Missing Numbers in Children's Services

How better data could improve outcomes for children and young people

Gavin Freeguard

Colm Britchfield

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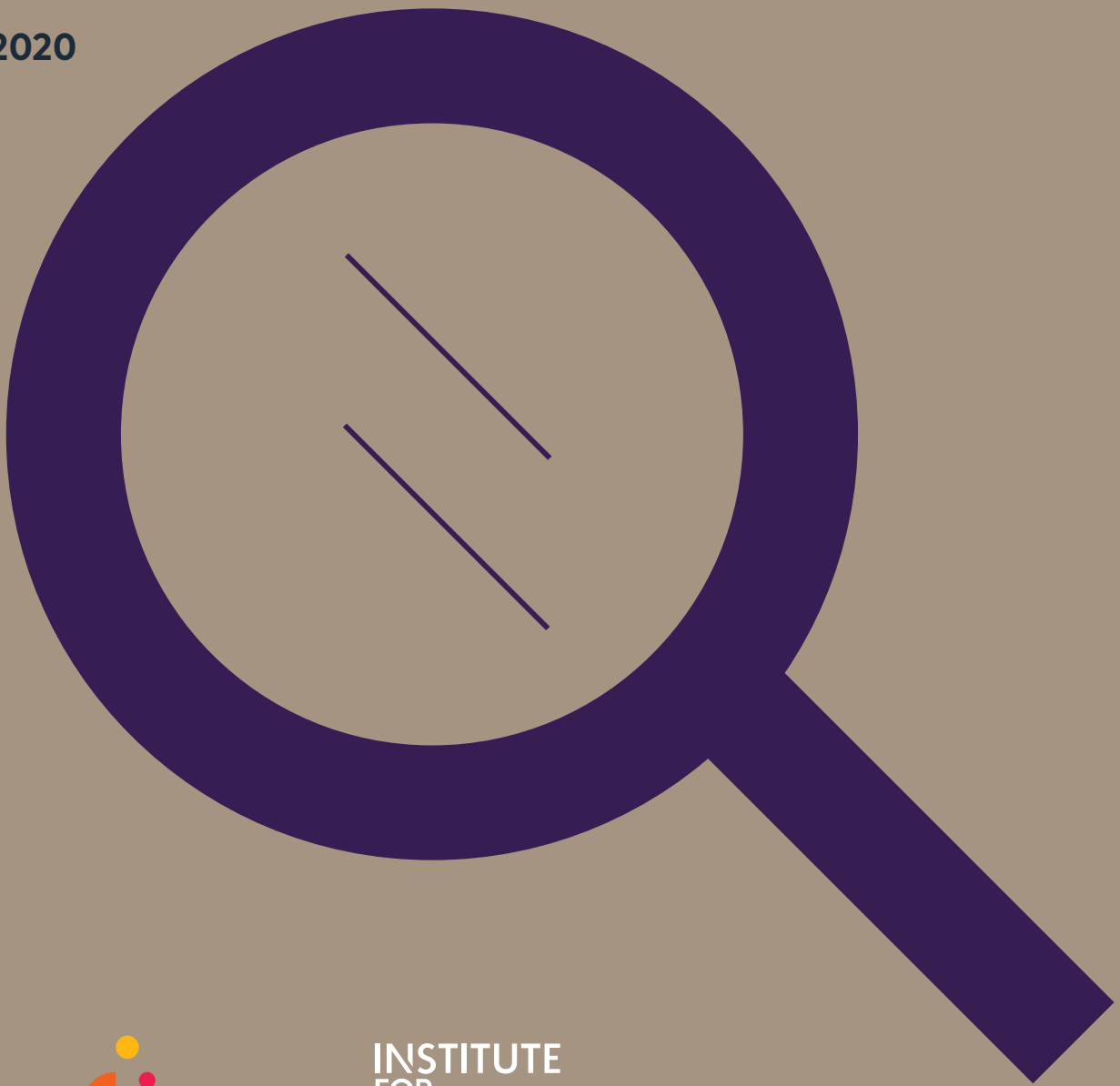

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About the authors

Gavin Freeguard is a programme director and head of data and transparency at the Institute for Government.

Colm Britchfield is a research assistant at the Institute for Government.

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Contents

List of figures 4

Executive summary 5

Introduction 7

Ways of thinking about data 10

What data is available on children's services? 13

What are the barriers to more useful data in children's services? 25

Policy recommendations – how can we move towards an ideal data world? 36

Conclusion 41

References 44

List of figures and tables

Figure 1 A logic model for the children and young people's services system 10

Table 1 Ways of thinking about data 12

Figure 2 Map: The children and young people's services data ecosystem – at present 14

Figure 3 Proxy measures for children's outcomes 17

Table 2 Data that local authorities are mandated to report on children's provision 24

Figure 4 Map: The children and young people's services data ecosystem – the ideal world 26

Figure 5 Policy recommendations – how to move towards an ideal data world 37

Executive summary

The case for early intervention is strong. Investment in preventive 'upstream' services, such as children's centres and youth services, can improve outcomes for children and young people while also reducing demand for more expensive 'downstream' services, such as children's social care. However, the lack of consistently good-quality data restricts the ability of frontline staff, local authorities (LAs) and central government to understand what works and therefore to intervene in an evidence-based way.

This report begins by reviewing what data is available about children's centres and youth services. We then explore the benefits of, barriers to and technical challenges associated with improved data access and utilisation across these domains.

The core problem we have identified is that much of the data that is key to making more effective decisions in children's services is held in a siloed and fragmented nature across central government, LAs and their delivery partners. This lack of connectivity, combined with other issues, inhibits the public sector from taking a holistic and comprehensive approach to data usage for policymaking, service delivery and evaluation.

We recognise that the COVID-19 pandemic has forced government to review its strategic priorities. Capacity is also severely stretched. Data transformation projects may therefore be viewed as a 'nice to have' but not essential. We think that this perspective is short-sighted. Our view is that data should be reimagined as a strategic asset, a means to reform children's services so that they are fit for the future and help create better outcomes for children, families and society. One way to square this circle would be to take a place-based, incremental approach.

We recommend that the Department for Education (DfE) work in partnership with the Ministry of Housing, Communities and Local Government (MHCLG) and a single LA to implement the following recommendations over the next 12–24 months. This process could then be refined and rolled out nationally. (Further detail is provided on pp.36–40.)

1. Identify data demand:

- Consult a diverse range of stakeholders to define a set of objectives as to why various actors want to use children's and young people's data. This exercise should include policy, analytical and operational teams from across the department and the LA partner as well as relevant frontline practitioners.
- Once the objectives for data use have been specified and prioritised, DfE should map out who would need access to the data and within what time frames to meet the objectives.

2. Identify data supply:

- Identify what data sources are available at the national, local and operational levels.
- Identify who is responsible for collating and governing this data.
- Identify those with whom the various data sources are being shared.

3. Conduct a gap analysis:

- Once the existing data landscape has been mapped, DfE should analyse whether any data is missing, incomplete or redundant in light of the defined objectives.

4. Initiate high-impact data transformation projects:

- Implement a data quality improvement service.
- Improve data linkage.
- Improve data access.
- Improve data literacy.
- Address wider cultural barriers to change.

While this report focuses on preventive services for children and young people, many of the lessons and recommendations will be more generally applicable to other public services.

Introduction

Imagine you are a social worker, assessing whether a child needs to be taken into care. You would want as much information as possible before making such a significant decision. Or imagine you are a head of children's services with a reduced budget to spend. Where could you best invest to improve the life of children across your local authority (LA) to prevent the social worker from being faced with this decision in the first place? Or perhaps you are the chancellor of the exchequer, or one of their advisers, deciding the budget for LAs and public services, and also needing information about where public money is best spent. In all of these cases, you will struggle to find the right data, at the right time, to make the right decisions.

Better data matters. It can shape better services. It can mean better lives.

Access to the right data matters for accountability. Those of us on the outside need to be able to scrutinise government and its services at all levels. Better data also matters as it helps make government more effective. Government departments and LAs need to understand how their systems operate and what effect they have in order to be able to improve them.

This report looks at one area of public services where data is currently missing or could be improved for better outcomes: preventive services for children and young people, specifically children's centres and youth services. We do, however, expect that much of the discussion and many of the lessons learned will also be more generally applicable.

While children's and young people's services is just one of many areas of government that could benefit from improved data, it was chosen to be the focus of this research because it has previously been highlighted as an area particularly lacking in appropriate data.[1] It is also an area where it is thought that improvements could have a particularly positive impact on people's lives and where the complex issues faced around data typify those faced at government level.

A children's centre is a place managed by, or on behalf of, an LA, through which early childhood services are made available. The term therefore often refers to a set of services and interventions conducted through children's centres rather than the centres as such.[2] Youth services are targeted at older children and can encompass a wide range of activities, usually provided by voluntary or third-sector organisations. These can include universal educational and recreational activities or more targeted interventions aimed at supporting young people with specific needs.

Preventive services, or early intervention, refers to those upstream services (such as children's centres and youth services) that intervene to reduce problems that will require attention from downstream services, such as hospitals, social care or the

justice system. A universal provision of these upstream services, or more precisely targeted offers, can reduce the future need for downstream services.[3]

Better data in these areas is essential for two main reasons:

- For local government, both frontline staff and management, to better understand need, target services and interventions to benefit children, families and communities and thus provide better services.

- For government at all levels to better understand the impact of its spending decisions. How well are services performing relative to the investment in them? With demands on public spending high, the Treasury department, LAs and other bodies need to understand whether the money they are spending leads to improvements in children's lives.

Understanding the impact of preventive services, such as children's centres and youth services, is particularly important for the government given how expensive downstream services, such as children's social care, can be. LAs spent £7.9 billion on children's social care in 2017/18 – 13 per cent of their locally controlled budgets.[4] It is even more important, however, for children themselves because missing or poor data leads to poorer services, which can mean children face harm and fail to fulfil their potential.

Through an extensive literature review, a workshop and a series of interviews, t his report looks at the data available for children's centres and youth services as well as missing data. Firstly, we look at what a typical data experience looks like for a head of children's services for an LA. We then focus on outcomes data – what do we want these services to affect? We then discuss the data available on need (how many and which children could benefit from different interventions) as well as any missing data, and the inputs (spending on resources like staff and equipment) and outputs (activities that services undertake with those inputs). Finally, we explore what could make the data more useful to push the system closer to being ideal where better data is available, leading to (and allowing us to measure) better outcomes for children, families and society.

The wider context

The year 2010 was a turning point for children's and young people's services. Local government funding has been cut by 18 per cent since 2010, with councils focusing on acute and specialist support at the expense of universal and preventive services.[5] The fact that councils were not obliged by law to provide many children's and young people's services, and that claims regarding the beneficial effect that investing in such services were 'hard to evidence', meant this was where many of the cuts fell.

Overall spending on children's services has fallen over the past decade. The biggest victim of the cuts – in both relative and absolute terms – has been Sure Start Children's Centres. LAs' spending on these centres fell from £1.5 billion in 2009/10 to less than £0.7 billion in 2017/18, a real-terms fall of 62 per cent.[6]

Before 2010, the Labour Government had introduced Sure Start early intervention programmes which were grouped together under Sure Start Children's Centres.[7] The Labour Government introduced a number of other initiatives, too (partly in response to the death of Victoria Climbié in 2000). These included the Every Child Matters outcomes framework, which set objectives for services, and ContactPoint, a database allowing services to share data about children with the aim of improving child protection.

The Coalition Government abolished ContactPoint in 2010. While it acknowledged the need for professionals to access the data it held, it argued that 'it was disproportionate and unjustifiable to hold records on every child in the country' and undertook instead to '[explore] the practicality of a new national signposting service' allowing practitioners to identify those who had worked with the same child before.[8]

In 2012, the Coalition Government moved away from the Every Child Matters outcomes framework. The Department for Education (DfE) commissioned a consortium of organisations to produce a new framework of outcomes for young people (the Catalyst Framework of Outcomes for Young People).[9] Within youth services, the Coalition Government introduced the National Citizen Service, allowing all 16- and 17-year-olds to sign up for team projects in their community. The National Youth Agency was no longer required to collect data for the sector beyond annual monitoring of which degree-level youth and community programmes existed. The government also no longer required the Office for Standards in Education, Children's Services and Skills (Ofsted) to inspect youth services.

Scope of this report

This report only looks at England and does not aim to be comprehensive. It focuses on data rather than the wider workings of and flaws in the system, although we inevitably acknowledge some of these structural issues at various points. This report does not list every relevant dataset though more can be found in our research materials.[10] There are many strands that others could pick up based on our research and we hope that they will do so.

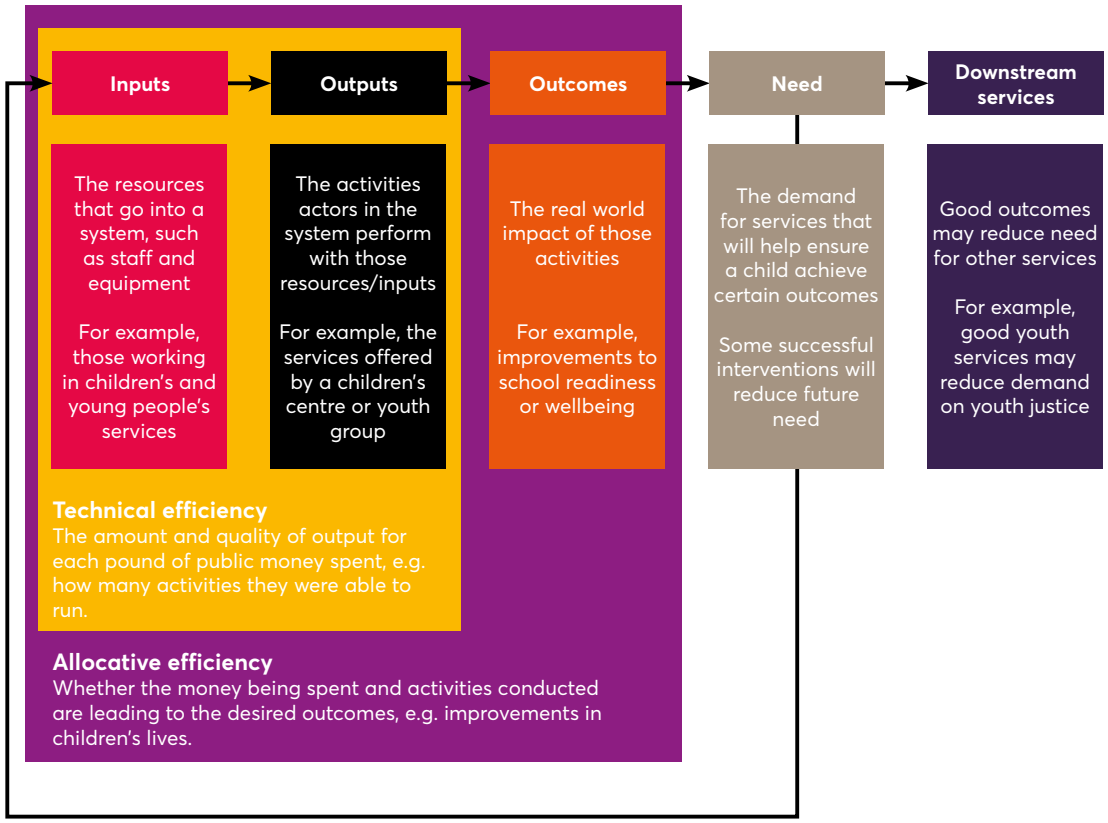
Finally, this report does not recommend a particular view of government. Throughout, we discuss the role of central government in what is (fundamentally) a set of services delivered by local government. There is a role for central government (it currently sets spending and policy and could play a greater, or lesser, co-ordinating role), but this report is about ensuring that, in a fragmented system, there are stewards capable of ensuring the right data is available to the right people – decision-makers and researchers – in the right format, at the right time.

Ways of thinking about data

The term 'data' covers very different types of information that are collected, analysed, used and published in very different ways. Below are some of the key distinctions which we hope will be useful for practitioners beyond the scope of this report and the services it covers.

The logic model

Figure 1 **A logic model for the children and young people's services system**



Much of this report is framed around a 'logic model' of inputs, outputs and outcomes. In general terms, inputs are resources (such as staff and equipment) that go into a system; outputs are the activities that actors in the system perform with those inputs. Outcomes are the impact that these activities have in the real world. Each of these can be measured in some way, as can the need in the population for the services provided by the system.

We use a simplified model to think about the different types of data available rather than a detailed model of the many complex ways that public services, as well as wider economic and social factors, contribute to the outcomes of children and young people.

Different types of data and their users

When we talk about better data on children's centres and youth services, there is an assumption that different audiences will have different needs. Local government, for example, will need disaggregated data for operational purposes (making decisions about individual children). Central government, on the other hand, will need aggregated data to monitor trends, set policy, allocate money and understand if interventions are working. (There are others in addition to those listed, including 'accountability' audiences such as journalists, and the children themselves, their families and households, but these are not a major focus of this report.) This assumption and the consequences for the data that needs to be collected (a frontline worker will need real-time information on an individual child while a longitudinal researcher will not) may be overstated. Researchers on longitudinal studies will also benefit from individually linked data (to fully understand characteristics and journeys). Lags in data can be a problem for researchers, central government and inspectors, as well as for those on the frontline.

Data never simply means numbers in a spreadsheet – it covers a wealth of different numerical and non-numerical information. We split these into sources and types (see table below).[11] Each of these data categories will have strengths and limitations. Different audiences are likely to focus on particular ones – but a full view of each child and the system as a whole will require some combination of all of them.

Related to this is the fact that different audiences may want, and different types of data may provide, different levels of granularity. Again, there may be a false opposition between these: the data infrastructure that allows individual tracking (unique identifiers, data standards) could allow more detailed information at higher levels. The work and techniques necessary to obtain more detail on smaller populations (surveys, interviews, etc.), however, may not be appropriate at a higher level.

Finally, a recent report by the Open Data Institute, Royal Society of Arts and Luminate, distinguishes between four different types of 'data about us'.[12] It is worth bearing these distinctions in mind given how central it will be to improve data sharing of, and access to, personal data on children's and young people's services.

Table 1 **Ways of thinking about data**

Audience	Sources	Types	Granularity	Periodicities	Purposes*	Types of 'data about us'**
Local government Frontline social workers, data analysts, heads of service	**Administrative data** Collected as part of running a service, with details of a child's interaction with those services	**Qualitative data** Data which goes beyond numbers – e.g. in this project, case notes, where natural language processing could identify insights, and answers to surveys	**Whole population** High level information about (for example) total usage of a service	**Snapshot** Probably more useful for researchers and central government, although may come with a substantial time lag that makes the data less useful	**For individual-level decisions** Used to identify and target individuals who might benefit from an intervention at an operational level	**Personal** Relating to an identified or identifiable person, such as name, address, date of birth, digital identifiers
Central government Departments with responsibility for policy (e.g. DfE, MHCLG, DCMS) and spending decisions (HMT)	**Management information** Collected with a view to assessing the performance of a service, or for financial reporting	**Quantitative data** Numerical data. Some of this may be collected regularly, some may be one-off	**Sampling** More detailed information about small subsets of a whole population (these can be designed to be representative of a wider population)	**Realtime** More useful for those making frontline operational decisions	**For spending and commissioning decisions** Needed for analytical purposes at a strategic level to shape commissioning	**Sensitive** Relating to integral features of who we are, such as ethnicity, gender, health, education
Academics and researchers	**Statistical data** Quantitative data combined at a high aggregate level (e.g. whole population), often the result of modelling and other techniques (i.e. not raw data)	**Longitudinal data** Quantitative data which looks at the same people or things over a long time period	**Tracking individuals** Complete information about single individuals, joining up data from different sources		**For monitoring and performance management** Recording data on the quality of activities on an ongoing basis	**Behavioural** Websites we browse, likes and dislikes on social media, transactions, real-time location
Regulators and inspectorates	**Survey data** Data collected via questionnaire and other methods, which may be a mix of quantitative and qualitative data				**For evaluating impact** Retrospective	**Societal** Data that incorporates elements of personal data but does not link back to us, such as census data, demographics, school performance, waiting times
Service providers Charities and other voluntary/private sector organisations					*based on a typology offered by one of our interviewees	**taken from ODI, RSA, Luminate report, Data About Us
Other public services Including health, education and justice						

What data is available on children's services?

In order to understand where the gaps are, we first have to understand what data is currently available on children's services. This chapter first presents what a typical data user experience currently looks like in children's services, and then discusses what data is available on:

- **Outcomes:** The things we want these services to affect.
- **Need:** How many and which children could benefit from different interventions?
- **Inputs:** Spending on resources such as staff and equipment.
- **Outputs:** Activities that services undertake with those inputs.

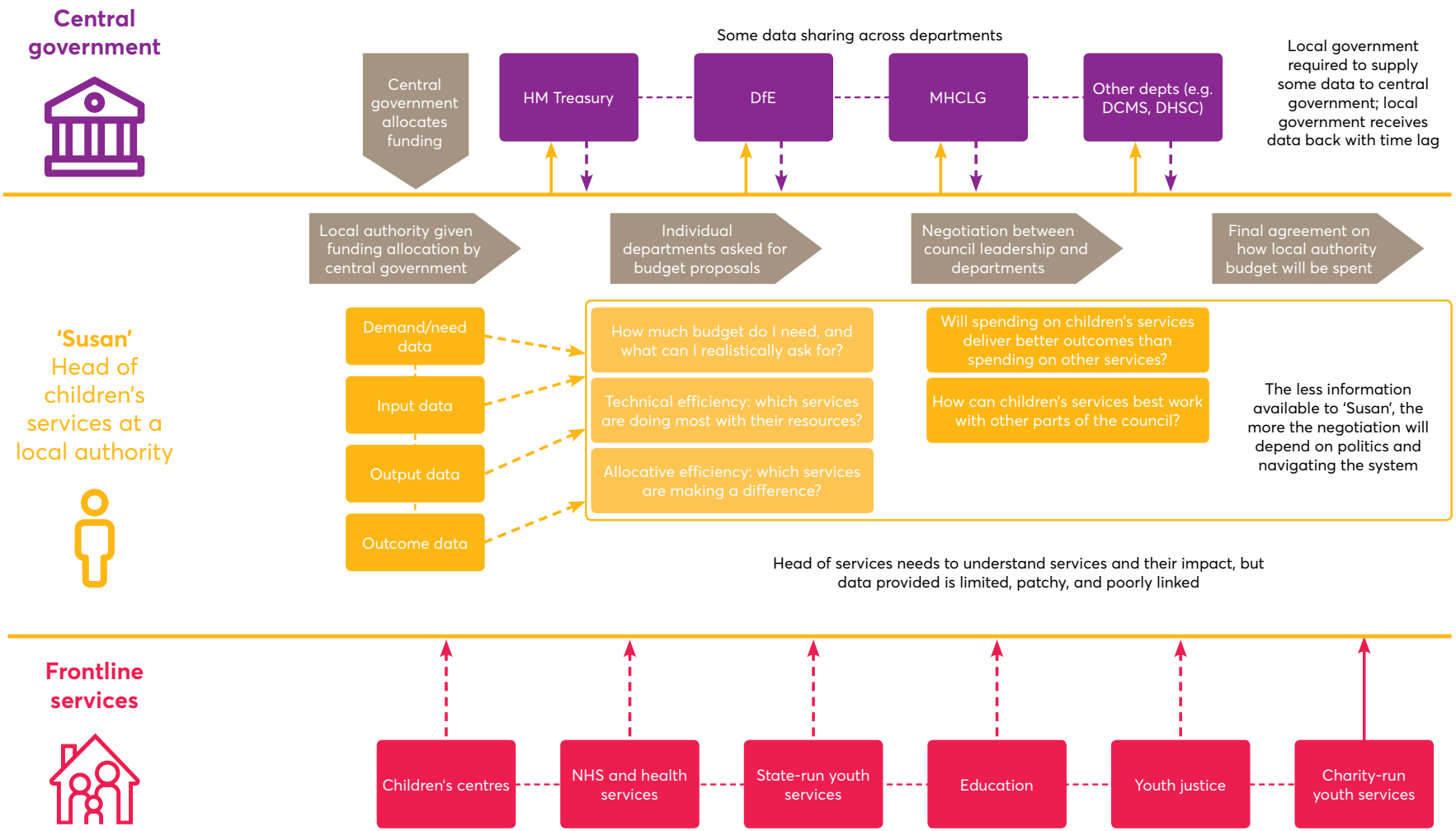
Box 1: A typical head of children's services' user experience
Susan is head of children's services for an LA.

The Treasury has just announced the spending allocation for her LA. This is not based on a data-informed understanding of how well public services are performing and where investment is most needed. It is also not based on how much services are doing with the money previously allocated to them or whether those services lead to the required government outcomes.

Susan now has to make the case for her services' share of that money. Firstly, she needs to understand how her services are performing and therefore what they need. This is extremely difficult. She lacks a lot of basic data about who uses the services, who should be using them but is not, what activities her services undertake and what difference they make to the lives of the community and to individual children. There is a lot of data she cannot access at all such as that on youth services provided by charities. For those services for which she is responsible which do have data, it is often challenging to access because of her council's old IT systems. In any case, the management information captured on the council's administrative systems is not that helpful. It does not say anything about the outcomes for children, for example.

Secondly, Susan's lack of data means that those council departments with better data and the appropriate political skills and ability to navigate the system will be more successful in negotiating their funding settlement. If Susan is unable to prove the value of her services and sufficiently outline their needs, she loses out. Susan is extremely disappointed at the impact this will have on the children and young people who need her services. She is also worried that the lack of data means this impact will not be fully appreciated.

Figure 2 **Map: The children and young people's services data ecosystem – at present**



Note: DCMS= Department for Digital, Culture, Media and Sport; DHSC = Department of Health and Social Care

Outcomes: Improving the lives of children and young people

It is difficult to build a national picture whether interventions are affecting outcomes or not given the lack of consistent frameworks and measures, and the lack and poor quality of data on need and service provision.

It is logical, when assessing data in children's and young people's services, to start from the end goal – the desired impact on children's lives. Any assessment of the quality and efficacy of the services being provided has to begin with an agreed understanding of what outcomes the government, service providers and children themselves, hope to achieve.

The methods used to measure outcomes depend largely on what service is being delivered and what data can be collected before, during and after the intervention. Children's centres and youth services which are administered by LAs (although often through third-party providers), are not evaluated in a consistent way. It is therefore very difficult to build a national picture or compare results between – or even within – LAs. One youth services expert we spoke to said that in the absence of shared outcome and data standards, organisations frequently claim hugely unrealistic success rates that undermined the credibility of the sector as a whole. They believed that good data existed at an organisational level but that people did not know what to do with it or how to usefully share it. Such data, therefore, was practically 'meaningless'.[1]

This chapter sets out reasonable options available for assessing outcomes, discusses some areas of good practice, and sets out a case for greater use of existing outcomes frameworks as well as the development of new ones.

What data on children's outcomes is available now?

There is a wide range of outcomes that early interventions might try to affect. Our research, and suggestions from the Early Intervention Foundation, recommend adopting the following broad categories:[2]

- Socio-emotional development and well-being.
- Physical development and health.
- Cognitive development and opportunity in education and employment.
- Behavioural development and interactions with the criminal justice system.

No single dataset or measure can capture something as expansive as concepts like well-being. Finding relevant proxies (which are sometimes combined to produce composite indicators) is the only way to measure the outcomes children's and young people's services are trying to achieve. Some of the outcomes categories listed above have more obvious and (relatively) easily attainable measures than others.

Linked to this, the assumption that government spending allows service providers to deliver a service of sufficient quality inasmuch as it has a tangible impact on the life of the person receiving it, is limited. Children's lives are complex. Government has the responsibility to provide some important services but it is usually unclear exactly how these services interact with each other and the myriad other influences on a child's life. Such influences include the socio-economic status of a child's family, their family relationships, their health and that of their parents and the quality of their housing, all of which shape their experiences and outcomes. Any meaningful measure of outcome must account for this complexity and for the many causal factors at play.

Figure 3 gives some idea of the kind of measures that are often considered useful in acquiring an aggregated view of outcomes.

Figure 3: **Proxy measures for children's outcomes**

Children's physical health

- **The National Child Measurement Programme** Excellent cohort-level, longitudinal data on childhood obesity.
- **Health Survey for England** An interview and visit from a nurse for a sample of the population.

Linking this data with specific early interventions can be challenging but is not impossible. A recent report by the Institute for Fiscal Studies found Sure Start Children's Centres had had 'major benefits' for the health of children from poorer areas by modelling their access to the centres (using DfE data on location/opening hours) alongside **NHS Digital hospital episode statistics**.*

Behavioural development

- **Ministry of Justice Police National Computer Data** Relatively robust data on youth offending and first-time offending.
- **Crime Survey for England and Wales**, and **self-reported offending data.****

Youth interactions with the criminal justice system provide only a very partial insight into behavioural well-being (and the incidence of crime among young people). These proxies do not measure the general features of good behavioural development that contribute to children having a good level of well-being as adults, but they do indicate where the most serious problems are.

Socio-emotional development and well-being

- **Strengths and Difficulty Questionnaire (SDQ)** A brief emotional, behavioural and mental health screening questionnaire for children and their families, with consistent standards used by a wide range of services which work with children.

Measuring socio-emotional outcomes meaningfully in a way that goes beyond simply a child's interaction with services and takes account of the goals of children themselves is exceptionally difficult. Although the SDQ is a valuable tool, there is no uniform approach.***

Cognitive development and health

- **Ages and Stages Questionnaire (ASQ)** Parent-completed questionnaire which tests and produces a score for each of five child-development domains, a well-developed measure that is reported nationally by NHS Digital.

Survey data, including that made up of aggregated scores from standardised questionnaires, can be an important measure of children's cognitive development. Taken with other measures like the Health Survey for England, they give an indication of early child development, and flag up areas where developmental delays (associated with worse outcomes in later life) are likely.

* Cattan S, Conti G, Farquharson C, Ginja R, *The health effects of Sure Start*, Institute for Fiscal Studies, 2019, https://www.ifs.org.uk/publications/14139

** Child Outcomes Research Consortium, *Strengths and Difficulties Questionnaire (SDQ)* (accessed March 2020), https://www.corc.uk.net/outcome-experience-measures/strengths-and-difficulties-questionnaire

*** Gilman A, Hill K, Kim B K E, Nevell A, Hawkins J D, and Farrington D,' Understanding the relationship between self-reported offending and official criminal charges across early adulthood', *Criminal Behaviour and Mental Health*, 2014, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4971880

The Early Years Foundation Stage (EYFS) statutory framework

Arguably the most developed composite measure of early development is the Early Years Foundation Stage (EYFS) statutory framework which sets learning and development standards that all early years providers in England have to use as a basis for their reporting. Providers report development levels for communication and language; physical development; personal, social and emotional development; literacy; mathematics; creativity; and understanding the world. EYFS data can be fed into a more comprehensive outcome measure called 'school readiness'.

The government says that 'children should start school healthy, happy, communicative, sociable, curious, active and ready and equipped for the next phase of life and learning'.[3] Although there is a focus on skills that will allow a child to manage when they start school – recognising numbers and quantities, participating in group activities, being able to communicate with a good vocabulary – school readiness also encompasses physical, socio-emotional and behavioural development.[4] As such, it is best viewed as a composite outcome measure, with the potential to shine a light on all aspects of early child development.

As children progress through the education system, their data is stored in the DfE's National Pupil Database (NPD), which, as well as exam results, includes information about free school meal eligibility, family characteristics, location, disability status, care status and other personal contextual information. By matching NPD data with early years measures like school readiness, researchers and government can robustly assess the meaningfulness of school readiness as a likely indicator of good academic outcomes.

Although it is very difficult to build a good national picture of outcomes from children's and young people's services, because data collection and analysis practice varies so dramatically, some LAs do have the tools to produce high-quality, useful data for practitioners on the ground. For example, since 2012 the Greater Manchester Combined Authority (GMCA) has collaborated with the 10 LAs in the metro area to better understand their EYFS school readiness data, which was already being collected.

GMCA realised that LA-level data was not granular enough to be meaningful for practitioners. This meant a rich dataset was being underused (despite issues around data quality). At the request of LA Early Education Leads, analysts broke down the data by wards – meaning they had 215 areas to look at in detail, rather than 10. By analysing the relationship between EYFS data and data on deprivation, they were able to identify areas that were showing positive 'Good Level of Development' results despite high levels of deprivation. In addition, they were also able to show areas that were underperforming in terms of their socio-economic context.

Having this information at a very local level gave practitioners additional context about the work they were doing, and about the children, families and communities with whom they were working. It also allowed them to consider the design of the services they were delivering, armed with better knowledge of the nature of the problem and the impact they were having on it.

Frameworks for understanding outcomes

When it comes to understanding children's outcomes after early interventions, there is no single standard set of tools and categories for measurement. However, outcomes frameworks do exist which combine relative rigour with enough flexibility to be used to assess hundreds of different types of intervention.

The Catalyst Framework

The framework that was raised most often in our research was the Catalyst Framework of Outcomes for Young People, produced for the DfE in 2012 with the aim of 'developing the language of outcomes, and a common approach within the youth sector'.[5] It was developed with the intention of clarifying the connections between short-term outcomes and their longer-term impacts on areas of interest to government and society (such as stable employment, reduced crime and anti-social behaviour, as well as reduced demand on welfare and health systems).[6] The framework was revised in 2019 by the Centre for Youth Impact (CYI), with advice for selecting measures to assess social and emotional learning skills. The updated framework sets out seven 'clusters of capabilities':

- Managing feelings.
- Communication.
- Confidence and agency.
- Resilience and determination.
- Creativity.
- Relationships and leadership.
- Planning and problem solving.[7]

The Rees Centre's Outcomes Framework

Another recently developed framework, aimed at assessing the quality of children's social care as a whole, is the July 2019 report by the Oxford University Rees Centre, 'How do we know if children's social care services make a difference?'.[8] It approaches outcomes by asking what service users expect (user outcomes) and how these expectations can be achieved (intermediate outcomes) and describes how these outcomes could best be monitored using existing administrative data indicators, new approaches to local data and new forms of data collection. These are discussed in greater detail in the next chapter of this report.

The Rees Centre report reflects widespread concern with over-reliance of national datasets on process measures. As an alternative, they propose a standardised tool for collecting data from users on their sense of changes made in their lives and a set of standard progress indicators that could be developed with existing data to complement self-reported progress. This would allow easier longitudinal monitoring of children's social care.[9]

This framework (which the authors themselves stress requires piloting to 'operationalise the indicators') is directed at statutory social care. However, there is no reason in principle that many of the lessons drawn from it could not be applied to preventive interventions – particularly the measures focused on understanding the degree to which children and families feel valued and empowered by the service,

have supportive relationships based on trust with the people delivering the service and are actively involved in identifying their own needs.[10]

Understanding need: How much demand for children's services is there?

A focus on available administrative data and the difficulty in linking existing data risks missing many children who may be in need of intervention.

How central and local government understand demand for services is critical. Government services are ultimately designed to serve not only individuals, but society as a whole. Measures of the outcomes of interventions, irrespective of whether they are early or late, can only be meaningful in the context of as comprehensive an understanding of need as possible.

The concept of being 'in need' is defined by the Children Act (1989). It says that a child is in need, and therefore eligible for intervention, if there is 'actual or likely impairment to health and/or development'.[11] The Act's definition focuses on the factors that affect development, and gives permission to intervene where there are risks that make disrupted development likely, rather than only when the disruption happens.[12]

There is an important relationship between children's developmental and well-being outcomes and need, or demand, for children's services. In essence, need is an assessment of the risk that a child will not achieve certain critical outcomes.

Accurately understanding which children would benefit from children's services interventions – of any description – is vital to understanding whether a policy is having the desired impact on the population it was designed to serve. Proponents of early intervention also argue that the failure to achieve good outcomes in upstream services leads to increased need for more acute (and more expensive) downstream interventions in children's social care and other services. For example, if an effective youth service helps a young person leave a gang, there is likely to be reduced demand on the criminal justice system. In combination with outcomes data, information on need is also essential for the difficult task of calculating the true costs associated with delivering services to children and thus, ensuring we are getting the best value for money from social services.[13]

What data on children's needs is available now?

The basis for much of our understanding of need (and of actual service provision) is administrative data. Administrative data is collected whenever people interact with public services, and is generally collected for operational purposes – to keep the services running, and for financial management and performance assessment. This necessarily omits children who are not receiving services which would benefit them, and ignores important information that might be generated through children and families' interactions with other services (such as health, housing, welfare) that might also indicate higher levels of need. Building a more accurate picture will require greater linking of data across services, combined with contextual socio-economic and geographic data.

DfE collates the annual Children in Need (CiN) dataset through mandatory local government reports on referrals, section 47 investigations (conducted when an LA has reason to suspect a child is suffering or likely to suffer significant harm) and their results, child protection plans, and the number of looked-after children (as part of the Children Looked After (CLA) census). By definition, CiN data only measures those children who come into contact with state services.

Central and local government regularly collect a number of datasets that are seen as likely indicators of need that can be used to plan and target interventions and spending more wisely. These include:

- Exclusion rates at school.
- Levels of referrals to social services
- Free school meal eligibility.
- Temporary accommodation and homelessness.
- 'Not in Education, Employment, or Training' (NEET) status.
- Criminal convictions or cautions.
- Special educational needs (SEN) status
- Education, Health and Care (EHC) plan status.

Nevertheless, as highlighted by previous research (Exploration of the costs and impact of the Common Assessment Framework), the data submitted to government departments as part of national statutory returns, such as the CiN consensus, represents only a small proportion of the data held and utilised by LAs.[14]

Other organisations have tried to produce more comprehensive estimates of need in the child population than the CiN and other government measures can provide. Dartington Service Design Lab's February 2019 report, *Matching Children's Needs and Services: A case of three circles*, investigates unmet need among the 'high-end' need population, which the report defines as children and young people with multiple impairments to their health and development or a 'constellation of risks likely to knock them off a healthy developmental trajectory'.[15]

The report found that 24 per cent of children have high needs, but only a quarter of that number receive appropriate support from LAs. It concluded that the extent of children's need exceeded the capacity of services available, that many children with high-end needs received no appropriate services, and that some services designed for children with high-end needs were used by children with lower levels of need.[16]

The Office of the Children's Commissioner (OCC) produces an annual 'vulnerability report', an attempt (by aggregation and modelling) to produce an estimate of the number of vulnerable children not being reached by children's services – 1.6 million in 2019.[17] Most significantly, they model the number of households they believe exhibit the 'toxic trio' of domestic violence and abuse, parental mental health issues and parental drug and alcohol misuse (which are believed to predict a later need for children's social care). They found that 100,000 children in England (0.9 per cent of the total child population) were in a household that faced all three toxic trio issues to

a severe extent, and that 420,000 children (3.6 per cent of the child population) were in a household where a randomly selected adult faced all three to a moderate extent.[18]

By linking the data and modelling with longitudinal studies, such as the Understanding Society survey (formerly the British Household Panel Survey), and the English indices of multiple deprivation (which gives statistics on relative deprivation in small areas of the country), the OCC report is able to give detailed estimates of the levels of need which are not met by children's and young people's services.[19]

What drives demand for children's services?

Understanding the drivers of demand for children's services has only recently become something the DfE considers part of its responsibilities.[20] Although central government has recently begun to pull together its own data on risk factors such as deprivation, substance misuse and parental mental health, the National Audit Office (NAO) in 2019 described its analysis as 'analytically limited' and 'not comprehensive'.[21] Currently, government does not use all the data resources available to it and relies too much on the process data of those who come into contact with specific children's services.

It is also important to explain variations in demand to understand need. The data is such that it is not always easy to tell whether variations are due to genuine variations in need or due to the ways in which systems are set up. One interviewee gave the example of comparing social care in two LAs: one in London and another in the north of England. The London borough's social care services might deal with disproportionately high numbers of older children while those in the north might have a population of service users that skews towards younger children. Therefore, comparing adoption rates between the two authorities (given that younger children have far higher rates of adoption) is not necessarily a reasonable administrative metric.

Inputs and outputs: The resources and activities needed to improve children's lives

We lack basic data on early interventions in children and young people's services, such as children's centres and youth services, and the data that does exist is more difficult to link and use because of a fragmented administrative landscape and a lack of consistent standards and language.

As with need, a good understanding of how children's services are operating, who is using them and what is being done also largely relies on administrative data. We break down such data into inputs – things invested into a service such as spending on staff, equipment, training – and outputs, the things that a service produces (which might include a health visit, a class, a counselling session, or the development of a child protection plan).

Although not sufficient alone, administrative data is very useful as part of a wider suite of indicators: as the recent Rees Centre report makes clear. Capturing the complexity of people's lives and their interactions with state services will always require 'triangulation of multiple measures from different data sources'.[22]

A more comprehensive understanding of service inputs and outputs, with data presented in more usable, useful forms, is crucial to support more complex analyses of effectiveness and outcomes.

This chapter of the report discusses what administrative data LAs are required to report to central government, and therefore what we know about the overall state of children's services provision. Gaps in our basic understanding of how children's services operate, particularly in upstream early interventions, severely limit local and central government's capacity to analyse services comparatively and at a strategic, national level, and make it very difficult to understand outcomes.

LAs should gather better data about the children's centres and youth services they run themselves. They should also ask more of the third-party providers who deliver those services on their behalf. Furthermore, they should do more with the data they do collect by agreeing consistent data standards and categories with outcomes frameworks in mind.

What input and output data is available now?

LAs are the main owners of administrative data on children's and young people's services, submitting much of it to central government through the DfE. Most spend data is reported through Section 251 filings, where LAs submit statements to DfE on planned and actual spending on education, safeguarding, looked-after children, children's centres and youth services.

Table 2 lays out the relevant data related to provision for children that LAs are mandated to report to central government.[23]

Table 2 **Local authority data on children's provision collected by central government departments**

Department for Education	Other departments	
Children in Need (CiN) census	Child Death Review Panels	
Children Looked After (CLA)	National Child Measurement Programme	DHSC
Children's Social Care Workforce (including information on staff numbers, turnover, vacancies, caseloads, qualifications, and use of agency staff)	Social care and health visitor workforce, with Skills for Care (staff numbers, turnover, vacancies, caseloads, qualifications, use of agency staff)*	
Secure Children's Homes	Homelessness Case Level Information Collection (H-CLIC)	
Early Years Census	Rough sleeping streets counts and estimates	MHCLG
Early Years Foundations Stage Profile (EYFSP)	Count of traveller caravans	
School data (including census, capacity, condition, admissions, workforce, key stage assessment data, exclusions)	Single Housing Benefit Extract (SHBE)	DWP
Section 251 financial return	Youth Justice Application Framework	MoJ
Children with Statements of Special Educational Needs (SEN2)		
Foster care data set and self-assessment		

* Department for Education, 'Experimental statistics: Children and family social work workforce in England, year ending 30 September 2017', 2018, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/681546/SFR09-2018_Main_Text.pdf

What are the barriers to more useful data in children's services?

As the previous chapters have shown, there is a lot of missing data in preventive services: outcomes are difficult to measure and a lot of basic input and output data is lacking. Where there is data, there are limits with regard to what is collected, whether and how it is used, and how easy it is to use. Also, it is usually impossible to link different datasets about the same child, and this is without considering their parents and household. While some barriers to sharing and accessing data are understandable and necessary (ethical and legal concerns around privacy, for example), many are not. This chapter first presents what a data experience could look like in an ideal world and then highlights some of the key issues that are currently preventing us from reaching it.

Box 2: A head of children's services' ideal user experience

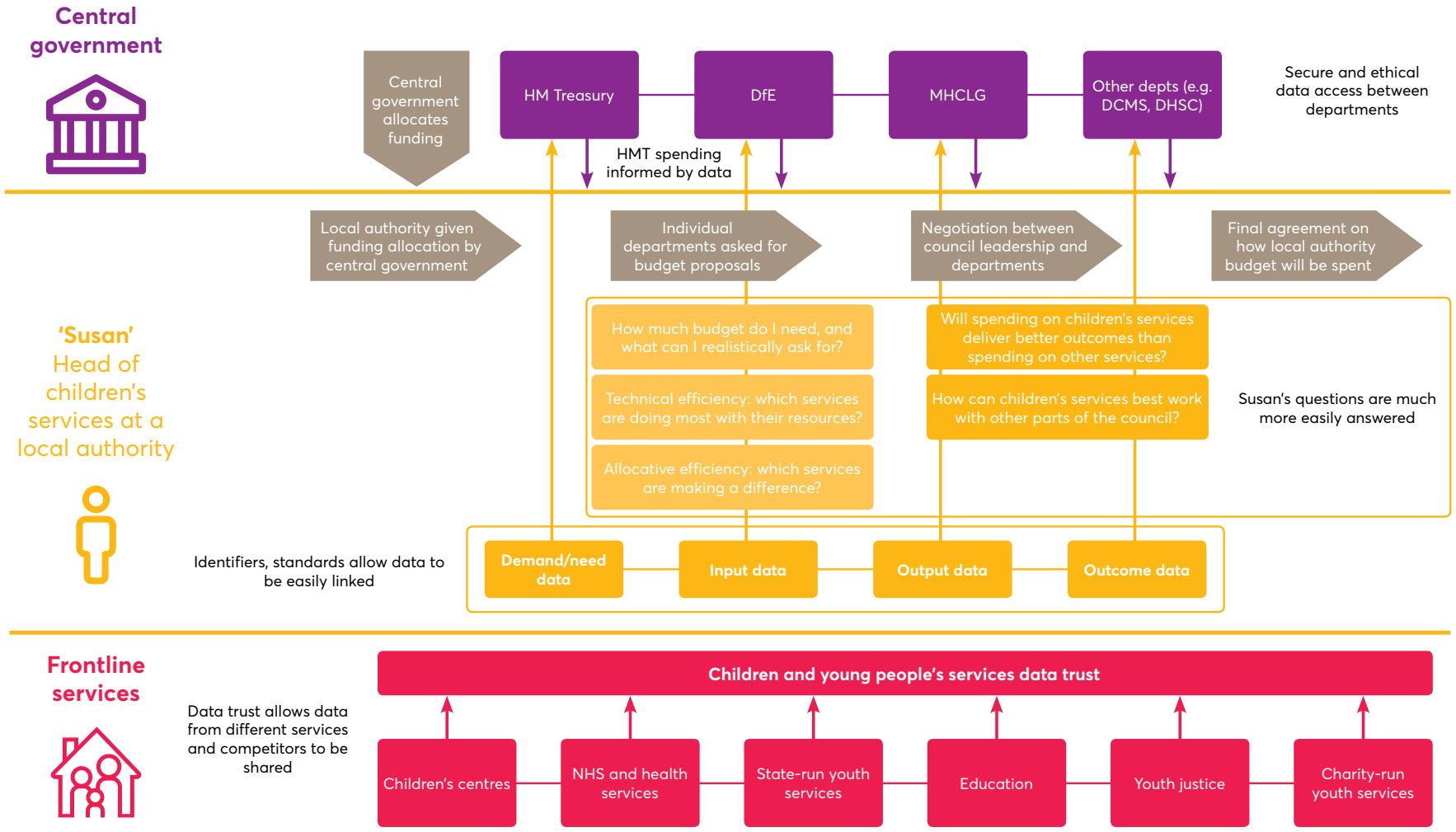
Susan is head of children's services for an LA.

The Treasury has just announced the spending allocation for her LA. This has already been informed by an understanding of need and where public services are performing, thanks to easier (and more secure) data access between central government departments and local government.

Susan now has to make her case for her services' share of the money allocated. A new data trust has helped bring together data from children's centres and youth services – including those run by charities which would normally keep their data from one another to maintain a competitive advantage. Various standards – including one for recording data about youth services – means all the data can be linked together, providing a much more complete picture across different services, from the resources that go into them to the impact they actually have on children and the community. None of this comes as a surprise – Susan's department has been monitoring all of the data on an ongoing basis, thanks to systems redesigned to be interoperable and processes built by talking to users, from frontline staff to senior management.

Susan is able to enter into negotiations with other council departments with a clear understanding of what she requires and substantial evidence about the outcomes her services have delivered. Thanks to some late data-informed political compromises, she comes away happy with her funding settlement, confident her services can serve the children and young people who need them.

Figure 4 **Map: The children and young people's services data ecosystem – the ideal world**



It is not all about the data

Many of the problems are not fundamentally about data but about the multiple organisations involved in the systems around children's centres and youth services.

Nobody has responsibility

Youth services in particular are delivered through an '[extremely] fragmented system' of different parts of central government, local government and the voluntary sector from national programmes such as the National Citizen Service, through to youth homelessness services delivered by LAs and youth clubs run by charities.[1] Youth provision stretches across multiple budget lines, benefits accrue to different parts of central and local government, and the largely voluntary nature of much of the workforce makes it much more difficult for anyone to co-ordinate and corral the sector. Although DfE has overall policy responsibility for children's services, LAs have a 'high degree of autonomy'.[2] The fragmentation of this system means that better data might not solve the problems: 'it is everybody's business, but ultimately no-one's business'.[3] One interviewee worried the conversation about better data was a 'comfort blanket' for the sector and detracted from fundamental, structural problems. The interviewee worried that there is a 'build it and they will come' attitude, that better data would suddenly lead to everyone using it properly – when in reality the system would require 'massive' reorientation of structures and resources to make use of better data.

There is no common language

A related problem is that multiple players in the system means multiple different ways of talking about the same thing. Without consistent language, definitions and terminology, working with LAs is the 'equivalent now of having 152 different conversations, which you just can't have'. One interviewee said it was difficult even to craft freedom of information requests to obtain information: where one LA had 'children's centres', others would have different names like 'children and family centres'. Another interviewee said a particular problem which arises when definitions vary is that decision-makers may fall back on their own knowledge of, say, youth centres. The unstructured, pool table version of the 1980s may be familiar to many but is a long way from the modern reality and can lead to decisions being made on outdated perceptions.

As well as different definitions of interventions, LAs have different thresholds for referral, and different models of assessment. One authority, for example, might have an integrated early care and social care assessment while another might have a triage programme separating them out. Understanding how people move from more universal services to acute, specialist support, and comparing these services, is therefore more complicated than simply having better data collection.

Cuts to funding since 2010 have made a difference

Cuts to local government budgets since 2010, and a resulting focus on more specialist and acute services, have meant fewer resources for data and analysis. Changes to youth services – government ceasing to fund the National Youth Agency's data collection for the sector,[4] the dropping of Ofsted inspections of youth services, and the general dilution of 'youth services' as a discrete category (for instance, in job titles and budget lines) causing it to be dispersed within LAs – were all cited as factors in worsening data quality. The Coalition Government also abolished the ContactPoint scheme introduced by the Labour Government to improve data sharing between children's services (promising to explore an alternative system 'signposting' where other practitioners had worked with the same child instead).[5] Taken together, this has made it even harder than it already was to build a national picture of the sector.

There is no single outcomes framework

There is a lack of a 'mutually exclusive, collectively exhaustive'[6] national outcomes framework, which would clarify objectives and incentivise the collection of the right data to understand progress against it. Since 2010, the government has moved away from the 2003 Every Child Matters framework, which a number of interviewees viewed positively.

Greater use of consistent outcome measures and frameworks would make it easier for LAs to understand and compare different interventions within their own services and with their peers. If reliable measures were ultimately adopted at scale and widely reported, central government would also be able to build a national picture of what is working and what is not. However, many of the obstacles to developing – and more importantly using – better outcomes frameworks are related to the quality of data we currently collect on the nature of service provision, and the nature of demand for services. This data is the subject of the next two sections of this report.

Data-related barriers

There are also other data-related problems but many of these are not specific to children's and young people's services. As the National Audit Office wrote in 2019:

> Without accurate, timely and proportionate data, government will not be able to get the best use out of public money or take the next step towards more sophisticated approaches to using data that can reap real rewards… [D]espite years of effort and many well-documented failures, government has lacked clear and sustained strategic leadership on data.[7]

The government has not made the progress expected by the 2017 government transformation strategy. Pledges included the appointment of a chief data officer 'to lead on use of data' in government, which is still yet to happen.[8] The National Data Strategy, first announced in June 2018 to 'unlock the power of data across government and the wider economy, while building citizen trust in its use', has been delayed by Brexit and other political events.[9] Many of the problems described below will be replicated in other sectors – and many of the possible solutions could be replicated elsewhere, too.

Data that exists is incomplete

In relation to the CiN dataset, one interviewee told us 'there are no children in these data'. Much of the administrative data around children's and young people's services only records interactions with the system. This can miss the real experience of children. For example, admin data can only tell us how many children are accessing childhood and adolescent mental health services (CAMHS), and not how many children there are with mental health issues (i.e. prevalence of need).

A constant theme through our workshops and interviews has been the important role that survey data can play in understanding the real experience of children: 'surveys have to be part of the answer', since administrative data on interactions with a service cannot capture everything. GMCA has, since 2018, run a large-scale survey on 'life readiness' outcomes with secondary schools. Drawing on existing measures of subjective well-being (principally the Children's Society's Good Childhood Index), alongside bespoke questions that explore students' experiences of careers and education advice, the survey ensures that the child's own view is informing multi-agency work across Greater Manchester to equip young people for life. A key strength of the city's regional collaboration is the scale of the survey. The exercise achieves a sufficient number of responses (7,500, or 20 per cent of possible respondents) to provide many schools with detailed results for their own students. Another way to ensure better survey data would be to change precisely what is gathered within admin data. Currently such data tends to meet the particular needs of those running a service – for planning, funding and compliance – rather than understand the impact of services on children's outcomes.

Data that exists isn't being used

A lot of data that is collected is not being used to improve services or outcomes for children. Some LAs were said to view central government-mandated data collection as a box-ticking burden, rather than something useful, e.g. for performance management. This echoes findings from previous Institute for Government research.[10] This is often because such data collection is a burden, not designed to be helpful to those on the frontline. But some of it was due to the nature of the way data was collected and used. Some of those in LAs complained about the relatively limited outputs that came after the huge effort required to satisfy central government requirements. The final statistical returns (often after a long time lag) did not reflect the richness of data submitted in the first place. Work with the not-for-profit organisation, Social Finance, which aimed to make these returns more manageable was positively viewed. The difficulties of completing the mandatory returns, however, are still widely seen as not worth the effort, with little output that would allow LAs to compare themselves with others. Many said that collecting important data, especially around youth services, is not a statutory requirement which means it is of poor quality, where it exists at all.

Some data is not being used because of difficulty in accessing it. Much of this is due to difficulties in sharing data, covered below. But some of it is owing to the nature of the data. Notes stored in case files could be of huge value. Advances in technology, machine learning and natural language processing mean that insights could be

gleaned from qualitative data like case notes. The Behavioural Insights Team has experimented with using this to help social workers identify which cases to escalate, and a consortium of organisations recently published an ethics review into using such data.[11]

Data does not exist or is difficult to find

Previous chapters have shown that a lot of data – on everything from staffing at children's centres, to youth services provision – simply does not exist.

As mentioned above, the time and effort involved in providing data for centrally mandated collections can feel like a burden, especially without seeing the benefit. Case studies of where data has led to greater insight are few and far between but could help show those on the frontline the value of the data they are collecting and what it can be used for.[12] Furthermore, those at the top of organisations are unlikely to fully understand just how poor such data is, and it is difficult for frontline workers to discuss these issues with anyone outside government (for example, think tank or academic researchers and journalists who may be in a position to highlight these problems).[13]

Some basic reference data is also missing or extremely difficult to find – a list of children's centres, for example. Some of this data may exist, but tends to be in the 'deep, dark confines of [a public servant's] computer' and only accessible if you happen to stumble upon the right public servant.

Some interviewees complained of paywalls – data portals that needed to be paid for in order to access valuable data.[14] The Institute has previously highlighted similar issues with government procurement,[15] where government departments and public-sector organisations charge one another for data access.[16]

The 'registers' work undertaken by the Government Digital Service builds trustworthy canonical lists of everything from public bodies to countries recognised by the UK and provides standard reference definitions. It is another relevant example, although has stalled in recent years.[17]

Data that exists is difficult to link and use

Much of the relevant data exists that would help us better understand the nature of need in the population and the impact of interventions. The problem is that the data is collected and stored by many different services – health, education, justice – and there is no systematic way of linking the data. Being able to link such data would be useful at a strategic level for LAs and central government in understanding need, allocating resources and understanding the impact of their interventions. It would also be useful for frontline service providers who would be better able to understand the family risk factors and the history of service interactions of the individual children and young people with whom they were working. Health visitor data might be an obvious place to start because the service is universal, specifically focused on early years health metrics.

Typically, the issue is not one of desire but of feasibility. Below we discuss some of the key challenges to linking these datasets.

Unique identifiers and standards

Different datasets about the same child are extremely difficult to link. A number of interviewees talked about how much easier life would be for a director of service in an LA if they could type in a unique identifier for a child – usually an NHS number – and see all the relevant data. However, this would not only be useful for operational reasons. Those in central government, or academics and other researchers would also welcome linking an individual child's journey in order to understand the system at a strategic level. For example, it is relatively straightforward to obtain data on a particular vulnerability but much more difficult to understand where children have multiple vulnerabilities.

While some of these problems may be due to nervousness and a lack of clarity about data sharing (see below), many are also due to poor-quality data, a lack of unique identifiers (that would allow the same individual to be mapped across different datasets and services), and a general lack of standards. Even the CiN dataset was described to us as: 'it doesn't link nicely to other datasets, and doesn't create a longitudinal sense of need'. And, given the range of issues, services and providers involved in children's and young people's services, 'no single data source is going to solve all of these problems', making it essential that different datasets can be linked with one another.[18]

The lack of standards goes back to the point about a lack of consistent terminology, language and definitions given the fragmented systems which have to take account of different tiers of government and multiple LAs. Definitions of what constitutes a youth service, for example, and the multiple ways different organisations count and record similar information means data will be inconsistent and often incomparable. This makes it difficult to build up a national picture. A great deal of work is required to aggregate such data where it is possible to do so. The OCC thought 80 per cent of its work involved aggregating the data even though most of the value came from the models it was able to build as a result. An example would be estimating by LA and constituency, how many children are in households exhibiting the toxic trio of domestic violence and abuse, parental mental health issues, and parental drug and alcohol misuse.

Identifiers, such as NHS numbers, that would theoretically allow data about the same person from different data sources to be linked, do exist. Data standards have been successfully developed and rolled out in other areas. Those selected for use in government by the Open Standards Board include those for open contracting (the Open Contracting Data Standard) and grant-giving (the 360Giving standard).[19] The Department for Digital, Culture, Media and Sport and the Office for National Statistics has been leading work on developing data standards for loneliness, which also appears to be forcing broader conversations about language and definitions that can be useful to multiple audiences.[20]

Well-linked data would also provide the opportunity for detail-rich longitudinal data. Over time this would enable real-time, highly granular cohort studies, which would enable 'test and learn' innovation systems. Linking data for the purposes of longitudinal study and insights into what works would inevitably need to be weighed against potential privacy risks. It is likely that the anonymised data is all that would be required for this type of work. There has been considerable progress in recent years in the development of Privacy Enhancing Technologies (PETs) which enable data minimisation, i.e. the collection and storage of only data that is strictly necessary to fulfil a specific purpose.[21] Efforts to link data and provide longitudinal information should explore how PETs, such as differential privacy, can enable this through genuine anonymisation of data.

IT systems

Technology – particularly legacy information technology – is also a hindrance. Different suppliers provide different proprietary systems to different councils (and even to different parts of the same council), which are not designed to be easily interoperable with other systems. Such systems count and store data about the same things very differently. Previous case study research confirms that the integration of IT systems remains a consistent theme.[22]

This is an issue across the public sector. Previous Institute for Government research has highlighted the problems this causes with outsourcing and contract management.[23] At the same time, suppliers of electoral management systems have been unable (so far) to help the UK achieve its goal of publishing election data to a common data standard.[24]

Silos and competing providers

The siloed nature of government services – including health, justice and education besides wider children's and youth services – complicates the joining together of data around a single child or family. The proliferation of different datasets, standards, geographical boundaries, systems and identifiers make it impossible to link all the data. Further complicating this is the fact many youth services are supplied by other providers altogether, e.g. youth groups and organisations such as the Scouts Association, charities and advice helplines. Individual organisations will hold incredibly rich data but only on the services for which they are responsible, and to their own standards, suited to their own needs, on their own systems. Many charities will see having better data than others as a competitive advantage which constitutes another barrier in addition to any ethical, legal and technical concerns.

Our new, data-dominated world could lead to a proliferation of new types of institutions involved in the management, governance and use of the data. One of the most discussed in recent years has been the idea of a 'data trust', defined by the Open Data Institute as 'a legal structure that provides independent stewardship of data'.[25] Such a trust could, theoretically, allow charities and other organisations who might be incentivised not to share data, to do so for the public benefit. Such an idea could also be a model applied more broadly across children's and young people's services, allowing different organisations from the public, private and voluntary sectors to pool information around particular problems.

It should also be possible to follow a child's journey through any number of different systems and understand where data is collected on them, and use it to understand how data (and services) could be better linked. The homelessness charity, Centrepoint, for example, has mapped a user journey for youth homelessness.[26]

The Ministry of Housing, Communities and Local Government (MCLG) has previously highlighted the need for frontline workers in Early Help and Social Work to have better access to information on children's families, particularly the contact they have had with support services (e.g. social care, housing, youth justice). The first round of its Local Digital Fund focused on supporting the development of prototypes that give workers better access to this information. Future programmes should draw on the lessons from these pilots.[27]

Administrative Data Research UK (ADR UK) is also making progress in terms of clearing some of the barriers to useful data linking in some specific areas. The ONS Secure Research Service is also working to make unpublished data more accessible to accredited researchers, and the 2020 budget included some funding to improve data sharing. However, the consensus among the majority of those we interviewed was that more could be done.[28] There is support for this position in Parliament. The Science and Technology Committee's 2019 report into evidence-based early years intervention recommended that the government consider 'what infrastructure and licences could facilitate efficient, interoperable data processing by local authorities'. It also advocated a secure route for accredited researchers to use de-identified data from across government departments, LAs, and health authorities.[29]

Different audiences need different data

Throughout our research, interviewees and workshop participants have rightly highlighted the multiplicity of different audiences for data and their different uses. This suggests that while some will need real-time data to make operational decisions (e.g. frontline social workers and heads of service), others will be more interested in longitudinal data for research (e.g. academics and central government departments with responsibility for policy and spending).

It may be possible, however, to overstate these differences. An operational versus longitudinal data divide should not exist when frontline local government workers need to be able track the journey of an individual child in order to make decisions. Researchers also need to be able to track (anonymously or by using an alias) the journeys and characteristics of individual children to conduct rich and rigorous longitudinal studies about the effects of early intervention. Similarly, the Treasury may need data to best understand where to spend money. This will not be so far removed from other actors in the system who describe 'Anything that can compel the Treasury' as 'useful' data. Nonetheless, a number of interviewees discussed the need for government to have a better understanding of user needs of the data.

People are nervous about sharing data

Many of those we spoke to for this project would clearly welcome an identifier that would allow data from multiple services and sources to be easily linked for each child (and, ideally, for their parents and households, too). Such an approach would give operational staff in local government a complete view of each child, and researchers powerful longitudinal data to fully understand the system. There are inevitably, however, privacy and other ethical concerns around government holding such powerful, personal data on children (who will not have given their consent for the data to be held), which could be misused. Would it be ethical to link data about a child before they had started a journey through social care? Would seeking consent turn some people away from using a service? How can people think ahead to how data could be linked in future in order to secure consent at the time of collection?

One interviewee said they had encountered resistance to the idea of greater data sharing and reporting among youth workers. They gave an example of youth workers refusing to support the collection of footfall data using mobile phones, given the danger, whether real or perceived, that children's data was being commodified. Another example given was that families might have their immigration status revealed to the Home Office.

Conversations about personal data and digital identity are sensitive. They tend to conjure up past debates about ID cards (plans for which were abolished by the Coalition Government in 2010, the then-deputy prime minister described them as 'wasteful, bureaucratic and intrusive').[30] The government's digital identity system, 'Verify', is behind its targets for use by citizens and by different digital services.[31] Councils are worried about scandals as data is made available. Councils may not be confident enough in the quality of their services to risk opening up data that could lead to them being blamed for failure.[32]

Some interviewees were very critical of government on this front. One interviewee said 'government has been incompetent and timid and lacks leadership' on data linking. Many people expect that government is already using personal data given the powers it has (under the Digital Economy Act and earlier legislation), and that it is not transparent about how personal data is currently used. Where stories about government's use of personal data are published in the press, they tend to be about the misuse of data. Others understood why government was not making better use of personal data. They said it was because of 'some combination of [a lack of] capability and caution'. People were unlikely to have seen anyone else making use of linked personal data in a sensible way and without having a success story to copy, were unlikely to try to do so themselves. Even though the Digital Economy Act could provide a gateway for further sharing, the information governance culture is not well regarded.

As the Institute for Government, Nesta and other civil society organisations have said:

> Great public benefit can come from more joined-up use of data in government and between government and other sectors. But this will only be possible, sustainable, secure and ethical with appropriate safeguards, transparency, mitigation of risks and public support.[33]

Government 'needs to earn the public's trust' by having this discussion 'in public, with the public'.[34] There are frameworks available. The government's data ethics framework, the 'five safes' which ensure data can be used for research while protecting privacy – is already available for use. There are technical solutions that minimise the data that needs to be shared, as developed. The Government Digital Service's Personal Data Exchange,[35] is one example, although some technical solutions could create their own problems. One interviewee referred to a solution whereby 'only the algorithm sees everything' which raises serious questions concerning transparency and accountability. Such a solution also instils a false sense of trust in an algorithm that is only as good as the people who designed it and the data entered into it.

Nonetheless, there is still much more government could be doing. We don't have an especially good picture of where data is being shared across government, which legal gateways are being used to share it, which ethical frameworks are being applied or, in short, what works well and what does not.

Best practice is not necessarily being shared

These points indicate a broader problem. Good practice is not visible or is not being shared. If it were, it would be particularly useful for surveys and other subjective data collection. There are, however, some examples of collaboration, namely the Data to Intelligence project between Ofsted and LAs. We would also expect the What Works Centre for Children's Social Care to play a role in dissemination. It is clear, however, that more can be done to support everyone to do new things in a consistent way.

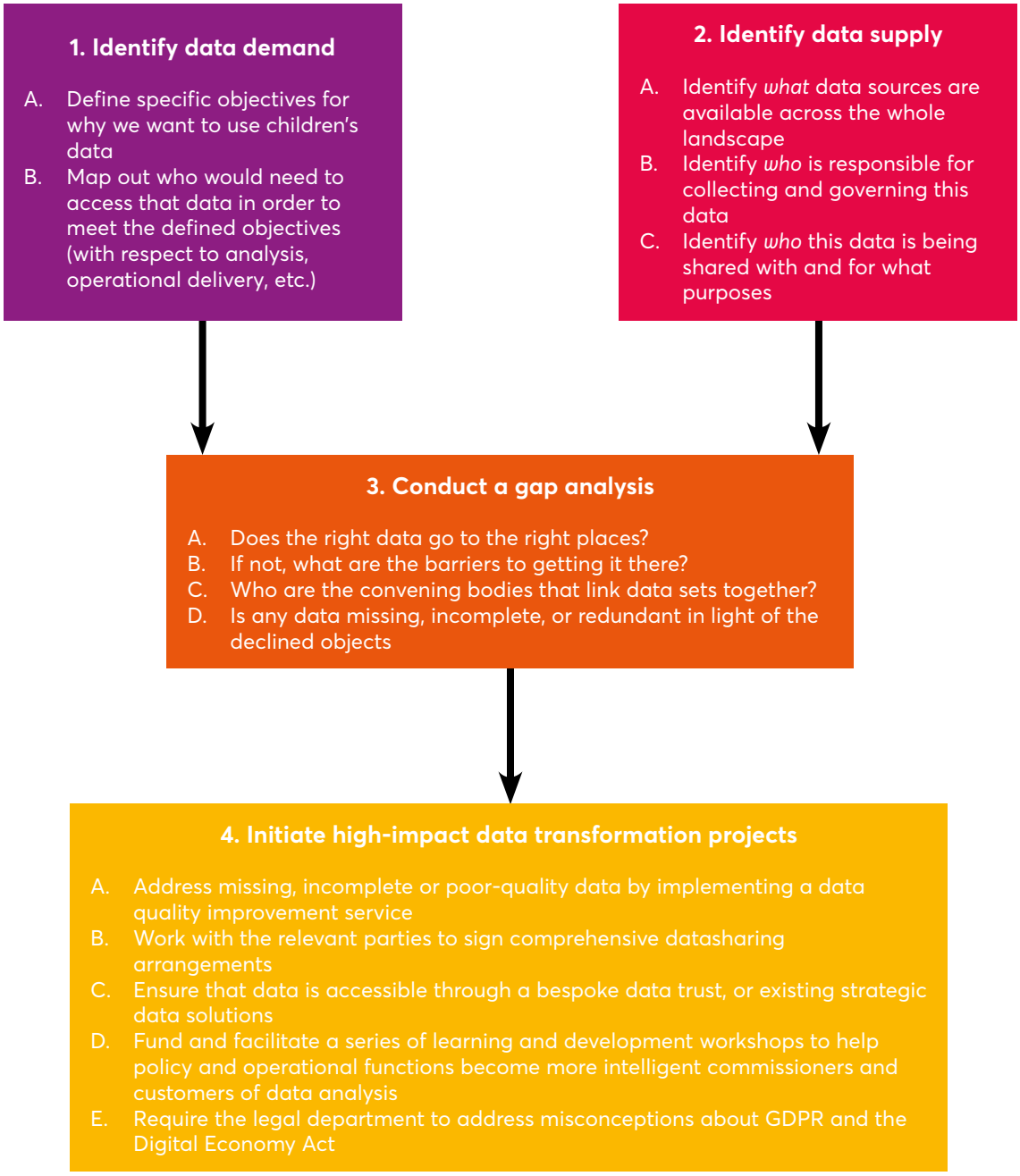
Policy recommendations – how can we move towards an ideal data world?

The core problem identified by this report is that much of the data that is key to making more effective decisions in children's services is held in a siloed, fragmented nature across central government, LAs and their delivery partners. This lack of connectivity, combined with other issues, inhibits the public sector from taking a holistic and comprehensive approach to data usage for policymaking, service delivery and evaluation.

We argue that such data should be reimagined as a strategic asset, as a means to reform children's services so that they are fit for the future. Better data quality, linkage and access will enable government to target interventions more effectively, to better evaluate their efficacy and efficiency, and to design policies that improve the whole system, while minimising unforeseen consequences. That said, we recognise that COVID-19 has stretched public-sector capacity to its limits, and data transformation programmes may not be at the top of the list of the government's strategic priorities. That is why we recommend that the following policies be implemented incrementally through an initial pilot project. By fixing a small part of the puzzle, officials will glean insights that can inform wider system reform when there is the capacity and political will to do so.

Practically, this could mean that DfE and the Ministry of Housing, Communities and Local Government (MHCLG) work in partnership with a single LA. This new data transformation initiative would build upon existing networks established through former programmes, such as Opportunity Areas and Troubled Families, among others. In November 2019, the Opportunity Areas programme was extended for a fourth year, with an £18 million budget to spend by August 2021.[1] We suggest, therefore, that this may be one channel for DfE to explore for project funding. Given the nature of the recommendations, we suggest that the project be run by a multidisciplinary cross-functional team with policy officials working alongside their analytical and operational peers. While we suggest that these recommendations be led by DfE in partnership with MHCLG, they should be implemented in such a way that they align with the government's National Data Strategy and central government's wider efforts to radically improve the utilisation of data across government.

Figure 5 **Policy recommendations – how to move towards an ideal data world**



1. Identify data demand:

a. Consult a diverse range of stakeholders to define a set of objectives as to why various actors may want to use children's and young people's data. This exercise should include policy, analytical and operational teams from across the department and the LA partner as well as relevant frontline practitioners and academic bodies Different audiences will have different needs; find out what they are.

b. Consider the best way to have the discussion about how government uses personal data in a constructive and transparent way with the public and facilitate this discussion.

c. Once the objectives for data use have been specified and prioritised, DfE should map out who would need access to the data, and in what time frames in order to meet those objectives.

2. Identify data supply:

a. Identify what data sources are available at the national, local and operational levels and publish a list of the data collected and/or held in the way that the Office for National Statistics publishes a list of all official statistics.[2]

    i. How are these datasets structured?

    ii. What are the specific fields that are held in these datasets?

    iii. How, and how often, is this data collected?

    iv. Is this data of robust quality?

b. Identify who is responsible for collating and governing this data.

    i. Are there gaps in governance?

    ii. Would new governance structures provide greater strategic co-ordination?

    iii. What data standards should be adopted?

c. With whom are the various data sources being shared?

    i. What existing data-sharing agreements are there?

    ii. What new data-sharing agreements would add strategic value?

    iii. What are the ethical and legal constraints to further data sharing?

3. Conduct a gap analysis:

a. Once the existing data landscape has been mapped, DfE should analyse whether any data is missing, incomplete, or redundant in light of the defined objectives.

    i. Is the administrative data collected sufficient to achieve the defined objectives or should survey data also be collected to provide richer insights?

    ii. Should LAs request more of the information kept by service providers of children's centres?

    iii. Does the right data go to the right people at the right time?

    iv. Is there any mandated data collection that is redundant and could be cut?

4. Initiate high-impact data transformation projects:

a. Implement a data quality improvement service.

    i. Agree a set of common data input standards and security requirements.

    ii. Fund necessary improvements to IT systems and data infrastructure.

b. Improve data linkage.

    i. Work with the relevant parties to sign a single, comprehensive and strategic data-sharing agreement (rather than numerous bilateral DSAs). One area of specific focus should be linked longitudinal data.

c. Improve data access.

    i. Create or commission a data trust, or leverage existing strategic data solutions such as the Office for National Statistics' Secure Research Service.

d. Improve data literacy.

    i. Fund and facilitate a series of internal learning and development workshops to help policy and operational functions in both DfE and the LA partner become more intelligent commissioners and customers of data analysis.

e. Address wider cultural barriers to change.

    i. Share examples of best practice in data sharing such as 'Born in Bradford'.[3]

    ii. Legal should issue guidance to address common misconceptions about GDPR and the Digital Economy Act.

These recommendations are primarily aimed at the DfE because it is responsible for the legal and policy frameworks within which children's social services operate. Nevertheless, many of the same challenges affect other services and government at all levels. These same recommendations are therefore likely to be relevant to other departments, too.

Conclusion

Institute for Government: What would your ideal world look like in terms of data?

Interviewee: That's the first time I've ever been asked that question.

Imagine you are a social worker. Imagine you are assessing whether a child needs to be taken into care and you are able to securely, ethically and usefully access data about that child's interactions with public services and the impact those interventions have had. Imagine you are a head of children's services with the data to understand your local area's need, what your service provision looks like and the impact it is having on children's lives at your fingertips. Imagine you are the chancellor of the exchequer or one of their advisers, able to look at the data and understand whether and where public money spent on children's services is making a difference and which policies are working.

This report has found that we are still some way from that ideal world. Whether looking at the impact of preventive services, the resources available to them and the activities they run with those resources, there is a lot of data that is not collected, is too difficult to find, too difficult to use or is not able to be linked in a way that would lead to better services and better life outcomes for children. This makes it more difficult for those on the frontline to help individual children. In addition, it is more difficult for those at all tiers of government to understand the effects of their policies, and whether, at a time of high demand on public spending (likely only to increase in the course and aftermath of COVID-19), public money is being spent in ways that benefit citizens most effectively.

These findings are not exclusive to preventive services like children's centres and youth services.[4] The Institute for Government works on matters of central government and public services as well as parliamentary issues. Subjects like outsourcing show that too often, government does not have the data it needs to fully understand the services it runs (or allow others to hold it to account). Some data does not exist. Some data exists but is of such poor quality that it cannot be used to its full potential. Some data exists but is simply not being put to use.

The flipside of this is that any lessons learned from this report can be applied more generally. The ways of thinking about data – of the different types, periodicities, levels of granularity and, in particular, the different uses of and audiences for that data – can be used by practitioners in other fields to design better systems. A key finding on this front is the need to make better use of administrative data. This can be achieved not only by setting and adhering to interoperable standards that allow different datasets to be linked, but also through more use of surveys and qualitative data in order to go beyond the process and reach proper understanding.

This report is not comprehensive; there are strands that others could pick up based on our research, and we hope they will do so. One potential avenue for further work is to compare the system in England to the devolved nations – especially on the subject of outcome frameworks and national objectives, given Scotland has a National Performance Framework and Wales has the Well-being of Future Generations Act. Another avenue would be to look at international comparisons, and particularly how other countries approach questions of data sharing and linking across public services.

Our chapter on how to make the data useful shows there are examples and existing solutions that warrant further research, prototyping and piloting. These include:

- Data trusts to help multiple organisations (including those in competition with one another) share data.
- Standards that would make data to link and share in the first place.
- Existing outcomes frameworks that set a common language and common objectives.

One key theme is that there needs to be a better understanding of users of data. This means understanding users as frontline staff, local and central government decision-makers, academics and other researchers. It also means understanding the user journey of children and young people through the various systems. If personal data is to be linked across different services, this also means talking to users and the public more generally about how government uses personal data, and how to balance public benefit through better services with genuine privacy and other ethical concerns being addressed.

Another theme is that the problems go beyond the data. It is clear that nobody really has responsibility for the early intervention/preventive services system, particularly youth services, between the different parts of central government, central and local government, or even within the different sectors of local government itself. This was demonstrated by the fact that, in providing solutions to data-related problems in the previous chapter, it was often challenging to determine who best to target with the recommendations. There needs to be more central oversight, leadership, sharing of best practice and standard-setting. Such calls for leadership in central government and the development (and mandating) of standards should not be regarded as recommending a centralised, top-down approach. Rather, they provide a focal point for convening, co-ordinating and stewarding a complex system, and developing data standards that allow all actors in the system to make better use of data.

There needs to be a much better understanding of the system as a whole. We need to understand how to ensure everyone within the system has the data they need to do their jobs. This should incorporate the design of the right processes, from a frontline social worker collecting the data to the Treasury official helping a minister to make spending decisions to ensure better data leads to a better service.

It should include the development of a data-designed government and public services that ensure the right decision-makers have the right data in the right form at the right time and use it in the right way to achieve the right outcomes. We hope this report not only helps people to gain a firmer grasp of some elements of a public service system but also provides an approach that can be used to better understand, and improve, other public service systems.

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Policy recommendations – how can we move towards an ideal data world?

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enquiries@instituteforgovernment.org.uk

+44 (0) 20 7747 0400 **+44 (0) 20 7766 0700**

@instituteforgov

Institute for Government, 2 Carlton Gardens
London SW1Y 5AA, United Kingdom

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