A legible and permeable city centre
- A safe and secure environment in which active travel modes predominate
- A city with high quality public realm
- A low emission centre



Theme 2:

Ensuring connectivity within an expanded city centre

- A transformed wider city centre area fully integrated with the wider city region
- Severance impacts of major infrastructure minimised



Theme 3:

Supporting a growing and moving 2040 city centre economy

- Delivering a Northern Powerhouse economy
- Increased public transport capacity and connectivity.
- Supporting a 24/7 and visitor friendly economy
- A city centre that embraces innovation

Future Challenges – Future City Street Design

- Kerbside space eg EV charging points, flexible space
- AVs / CAVs
- Wayfinding
- Servicing and deliveries
- New mobility systems
- Move more people with less vehicles
- MaaS
- Influencing travel behaviour
- Data and monitoring of people movement

Citizen Engagement



Key Focus for the Open Call

- How people interact with their communities and places?
- Where are the hot-spots for people on a day to day basis?
- How can we understand what makes those places popular?
- How can we monitor changes?

For example: Manchester tested the use of mobile phone data to look at visits to the Christmas markets, looking at pings in Albert Square and then where those handsets were 24 hours and 7 days before and after the visit. Could we do something similar across the whole city but at a fine level of granularity to allow local insight, looking for patterns (i.e. the typical flows within say a 7 day period) and then monitoring changes from the norms?

Data and insight

Currently organised around four key activities:

- Supporting system design
- Supporting service delivery
- Supporting case working
- Providing accountability / transparency

Data and insight - opportunities

Although a lot is already happening there are some fundamental requirements to ensure that these approaches can continue and evolve to meeting ongoing demand.

- **Data (inc Quality)** – supported by the Information Strategy.
Focus on three pillars (security, governance, analysis)
- **Tools (inc ICT)** – supported by the ICT Strategy.
Connection between ICT development roadmap, and ongoing assessment of the right tools to support our core questions
- **Skills** – supported by the Our People Strategy.
A need to develop our workforce to undertake (i.e. research & data science skills) and facilitate (i.e. information governance) analysis
- **Ways of Working** – supported by the Corporate Strategy and Our Manchester approach
The insight generated needs to be able to feed directly into policy and delivery decisions

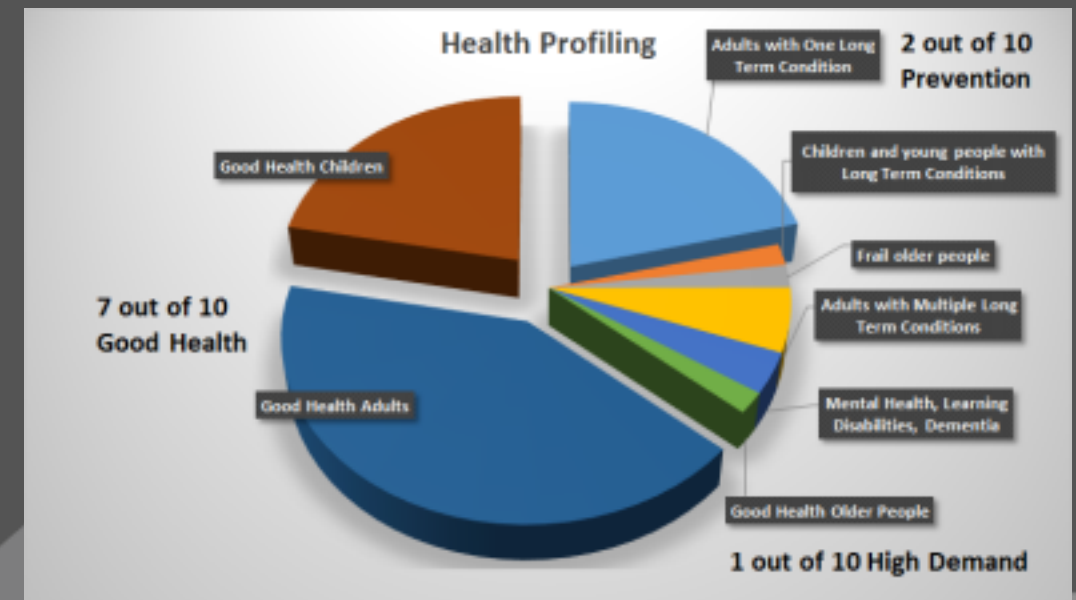
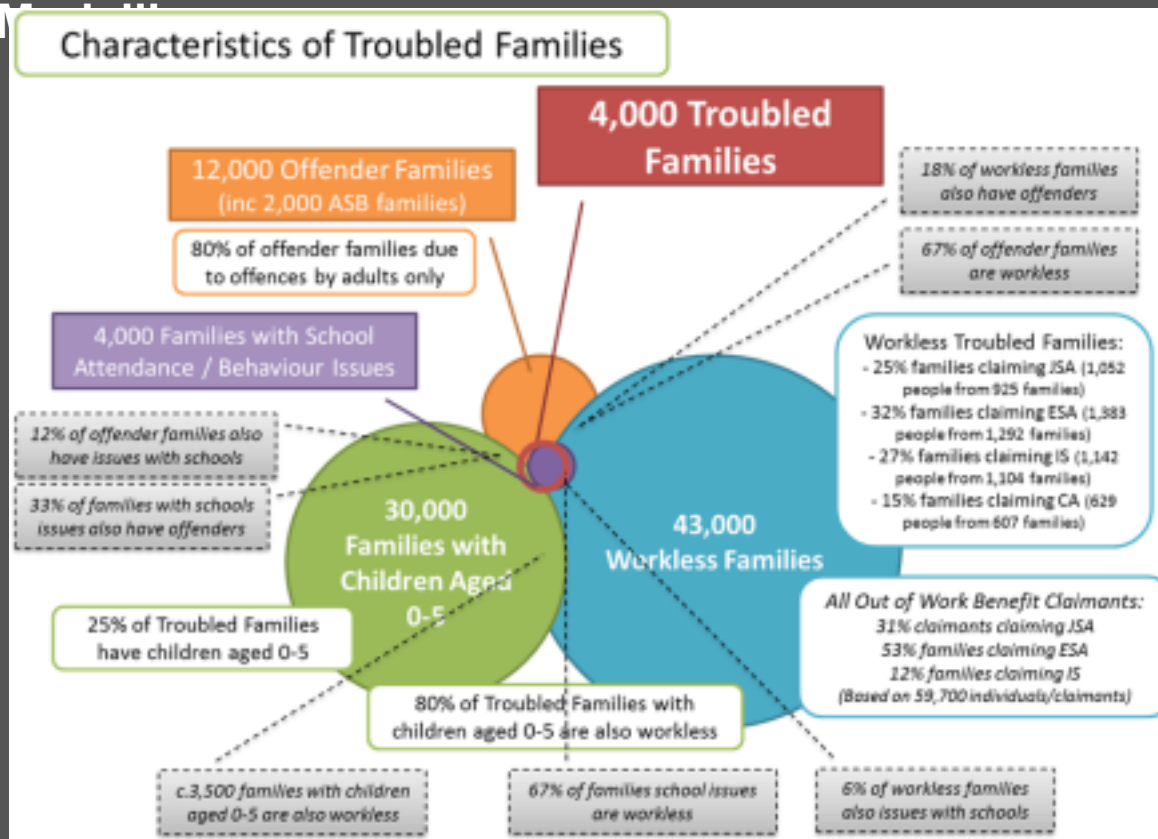
Understand the whole population

1. State of the City
2. Joint Strategic Needs Assessment
3. Population Modelling
4. Resident Personas
5. Resident Engagement and Consultation
6. Market Profiling (City Policy)

Positioning Reform into the wider context

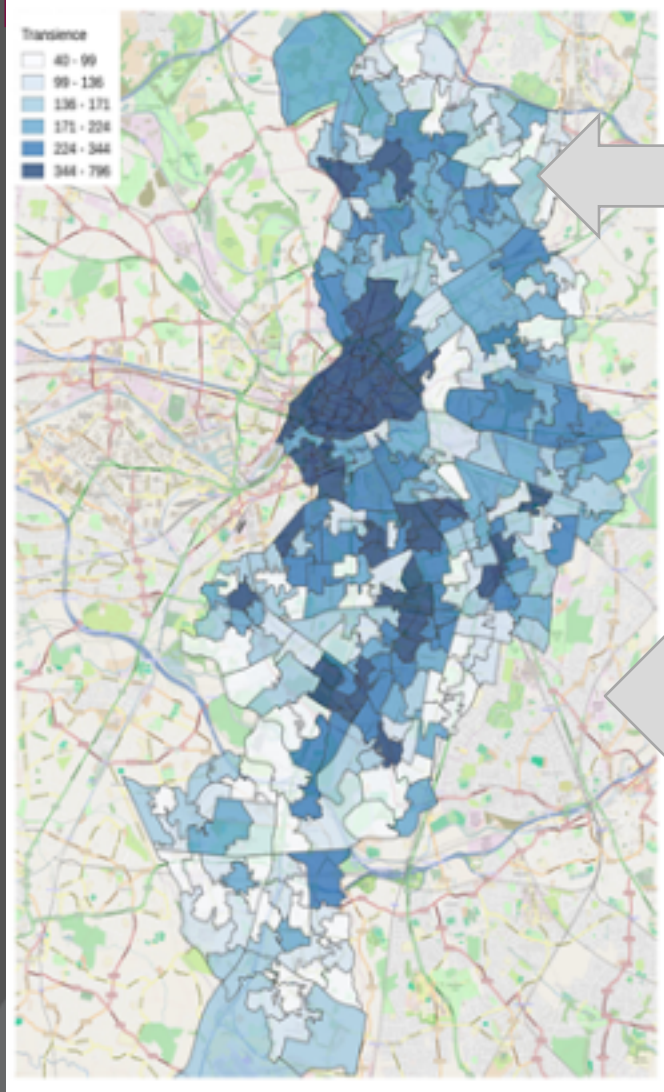
Complex Families a small part of the whole population

H&SC Population



Small proportion of population require high intensity support

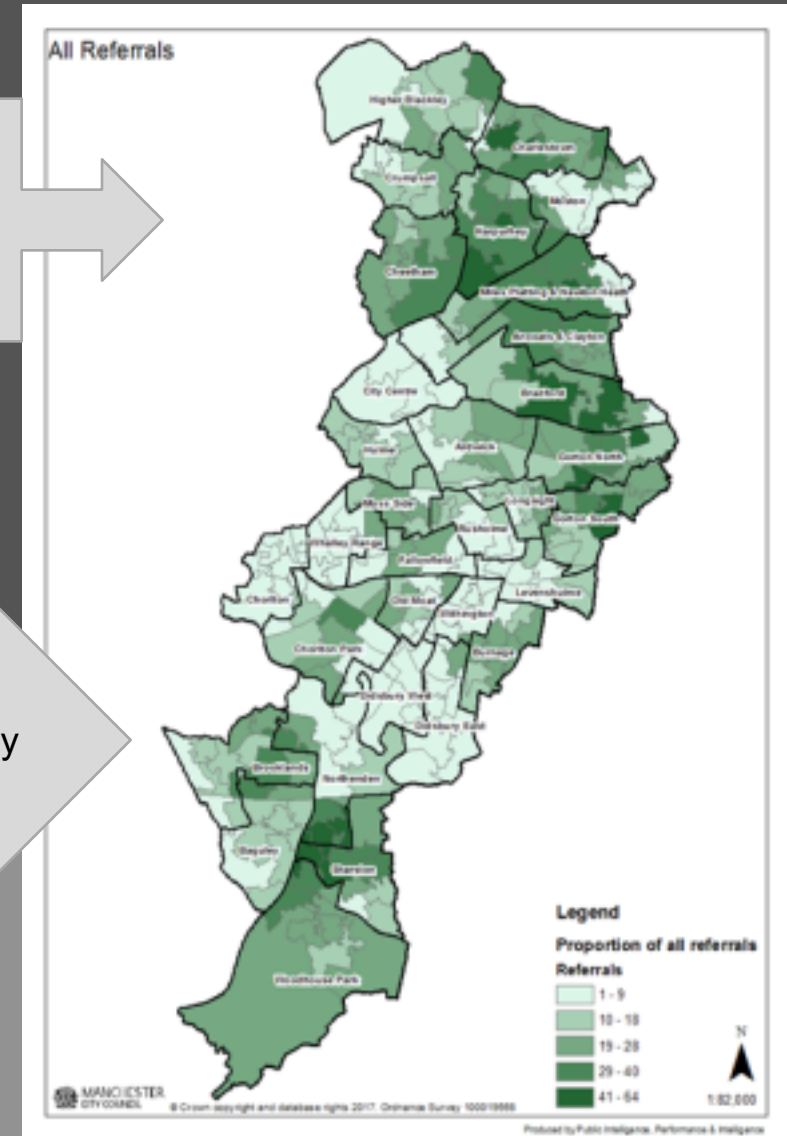
Understanding People & Place



High Council
Tax Turnover

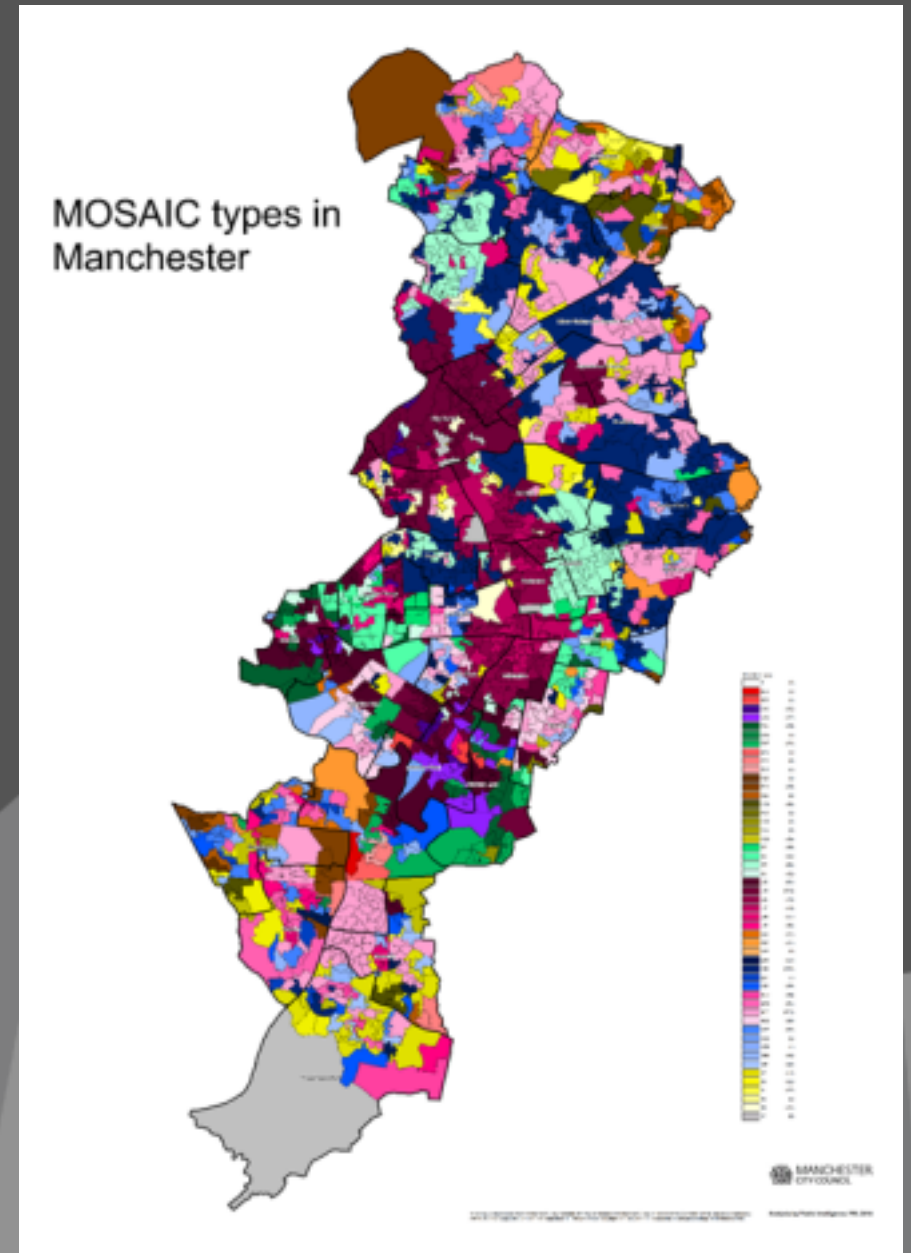
Complex
Families

Transient Places v Support Stability



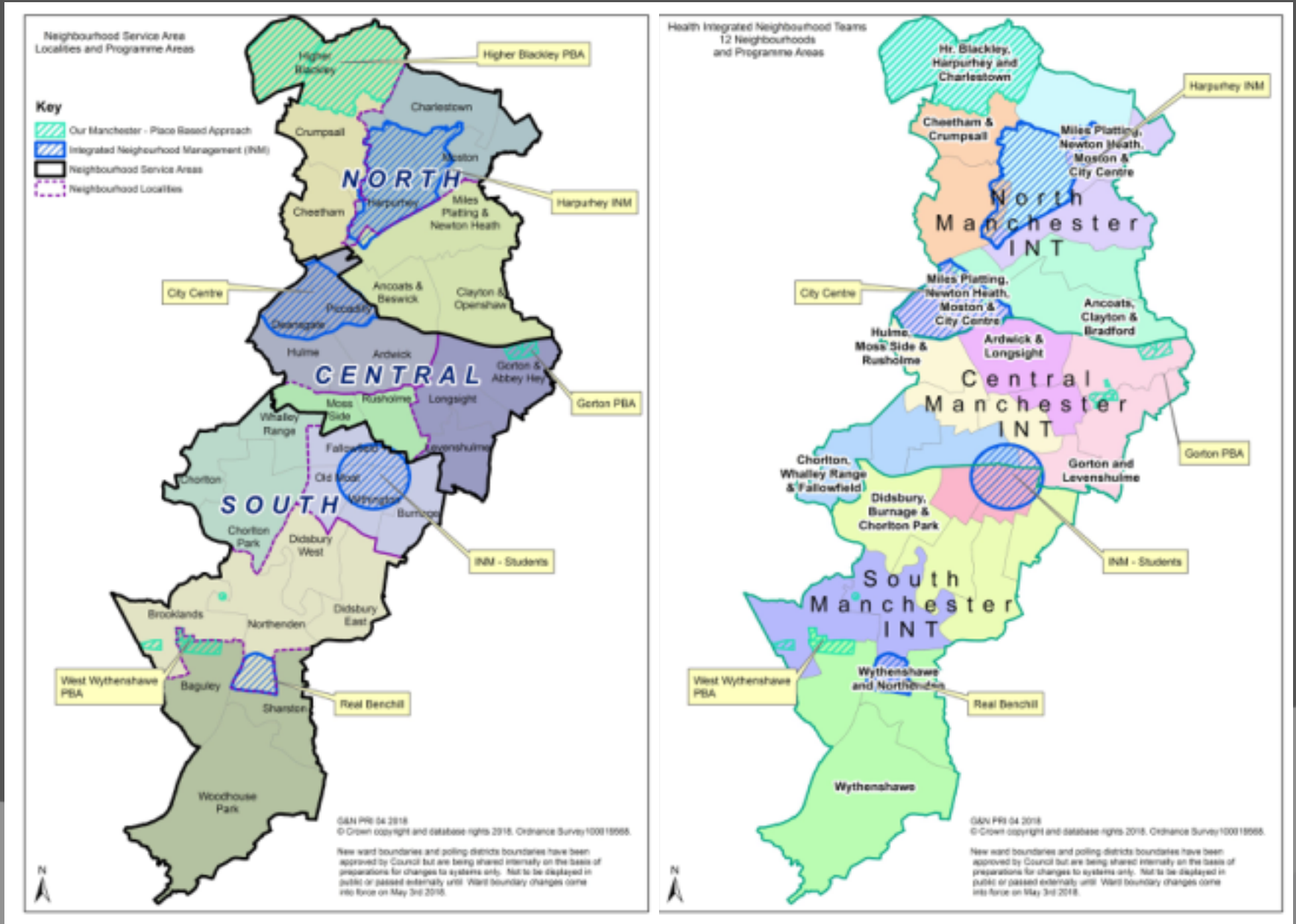
People Classification (Mosaic)

- Where typologies focus on the characteristics of a place, the Mosaic data describes the characteristics of the residents
- The Mosaic data here was used to support the development of broader Resident Personas
- Enabling us to better target and deliver messages in ways that our residents are most likely to engage with



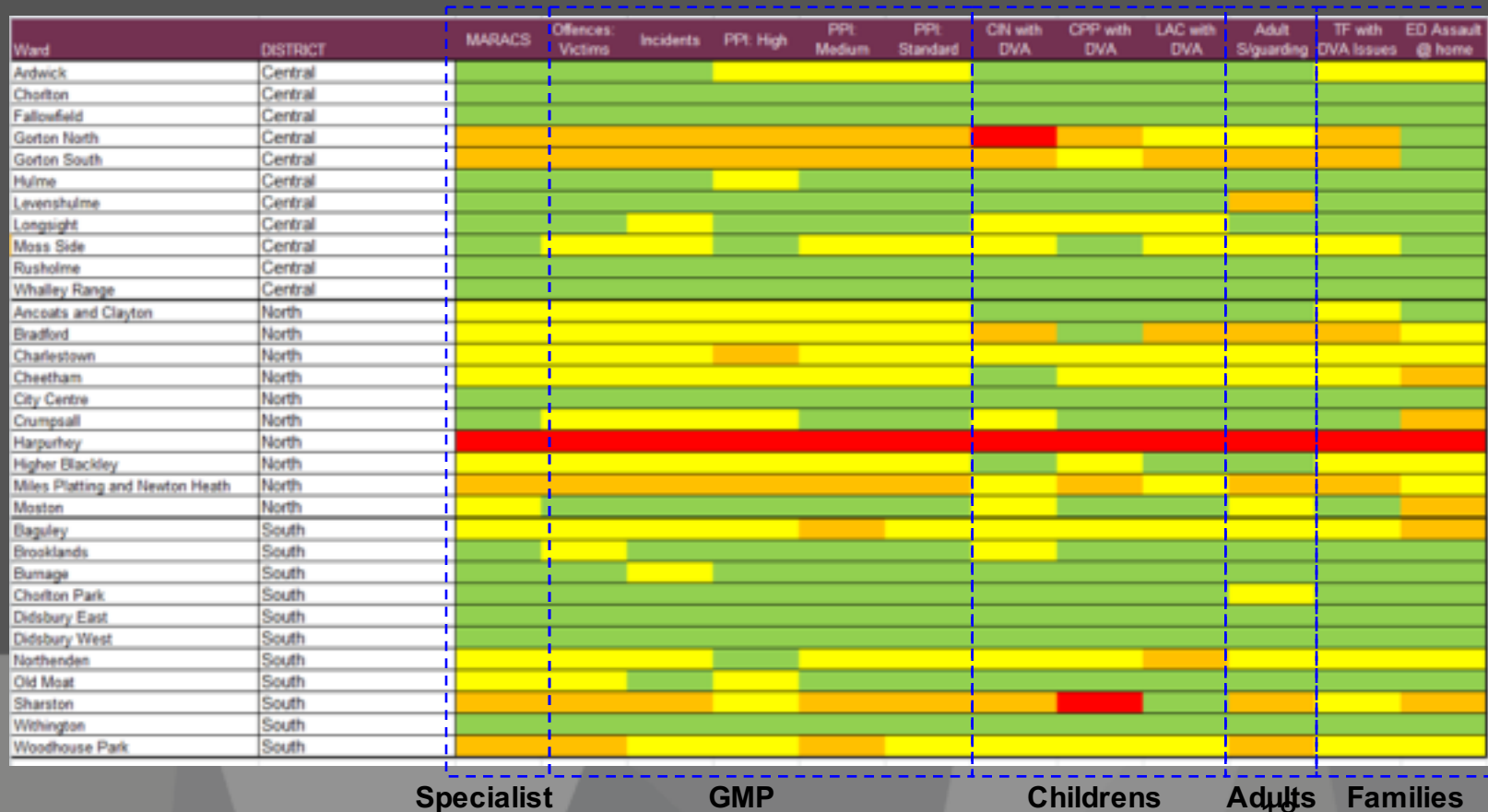
Programme Geographies

- The maps highlight the varied geographies and coverage across programmes and services currently
- The map on the left shows the new ward boundaries
- The map on the right shows the INT geographies
- Both have the place based approach and INM areas overlaid
- A PDF has been provided as a separate annex 2 (includes overleaf)



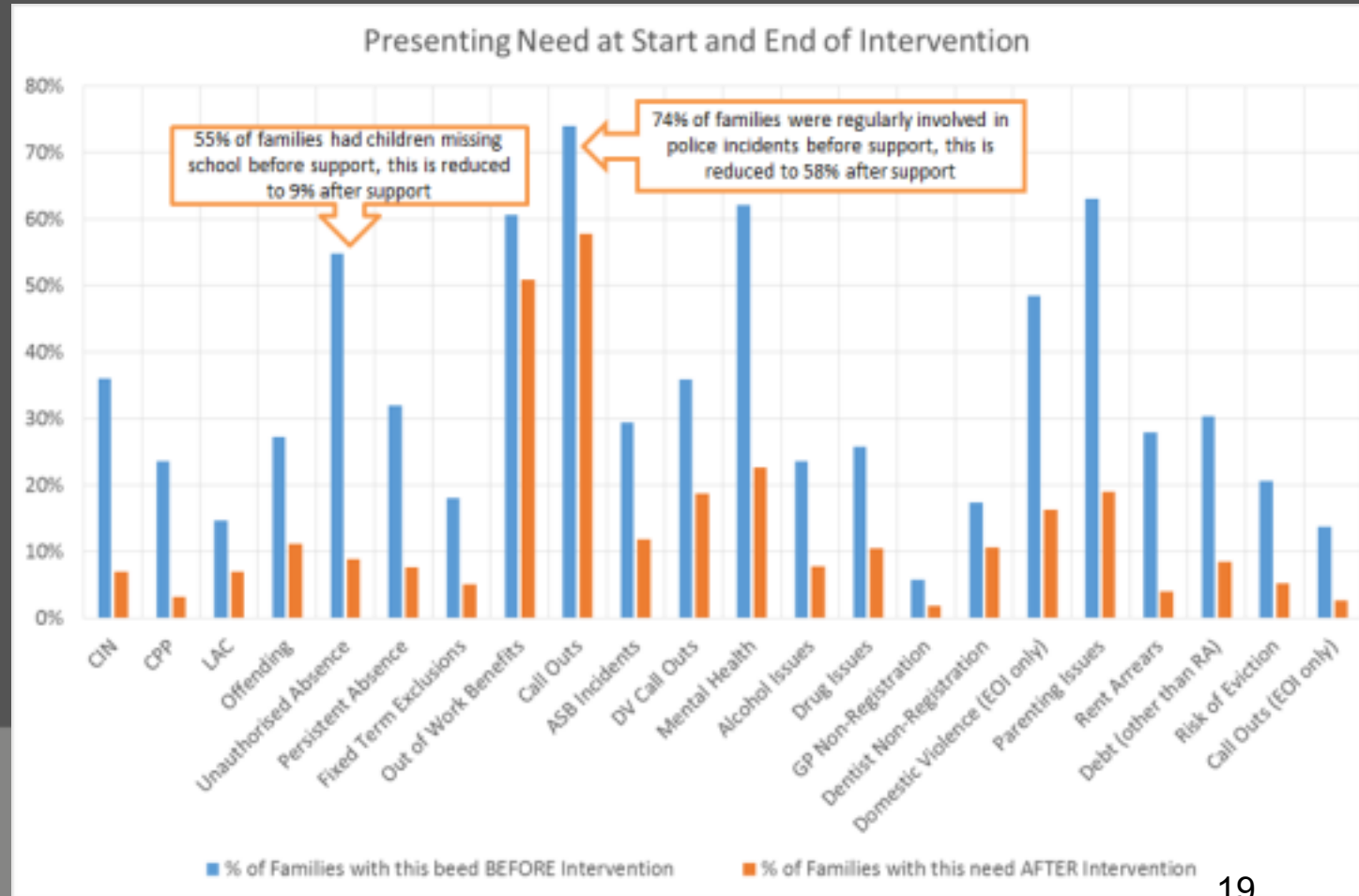
Same challenges, different lens

We can look at our residents and communities as people and places, but it's also interesting to look at them through different organisational lens. The illustration below shows how the distribution of Domestic Abuse can be interpreted differently.

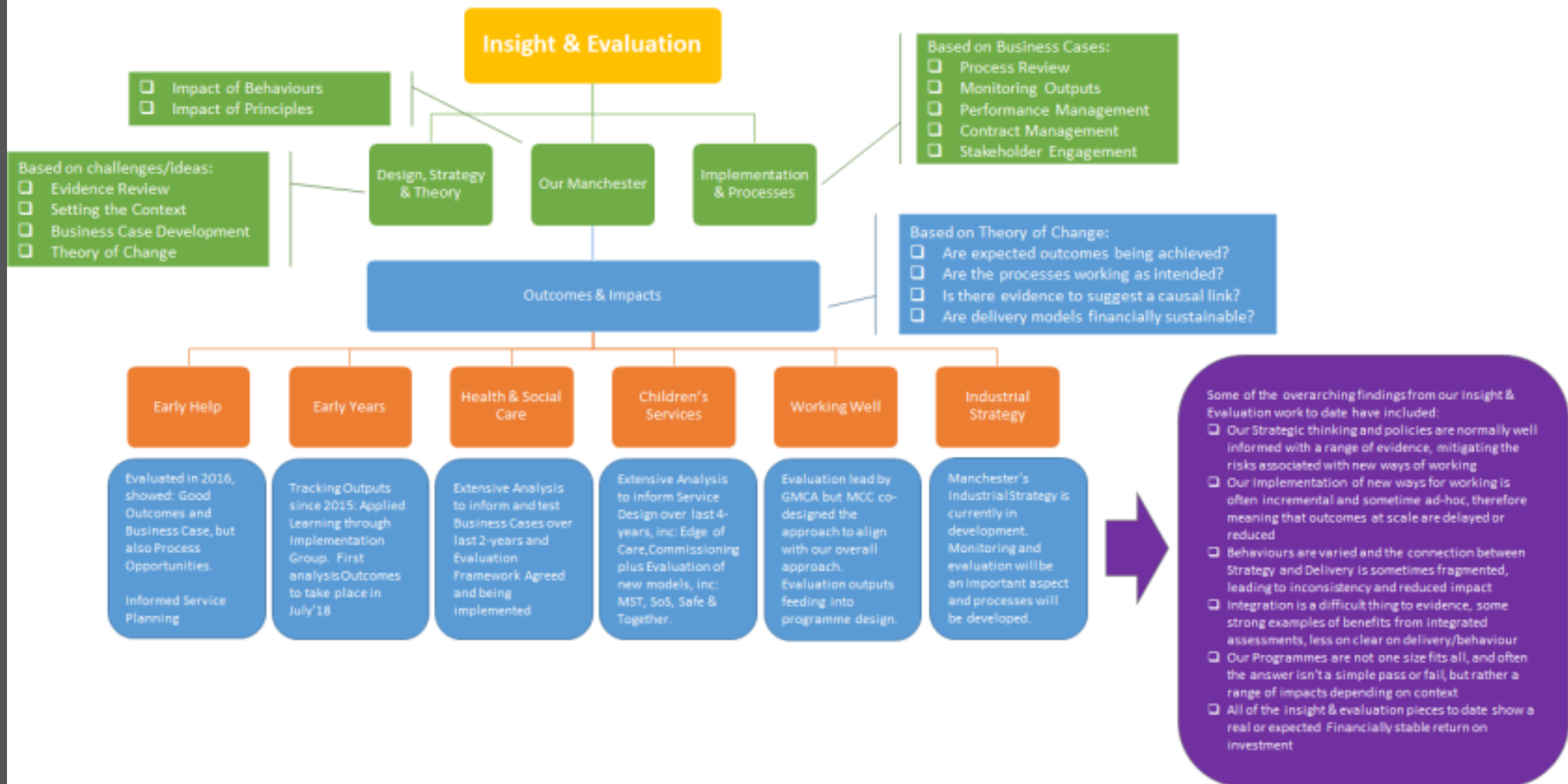


Evaluation of reduced demand: example

Troubled Families evaluation in Spring 2017 provided the strongest evidence yet of the sustained improvements in the lives of 1,400 families, on a wide range of indicators:



Common approaches and lessons learnt



Opportunities to work together

1/ **Understanding complex pathways**, recognising that there might not be fixed patterns, but there could be solutions to monitor the stocks and flows through a system - Social Work, H&SC, Worklessness, etc

2/ **Understanding longitudinal outcomes**, using national data to understand how current cohorts got to where they are, and how that might apply to future demand - Early Years, Early Help, etc.

3/ **Understanding resident perception / whole population**, how can we listen, capture, understand and respond to multiple channels - OM Resident Survey, Synthetic Places, etc

4/ **Understanding the connection between people and place**, how do people affect a place and how do places affect people, plus how does this affect personal decisions about where to live - Complex Families, Neighbourhood Typologies, Asset Mapping, etc.

Annex 1: Using Data and Insight to support this agenda



Background

A specific enabler underpinning this work relates to data, insight and intelligence, and the next few slides provide a brief update of:

1. Where we currently are (current landscape)
2. Where we need to be (requirements)
3. What we need to do (opportunities)

If bringing services together for people in places is to underpin reform and the ways in which we design and delivery our responses, then our data analytics and systems need to do the same.

Current Landscape

There is already a lot of data and analytics taking place across Manchester, we can describe these under four main types of activity.

1. Supporting system design
2. Supporting service delivery
3. Supporting case working
4. Providing accountability / transparency

(1) Supporting System Design

Analysis of Demand → Business Case Research → Business Case Testing → Evaluation Planning → Quant Data Processes → Qual Processes → Evaluation → Feedback

In order to design effective policy / service responses access to insight and understanding is critical. The Council has worked with a number of stakeholders over the last few years to provide both quantitative analysis and qualitative engagement support in this area.

Examples include:

- Early Help
- Early Years
- Homelessness
- Care Leavers
- Health & Social Care Transformation
- Population Profiling
- Resident Attitudes / Perception
- Neighbourhood Typologies
- Market Shaping / Modelling

Illustration 1 - Early Help

Extensive analysis of the characteristics of both service users & service delivery

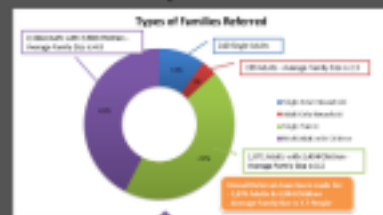
Understanding where support is needed (i.e. individual demands)

How support can be constructed (i.e. identifying the overlaps/crossover)

Identifying Demand

Who and What (single issues)?

Different People

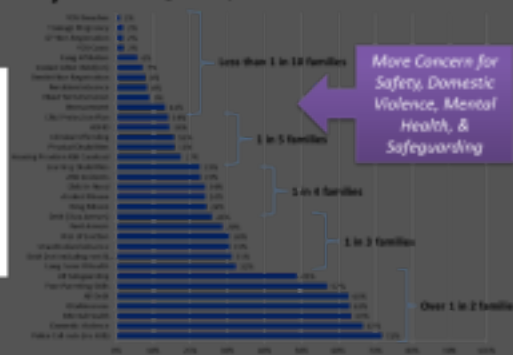


More Young Families and fewer Single Adults

Different Responses

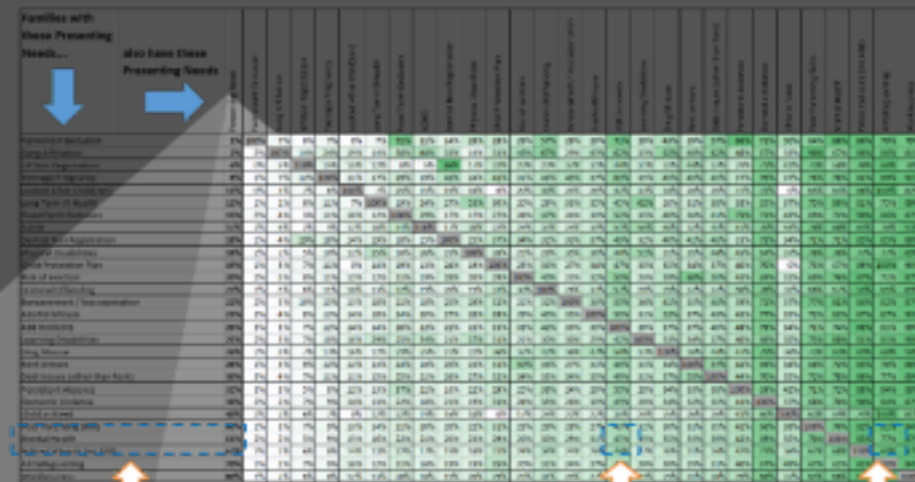


Different Issues
Presenting issues present in referred families



Connections to support Analytics

Needs of Troubled Families are complex and interdependent



40% of families with a mental health issue are also linked to A&E = c.2,400 families

40% of families with a mental health issue are also linked to A&E = c.2,400 families

77% of families also have safeguarding = c.1,800 out of c.2,400

(2) Supporting Service Delivery

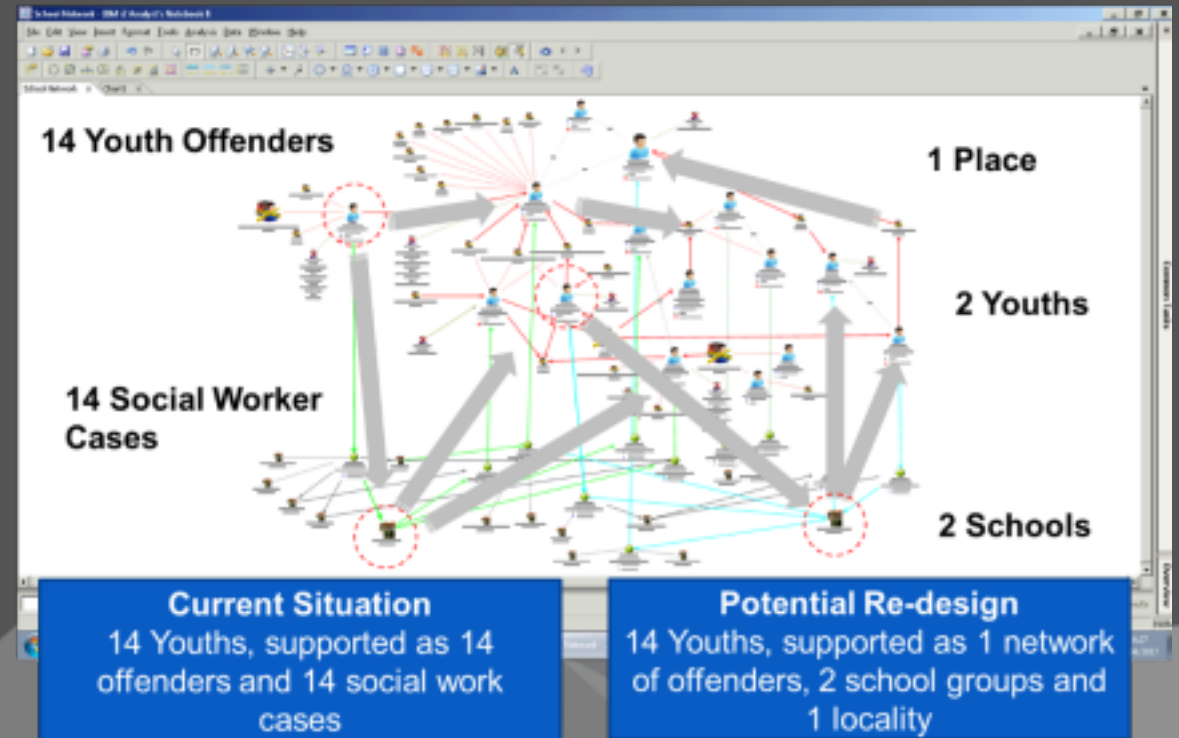
Data and insight can also play a critical part on more localised case / resource planning, however this is an area where our approaches are less consistent than our support for policy development.

The introduction of the iBase (data warehouse) system in 2012 to support research and analysis tasks quickly highlighted the benefits that bringing data together from various places and systems can have on service delivery.

Illustration 2 – Compare Youth Justice & Social Care

This example is an illustration of how 14 boys who are all being supported appropriately / robustly as individuals, are actually part of a single network of events. Therefore enabling the service to assess if there are wider opportunities to work with these boys, beyond the one to one support they are currently receiving.

Connections to support Service Planning



(3) Supporting case working

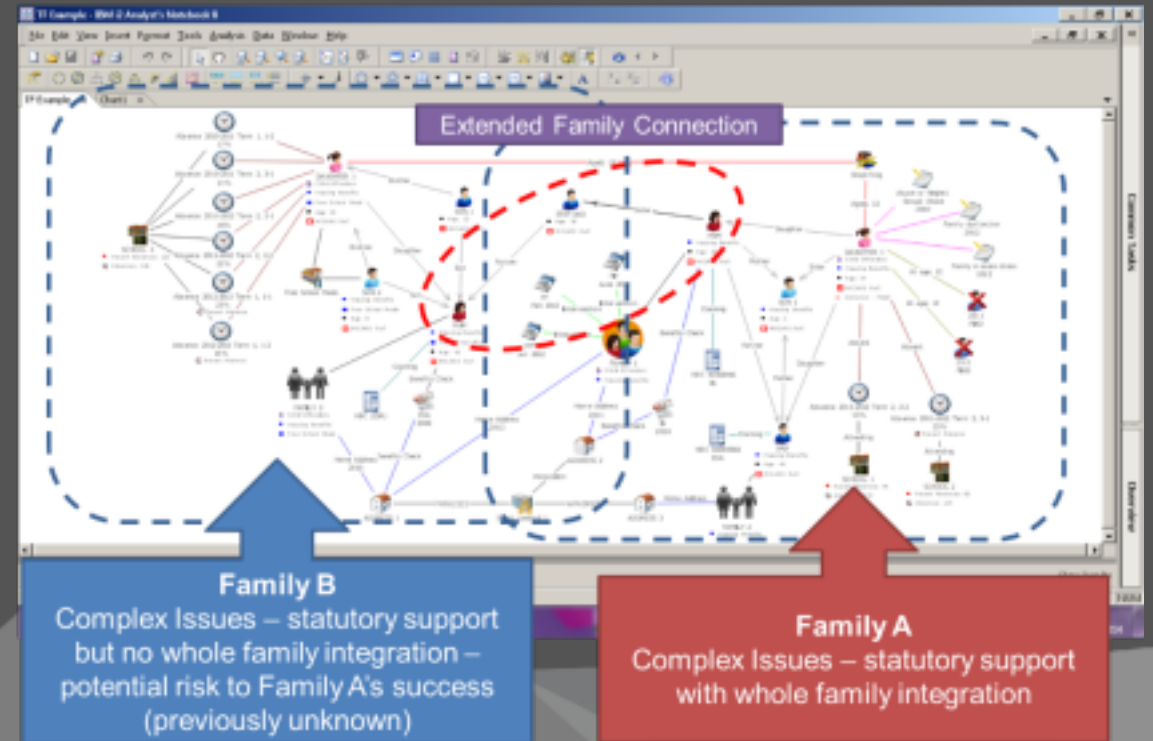
There are obviously also benefits of joining up data, insight and understanding at the individual case level. The work around iBase also provides a good illustration of how this can add value.

This however this can't simply be a case of data driven / system led decisions, but rather providing a way that data can empower all our frontline professionals to make the best decisions they can.

Illustration 3 – Understanding Families

This example shows how a case allocated to worker (Family A) has a set of complex issues, however by connecting our data and insight, alongside conversation / review, we're able to enable that worker to see that there are some wider extended family factors that may be affecting a family.

Connections to support Case Work



(4) Providing accountability / transparency

Manchester has invested in performance monitoring and evaluation is a fairly significant way over the past few years, and has produced a series of high quality impact and process analyses.

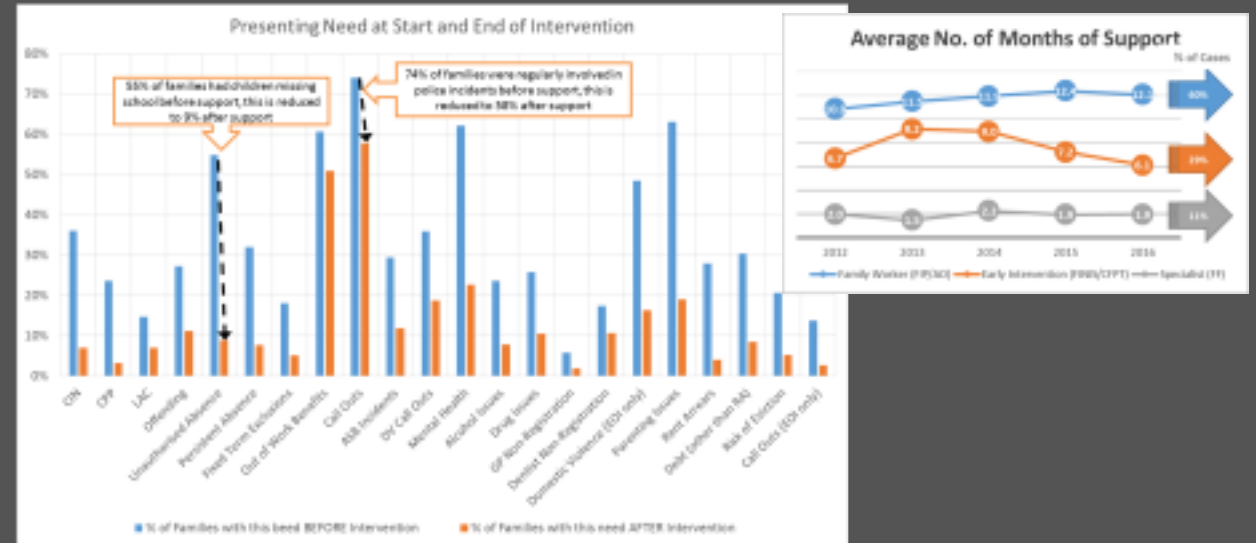
This has involved using a range of quantitative and qualitative approaches, working with service areas to design, implement and test hypotheses.

There is a need however to better share and combine learning these evaluations, to gain maximum insight around our reform priorities.

Illustration 4 – Evaluation of Troubled Families

This example shows how tracking 5,000 families through our Early Help functions over the past 6-years has provided us with insight to support our service responses. The analysis shows the benefits from our inputs, how long our input is required for, and that there is a lot of variation in the types of families requiring EH.

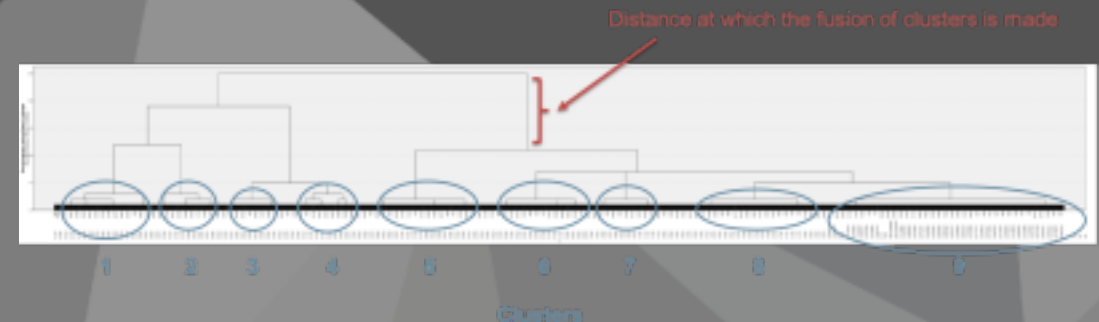
Support has led to reduced needs



Based on 1,898 families

But it is not one size fits all!

Output = Dendrogram (tree diagram), using Ward method



Requirements

Although a lot is already happening there are some fundamental requirements to ensure that these approaches can continue & evolve to meeting ongoing demand.

- Data (inc Quality) – supported by the Information Strategy
- Tools (inc ICT) – supported by the ICT Strategy
- Skills – supported by the Our People Strategy
- Ways of Working – supported by the Corporate Strategy and Our Manchester Approach

Requirements

In terms of data there is a focus on three pillars (security, governance, analysis)

In terms of tools there is a connection between the ICT development roadmap, and ongoing assessment of the right tools to support our core questions

In terms of skills there is a need to develop our workforce to undertake (i.e. research & data science skills) and facilitate (i.e. information governance) analysis

In terms of ways of working the insight generated needs to be able to feed directly into policy and delivery decisions

Opportunities

There are significant opportunities to join up both projects and skills development by connecting into partnerships already have:

- **International** – CityVerve, Academic Partnerships, Private Sector Partnerships (via DUG), ICT Partnerships...
- **National** – ONS, ONS Data Science Campus, MHCLG, DWP Digital, HMRC Digital, Public Health England, The Children's Society, Behavioural Insights Team, Academic Partnerships, Core Cities...
- **Regional** - GMCA (GM-Digital, GM-Connect, GM-Research), GMP, GMFRS, TfGM, 10x GM LAs, NW Performance Groups...
- **City** – The University of Manchester, Manchester Metropolitan University, Data Sciences Commissioning Framework, VCS Collaboration, OpenData Manchester, Residents...

Environment & Wellbeing

Synchronicity Open Call: Climate Adaptation

Jonny Sadler
Programme Director
Manchester Climate Change Agency

MANCHESTER
CLIMATE CHANGE AGENCY

Overview

- Climate change risks – EU cities
- Climate change risks – Manchester
- Responding with Green Infrastructure
- The challenge

Map ES.1 Key observed and projected climate change and impacts for the main biogeographical regions in Europe

Arctic region

Temperature rise much larger than global average
Decrease in Arctic sea ice coverage
Decrease in Greenland ice sheet
Decrease in permafrost areas
Increasing risk of biodiversity loss
Some new opportunities for the exploitation of natural resources and for sea transportation
Risks to the livelihoods of indigenous peoples

Atlantic region

Increase in heavy precipitation events
Increase in river flow
Increasing risk of river and coastal flooding
Increasing damage risk from winter storms
Decrease in energy demand for heating
Increase in multiple climatic hazards

Mountain regions

Temperature rise larger than European average
Decrease in glacier extent and volume
Upward shift of plant and animal species
High risk of species extinctions
Increasing risk of forest pests
Increasing risk from rock falls and landslides
Changes in hydropower potential
Decrease in ski tourism

Coastal zones and regional seas

Sea level rise
Increase in sea surface temperatures
Increase in ocean acidity
Northward migration of marine species
Risks and some opportunities for fisheries
Changes in phytoplankton communities
Increasing number of marine dead zones
Increasing risk of water-borne diseases

Boreal region

Increase in heavy precipitation events
Decrease in snow, lake and river ice cover
Increase in precipitation and river flows
Increasing potential for forest growth and increasing risk of forest pests
Increasing damage risk from winter storms
Increase in crop yields
Decrease in energy demand for heating
Increase in hydropower potential
Increase in summer tourism

Continental region

Increase in heat extremes
Decrease in summer precipitation
Increasing risk of river floods
Increasing risk of forest fires
Decrease in economic value of forests
Increase in energy demand for cooling

Mediterranean region

Large increase in heat extremes
Decrease in precipitation and river flow
Increasing risk of droughts
Increasing risk of biodiversity loss
Increasing risk of forest fires
Increased competition between different water users
Increasing water demand for agriculture
Decrease in crop yields
Increasing risks for livestock production
Increase in mortality from heat waves
Expansion of habitats for southern disease vectors
Decreasing potential for energy production
Increase in energy demand for cooling
Decrease in summer tourism and potential increase in other seasons
Increase in multiple climatic hazards
Most economic sectors negatively affected
High vulnerability to spillover effects of climate change from outside Europe



Urban adaptation to climate change in Europe 2016

Transforming cities in a changing climate

ISSN 1937-8449



<https://www.eea.europa.eu/publications/urban-adaptation-2016>

Table 2.1 **How climate impacts affect urban living, working and moving**

	 LIVING	 WORKING	 MOVING
HEAT 	Decreased comfort Health risks Increased energy use for cooling, decreased for heating	Reduced labour productivity Increased energy use for cooling, decreased for heating	Discomfort on public transport Rail buckling Increased energy use for cooling, decreased for heating
FLOODS 	Nuisance/health risks Damage to houses Power and water failures	Reduced accessibility Economic asset damage Power and water failures	Blocked roads and rail
WATER SCARCITY 	Discomfort Health and safety risks	Reduced productivity Power and water failures	Shipping constraints
WILD FIRES 	Health and safety risks Damage to houses	Damage to economic assets	Transport route blockage
STORMS 	Nuisance/health risks Damage to houses Power and water failures	Economic asset damage Reduced accessibility Power and water failures	Blocked roads and rail

Note: The examples are not exhaustive and they may not be relevant for all cities.

Box 2.3 Examples of economic impacts of catastrophic events

The 2002 flooding in Dresden (Germany) caused about EUR 80 million worth of damage to community services alone. The damage to flood protection infrastructure cost an estimated EUR 300 million. Damage to agriculture and forestry is estimated at about EUR 45.6 million. Flooded public and private buildings suffered several more millions of euros' damage.



Photo: © Landeshauptstadt Dresden, Umweltamt

Sources: <http://statistik-dresden.de/archives/7823>; <http://statistik-dresden.de/archives/7794>; Forcade, 2016; Mottaghi, 2015; <http://www.sydsvenskan.se/malmo/ett-ar-efter-oversvamningarna-i-malmo>.



Population: 5 530 754 (Dresden)

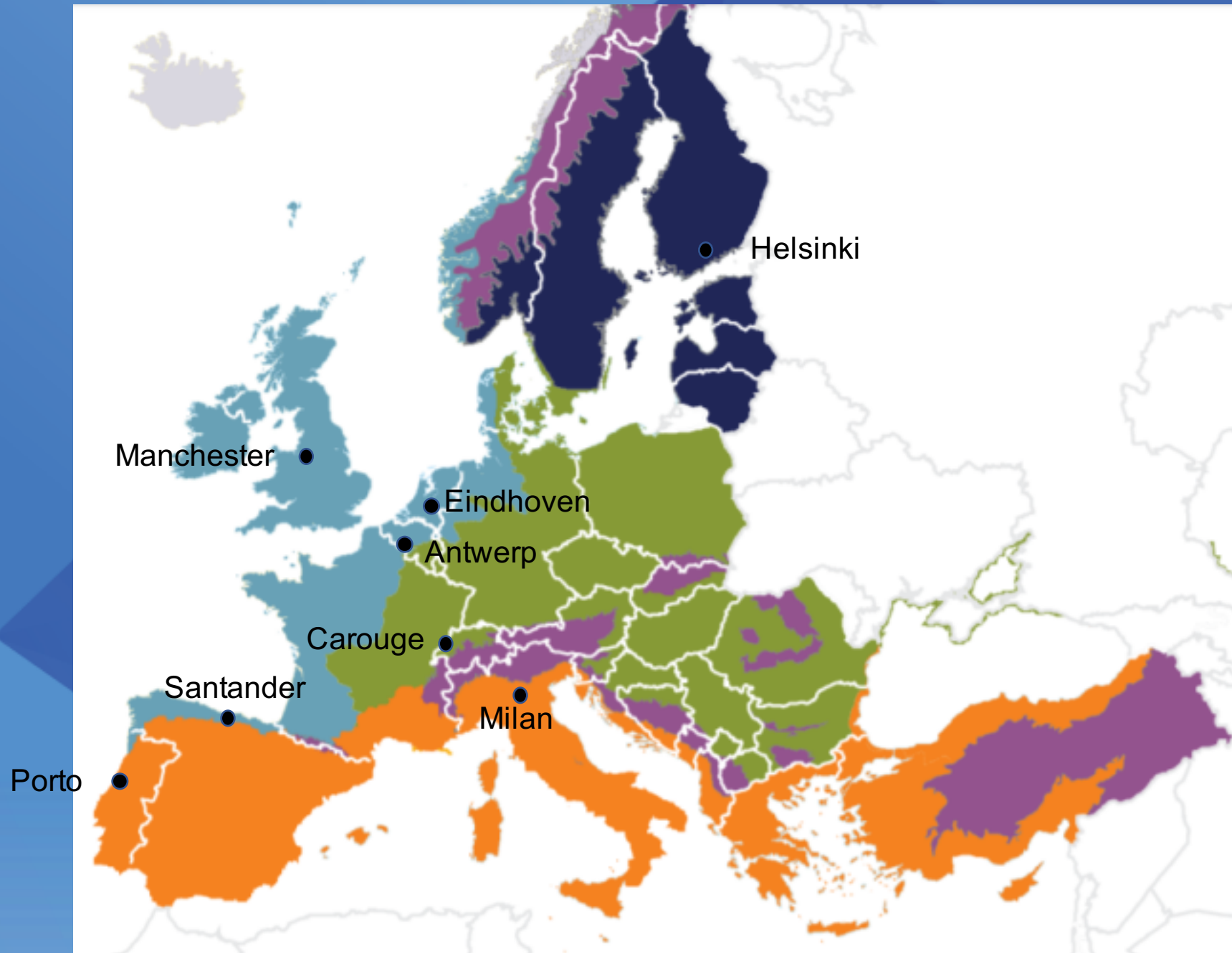
596 958 (Genoa)

302 835 (Malmö)

Biogeographic region:
Central and eastern Europe/
Mediterranean

The 2014 flash flood in Genoa (Italy) caused damage to buildings and their contents of approximately EUR 100 million, according to estimates by the CIMA Foundation, and exposed 12 710 residents to risk.

In August 2014, a cloudburst in Malmö (Sweden) caused damage in excess of SEK 250 million (EUR 26 million) in immediate insurance claims and over SEK 100 million (EUR 10 million) in clean-up costs for the city. In insurance claims alone, that single flood accounted for approximately one third of the annual costs from flooding in the city. We still do not know the total costs. One year after the event, insurers had yet to process hundreds of claims.



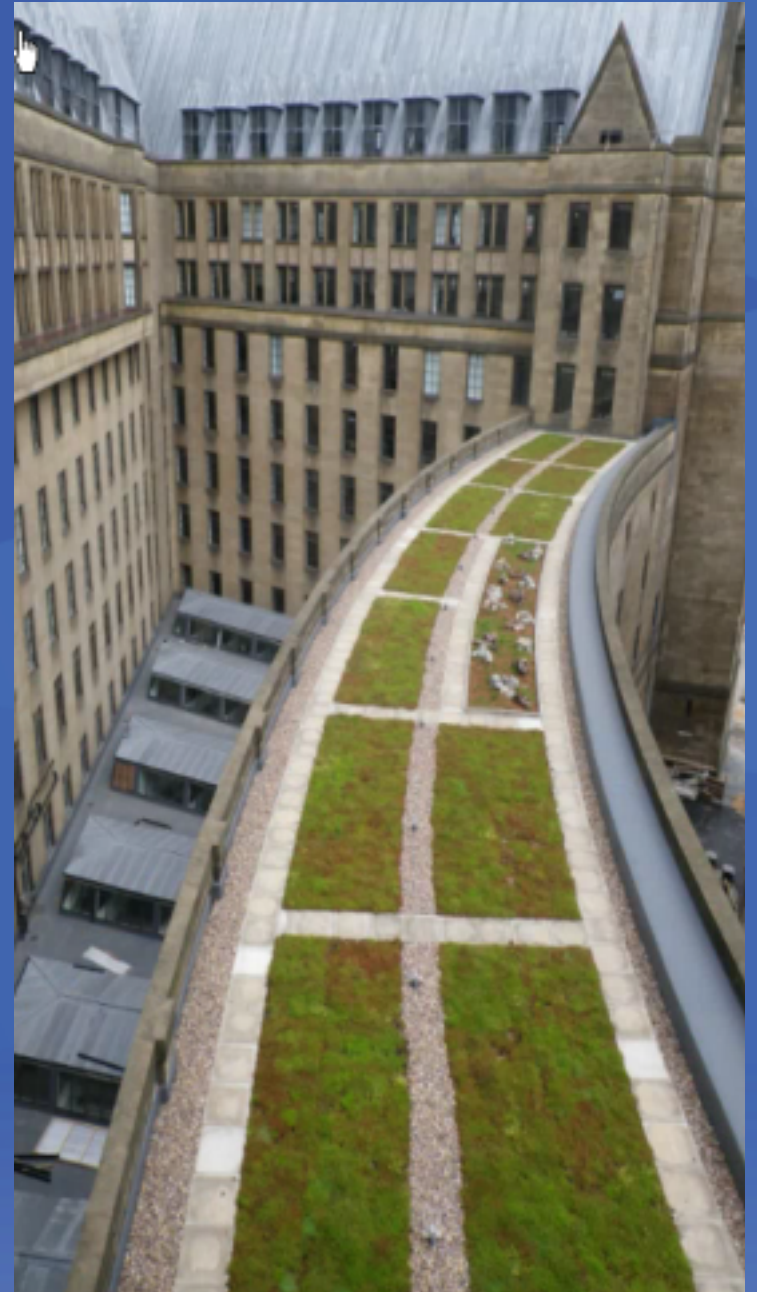
Common risks:

1. Increased flooding and flood risk
2. Increased heat stress and heat stress risk



Manchester





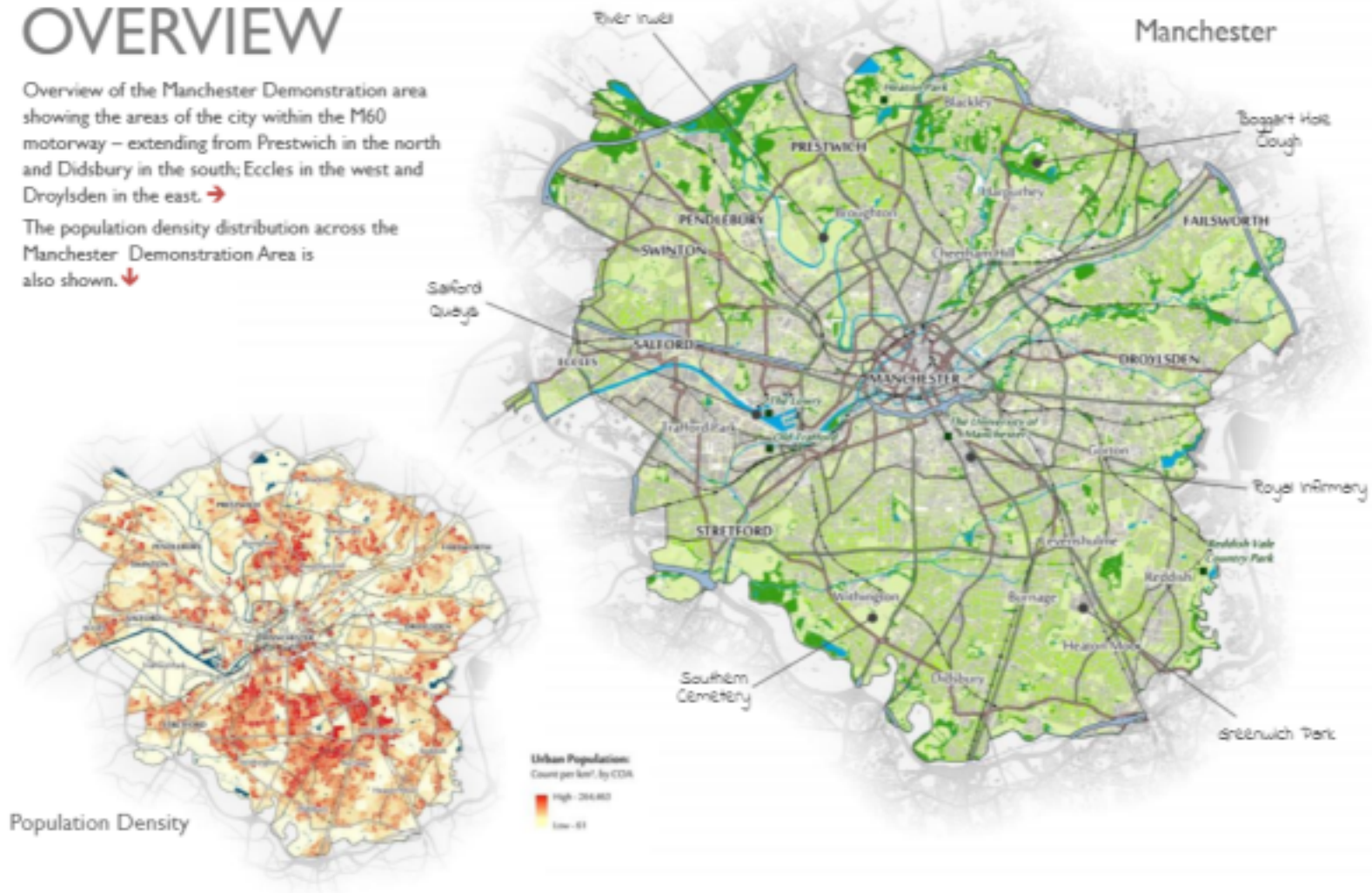


The Challenge – 10% increase in urban GI

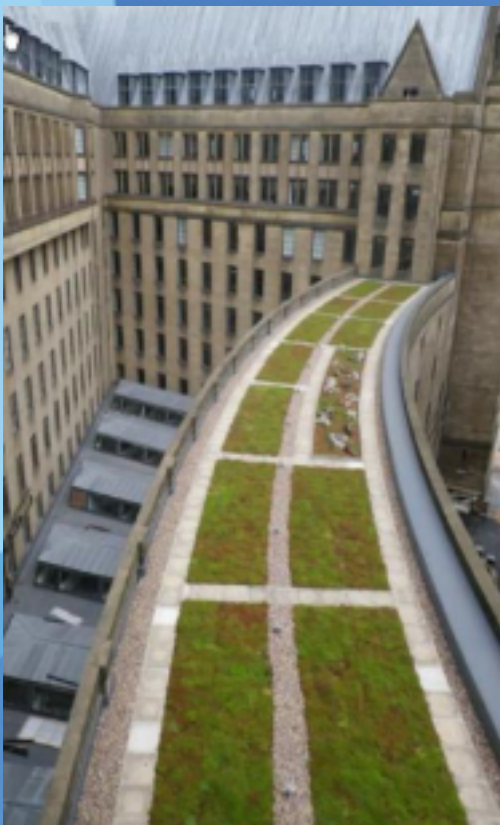
OVERVIEW

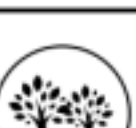
Overview of the Manchester Demonstration area showing the areas of the city within the M60 motorway – extending from Prestwich in the north and Didsbury in the south; Eccles in the west and Droylsden in the east. →

The population density distribution across the Manchester Demonstration Area is also shown. ↓



The Challenge – funding



	Recreation and Leisure
	Quality of Place
	Land and Biodiversity
	Flood alleviation and management
	Climate change adaptation and mitigation



	Economic Growth and Investment
	Land and Property Values
	Labour Productivity
	Tourism
	Products from the Land
	Health and Wellbeing

The Challenge – summary

1. Funding for delivering and maintaining green infrastructure, through:
2. Project pipeline of sufficient scale to:
 - increase urban GI by 10%, and
 - attract investment
3. Business models & funding to deliver and maintain the pipeline – underpinned by understanding of economic benefits
4. Post-delivery monitoring & validation of project performance i.e. economic benefits achieved & return on investment

Further Information

Business in the Community pilot

- <http://naturalcourse.co.uk/uploads/2018/05/Natural-Course-Case-Study-Water-Resilient-Cities-v3.pdf>

Mapping Ecosystem Services

<http://urbanwater-eco.services/project/demo-area-manchester/>

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