

# Integrated Data

## The foundation for Innovation

October 2019

Graham McCusker  
Director

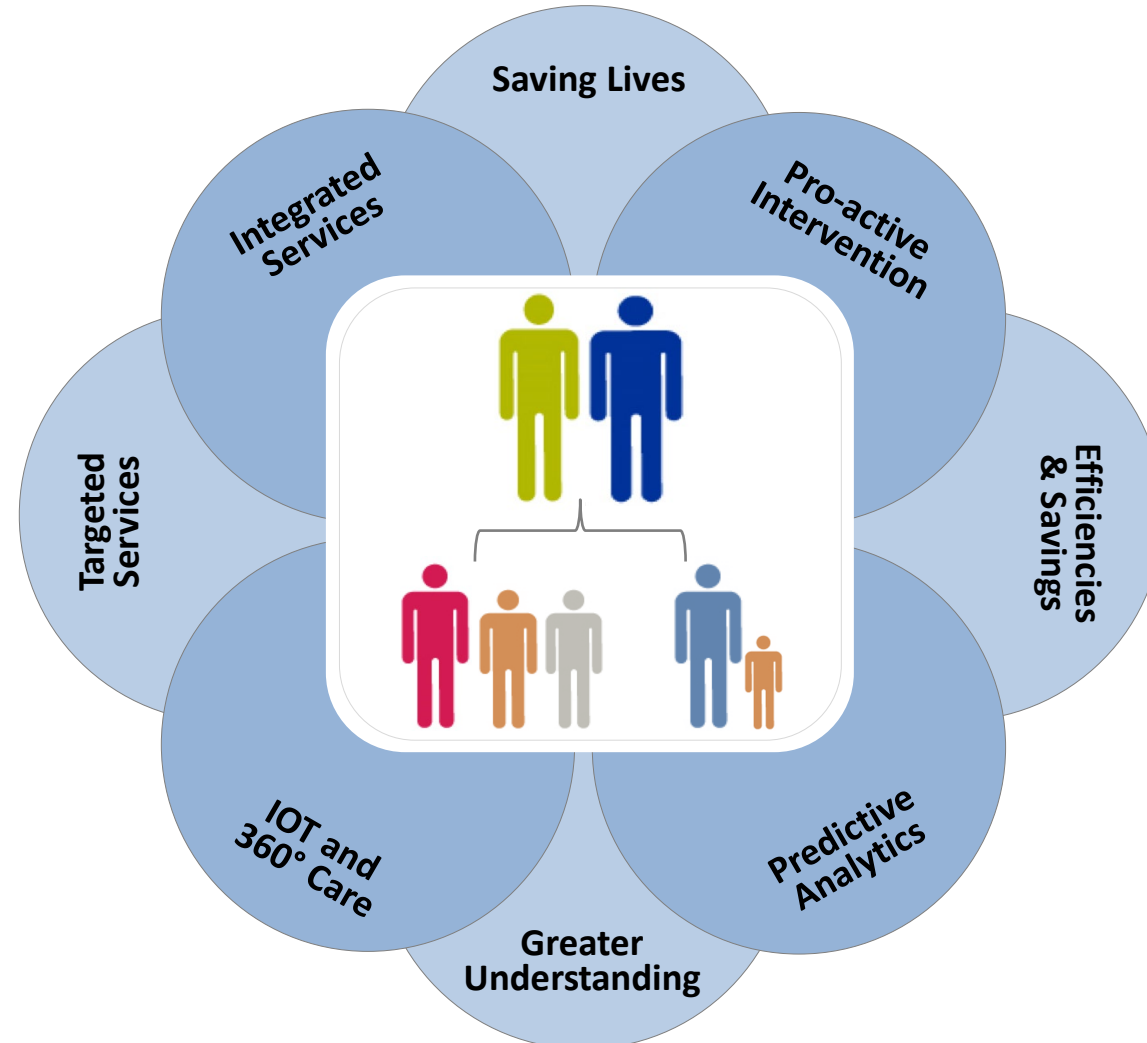
sentinelpartners

[www.sentinelpartners.co.uk](http://www.sentinelpartners.co.uk)

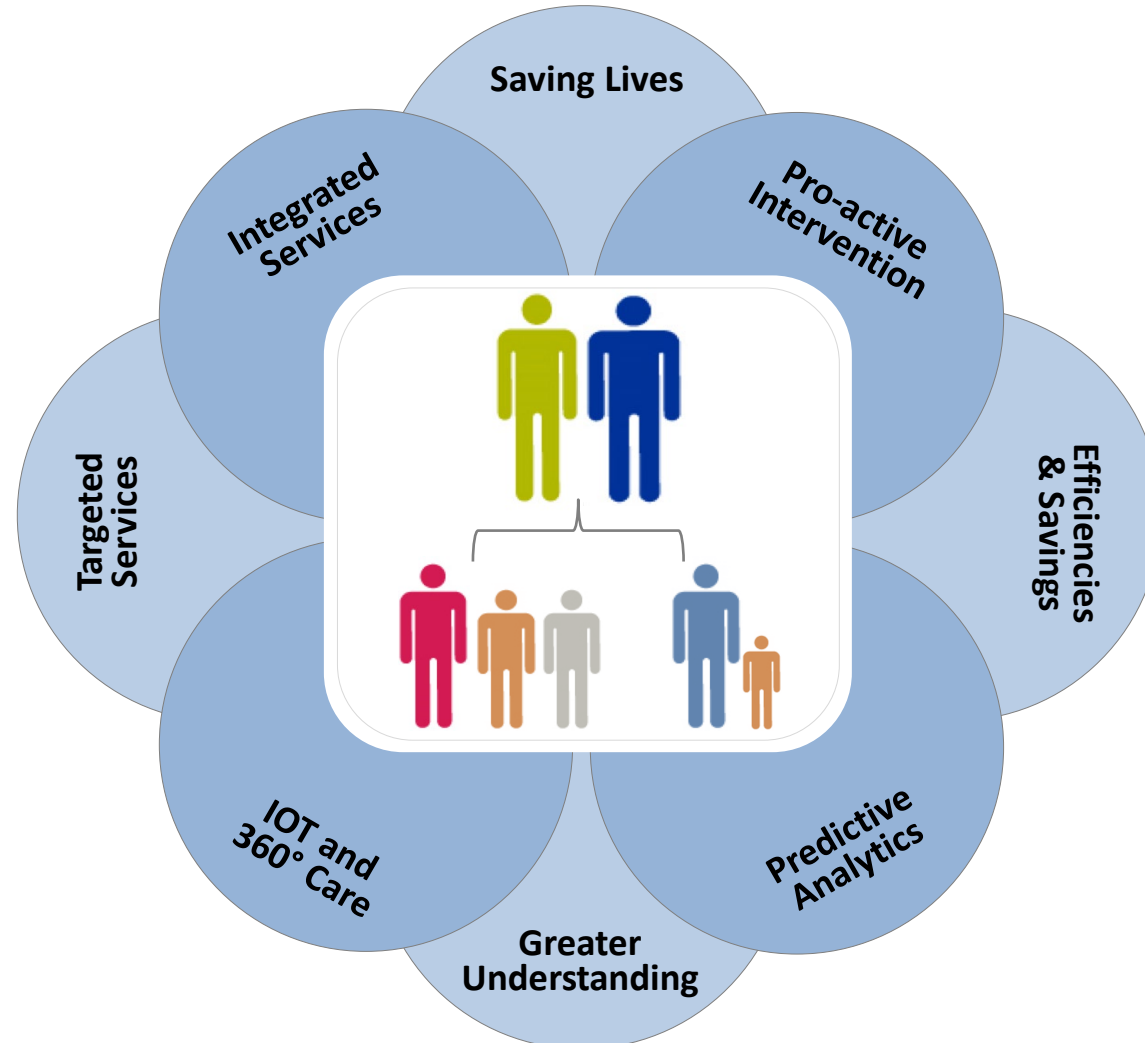


# The Common Objective

**A holistic, single view of people, of families and of any other groups**  
**Everything that we know about people, events and outcomes in a single place**  
**Supporting all our collaborative working aims, data initiatives and service innovations**



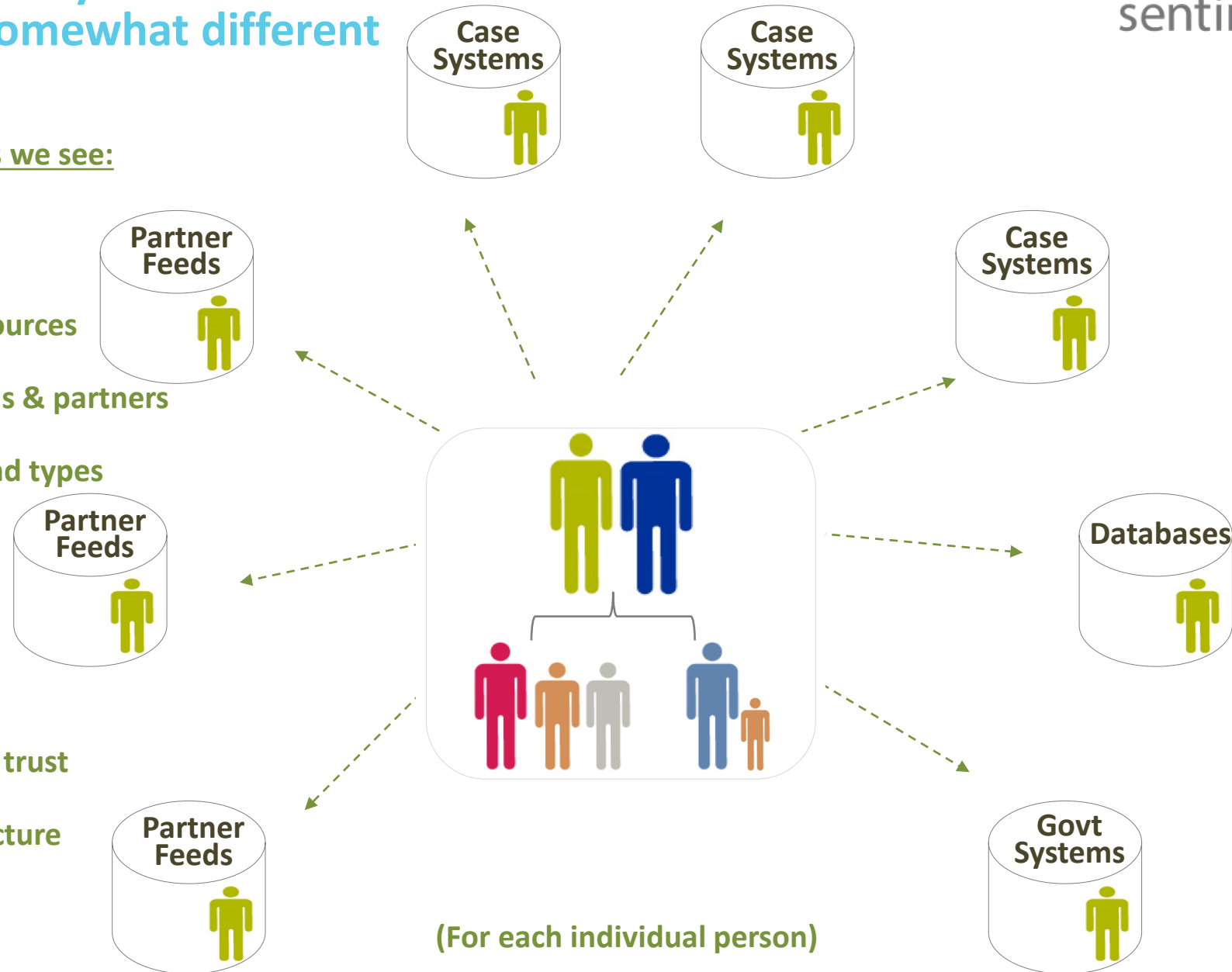
**A holistic, single view of people, of families and of any other groups**  
**Everything that we know about people, events and outcomes in a single place**  
**Supporting all our collaborative working aims, data initiatives and service innovations**



# The Everyday Reality, ... maybe somewhat different

## Common Data problems we see:

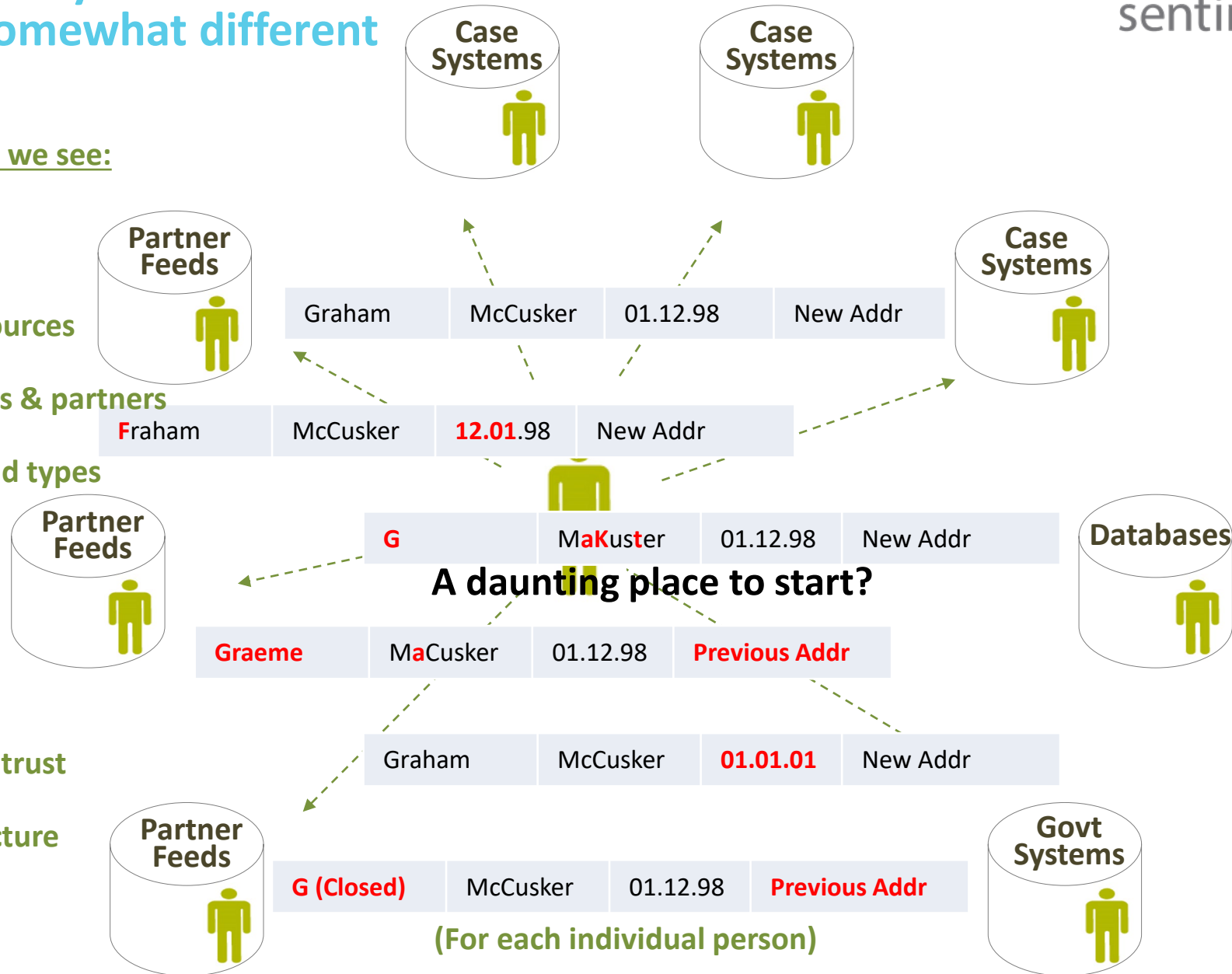
- Data is fragmented
- Spread across multiple sources
- Owned by different teams & partners
- Different data formats and types
- Quality is variable
- Duplicate records
- Some out-of-date data
- Hard to manage levels of trust
- Difficult to see the big picture



# The Everyday Reality ... maybe somewhat different

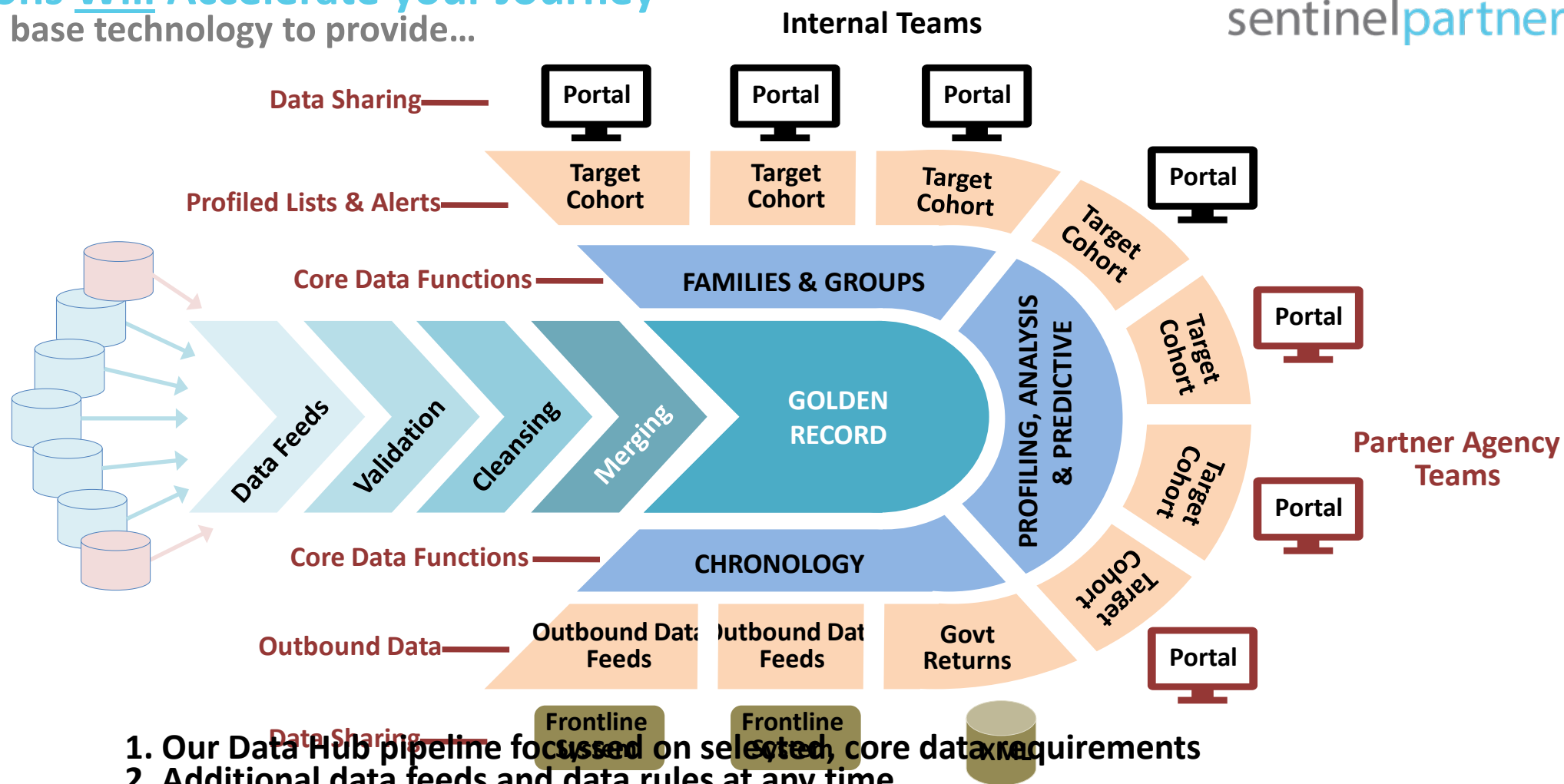
## Common Data problems we see:

- Data is fragmented
- Spread across multiple sources
- Owned by different teams & partners
- Different data formats and types
- Quality is variable
- Duplicate records
- Some out-of-date data
- Hard to manage levels of trust
- Difficult to see the big picture



# Our Solutions Will Accelerate your Journey

Entirely rules base technology to provide...



1. Our Data Hub pipeline focussed on selected, core data requirements
2. Additional data feeds and data rules at any time
3. Configure Data Services: Merging people into families and any other groups / associations  
Create automatic 'As-Is' Profiling, Alerts and Predictive Analysis  
Establish a full chronology of events & outcomes
4. Profiling & Scoring rules to identify different target cohorts for different teams
5. Creating as many Portals and outbound feeds to share data across all teams & agencies

## Handover To John Bowers at Liverpool



Liverpool  
City Council

*“How to master your data: the Liverpool Evolution”*

Data4Good Event, London - 11<sup>th</sup> October 2019

John Bowers – Liverpool Families Programme Data and Information Manager



A stylized silhouette of the Liverpool city skyline, including the Liver Building, the Royal Liver Building, and the Port of Liverpool Building, rendered in shades of purple and blue. The skyline is reflected in a light blue water surface below it.



Liverpool  
City Council

# *“How to master your data: the Liverpool Evolution”*

Data4Good Event, London - 11<sup>th</sup> October 2019

John Bowers – Liverpool Families Programme Data and Information Manager





# Liverpool - A strong and growing city, built on fairness



Liverpool  
City Council



World class culture,  
media and sport offers

Award winning  
cultural events



European Capital of  
Culture in 2008

Visitor economy  
worth £4.3bn,  
welcomed over 62m  
visitors and supports  
over 51,500 jobs



One of the world's  
most distinctive and  
creative cities



World Heritage  
Site and home  
to the world's  
largest harbour





## Liverpool's Troubled Families Solution

- Background – What is the Troubled Families Programme?
- Pre-ICT Solution Background
- Procurement
- Key Requirements
- Next Steps
- Sentinel Solution



# Liverpool Families Programme – National Troubled Families Programme



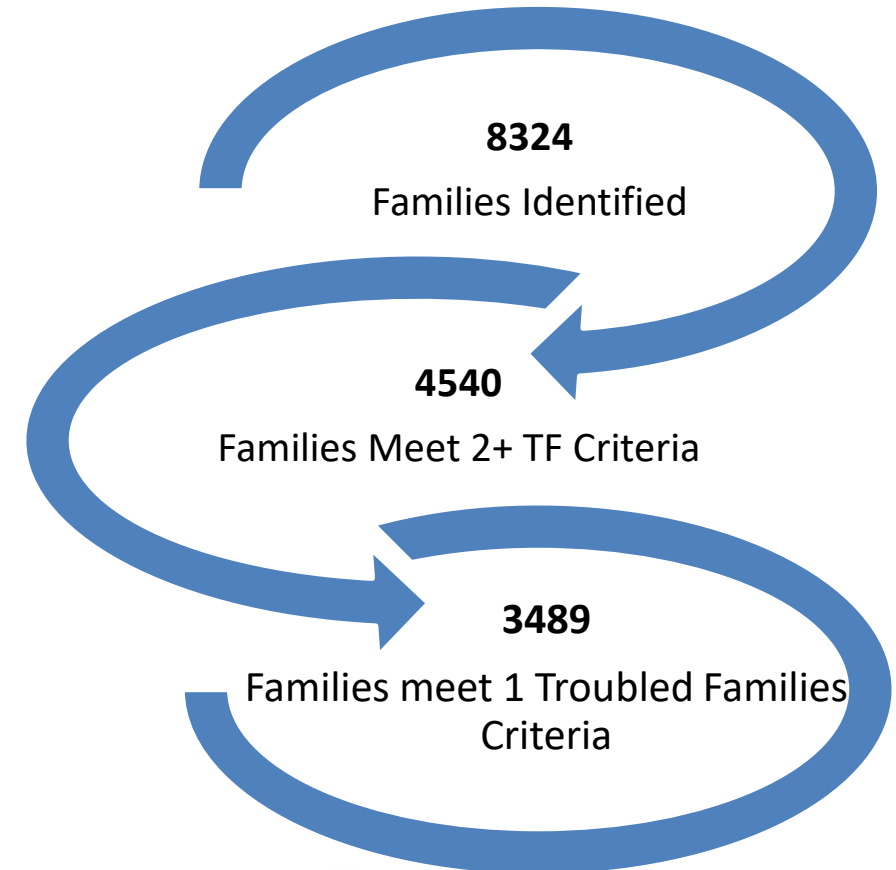
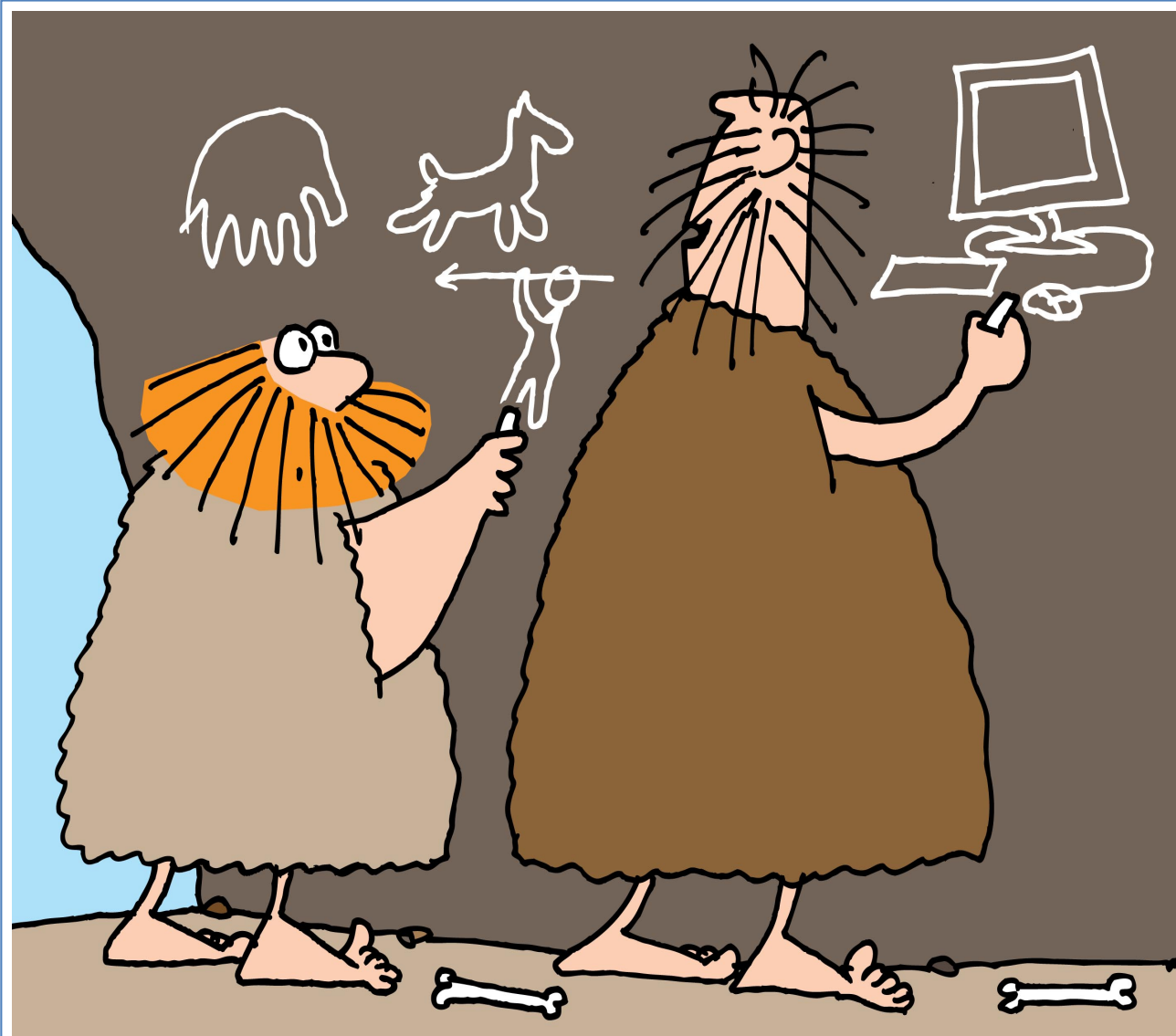
Liverpool  
City Council

- Between April 2015 and March 2020, Liverpool has been allocated 6760 families by the Ministry for Housing, Communities and Local Government to identify, engage with under a key worker approach and monitor for significant & sustained progress (2<sup>nd</sup> Phase)
- To be eligible for the programme, families with at least one child or young person under the age of 18 at the point of identification must meet at least two of the following criteria:
  1. *Parents and children Involved in crime or ASB;*
  2. *Children not attending school;*
  3. *Children who need help;*
  4. *Adult worklessness and children at risk of worklessness;*
  5. *Families affected by domestic abuse;*
  6. *Parents and children with health problems.*
- The Liverpool Families Programme Outcomes Plan defines the cities strategic approach to working with complex families and outlines how significant and sustained progress is measured
- Since April 2018, Liverpool has had 'Earned Autonomy' status to accelerate transformation
- From September 2019, the National Troubled Families Programme has been extended by a further 12 months to March 2021.

# Pre ICT Solution Background



Liverpool  
City Council



# ICT Solution Key Requirements



Liverpool  
City Council

- Automated Family matching
- Handle large volumes of data
- An integrated partnership data system to profile Liverpool families to ascertain if they meet criteria as outlined in the Liverpool Families Programme Outcomes Plan
- Ability to track and monitor families for 'payment by results' outcomes
- Evaluate effectiveness of funded initiatives and projects
- Provide MHCLG with performance information via the National Impact Study (NIS) and Family Progress Data (FPD)
- Improve partnership working and lives of residents
- Longevity...



# Next Steps...



Liverpool  
City Council

- Identify a solution Liverpool required...
- Researched other Core City solutions
- Invited companies to provide solution demonstrations:
  1. Liquid Logic – Troubled Families Module
  2. IBM – i2 Analyst Notebook / iBase
  3. Sentinel Partners Ltd
- Data Management system not Case Management
- Work closely with LCC ICT to deliver project – identify key Project Management lead!
- ICT Framework Procurement Process – identify best route for purchasing a system
- Report back to Families Strategic Group

Liquidlogic

IBM

sentinelpartners 





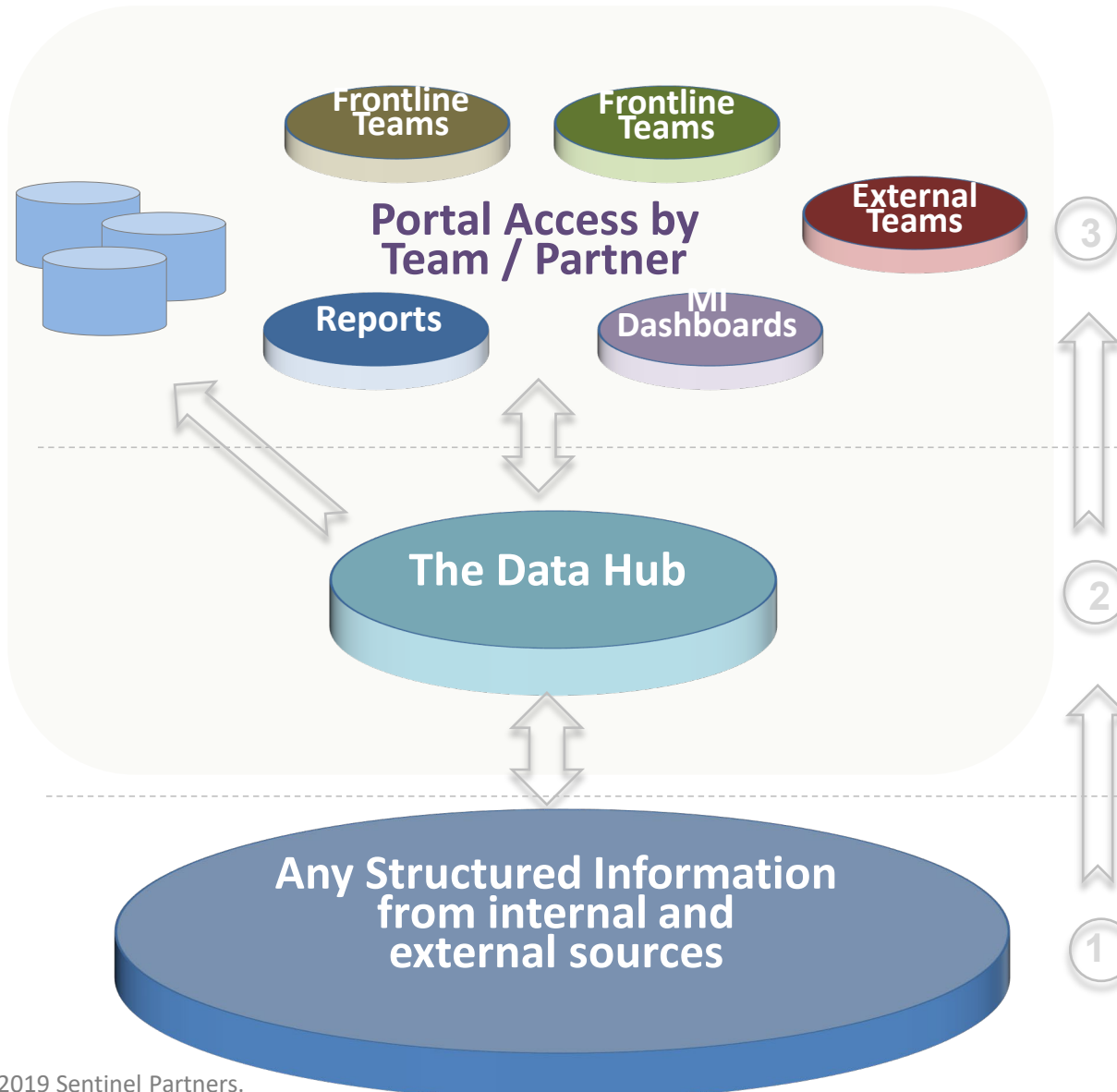
# Sentinel Solution Overview – Just what we needed!

A Multi-Layered approach to Data Integration and Data Sharing



Liverpool  
City Council

sentinelpartners



Support online services, customer interactions & partner collaboration

Share with any internal and external teams & partners via tailored portals.

Monitor data and trigger alerts (pro-active intervention).

Sharing back to source systems to make common use of the most complete and most trusted data.

The collected data is Validated, Cleansed & merged into a new Single View of a person.  
(The Baseline Solution.)

Then match People to any Groups  
We then Score (profile) to identify any number of target cohorts.

Collect any information available to you, from any System, from any DB Type and from any Partner Agency



# Liverpool System Development



Liverpool  
City Council

- Timescales
- Data Feeds
- Strategic Dashboard
- Scoring
- Family Dashboard
- Programme Results
- Intelligence for strategic decisions
- Predictive analysis?
- Future





# Liverpool Implementation Process to Date...



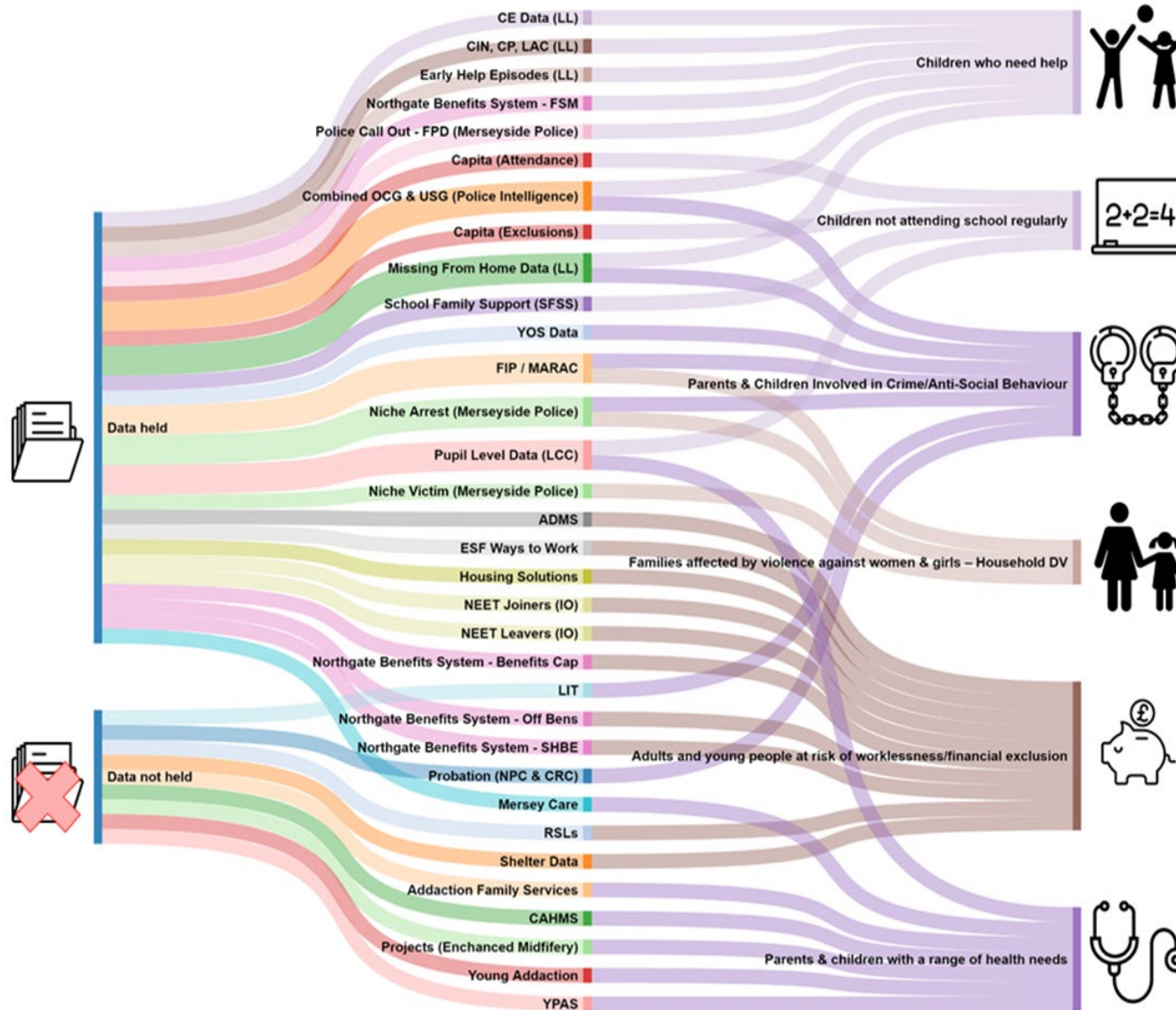
Liverpool  
City Council



# Liverpool Data Feeds



Liverpool  
City Council



3 to 35  
Data  
Feeds



# Strategic Dashboard



Liverpool  
City Council

SENTINEL

John Bowers

YOU ARE HERE: TF\_DASHBOARD

Home

Dashboard

Person Quick Search

Family Quick Search

Families

Cases

PBR Claims

DWP and Benefits

DCLG Returns

Scoring

Reports

Data Administration

Set up

User Management

Logout

Liverpool Gangs

Match Think Family

Liverpool Families Data

## Liverpool Families Programme

113456

Families Identified

9432

Assigned Cases

0

Open PBR

6195

School exclusions - count of unique individuals

7508

School Attendance Below 90

24884

No longer in CIN

378

New arrivals in CIN

10464

One Person Potential

109

On Hold Potential Cases

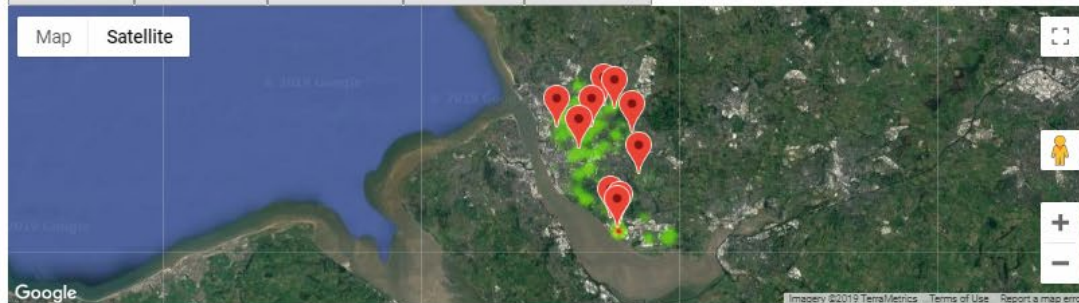
851

Proposed Cases

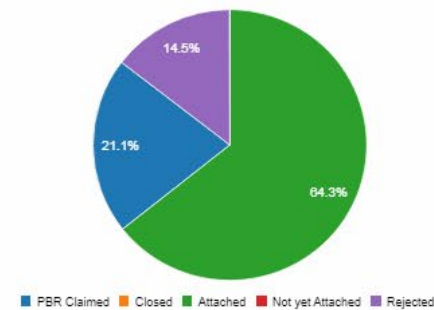
## Dashboard

### FAMILY HEAT MAP

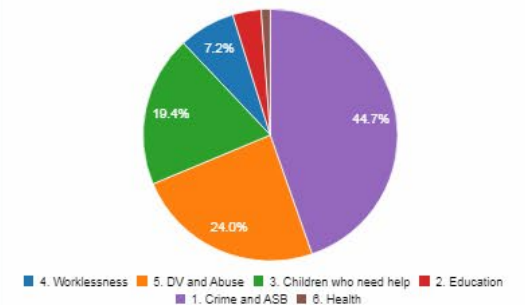
Toggle Markers Toggle Heatmap Change gradient Change radius Change opacity



### CASE PIPELINE



### ELIGIBILITY CATEGORIES



# Family Dashboard



SENTINEL
John Bowers

YOU ARE HERE: Dashboard > Search Results > Overview > TF\_FAMILY\_OVERVIEW

- Home
- Dashboard
- Person Quick Search
- Family Quick Search
 

Search
Clear
- Families
- Cases
- PBR Claims
- DWP and Benefits
- DCLG Returns
- Scoring
- Data Administration
- Set up
- User Management
- Change Scheme
- Logout
- Liverpool Gangs
- Match
- Liverpool Families Data

## Liverpool Families Programme

**MANAGE FAMILY**

**Overview**  
View the details about this Family

**Composition**  
See all current and historic composition

**Split**  
Split the family

**Merge**  
Merge family members to existing Family

**Add People**  
Add New People

**Address**  
Review and change Address

**Chronology**  
Show timeline of Family

**Scoring**  
See all current and historic Scores

**PBR**  
Check of the family Payments by Results

**Cases**  
Check of cases created for this family

**Imported Data**  
View and work with imported data for this family

**FAMILY OVERVIEW**

Family Id	2940478
Family known as	██████████
Number at household	4
TF identified date	27/04/2018
Created by	Sentinel
Changed by	
Current family score	1200
Number of categories	5

**CURRENT ADDRESS**

Family Id	2940478
UPRN	38123434
Address Line 1	██████████
Address Line 2	
Address Line 3	
Town or Locality	
Postcode	L6██████

**LOCATION OF FAMILY ADDRESS**

**CATEGORIES**

Domestic Abuse	X
Work	X
Education	X
Health	
Vulnerable Children	X
Crime Asb	X

**COMPLEXITY**

Domestic Abuse	Complex
Work	Less Complex
Education	Less Complex
Health	
Vulnerable Children	
Crime Asb	Highly Complex

**FAMILY COMPLEXITY**

Highly Complex

**POTENTIAL CASES**

Accept and Attach

**REJECT CASE**

Reject

**PUT POTENTIAL CASE ONHOLD**

Set on Hold

**FAMILY MEMBERS** Form Actions

Column visibility
Restore visibility
25 rows
records per page
Search:

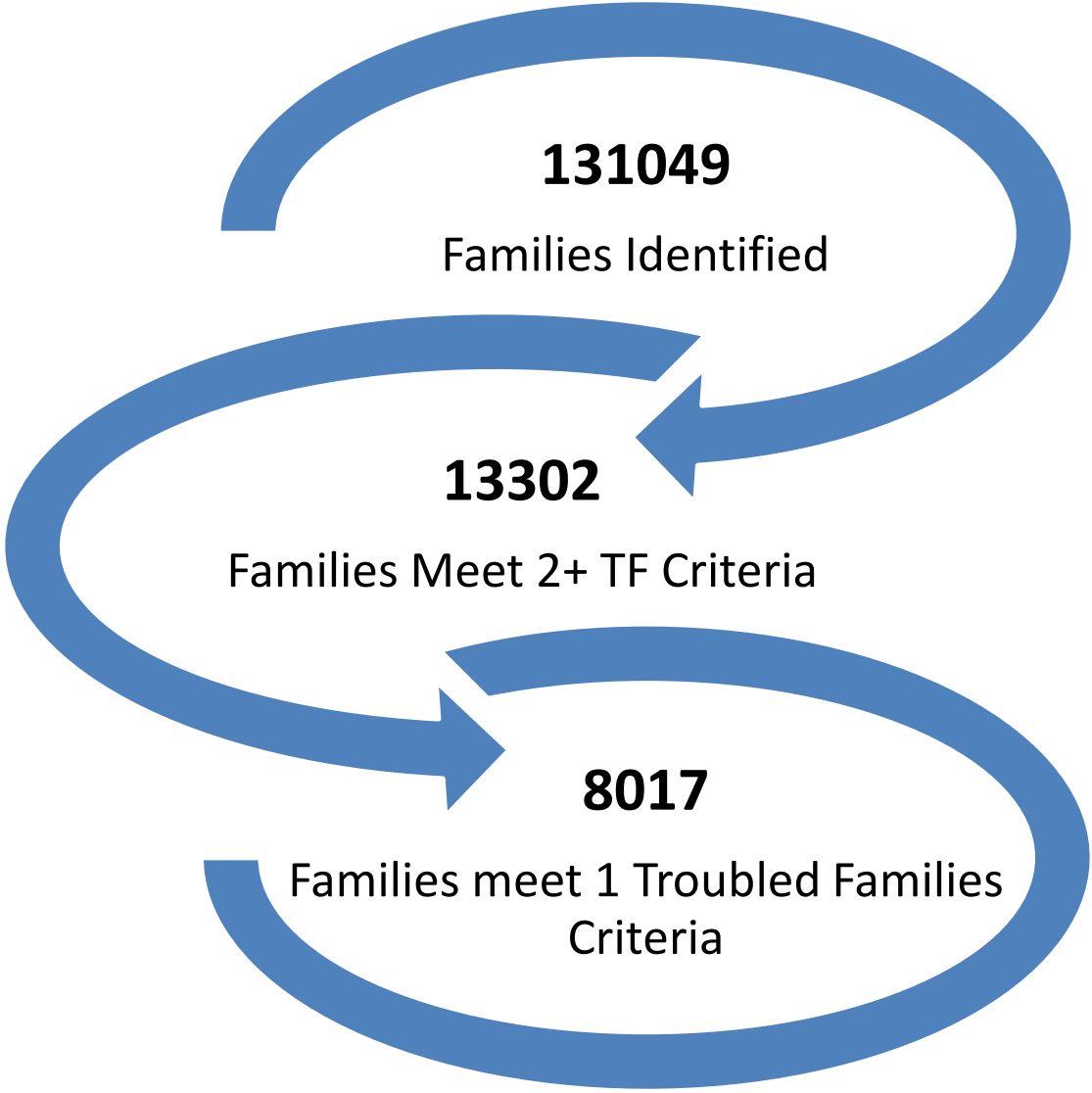
Sentinel Key	Categories	Score	PBR Score	Flag multiple families	Manual Score	Forename	Middle Name	Surname	Gender	Date of Birth	Date of Death	Liverpool Family Id	Already Claimed	Involved in knife Crime	Involved in hate Crime	Involved in gun Crime	Menu
7612510	1	100	0	<input type="checkbox"/>		██████	C	██████	Female	██████980		2940478	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actions
7606884	5	1000	600	<input type="checkbox"/>		██████	B	██████	Female	██████000		2940478	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actions
7661299	1	100	100	<input type="checkbox"/>		██████		██████	Male	██████2017		2940478	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actions
7684002				<input type="checkbox"/>		██████		██████	Male	██████2011		2940478	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actions



# Liverpool Families Programme Results



Liverpool  
City Council



• Outcome

1474%  
Increase

• Outcome

193%  
Increase

• Outcome

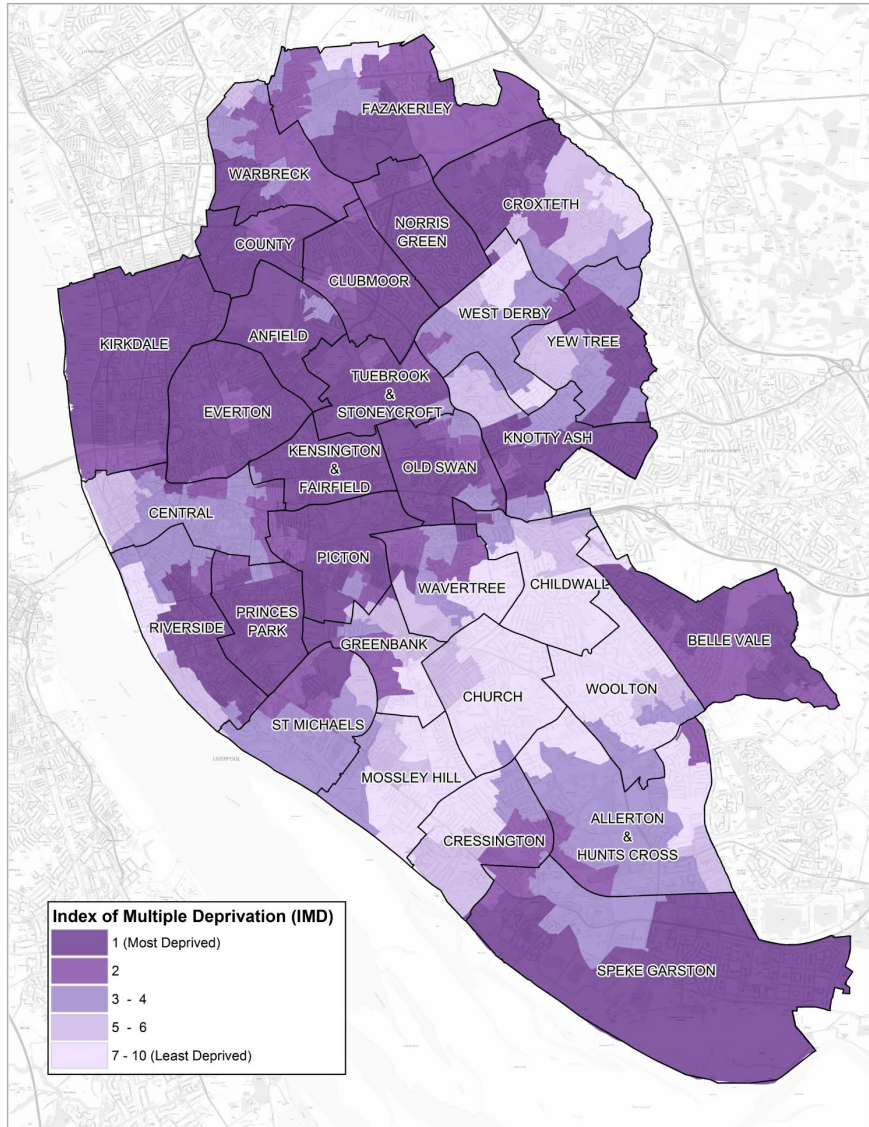
130%  
Increase

37%

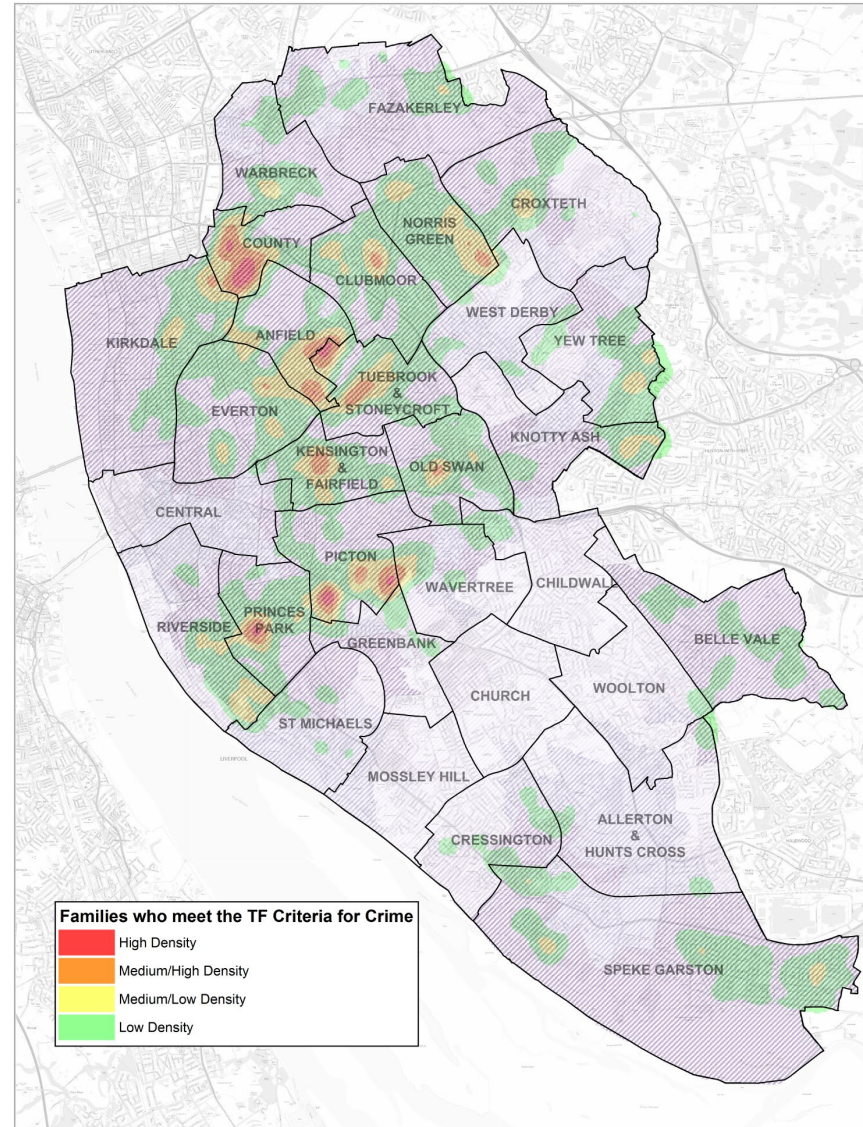
Claims

2017/18  
vs  
2018/19





Deprivation within Liverpool by Lower Super Output Area (LSOA), where an IMD score of 1 indicates the most deprived 10% of LSOAs nationally.



Families within Liverpool who are known to the Troubled Families Programme and meet the TF criteria for crime.



Liverpool  
City Council



**Intelligence Key For Strategic decisions...**

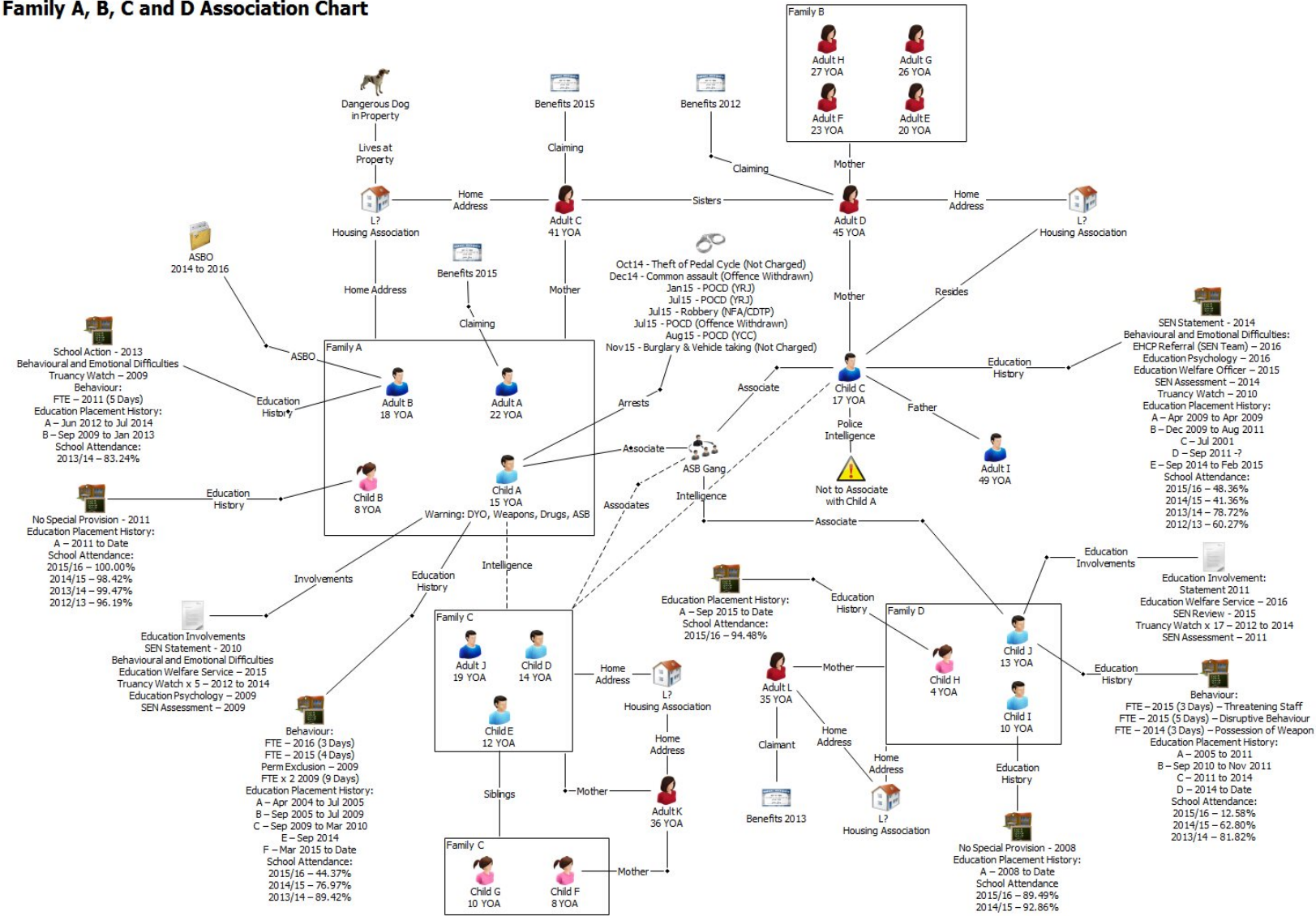


# Predictive Analysis - Liverpool Family Complexity



Liverpool City Council

Family A, B, C and D Association Chart



- Stop checked in a gang after an assault
- Criminal activity started in early teenage years
- Older siblings also have history of criminal activity
- School attendance dropping year on year
- Multiple schools
- Attended PRU
- Previous school interventions
- SEN statements
- All reside in Housing Association properties
- High level of benefit claims
- Single adult families
- Criminal activity has escalated – latest police intelligence
- Sibling attendance remains high

# Challenges



Liverpool  
City Council

- Senior Leader and Partnership support
- Funding
- Key Requirements
- Data Mapping – Outcome Plan
- Time!!!
- Data cleansing
- Implementation periods – Consultant time vs Staff Time
- Integration of new data
- Data Governance
- Automated direct links to partner databases
- Continued programme? / Ensure Business as usual!





# How the Project is Transforming Services – The Future



Liverpool  
City Council

- Integrated data source that is unique in the local partnership
- Moved Liverpool's Data Maturity Model outcome from 'Developing' to 'Maturing' with aspects of 'Mature'
- Promoting how to utilise data in different ways – Predictive Analysis
- Better understanding of families in Liverpool and the services they require – Youth Crime Bid and Special Educational Needs
- Evaluation of interventions to gather cost saving figures and transformation progress
- Evidencing success of the Liverpool Families Programme and wider partnership work
- Promoting Innovation – IG and ICT Solutions



# Where we are now...



Liverpool  
City Council

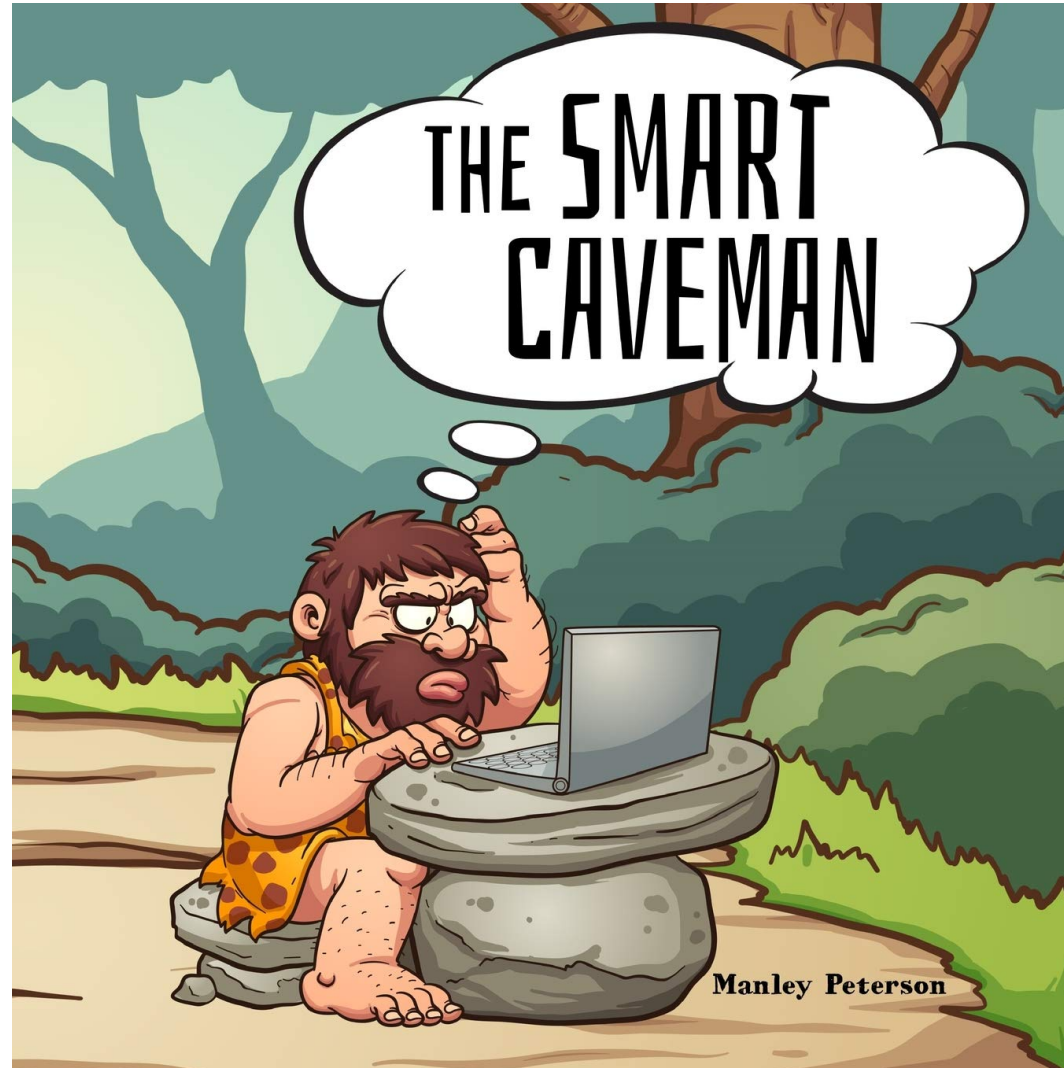


Image: The Smart Caveman: Manley Peterson: 9781796450217





Liverpool  
City Council

Copies of the presentation are available on request:

[john.bowers@liverpool.gov.uk](mailto:john.bowers@liverpool.gov.uk)

Further Details about the Programme can be found at:

<http://liverpool.gov.uk/council/strategies-plans-and-policies/children-and-families/liverpool-families-programme/>

Or

Google ***“Liverpool Families Programme”***

