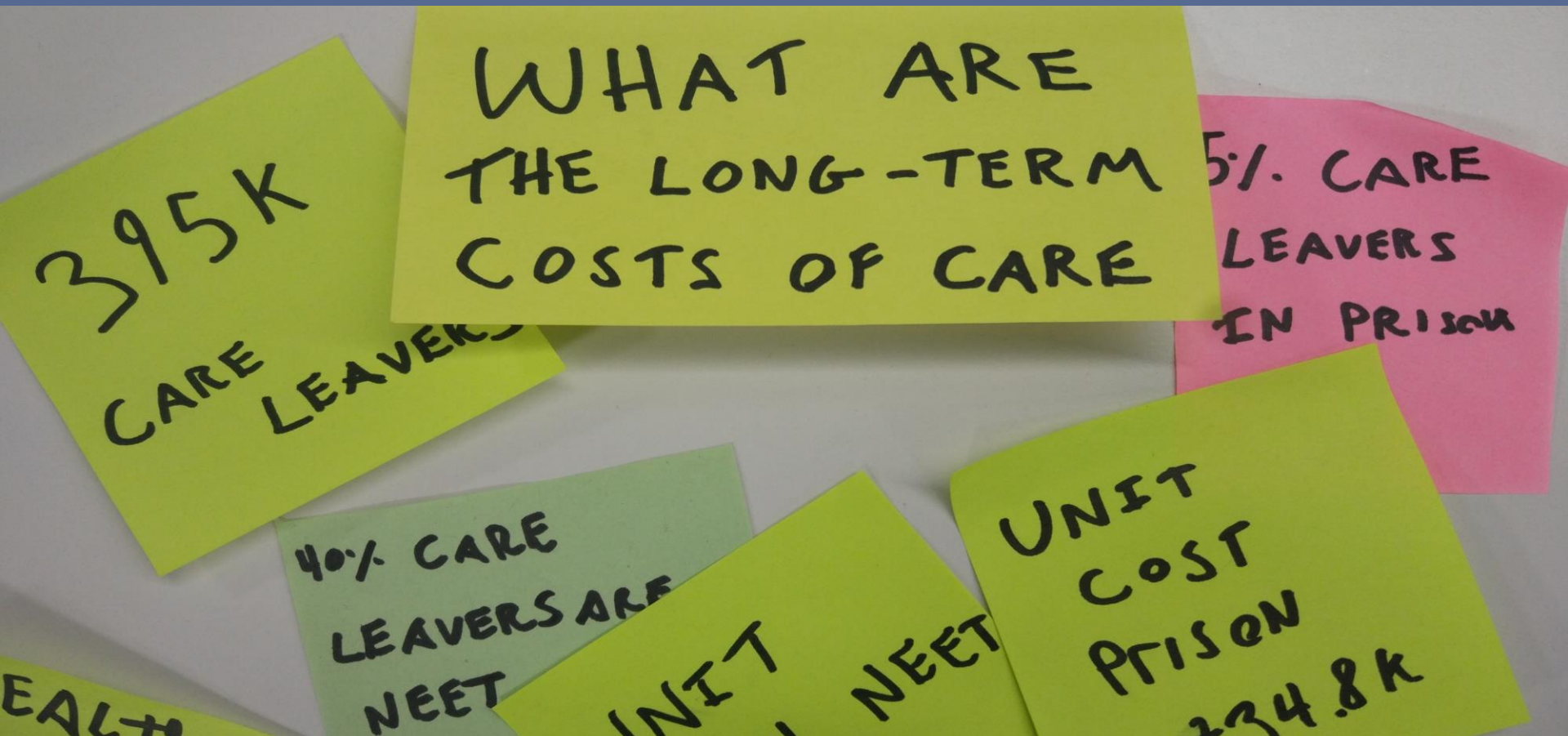
GMCA GREATER MANCHESTER COMBINED AUTHORITY | MANCHESTER CITY COUNCIL | Wigan Council | STOCKPORT METROPOLITAN BOROUGH COUNCIL | Ministry of Housing, Communities & Local Government | SOCIAL FINANCE

BETTER DATA ON CHILDREN IN CARE DISCOVERY PROJECT: BUILDING A COMMON APPROACH

BENEFITS CASE

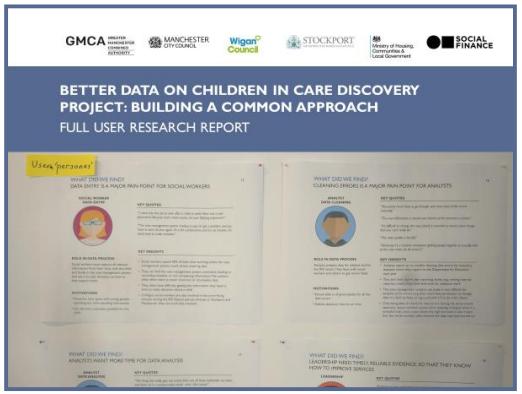


THIS DOCUMENT CONTAINS THE BENEFITS CASE

We wrote up our findings in three documents:

Overall Summary Report

Detailed User Research Report



Benefits Case

CONTENTS

WHAT PROBLEM ARE WE TRYING TO ADDRESS?

THE PROBLEM

Local authorities do not have timely access to all the data and information they need to make sure Looked After Children access the right support

"We need to target limited resources so I need to know what the impact of our decisions are, where's the cost, where's the demand, what's the quality like, what's contributing to it?

If we don't have this we're at risk of bringing another generation of people through the system who don't get the support they need"

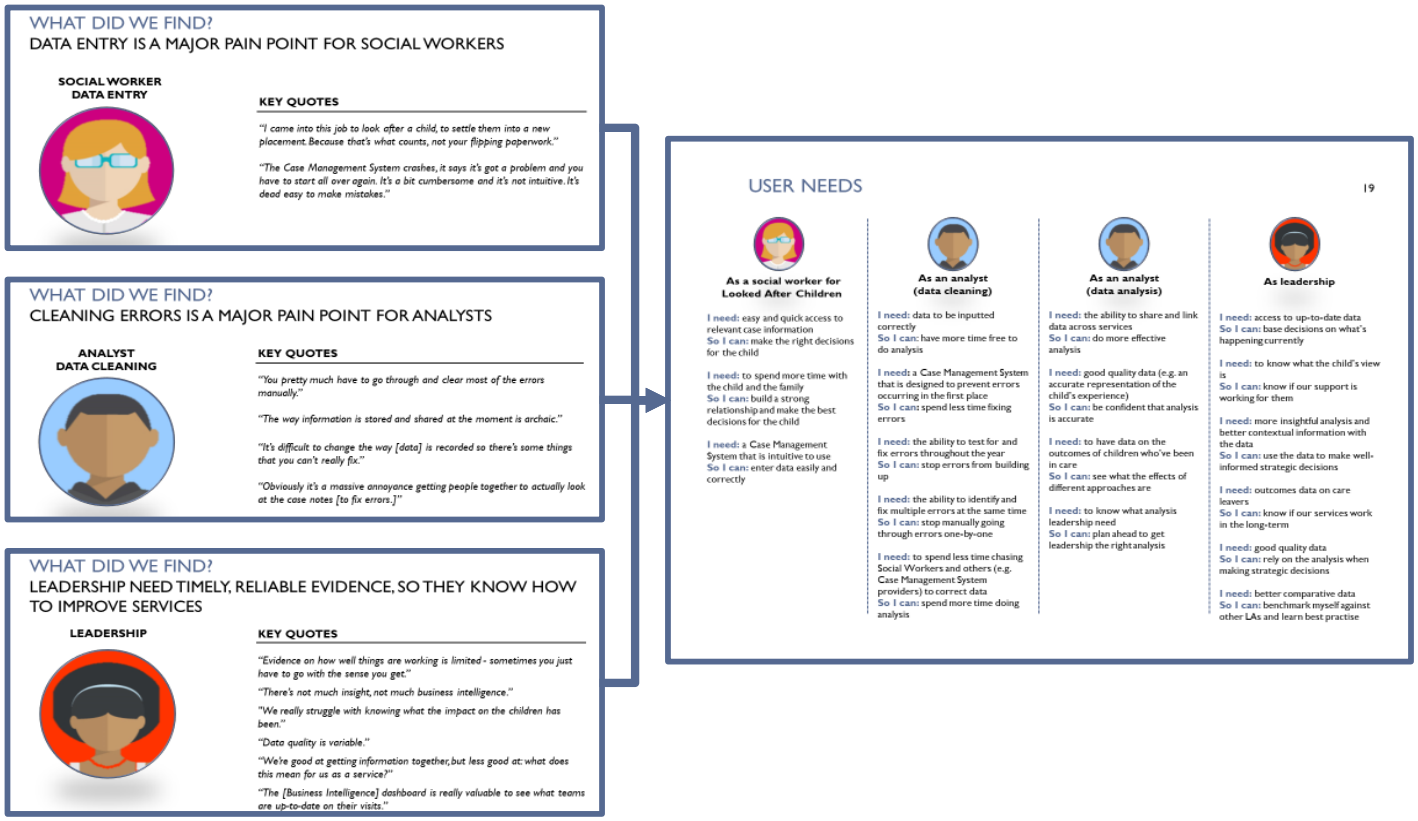
James Winterbottom
Director of Children's Services
Wigan Council

THE OPPORTUNITY

We wanted to work collaboratively across three local authorities to see whether there are common reasons why their Children's Services Departments do not have all the information needed to improve support for Looked After Children

WE SPOKE TO SOCIAL WORKERS, ANALYSTS AND LEADERSHIP TO UNDERSTAND THEIR USER NEEDS

We conducted user research with 29 people from across the service and translated them into clear user needs.



DATA QUALITY IS A MAJOR PAINPOINT ACROSS USERS

	Social worker	Analyst (data cleaning)	Analyst (data analysis)	Leadership
User				
Key finding	**Data entry is a major pain point for social workers** It's unintuitive and time-consuming which means mistakes often happen	**Cleaning errors is a major pain point for analysts** They spend significant time on manually cleaning data	**Analysts are not able to do all the analysis needed** They spend a lot of time error-cleaning	**Leadership do not have access to timely, reliable data to improve services** Currently they lack accurate, up-to-date data on what works
Impact	Social workers lose valuable time on data entry and cleaning	Analysts lose time, meaning they can't do as much analysis as they would like	Analysts cannot provide leadership with the analysis and insight they want	Decisions on support for Looked After Children aren't made on the best evidence

HOW BIG IS THIS PROBLEM?

SOCIAL WORKERS SPEND ~50% OF THEIR TIME WORKING IN THE CASE MANAGEMENT SYSTEM – MUCH OF THIS IS RECORDING DATA

User

Social worker

Key Finding

Data entry is a major pain point for social workers

It's unintuitive and time-consuming which means mistakes often happen

Impact

Social workers lose valuable time on data entry and cleaning

Scale of the problem

- On average, social workers spend around 50%[1] of their working time in the case management system, much of this recording case notes
- While diligent record keeping is essential with vulnerable children, much of this time is highly inefficient and making mistakes is really easy
- Research suggests that data entry could be 30% more efficient[2]
- Confusing and inefficient case management systems lead to social workers making data entry mistakes
- With the average council having around 100[3] social workers, this means that the equivalent of 50 FTEs are spent working in the case management system
- Although not all of these social workers support Looked After Children, they all enter similar data into the case management system

1. Based on interviews with social workers. This is consistent with external estimates of 50-60% of time spent with the case management system e.g. FutureGov Rethinking Children's Social Care Discovery with Tri-borough
2. FutureGov Rethinking Children's Social Care with Tri-borough estimated based on their user research that a 30% reduction in social worker data entry time was feasible
3. There are 16,000 social workers in England across 152 Children's Services Departments (Skills for Care: Social Worker Headline Statistics, 2017)

ANALYSTS AND OTHERS SPEND ~45 DAYS A YEAR CLEANING LOOKED AFTER CHILDREN DATA IN A TYPICAL COUNCIL

User

Analyst

Key Finding

Cleaning errors is a major pain point for analysts

They spend significant time on manually cleaning data

Impact

Analysts lose time, meaning they can't do as much analysis as they would like

Scale of the problem

- In an average council, analysts, business support and social workers spend around 45 days a year cleaning Looked After Children data[1]
- Additionally they have to spend time rewriting their code to extract data from the case management system and perform basic error checks whenever the DfE changes the data format
- These problems are not just found in Looked After Children data, similar issues exists for:
  - Children in Need statutory returns
  - Education statutory returns
  - Adult Social Care statutory returns
- These datasets are far larger than Looked After Children data sets, so will have a far greater number of errors requiring cleaning

1. Based on time spent cleaning data in Stockport and Manchester (Wigan does a far more intensive process with many more days spent, but is not typical). Stockport (an average sized council) spend around 45 days per year. Manchester spend around 110 days per year

ANALYSTS DON'T HAVE TIME TO DO THE ANALYSIS THEY WANT

User

Analyst

Key Finding

Analysts are not able to do all the analysis needed

They spend a lot of time error-cleaning

Impact

Analysts cannot provide leadership with the analysis and insight they want

Scale of the problem

- Every analyst we spoke to identified a lack of time for analysis. This is due to time spent cleaning data which is a major painpoint
- This problem was mentioned time and time again in conversations with other councils as well (Leicestershire, East Sussex, North West Authorities, etc)
- With a lack of time for analysis, analysts focus their remaining time on the essential pressing demands, such as regular reporting, ad hoc requests and freedom of information or subject access requests
- The effect of this is that there isn't time for forward thinking, proactive and strategic analysis

"Although we're analysts we don't really do much analysis because we're constantly churning out lists of figures."

THE BIGGEST PROBLEM BY FAR IS FOR LEADERSHIP. LEADERSHIP NEED RELIABLE EVIDENCE TO IMPROVE SUPPORT

User

Leadership

Key Finding

Leadership do not have access to timely, reliable data to improve services

Currently they lack accurate, up-to-date data on what works

Impact

Decisions on support for Looked After Children aren't made on the best evidence

Scale of the problem

A. Looked After Children have extremely poor outcomes across education, crime, employment, health & housing.

B. We estimate conservatively that these negative outcomes cost government at least £1bn/ year.

C. With 65% of Looked After Children in "inadequate" provision and with such poor outcomes, leadership need to improve support for Looked After Children.

D. Declining budgets and increasing Looked After Children numbers mean more needs to be done with less – which requires leadership making better decisions.

E. Leadership say they need better evidence to improve decisions…

F. …but that data quality and timeliness hinder the use of evidence.

Data quality is one enabler of better decisions, improving it could have a significant impact on Looked After Children outcomes

WHAT IS THE SCALE OF THE PROBLEM FOR LEADERSHIP?

A) OUTCOMES FOR LOOKED AFTER CHILDREN ARE EXTREMELY POOR

Area	Outcomes
Education 	Looked After Children are[1]: • 3x less likely to get 5 A*-Cs at GCSE • 5x more likely to be excluded • 20x less likely to go to university • 10x more likely to have special education needs or Education, Health and Care Plan
Employment 	Looked After Children are almost 3x more likely to be not in education, employment or training (NEET)[2]
Criminal justice 	Looked After Children are 45x more likely to spend time in custody[3]
Health 	Looked After Children are[4]: • 4x more likely to experience mental health issues • 23x more likely to smoke • More likely to drink and take drugs
Homelessness 	Looked After Children are 40x more likely to become homeless[5]

1. 17.5% of LAC get 5 A*-C at GCSE vs 59% of their peers (Transitions from Care to Independent: Supporting care leavers to fulfil their potential, Jenny Driscoll, 2017); LAC are 5 times more likely to be excluded from school than their peers (Looked-After Children – The Silent Crisis, Social Market Foundation); 6.1% of former LAC attend university vs 51% of their peers (Support for Care Leavers, Briefing Paper 08429, House of Commons Library); SEN statistics from Department for Education
2. 40.2% of Care Leavers were NEET in 2016/17 vs 15% of their peers (Support for Care Leavers, Briefing Paper 08429, House of Commons Library)
3. 400 of 1500 YP in custody reported they had spent time in care (The care of LAC in custody, Thematic Report by HM Inspectorate of Prisons)
4. LAC are 4 times more likely to experience mental health issues (NSPCC), 7% of CYP in addiction treatment were LAC (Newcastle University)
5. 1 in 200 people in the UK are recorded homeless (Shelter), 20-30% of homeless people reported being in care at some point (Centrepoint, 2010)

B) THESE NEGATIVE OUTCOMES POSE SIGNIFICANT FINANCIAL COST FOR GOVERNMENT

Area[1]	% of Looked After Children that experience outcome	% of non-Looked After Children that experience outcome	Cost of outcome per year	Additional cost of outcome due to Looked After Children	Organisation bearing costs
Education	*Cost estimates not included as poor education outcomes are correlated with other negative outcomes experienced by looked after children*				
Employment Welfare benefits[3]	**11%** *Estimated care leaver unemployment rate*	**4%** *Unemployment rate for the general population*	**£3,120** *52 weeks of Job Seeker's Allowance*	**£82m**	DWP
Employment Foregone tax[4]	**68%** *Estimated employment rate for care leavers*	**75%** *Employment rate for the general population*	**£3,150** *Annual tax on average UK salary*	**£83m**	DWP
Criminal justice[2]	**6%** *of care leavers are in custody at any point*	**0.13%** *of the population are in custody at any point*	**£35,000** *Annual cost per prisoner*	**£754m**	MoJ
Health	*Cost estimates not included to keep potential impact conservative*				
Homeless-ness	*Cost estimates not included to keep potential impact conservative*				

ACROSS JUST THESE THREE OUTCOMES, LOOKED AFTER CHILDREN COST GOVERNMENT AN ESTIMATED ADDITIONAL £1BN / YEAR VERSUS THEIR NON-LOOKED AFTER PEERS

We estimate that there are ~400,000 CL overall in the country. This is based on estimated average number of LAC leaving care each year over the past 60 years. Number of care leavers per year is calculated assuming care leavers per capita is constant based on 2007 levels. (There has been a 20% increase in children in care since 2007, partly following the death of Baby Peter)

1. All numbers here are rounded. Calculations are based on non-rounded figures, with any small differences in calculated figures due to this. A detailed breakdown of the calculations can be found in the supporting business case model
2. 30% of YP in custody are CLs (Report by HM Inspectorate of Prisons); there are currently 83,000 prisoners in the UK (MoJ) with an adult population of 52,4M (ONS); cost per prisoner including overhead is based on NEF unit cost database
3. NEETs data was used to estimate CL unemployment rate: CL are 3x more likely to be NEET vs their peers (Support for Care Leavers, Briefing Paper 08429, House of Commons Library), we therefore estimate a correspondingly higher unemployment rate for CL;
4. CL employment rate was estimated using the difference between general employment rate of 75% (ONS) and estimated LAC employment rate of 68%. LAC employment rate based on LAC unemployment rate of 11% and conservatively assuming that the same proportion of LAC as of the general population are out of the labour force (21%). Average UK salary in 2015 was 27,600 (ONS), giving £3,150 per person at a 20% tax rate on salary above personal allowance

C) WE NEED TO IMPROVE THE QUALITY OF SUPPORT FOR LOOKED AFTER CHILDREN

Current support is not good enough:

65% of Looked After Children are in councils rated as "requires improvement" or "inadequate" by Ofsted[1]

However, it is possible to improve support, for example:

- The Troubled Families programme has used investment, data sharing and a new approach to successfully reduce Looked After Children numbers[2]
- The DfE Innovation programme is demonstrating that new models of support such as "No Wrong Door", "Signs of Safety" and "Stockport Family" can work[3]
- We know that early intervention e.g. through Early Help or Edge of Care support can improve outcomes[4]
- Councils have managed turnarounds in their level of support: Leeds City Council went from "inadequate" to "outstanding" in less than 10 years[5]

1. Looked-After Children: The Silent Crisis – Social Market Foundation
2. National Evaluation of the Troubled Families Program 2015-2020
3. Children's Social Care Innovation Programme
4. Essex County Council Multi-Systemic Therapy Social Impact Bond – Oxford University Government Outcomes Lab
5. Leeds Children's Services were rated "inadequate" in 2010, "Good" in 2015 and "Outstanding" in 2018

D) HOWEVER COUNCILS FACE A NUMBER OF STRUCTURAL CHALLENGES TO IMPROVING SUPPORT

Budgets are declining	Children's Services budgets have had a 25% real terms cut (2010-2016)[1]
Demand on services is rising	The number of Looked After Children has increased 20% in the last 10 years[2]
Complexity of needs is increasing	The number of children with complex needs has increased 50% since 2004[3]

IN THE FACE OF THESE CHALLENGES, LOCAL AUTHORITIES NEED TO DO MORE WITH LESS

1. Turning the Tide – Action for Children, National Children's Bureau and The Children's Society
2. Looked-After Children: The Silent Crisis – Social Market Foundation
3. Understanding the needs of disabled children – Council for Children's and True Colours Trust

E) LEADERSHIP NEED BETTER EVIDENCE TO IMPROVE SUPPORT FOR LOOKED AFTER CHILDREN

"We need to target limited resources so I need to know what the impact of our decisions are, where's the cost, where's the demand, what's the quality like, what's contributing to it?

If we don't have this we're at risk of bringing another generation of people through the system who don't get the support they need"

James Winterbottom

Director of Children's Services, Wigan Council

F) HOWEVER, DATA ISN'T ALWAYS SUFFICIENTLY ACCURATE AND UP-TO-DATE TO DO THIS

"The quality of our data is variable"
– Senior Manager

"There is a lack of trust in data"
– Analyst

"Around half the time I'll find the data quality makes the analysis tool unreliable"
– Analyst

"I was struggling not having live data, but now I've got a data team to get it for me and I'm reaping the benefits"
– Service Manager

"We're not looking at data that's about today. We're looking at Q3 data in Q1"
– Business Manager

WHAT COULD WE DO TO IMPROVE DATA QUALITY?

WE PRIORITISED A LIST OF POTENTIAL SOLUTIONS DOWN TO ONE: DEVELOPING AN ERROR IDENTIFICATION TOOL

Recommendation:

- Develop an error identification tool so councils can test what errors they have and clean data all year round
- The tool will improve data entry and quality, for example through:
- Helping social workers identify errors at the point of entry e.g. through automatically checking for errors and notifying them in real time or near-real time
- Helping analysts automate data cleaning so that they do not have to manually correct the data. e.g. missing placement information
- Helping analysts correct errors beyond what the DfE validation rules require so that other datasets have high quality data

Impact:

Councils will have cleaner data all year round, meaning:

1. Analysts, business support and social workers will spend less time inputting and cleaning data
2. Analysts will have more time to conduct analysis and support leadership
3. Leadership will have better quality data, enabling them to better use evidence to inform strategic decisions on support for Looked After Children

OVER THE COURSE OF AN ALPHA WE WOULD LOOK TO DEVELOP AND USER TEST A MINIMUM VIABLE PRODUCT

Indicative high-level project plan

1. Pre-project	Information Governance, data access and security, set up meetings and admin, mini-discoveries in new partner councils
2. Design sprint	Design sprint to identify and test options to meet user needs, including mock-up prototype design and testing
3. Tool build, user testing & iteration	Build first version MVP tool based on design sprint findings Test tool with users and iterate Further user research on expansion options e.g. other statutory returns, data diagnostic to identify other uncaptured error types, prototype autocorrection or automated notifications for social workers
4. Write up & beta plan	Write up findings to share with other councils (including open sourcing code with guidance), develop and test options for beta
5. Post project	Ongoing testing of impact of tool e.g. monthly user research follow-up to see if the alpha prototype is meeting user needs and reducing errors

FOR AN ALPHA WE WOULD LOOK TO BRING IN ADDITIONAL COUNCILS AND GOVERNMENT PARTNERS

CORE PARTNERS

- Manchester City Council
- GMCA Greater Manchester Combined Authority
- Wigan Council
- Ministry of Housing, Communities & Local Government
- Stockport Metropolitan Borough Council

AIM TO BRING IN OTHER GREATER MANCHESTER COUNCILS

- Trafford Council
- Oldham Council
- Bury Council
- Salford City Council
- Rochdale Borough Council
- Bolton Council
- Tameside Metropolitan Borough

ENGAGE WITH OTHER LOCAL AUTHORITIES TO TEST SCALABILITY

- Cheshire West and Chester
- Sheffield City Council
- North Yorkshire County Council
- Leeds City Council
- Camden
- Essex County Council
- Islington
- Haringey Council

Department for Education

We would engage actively with the Department of Education in any alpha to ensure it aligns to their workflows and vision for how the SSDA903 return should be processed and cleaned.

WHAT IMPACT WOULD THIS HAVE?

THERE ARE 1) IMMEDIATE BENEFITS FROM TIME SAVINGS AND 2) LONGER TERM BENEFITS FROM BETTER STRATEGIC DECISIONS

	1) Immediate time savings	2) Longer term benefits from better strategic decisions	
	Short-term (6 – 12 months)	**Medium-term (12 months – 3 years)**	**Long-term (3+ years)**
Benefits	• Analysts can more effectively clean data during the statutory return window, saving them time (Wigan, Stockport and Manchester) • Social workers, analysts and business support can input and clean data more easily throughout the year (Wigan)	• Better quality data is an enabler of better evidence for operational, commissioning and strategic decisions • Better quality decisions enable better care placements, social work, educational and health support	• Better support will improve outcomes for Looked After Children, increasing their quality of life • Better outcomes will lead to significant cash savings for central and local government
Costs	• Discovery, alpha and beta development • Training, support and onboarding	• Analysis and tool development, culture change, strategic support • Investment in intervention and service change	• Further tool and analysis development • Service investment and culture change
Impact	 Lower impact	 Medium impact	 Higher impact
Certainty	 Higher certainty	 Lower certainty	 Lower certainty

THE MEDIUM- AND LONG-TERM BENEFITS ARE THE MOST SIGNIFICANT, BUT THEY CANNOT BE ACCURATELY QUANTIFIED

HERE, WE WILL ONLY QUANTIFY THE SMALLER, SHORTER TERM BENEFITS AND COSTS

Short-term (6-12 months)	Medium-term (12 months-3 years)	Long-term (3+ years)
1 • Analysts can more effectively clean data during the statutory return window, saving them time (Wigan, Stockport and Manchester)	• Better data quality is an enabler of better evidence for operational and strategic decisions	• Better support will improve outcomes for Looked After Children, increasing their quality of life
2 • Social workers, analysts and business support can input and clean data more easily throughout the year (Wigan)	• Better quality decisions enable better care placements, educational and health support	• Better outcomes will lead to significant cash savings for central and local government

Immediate benefits – quantified in the benefits case

- Direct benefits of better data quality
- Benefits and costs are quantifiable

Longer term strategic benefits – not quantified in the benefits case

- Better data quality is required to improve decision making and achieve these benefits, but is not sufficient by itself
- Benefits and costs cannot be accurately quantified at this stage

1 *BENEFITS CASE:* ANALYSTS CAN MORE EFFECTIVELY CLEAN DATA DURING THE STATUTORY RETURN WINDOW (WIGAN, STOCKPORT AND MANCHESTER) – (1/2)

Estimated annual savings
Calculated based on Manchester and Stockport's less intensive return process

Benefits for:	Without confidence factor[1,2]	Applying confidence factors[3]	Potential impact of time saving
Average Council[4]	£34,000	£13,000	Extra 600 hours for analysis
Manchester, Wigan and Stockport[5]	£157,000	£60,000	Extra 2,700 hours for analysis
Greater Manchester 10 Councils[6]	£396,000	£150,000	Extra 6,800 hours for analysis
Whole Country	£5,200,000	£2,000,000	Extra 90,000 hours for analysis

Numbers are rounded

Improving data quality could conservatively save 3-4 months of time, equivalent to £13,000 / year / council

1. Calculated based on average time usage in Manchester and Stockport, who have more standard approaches to data cleaning during the statutory return window
2. Children in Need and Schools Censuses – see supporting benefits case Excel model
3. We apply confidence factors of 80% to the current time usage, 80% to the potential reduction in time usage and a further 80% and 50% confidence factors to the potential expansions to the Children in Need and School Census (based on GDS Benefits Case Guidelines and HMT Cost Benefit Analysis guide)
4. Average Council is based on number of Looked After Children
5. We assumed that Stockport and Wigan are average. We applied a multiplier of 2.6 to Manchester because it has more Looked After Children than the average council.
6. We assumed nine of the ten Greater Manchester Councils are average. We applied a multiplier of 2.6 to Manchester because it has more Looked After Children than the average council.

1 *BENEFITS CASE:* ANALYSTS CAN MORE EFFECTIVELY CLEAN DATA DURING THE STATUTORY RETURN WINDOW (WIGAN, STOCKPORT AND MANCHESTER) – (2/2)

Data entry time savings for social workers calculation:

903 Statutory Return Benefits

- In a typical council analysts estimate that they spend around 45 days per year cleaning data for Looked After Children statutory returns[1]
- We think that a significant number of these errors could be eliminated. 53% of errors across Wigan, Manchester and Stockport have already been eliminated by one of three councils. We believe it should be feasible to eliminate these in the others also[2]
- Additionally, errors are highly focussed with the top three types accounting for over half of the total errors.[2] For these two reasons, we think it should be feasible to eliminate at least 50% of overall errors
- Analysts rated the top errors as being no easier than others to clean on average,[2] so we assume that this error reduction would lead to an equivalent reduction in error cleaning time

Wider Statutory Return Benefits

- These problems apply also to other statutory returns and the tool would be relatively simple to adapt to other data schemas, we count some savings from these as well
- Each council submits over 130 statutory returns to central government[3] each year. Here we conservatively count extra savings from two additional returns only: the Children in Need (CiN) Census and the School Census
- Analysts estimate that the CiN census takes a similar amount of time to the 903 return (despite covering a >5x greater population, and that the school census takes over 300 days for analysts and schools. We apply additional confidence factors to these savings as we have not explored them in detail in this work[4]

1. Analysts in Stockport, an average size council, estimate 45 days on cleaning. Manchester estimate 110 days.
2. See analysis of error data in the accompanying user research pack.
3. www.gov.uk/government/publications/single-data-list
4. We apply an additional 80% confidence factor to CiN census savings as this process is very similar to the 903 return, submitted based on the same raw data, by the same analysts and in a similar format to the 903. We apply 50% to school census savings as although these are submitted based on a similar process to the DfE, the population, process and analyst involved are different.

2 *BENEFITS CASE:* SOCIAL WORKERS, ANALYSTS AND BUSINESS SUPPORT CAN INPUT AND CLEAN DATA MORE EASILY THROUGHOUT THE YEAR (WIGAN) – (1/2)

Estimated annual savings
Calculated based on Wigan's year-round error-cleaning process and only applying to councils doing more intensive year-round cleaning

Benefits for:	Without confidence factor[1]	Applying confidence factors[2]	Potential impact of time saving[3]
Average council	£23,000	£9,500	Extra 200 hours with children
Wigan[4] (Manchester and Stockport are excluded as they don't do extensive year round cleaning)	£70,000	£28,000	Extra 650 hours with children
Greater Manchester 10 Councils (applying to 1/3 of councils)	£230,000	£95,000	Extra 2,100 hours with children
Whole country (applying to 1/3 of councils)	£3,500,000	£1,400,000	Extra 32,500 hours with children

Numbers are rounded

Simplifying year-round cleaning could conservatively save time equivalent to £9,500 / year / council on average

1. Based on time usage on data cleaning throughout the year in Wigan, a council which invest heavily in this. However benefits are only assumed to be relevant for one third of councils. We assume also that time savings can also be made on the Children in Need Census as this is cleaned in the same way throughout the year
2. HMT "Supporting public service transformation: cost benefit analysis guidance for local partnerships" suggests a 60% confidence factor for uncorroborated expert judgements. Here we have gone further and applied a 40% confidence factor for our judgement on the possible amount of time saved, and a further 95% confidence level for our estimate of the amount of time spent on data entry, based on the GDS Benefits Handbook guidelines for confidence factors. We apply a further 80% confidence factor for the potential to expand to the Children In Need Census.
3. Assuming 50% of time saved is used to meet with children and families.
4. Wigan's all year round process is more intensive in comparison to the average council

2 *BENEFITS CASE:* SOCIAL WORKERS, ANALYSTS AND BUSINESS SUPPORT CAN INPUT AND CLEAN DATA MORE EASILY THROUGHOUT THE YEAR (WIGAN) – (2/2)

Data entry time savings for social workers calculation:

- The ability to automatically detect errors throughout the year and potentially automate cleaning or automate notifications and explanations to social workers and business support staff on what needs to change would result in significant time savings
- Currently the process of fixing an error is very time consuming. Wigan estimate that it takes a full day of time across different teams on average to clean one error. The steps are:
  1. Analyst identifies error by running report or noticing a mistake in analysis;
  2. Analyst reviews the error in the case management system to understand why it has occurred and what could be done to fix it;
  3. Analyst emails social worker and business support explaining the error and options to resolve it;
  4. Social worker and business support reply with clarifying questions, sometimes with several rounds of email responses
  5. Social worker makes a request to I.T. to fix the error;
  6. If this requires changing data in the case management system rather than just adding new data, I.T. must ask for manager approval;
  7. Social worker emails manager to get approval and forwards this to I.T.; and
  8. If the change is simple the social workers can make it
  9. If the change is complicated, it may require a request to the case management system provider for a "roll back", where all the data since the error is deleted and re-entered. Sometimes it takes months to process these requests
- Making a 50% reduction to this lengthy process could save 130 days of time (at a day rate of £175), equivalent to £23,000 per council[2] who uses a similar year-round data cleaning process
- For the benefits case, we assumed that 1/3 of councils use this type of error cleaning process
- Following GDS Business and Treasury Green Book business case guidelines, we have applied a confidence factor of 45%[1]
- We also count additional savings from expanding the tool to look at errors for the Children in Need (CiN) Census. This statutory return is similar to the 903 return and is cleaned in the same way by Wigan throughout the year. However, we apply an additional confidence factor of 80% to account for further uncertainty as this work hasn't focussed on CiN data

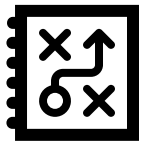
1. HMT "Supporting public service transformation: cost benefit analysis guidance for local partnerships" suggests a 60% confidence factor for uncorroborated expert judgements which we apply to our estimate of the potential time savings. We have applied a further 75% confidence level for our figures of the amount of time spent on year-round data cleaning, based on the GDS Benefits Handbook guidelines for confidence factors.

2. Using a typical £35k pa social worker / analyst salary and 21% pension overhead based on the GDS Benefits Handbook guidelines. This is conservative as a) it doesn't include any overheads for buildings etc., b) it is an at-cost salary, far lower than internal charge rates and c) in some cases analysts or social worker roles are filled by temporary staff on significantly higher salaries.

IT WOULD ALSO BE A KEY STEP TOWARDS ENABLING LEADERSHIP TO ANSWER THEIR KEY QUESTIONS…

Leadership need to know:

What are the needs of the children we support?



What journeys do children take through services?

What outcomes do children experience?

What are the costs and effectiveness of different services?

… MEANING THEY CAN MAKE BETTER DECISIONS ON SUPPORT FOR LOOK AFTER CHILDREN

With this information, leadership can improve vital decisions such as:

How do we target support towards the children who most need it?

How do we ensure looked after children have the right support to meet the needs of children?

How do we improve our services?

How should we prioritise our resources?

Which preventative services should we invest in?

WHAT MIGHT IT COST TO ACHIEVE THIS?

THE LARGEST COSTS ARE LIKELY TO BE TOOL DEVELOPMENT, WITH RELATIVELY LOW ONGOING COST FOR MAINTENANCE ETC.

Cost	*Description*[1]	*Value*[1]	*Fixed / per-council*	*One-off / ongoing*	*Confidence level*
Discovery	*12 week discovery project on LAC data* *Team: project management, 2 x user researcher, business analyst, senior oversight, council staff time*	*£110k*	*Fixed*	*One-off*	***Certain** – costs incurred*
Alpha	12 week alpha on an error identification tool, with follow-up user research over longer-term Team: project management, user researcher, business analyst, developer, senior oversight, council staff time	£100k	Fixed	One-off	**High** – based on next step project plan
Beta	16 week beta dependent on alpha outputs Indicative team: project management, user researcher, business analyst, 2 x developer, senior oversight, council staff time	£150k	Fixed	One-off	**Medium** – scale of beta depends on alpha findings
Maintenance	To account for high-cost scenarios: we assume the tool requires some ongoing development work as well as maintenance	£100k / year	Fixed	Yearly	**Low** – depends on alpha & beta outputs
Onboarding	4 days onboarding for each new council	£2k / council	Per-council	One-off	**Low** – depends on alpha & beta outputs
Process change	Assumed 4 weeks of process change is required to realise benefits, quantified based on at-cost rates	£3.5k / council	Per-council	One-off	**Low** – depends on alpha & beta outputs
Support & hosting	2 days of support required per year per council to maximise value of tool and as deployment model is unknown assume high hosting costs	£2k / year / council	Per-council	Yearly	**Low** – depends on alpha & beta outputs

1. Costs beyond alpha will vary significantly based on alpha outputs. Here we have made conservative assumptions including full costs across various future trajectories of the work. See supporting Excel model for details on assumptions.

HOW DO THE COSTS BALANCE AGAINST THE BENEFITS?

THIS CONSERVATIVELY ESTIMATES THAT TIME SAVINGS ALONE COULD PAY BACK INVESTMENT OVER A FEW YEARS[1]

Costs and benefits under different scale scenarios[2]

	1 council	10 councils (Greater Manchester)	30 councils (North West and partners)	152 councils (All councils in England)
Investment	c. £367k	c. £417k	c. £527k	c. £1,198k
Net Annual Benefits	Negative – not viable investment	c. £126k	c. £533k	c. £3,000k
Payback period	Never – not viable investment	3.3 years	1 year	5 months
ROI	Negative – not viable investment	30%	101%	250%
10-year NPV	Negative – not viable investment	£606k	£3.8m	£22.9m
	This work would not be feasible without collaboration	**Downside** – fail to scale beyond Greater Manchester	**Base case** – scale across the North West and other partners	**The potential** – scale nationally

However, the greater benefit – not quantified here – is supporting leadership to use evidence to improve strategic decisions

1. See supporting benefits case excel model for full details on all benefits and cost.
2. Conservative confidence factors have been applied to benefits here.

THIS ANALYSIS IS BASED ON A NUMBER OF CONSERVATIVE ASSUMPTIONS TO ACCOUNT FOR UNCERTAINTY

Recap: to ensure that we made a conservative estimate of the benefits and costs we:
(see figures on the previous page)

- Applied confidence factors to each of our benefits to account for uncertainty in the scale of benefits achievable
- To turn time savings into an equivalent financial figure we used "at cost" salary figures. These do not include any overheads for buildings, equipment etc.
- Assumed that we can largely eliminate just the most common errors (~50%)
- Used conservative estimates of costs e.g. ongoing maintenance of £100k / year and hosting costs of £1k / year / council

A less conservative estimate of benefits, presented on the following page, could be based on:
(see figures on the following page)

- Using the full benefits without the application of confidence factors
- To turn time savings into financial figures, apply additional overheads to full salaries (e.g. adding a 20% overhead)[1] –Assuming we can eliminate more than just the most common errors. Eliminating all of the common errors would equate to a ~75% reduction in errors
- Using less conservative cost estimates e.g. just £50k ongoing maintenance and development and assuming a tool is not hosted

1) Note that this is likely still conservative as it is a low overhead and based on salaries of full time employees not contractors or agency staff which are used in a number of cases.

APPLYING LESS CONSERVATIVE ASSUMPTIONS SHOWS THAT MUCH MORE SIGNIFICANT BENEFITS COULD BE POSSIBLE

Costs and benefits under different scale scenarios

	1 council	10 councils (Greater Manchester)	30 councils (Northwest and partners)	152 councils (All councils in England)
Investment	c. £367k	c. £417k	c. £527k	c. £1,198k
Net Annual Benefits	c. £52k	c. £1.1m	c. £3.1m	c. £15.5m
Payback period	7 years	5 months	2 months	1 month
ROI	14%	260%	600%	1300%
10-year NPV	£66k	£8.2m	£24.6m	£124m
	With less conservatism in assumptions, this work might be viable for one council	**Downside** – fail to scale beyond Greater Manchester	**Base case** – scale across the North West and other partners	**The potential** – scale nationally

IN AN UPSIDE SCENARIO, THIS WORK COULD PROVIDE LARGE BENEFITS, BASED ON TIME SAVINGS ALONE, EVEN WITHOUT FACTORING IN THE MAJOR BENEFITS OF BETTER QUALITY DATA FOR DECISION MAKING

AS WELL AS THE BENEFITS, THERE ARE RISKS WITH THIS PROJECT; HOWEVER, THESE CAN BE EFFECTIVELY MITIGATED

Risks	Mitigation
The DfE don't engage in the project meaning we can't access their error checking codes	We've prepared a conservative budget and business plan that could accommodate the additional cost of having to replicate their code using the published ruleset
Identification of errors does not translate into better data quality and improved cleaning processes	We will conduct user research and through constant iteration and feedback on the tool to ensure it aligns to workflows and meets user needs
Decision makers in other local authorities do not see value, hence it is difficult to scale	We've had conversations across the other Greater Manchester and North West authorities, East Sussex, Leicestershire, and Leeds to test and validate the findings
Operational risk that project outputs do not fit with existing systems or practices, so aren't used	We will continue to rapidly test and iterate to ensure that the outputs meet local requirements and are technology agnostic
Although councils see the project's value, large structural or macro changes could mean that councils cannot engage with the project	We have a flexible plan and could pause work in one council and add additional councils as we progress to keep a critical mass

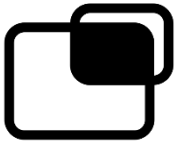
WE CAREFULLY ASSESSED WHETHER WE SHOULD CONTINUE TO ALPHA WITH AN "ALPHA GATEWAY" STYLE PROCESS

Category	Assessment	Discussion
Immediate value-add		There is immediate value-add in terms of time savings, however, these are relatively modest, equivalent to less than 1 FTE per council.
Long-term benefits		Strong long-term benefits from meeting leadership's need for good quality data year-round, meaning they can use solid evidence to improve services.
Scalability		Our conversations and experience show that data quality is a problem for all councils, and statutory return processes are similar across councils. This means a common solution could be easily shared and scaled across councils.
Strategic benefits		Local authorities want to collaborate to build tools and services – a common way of cleaning data would enable common tools such as common data models, shared analytics tools, etc. to be built and used across councils.
Fiscal case		The only quantifiable fiscal benefits are modest non-cashable time-savings. The larger benefits from better decisions are not readily quantifiable.
Feasibility		It is feasible to meet this need in a timely way. The DfE publishes error definitions which could be used to produce a simple tool.
Risks		Many major risks are well-mitigated: there is broad enthusiasm across councils and we have a flexible plan that can accommodate different levels of stakeholder involvement.
Uncertainties		There is some uncertainty around what pathways from identifying errors to improving data quality will prove most effective.

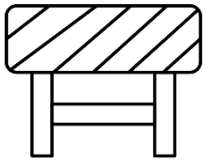
WE CONCLUDED THAT ALTHOUGH THERE IS UNCERTAINTY AROUND THE IMMEDIATE VALUE-ADD AND THE FISCAL CASE, THE HIGH FEASIBILITY, SCALABILITY AND LONG-TERM BENEFITS MAKE THIS AN ATTRACTIVE OPTION TO TAKE FORWARD TO ALPHA

APPENDIX: CASE STUDIES OF HOW EVIDENCE CAN TRANSFORM DECISION MAKING AND IMPROVE OUTCOMES

THE BARRIERS TO USING DATA AND EVIDENCE TO INFORM DECISION MAKING ARE CURRENTLY HIGH



The need: Local authorities need to better identify, understand and support young people who are at the edge of care, in care or leaving care.



The barriers: Many Children's Services teams find it challenging to use data to help improve their offer to young people. There are a number of barriers to this: data quality, disparate and incomplete datasets, lack of access to timely data, lack of outcomes data, and broader pressures (e.g. reduced budgets).

Solutions: However, with significant work, some councils are using data to improve services. The following slides show four case studies of what is possible when councils overcome the barriers to evidence-based decision making.

HAVING MORE TIMELY ACCESS TO CLEAN DATA WILL REDUCE ONE OF THE BARRIERS FOR COUNCILS TO IMPROVE DECISIONS WITH EVIDENCE, AS THE FOLLOWING THREE CASE STUDIES ILLUSTRATE…

CASE STUDY 1: NEWCASTLE MAPPED PATHWAYS THROUGH EARLY HELP, PROVING THAT IT WAS A GOOD INVESTMENT

Context: Newcastle City Council (NCC) wanted to understand more about young people's journeys through Early Help, and how to improve the pathways into Early Help.

Newcastle City Council

Barriers:

- Datasets could not be joined, which made it difficult to make strategic decisions
- Matching data requires significant data cleaning and checking

Solutions:

- Using data science techniques, datasets could be joined to better capture a young persons experiences and needs
- Created a set of reusable data models and analytics to support service improvement

Project impact:

- **The impact of better data:**
  - Cleaned and matched data enabled the council to better understand their Early Help and Sure Start services, and assess their impact on reducing social care demand
- **Impact on outcomes for young people**:
  - New analysis helped Newcastle demonstrate the impact of Early Help and preventative support, contributing to an internal business case for allocation of spend
  - Newcastle is exploring how and why cohorts of young people access different services, and how these could be avoided or improved

CASE STUDY 2: GREATER MANCHESTER IDENTIFIED THAT THEY COULD DO MORE TO SUPPORT TODDLERS ENTERING CARE

Context: Usually, children who enter care between the ages of 0 – 2 should leave within 24 months. In Greater Manchester, these children were spending a significantly longer time in care than expected.

GMCA GREATER MANCHESTER COMBINED AUTHORITY

Barriers:

- Children's Services need greater insight into which approaches give the best long-term outcomes

Solutions:

- A partnership of 20 councils, including Greater Manchester, developed a new digital tool to help analyse differences in the experiences of children in care and in practise models between councils

Project impact:

- **The impact of better data:** Bringing data together in this way allows councils to understand their current population, future demand, conduct cross-comparable analysis, and use insights to inform and improve delivery
- **Impact on outcomes for young people**: GMCA took the insights from this tool to help them explore how to more quickly identify children who should be adopted/returned home – ensuring they get the support required

CASE STUDY 3: ESSEX IDENTIFIED AN OPPORTUNITY TO INVEST TO HELP CHILDREN ON THE EDGE OF CARE STAY WITH THEIR FAMILIES

Context: Local authorities are often looking at how they can better manage demand for care placements and couple this with more targeted prevention support to families.

Essex County Council

Barriers:

- Shrinking local authority budgets mean that preventative services are not prioritised
- Cost of care placements are high at £20k-£300k per child per year

Solutions:

- Data analysis on the experiences of children on the edge of care and in care identified key populations, care placement type and costs to help build business cases

Project impact:

- **The impact of better data:**
  - Analysis of service, outcomes and cost data for the edge of care population was essential in contributing to the business case for investing into a new preventative service
- **Impact on outcomes for young people**:
  - The original project based in Essex provided 24/7 intensive therapeutic support for 380 adolescents over a five year period
  - This model has been scaled across 5 councils across Greater London – the first set of children who graduated from the programme spent 7475 days out of care

INTERVENTIONS LIKE THESE CAN HAVE MAJOR BENEFITS FOR VULNERABLE CHILDREN AND FAMILIES

Benefits case study: between 2011 and 2018 Manchester City Council provided Early Help support to 8,000 families. Their analysis of this work shows that it is highly effective for families and creates savings for government.

Impact of Early Help on children and families

Manchester showed that support achieved significant benefits for children and families:

Families with:	Before intervention	After intervention
School absences	54%	9%
Police call-outs	69%	48%
Out-of-work benefits	61%	51%
Mental health issues	61%	21%
Parenting issues	62%	19%
Domestic violence incidents	41%	15%

Benefits case for government

The benefits from these interventions were 1.9x larger than the costs incurred:

Costs: £33.3m
(for Manchester City Council)

Benefits: £63.5m

These benefits accrued across multiple issue areas and government bodies:

Manchester City Council, DWP, Housing, NHS, Criminal Justice and Schools