

Matching data to support troubled families

Camden Council has used its work on the national Troubled Families programme as a springboard for an ambitious project that brings together comprehensive information from a range of systems to help frontline workers provide a more effective and tailored service to all families in need residing in the borough.

Digital Transformation Programme

The work on this project undertaken by the London Borough of Camden has been funded through the Digital Transformation Programme, which is managed and overseen by the Local Government Association (LGA).

The programme was set up to help councils and their partners develop digital solutions to support their work on national programmes of transformation including the integration of health and social care, Troubled Families, welfare reform and public health.

The aim is for the digital tools and solutions created through the programme to be reused by other councils and contribute to the wider work to transform local public services.

The issue and context

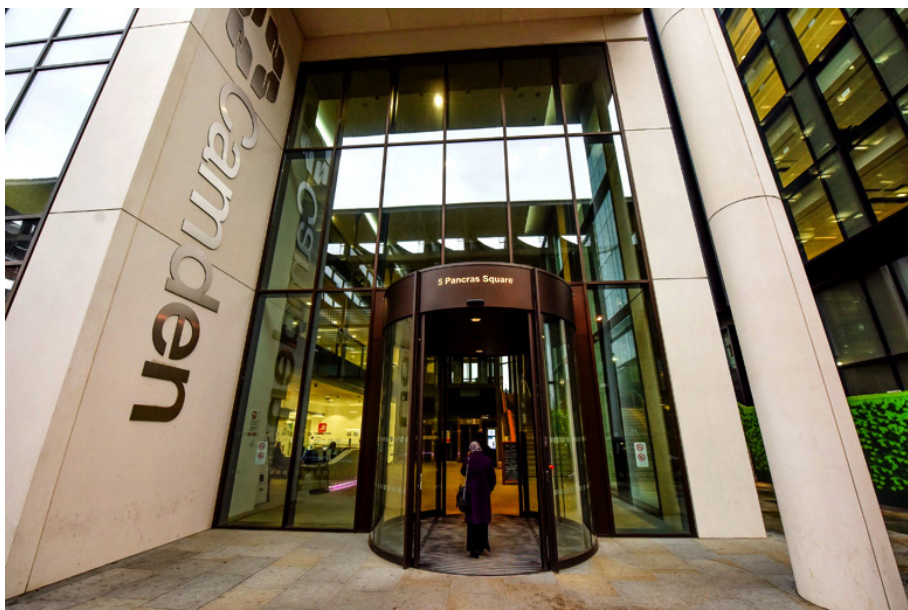
The London Borough of Camden covers an area of 22 square kilometres of inner London, ranging from Covent Garden and Holborn in the south, to Kilburn in the west, Hampstead and Highgate in the north and Kentish Town to the east. It serves a population of around 243,000 residents.

The council is committed to helping all families within the borough to improve their lives and the life chances of their children. It aims to provide a range of relevant, joined-up and cost-effective services and support, targeted at those most in need.

Camden has therefore been an active participant in the national Troubled Families programme. At the same time, the council is recognised as a leader in exploiting the potential of data and digital tools and technologies to develop greater understanding of residents' needs and to deliver more effective services.

“Camden’s Resilient Families programme set an ambitious agenda to change how we think about early help in our borough to ensure no one gets left behind. The first phase achieved systemic, reflective and relationship-based practice, shared whole-family working and an improved family experience through wide-system change. We still have a relentless desire to understand ‘is the help helping’ Camden’s children and families and to find ways of quantifying and qualifying this in a meaningful way.”

Service head



London Borough of Camden,
5 Pancras Square

The borough now wanted to increase the breadth and value of its activities around collecting, matching and using data, both to support the multi-agency, whole-family working associated with the national Troubled Families programme and to extend the same approach to all families in need within the Camden area.

In its initial bid for funding from the LGA's Digital Transformation Programme, Camden identified three specific issues, which remained an important focus for the Camden project, although there was a slight shift of emphasis over time:

- the need to develop a fuller, evidence-based understanding of the complex needs experienced by families across the borough, through bringing together the information spread across disparate systems and databases
- the lack of tools to provide evidence on the impact of integrated whole-family working against the desired outcomes agreed both internally and with partner agencies and central government
- the inefficiency of the processes by which information to support assessment and action by frontline staff was shared.

The borough's bid proposed to address these issues by exploiting the unprecedented volume and variety of information now available to the council through its existing work on data management and its increased information sharing with partners under the Troubled Families programme.

The project objectives and targets

The ultimate aim of the digital transformation project was to contribute to achieving better outcomes and greater resilience and wellbeing for families in Camden.

At the time of its bid for funding from the LGA's programme, the council had already invested in 'master data management' through implementing both IBM Info Sphere probabilistic matching technology (locally branded as the 'Camden Residents Index'), which draws together and matches core identity data from 15 council databases; and QlikView, a reporting and visualisation tool.¹

The Camden Residents Index draws data from the following databases:

- citizen portal
- customer service
- Council Tax
- education
- Electoral Roll
- early years
- adult social care
- child social care
- housing
- housing benefits
- libraries
- Property Gazetteer
- Framework-I/Mosaic

- parking permits
- accessible transport

The LGA funding would help to develop and link the council's data systems in the following ways:

- Incorporating partner datasets into the existing master data management processes would allow for profiling the needs of the 38,000 families across the borough. The longer-term aspiration was that the analysis of the data would be shared with partner agencies through reports to the Children's Trust Partnership Board (CTPB) and would allow for a deeper understanding of joint customers through the large-scale monitoring of shared outcomes.²
- Monitoring the outcomes of families supported with a multi-agency, whole-family intervention under the Troubled Families programme would help Camden and its partners to measure the impact and benefits of their work against their jointly developed 'Resilient Family Outcomes Framework', as well as providing an evidence base for ongoing service redesign.³
- The project would also make intelligence gathered from a wide range of data sources available to frontline staff in a secure

¹ Master data management is a comprehensive method of enabling an enterprise to link all of its critical data to one file, called a master file, which provides a common point of reference. When properly done, master data management streamlines data sharing among personnel and departments. Source: https://en.wikipedia.org/wiki/Master_data_management

² In Camden the CTPB is chaired by the cabinet member for children and members include representatives of Camden Council, Westminster Kingsway College, the Metropolitan Police, Jobcentre Plus, Camden NHS Clinical Commissioning Group, Camden and Islington Public Health, Voluntary Action Camden and schools.

³ This framework is the Camden response to the requirement of the Troubled Families programme for participants to develop a local 'Families Outcome Plan' against which the success of interventions can be measured.

and readily accessible format through a dashboard that would complement their current case management systems, helping to inform a thorough and efficient process of whole-family assessment and action planning.

The Camden work on data management incorporates, complements and goes beyond the outcomes monitoring required by the national Troubled Families programme, as well as fully satisfying the programme's stipulations for payment by results. It builds upon the early emphasis of the council and its partners within the programme on developing legal gateways to support information sharing and on trialling family-based and outcomes-focused ways of working across the participating organisations.

The practical benefits envisaged for the project included:

- an enhanced understanding of the needs experienced by families across the borough, which would help to shape the strategic direction of the council and its partners and to target scarce resources as effectively as possible
- the identification of residents who have previously 'gone under the council's radar', despite experiencing significant and complex need, because they had not been formally referred to council services
- a step change in automating current processes, including the routine and secure bulk uploading of matched data into the council's primary case management system (Framework-I/Mosaic) thereby cutting down the time spent by frontline staff on ad hoc information gathering
- easier and quicker recording of information against the shared Resilient Family Outcomes Framework agreed by the council and its partner agencies, together with a 'family information dashboard' giving frontline staff information on a variety of measures about the families with which they are working

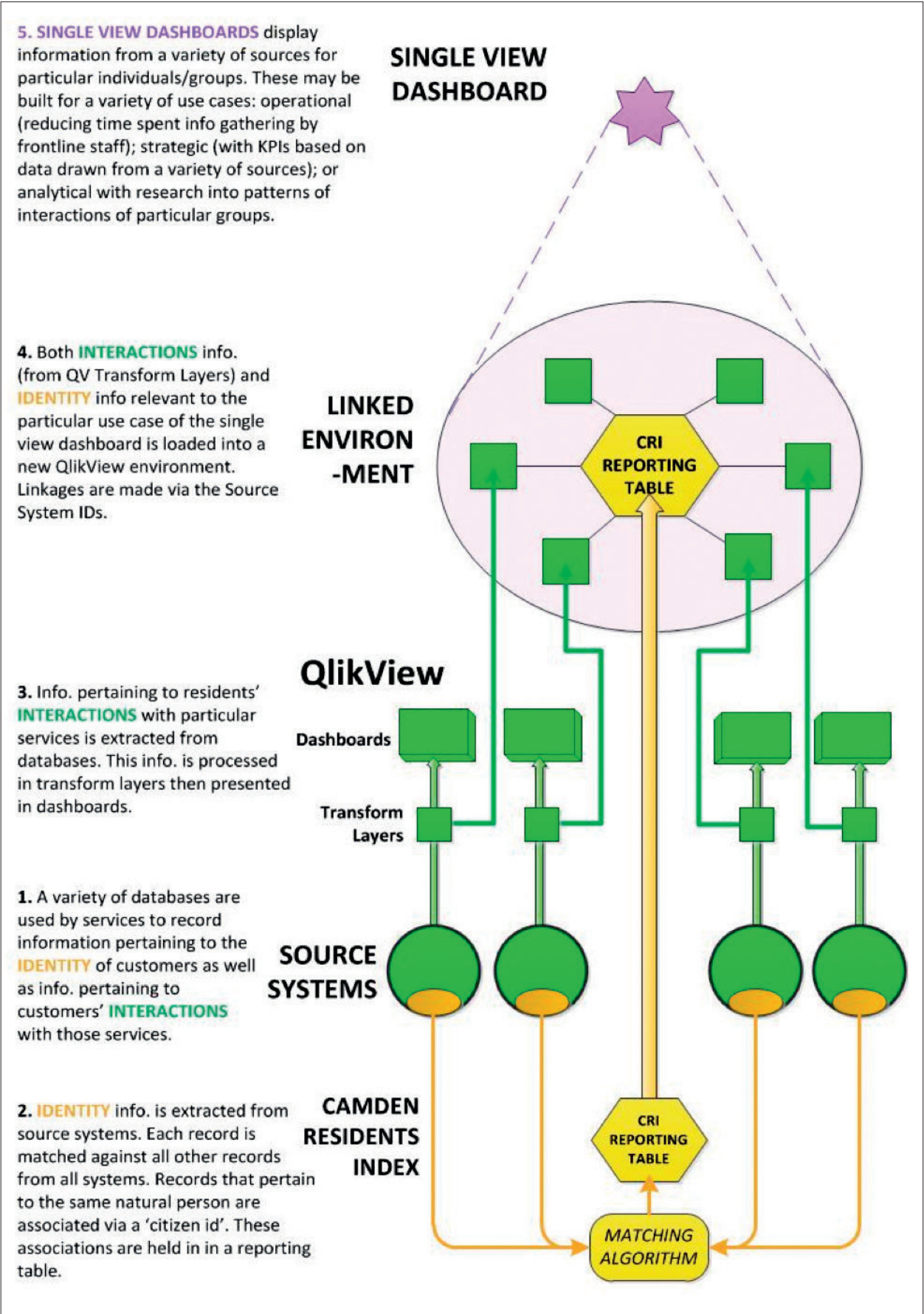
- the creation of a blueprint for making links between master data management and case management processes and systems, while also integrating partner datasets
- close collaboration with Camden's existing work on developing a 'single view of the customer' that will ensure that frontline staff from all services are able to identify which other services work with a client
- new opportunities to exploit predictive analytics to inform early intervention and preventative work with residents and to reduce the use of expensive reactive services; for instance, combining social care records with school attendance data might help identify children acting as carers and in need of support
- further encouragement of a 'data-driven' mind-set within the council and support for user-centred service redesign.

The bid identified potential savings in administrative time of around £83,000 per annum through the automated provision of information at the point of assessment. It was also estimated that the project could contribute some £56,000 per annum to the council's target for reducing commissioning spend by providing clearer information on the outcomes delivered by different interventions. In the longer term, the work would support earlier identification of need and an increased focus on preventative intervention.

The plan was to have the system fully operational by March 2017, at which point the focus would shift to exploiting the data gathered by the system to undertake more sophisticated geographical and predictive analyses.

Camden also committed to making any assets created during the project, including schemas and templates, freely available to other councils. The data retrieval and matching processes developed through the borough's work could be carried out by other widely available and/or open source business intelligence tools.

The single view dashboard – a concept diagram



The approach and progress to date

Following the awarding of the LGA grant, the digital transformation project formally started early in financial year 2016/17.

Early preparation

Work had already begun on creating additional functionality within the Camden Residents Index to allow for the bulk identification of household groups. The extra functionality would make it possible to return all available identifiers for an individual and all members of their household from across the 15 source systems feeding the index.

The project team had also begun discussions with the borough's early help and social work services on two topics:

- Which measures were likely to be of most value to their staff at the point of assessment and review? The focus would be on those measures which were included in Camden's Resilient Families Outcomes Framework. This work would inform the eventual creation of a family information dashboard for frontline staff.
- How are family units grouped and identified within the case management systems of the early help and social work services? Understanding these processes is clearly important for ensuring that the additional capabilities developed through the digital transformation project fully support the day-to-day work of frontline staff and align with the systems they use.

Implementing the basic architecture – autumn 2016

By the autumn of 2016, Camden had devised and implemented the basic architecture of the new solution. Specific project elements included:

- An initial version of the household group identification function in the Camden Residents Index being developed and tested. Although valuable, this work highlighted that the matching algorithms needed further refinement.
- Agreement that information would be presented to frontline staff via QlikView. An early version of a front end had been tested with a small number of family support workers using school attendance data and their feedback collated. The development work was being carried out in collaboration with data officers in associated teams.
- A range of initial data sets being loaded into the QlikView environment and matched to the person table of the Camden Residents Index. The data sets included school attendance, out-of-work benefits, youth offences and NEETs⁴ (not in education, employment or training). Work had also begun to incorporate rent arrears data into the front end of the solution.

4 NEETs are young people no longer in the education system and who are not working or being trained for work. www.ons.gov.uk/employmentandlabourmarket/peopleinwork/unemployment/bulletins/youngpeoplenotineducationemploymentortrainingneet/february2016#definition-of-young-people-not-in-education-employment-or-training-neet

- Further developing the data model that would underpin the various data sets and on automating the processes through which data was brought into the QlikView environment.
- The project team securing the support of Camden's business intelligence team and aligning the digital transformation project with their work – an important step in embedding the project in the council's wider priorities. The project team created space in the intelligence team's agile project management tool and was attending their 'scrums' and sprint meetings.⁵
- The borough's core social care case management system being successfully upgraded to a new version. New case management processes being designed to ensure that frontline staff were working to the indicators in the agreed outcomes framework and able to record reportable information from the Framework-I/Mosaic system.
- Design work begun with particular consideration of information security. The user interface within QlikView is based on a separate environment to the primary, back-end environment, creating a deliberate disconnect that ensures a greater level of control over information security. The team also planned to develop a permissions model so that each team member is only presented with information relevant to his or her individual cases.

The project team presented their work to relevant strategic service leads and groups, including the Resilient Families working group and the Supporting People management team, and began to provide analyses to support these colleagues. Details of the digital transformation work was included in papers on organisational digital strategy presented to councillors and the chief executive.

⁵ For further information on agile approaches and techniques, see <https://www.gov.uk/service-manual/agile-delivery/agile-government-services-introduction>

Leading up to going live – March 2017

Between the autumn of 2016 and the system going live in March 2017, the project team concentrated on the following work elements:

Securing additional technical and development resources:

As the project involved working with large volumes of data and remodelling it to a higher level of complexity, the need for more processing power became evident and slowed down the development for a short period in the late autumn. By December, however, the team had developed virtual machines that gave them access to significant additional server-based RAM.

It was also apparent that additional developer support was needed, particularly to create the more polished user interface that would be required for frontline staff (professional analysts could make do with something more basic). A meeting was held in mid-December to finalise a tender specification, included in which was a further requirement for the external developer to review the core architecture of the solution.

Developing the dashboard, user interface and data visualisation:

Building on their earlier work on a front end, during November 2016 the project team drew up proposals for a dashboard that would display matched data at a person level for frontline family support workers and summary information for managers within the borough's early help services. The dashboard would present both data matched through the digital transformation solution and the family support workers' case management information, ensuring that an integrated picture was available to frontline staff.

As a first step, the project team created an early visual output from the solution. This was essentially a series of tables, one row per individual, grouped by family and then team, with progress data shown monthly. This early output proved invaluable in stimulating discussion with the strategic service leads

and in contributing to the development of more elegant and useful ways of visualising the data gathered and modelled by the system.

In December 2016, the team held a workshop with family support team managers at which the team presented their initial proposals for the user interface. The feedback fed into a more detailed proposal that would act as an outline for the first release. Two family support managers were identified as the primary points of contact, with responsibility for helping to refine the requirements for the interface and to coordinate testing of the versions as they were released.

User testing of the first release of the user interface began in late January 2017 and continued on a weekly basis after that. The testing involved both family support managers and workers. The feedback given in these sessions was incorporated into the system for review at the following week's session.

A template presenting aggregated multi-agency data in a way that demonstrated the impact of client engagements with specific family support teams was also developed and distributed to managers. This allowed conversations to begin around how linked data could be used as a basis for statistical reporting.

Meanwhile, the external developer started work in February 2017 on a two to three day-a-week basis with a brief to consolidate the solution's back-end architecture and to ensure the front end of the solution was both user-friendly and visually appealing.

In the run-up to the full go-live of the system in March 2017, the system was used in several practical ways:

- To analyse the referrals received across different points of entry in children's social care and Camden's domestic violence service. The information produced by the system helped to identify duplications in process and informed the development of a clearer offer to Camden's communities and a more joined-up way of working.
- To identify families that had fallen into rent arrears and to check whether they were – or were not – known to the family support team. This enabled Camden to work with these families to understand more clearly why they were behind with their rent payments and to provide appropriate support.

Matching data in the Camden Residents Index (CRI):

The early work on the digital transformation solution had highlighted that the process of matching identities within the CRI was not as effective as was necessary for the successful implementation of the digital transformation project. For instance, the existing matching process created a significant number of 'false negatives', which was not a major problem for activities such as fraud investigation but would undermine the analytical value of the new tool being created by the project.

The project team therefore sought to collaborate with colleagues in ICT to improve the match rate. Given the other pressures on the ICT function, some negotiation was required for the ICT team (who were keen to improve the index) to be given permission to make this work a priority.

The work to fine-tune the matching algorithms began in early 2017. However, it was clear that the process was likely to extend beyond the timescales for some key milestones in the digital transformation project. A decision was taken to progress with more basic matching processes in the interim and to revert to relying more heavily on the CRI once its match rate had improved. This reversion to the CRI took place in spring 2017.

Building support and organisational engagement

A series of internal and external discussions took place during 2017 with:

- housing to plan the implementation of the system in their department
- both the police and probation services to discuss data sharing and their use of the system

- public health to explore their use of the system and the sharing of GP data
- the clinical commissioning group to discuss integration with the care integrated digital record and wider data sharing
- child and adult mental health services to discuss data sharing and their use of the system
- Camden's chief information officer to align the project with his vision of managing data more effectively across the organisation and removing the barriers that cause information to be held in silos
- a small number of other councils undertaking similar projects.

"I had a valuable conversation with the project manager of East Sussex's digital transformation project. This encouraged me to more actively involve Camden's managers in discussions about the analytical functions of our new solution. In the past, I have been reluctant to present new analytical outputs until I felt entirely confident in the quality of the analysis. I now understand this early communication is an important part of the development process."

Project manager⁶

Discussions with partners are continuing. One surprise for the project team was how difficult it could be to identify the appropriate individuals or teams within external partner agencies with whom to start a conversation and to maintain those discussions once a point of contact was identified.

Rolling out the system – April 2017 onwards

At go-live in March 2017, the system was being used by an initial group of four managers from the family support service, four data officers and two strategy officers.

During April 2017, the system was rolled out to wider group of 20 managers and senior frontline staff within the family support service. At the same time, a questionnaire was distributed to this group of users, asking for feedback on their use of the tool, its added value and any suggested bug fixes or proposed improvements. At a later stage, these conversations developed to cover an analysis of time and cost savings.

A further roll-out in August 2017 took the total number of users to 35 and by the date of this case study (April 2018), there were 90 active users across the following teams, all of whom deliver different elements of Camden's family support service:

- Early Years Family Support
- Early Help First Stop
- Families in Focus
- Transformation Team
- Youth Early Help.

As well as continuing to roll out the dashboard, the project team is focused on encouraging and monitoring the effective use of the tool and supporting users through the change process.

From April 2017 onwards, several other significant steps were taken:

- The project team increased their focus on providing information (via a tab within the system) on 'other involved professionals' to complement the existing data on family need within the system. This work continued throughout the summer of 2017 and covered professionals such as community safety case workers, social workers and rent officers.

⁶ East Sussex County Council's digital transformation project was also funded by the LGA

The Family Support Dashboard showing allocations and involved professionals⁷

<div> <div>0</div> <div>Open Early Help Referral Decisions</div> <div>across 0 families</div> </div>					<div> <div>16</div> <div>Open Allocations</div> <div>across 7 families</div> </div>					<div> <div>Team</div> <div>Sub Team</div> <div>Worker</div> </div>	
										<div> <div>Team 1</div> <div>Worker 1</div> <div>Worker 2</div> <div>Worker 3</div> <div>Worker 4</div> </div>	
	DOB	Age	Ref Start	Days	Weeks	Team	Worker	School	Housing Officer	Rent Officer	Additional
Client 1	01/01/1900 (0)		01/01/1900	14	2	Team 1	Worker 1	School A	Housing Officer a (ex. 1234)	Rent Officer x (ex. 9876)	
Client 2	01/01/1900 (0)		01/01/1900	14	2	Team 1	Worker 1	School A	Housing Officer a (ex. 1234)	Rent Officer x (ex. 9876)	
Client 3	01/01/1900 (0)		01/01/1900	14	2	Team 1	Worker 1		Housing Officer a (ex. 1234)	Rent Officer x (ex. 9876)	
Client 4	01/01/1900 (0)		01/01/1900	140	20	Team 1	Worker 1		Housing Officer b (ex. 5678)	Rent Officer y (ex. 5432)	
Client 5	01/01/1900 (0)		01/01/1900	140	20	Team 1	Worker 1	School B	Housing Officer b (ex. 5678)	Rent Officer y (ex. 5432)	
Client 6	01/01/1900 (0)		01/01/1900	140	20	Team 1	Worker 1	School C	Housing Officer b (ex. 5678)	Rent Officer y (ex. 5432)	

- A permissions model was developed to ensure that specific users of the dashboard can only see information relevant to the families with whom they are working. The approach taken involved the extraction of data around permissions and users from the Framework-I/Mosaic case management system. This data was then used to define access privileges within the dashboard. The permissions model is dynamic and scalable to allow for further roll-out of the system in the future.
- The work on providing information on other involved professionals, combined with the development of a sophisticated permissions model, ensured that the project could progress with all information governance requirements fully met.
- The system was demonstrated to Camden's chief information officer, who was keen to commit additional resources to the project to support the wider roll-out of the system.
- The project lead also had a very valuable meeting with Camden's chief executive, where he demonstrated the system and discussed its potential benefits; and with the cabinet member for finance, technology and growth, who recognised the value of linked data from both an operational and analytical point of view and was very supportive of the project.⁸
- Camden is currently involved in a collaboration with Salford University, as part of which Salford data science MSc students carry out analyses of anonymised Camden data for their dissertations. One student carried out a correlation analysis of need across the borough, using data produced from the new system, while the contact with the wider academic community at Salford has provided Camden with valuable review and challenge.
- Discussions were held with various services outside family support to identify further candidates for roll-out of the system. The services included youth offending, the multi-agency safeguarding hub (MASH), Connexions, housing (a landlord review pilot), benefits/welfare rights (a contact service pilot) and community safety. The MASH team was particularly keen to use the tool to support their front-door screening process and to have ready access to information about the various housing and community safety officers working with the families presenting to them.
- The project team continued to carry out ad hoc pieces of work that demonstrated the value of the system – for instance, to help the housing needs service identify vulnerable families in temporary accommodation who would qualify for direct offers of more permanent housing.

⁷ Please note that the image has been cropped. Each client will be linked on screen to a family and an address and have a unique person identifier.

⁸ This cabinet member, Theo Blackwell, has since become Chief Digital Officer for London, working with Mayor Sadiq Khan

Following the Grenfell Tower disaster in June 2017, Camden Council decided to evacuate four tower blocks on its Chalcots Estate – a major and complex undertaking. Camden used the new system to identify people within the blocks who were already receiving support from the council's services, to keep the service teams informed of what was happening to their clients, and to help the officers working with the families to find alternative sources of accommodation.

The outcome – successes and challenges

Camden's digital transformation programme has achieved significant benefits, both financial and non-financial.

Financial benefits

The benefits that are most readily able to be quantified and modelled are those associated with the automation of reporting functions and the use of the family support dashboard by operational staff. The illustrative savings generated by the project can be summarised as follows:

Area of saving (£)	Illustrative value for first year of operation
Analyst time on operational reports	7,206
Analyst time on family progress data returns ⁹	4,127
Analyst time on payment by results data	4,762
Family support dashboard usage	45,988
Total	62,083

It is important to note that the figure for the family support dashboard is based on the number of staff using the system most regularly at the time this case study was being prepared. The council plans to continue rolling out the system across both service heads/managers and frontline staff and extending its day-to-day usage among staff already registered as users.

The project lead has calculated that if all relevant users of the dashboard within Camden's workforce were to take advantage of the system, the annual savings would be around £174,000. Even assuming a take-up of 50 per cent, the annual savings would still be in the region of £87,000.

Savings in analyst time

The savings in analyst time have come from three main areas, set out below.¹⁰ In each case, the annual cost of an analyst's time has been calculated as £40,000 including on-costs, spread over 227 working days.

- Time savings in producing operational reports: the saving here is approximately one day per week or 45 days per annum, producing an estimated saving of £7,206.
- Time savings in producing Family Progress Data returns: these returns are a requirement of the national Troubled Families programme. By automating this process, Camden has reduced the analyst time involved from 30 days per year to four, generating an estimated saving of £4,127.
- Time savings in gathering and matching data for payments by results: once again, this data is required by the Troubled Families programme. By moving from a manual to an automated process, Camden has reduced the analyst time required from 40 days to 10, generating an estimated saving of £4,762.

⁹ The family progress data returns and payment by results processes are requirements of the national Troubled Families programme

¹⁰ The figures above are based on the time savings achieved by three analysts

Savings in operational time through using the family support dashboard

The savings in operational time have been modelled by analysing the use of the dashboard by staff in a range of Camden services that deal with families (see list earlier in this case study).

Staff at all levels have benefited from using the system, from caseworkers and case supervisors to managers and service heads. In each case, the estimated time saving per week has been multiplied by the number of current regular users in that job role and a salary cost (including on-costs), giving an estimated total annual saving across Camden's family support teams of almost £46,000 per annum.

This figure can be expected to increase as the system is rolled out more widely and staff become more familiar with using it on a day-to-day basis.

Non-financial benefits – delivering a better service to residents

The new system has enabled Camden to make substantial improvements to the service it offers.

Faster referrals and assessments

Referrals and assessments are now processed more quickly, resulting in a faster service for families. The time taken from first contact to completion of an assessment has reduced by an average of four working days since the roll-out of the family support dashboard.

“Previously, you had to go into the case management system on a case-by-case basis, so a lot of the work staff were doing wasn't easily visible. Now with the dashboard they and their managers can see progress across their caseload clearly.”

Data analyst

Better informed case workers

Previously, staff gathered information from different locations and had to know who to ask to find the right system and the right information. Now, key pieces of information are brought together in one place. The fact that the dashboard is updated daily means that the most up-to-date information is available when cases are discussed at supervisions.

A more joined-up and personalised service

Families experience a more joined-up service because lead case workers can better identify other professionals involved in the care of the family and can communicate and coordinate their activity with them.

Family support workers are using the time savings generated by the system to spend more time face-to-face with their families and to interact more with other involved professionals.

“An important part of my job is to research additional ways we can support families and to put them in touch with the wide range of local services available in Camden. I feel like I have more time to do this kind of research now.”

Family support worker

More ‘connected’ senior managers

Meanwhile, service heads benefit from having ready access to a wide range of detailed information about their service and its impact. They feel ‘more connected’ to both their staff and their customers and are able to use the insight about Camden families generated by the system to make better strategic decisions about service priorities and resources.

“I can use the dashboard to explore individual families and how we are working with them. It really helps me to understand people’s stories and to keep a connection with the families we help and with my staff. I can then use this insight at meetings of the Children’s Partnership Board and to inform strategic planning and service development.”

Service head

Non-financial benefits – working more effectively as a council

As well as the benefits to residents, Camden’s digital transformation project has helped the council and its partners to work more effectively as public service organisations delivering vital local services.

Supporting the council’s strategic goals

Camden is committed to providing joined-up services to its communities. The project has influenced strategic thinking around new approaches to master data management and how data might be used effectively to boost productivity and customer insight, encouraging officers across the organisation to view data in more creative ways.

It has also provided the architecture for equivalent ‘single view’ dashboards in other service functions. The development of a dashboard for housing is now well underway and one has been proposed for community safety.

The project has been referenced in the borough’s recent corporate data strategy and presented to senior leaders across the organisation, meaning it is having an impact beyond its original focus on troubled families and family support.

Enhancing performance management

Family support workers have greater oversight and ownership of their own performance information, without having to rely on their managers to provide this information. They can monitor their workloads more effectively and make better use of their time. Meanwhile, the transparency on workloads provided by the new system has given frontline workers greater confidence that their managers are able to see the full extent of their activity and the pressures they face.

“There are so many moving parts to our role. The dashboard really helps me to plan my work and manage my caseload, which means I can spend more time with the families I support.”

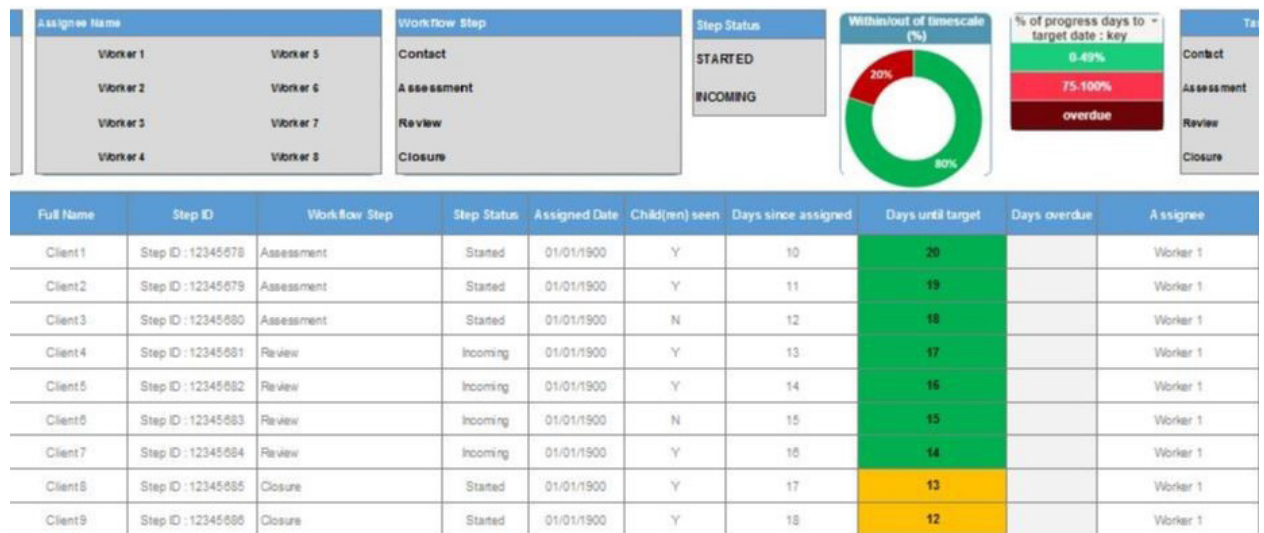
Family support worker

Line managers now have a much clearer picture of the key performance indicators for their teams. The data in the dashboard is updated overnight, so managers can see at a glance who in their team has too many cases, where complex cases have been allocated and how quickly the team are processing their work. They can now spend their time actively managing and supporting their teams rather than trying to extract information from multiple systems.

“I used to monitor my team’s caseload using an Excel spreadsheet, which I found really time-consuming. Now I can see where everything has got to immediately. The dashboard also helps us to balance people’s workloads and to identify members of staff who need extra support. It ensures that cases can’t drift.”

Team manager

The Family Support Dashboard showing timeframes for action¹¹



Giving the council new capabilities

The project has:

- Created the capability to link transactional data in new ways and produce ad hoc reports on areas of strategic interest. For instance, the council can now run reports showing rent balances alongside early help records, giving staff a better understanding of how the wider problems experienced by a family might be affecting their ability to meet their rent.
- Informed discussions around new approaches to outcomes monitoring. One example is where the system has been used to provide insight into the impact of a pilot underway around employment and income.
- Increased the council's ability to perform effective journey mapping exercises, allowing staff to better understand and improve the way in which residents gain access to and experience services.
- Freed up analyst time to support projects such as the application of predictive models to special educational needs data.

Fostering greater collaboration between teams

The ease with which other professionals involved with a family can now be identified has fostered greater collaboration, for instance between the early help service and housing.

It has also encouraged more sharing of best practice, as managers can see where each other's teams are performing particularly well.

"We all want to do our jobs well. So seeing how other teams are performing gives us an incentive to learn from each other."

Team manager

The project has forged new and valuable relationships between analysts and developers across the organisation. As the system draws data from a wide variety of databases, many data professionals have been involved with the project at some stage.

The cross-cutting work on solving problems has allowed for relationships to be developed and for learning and skills around data management to be shared. A more formal community of practice around data is now being created.

Developing staff and increasing job satisfaction

The project has considerably enhanced the professional development of the analysts involved in it. Two members of the team had formal training in QlikView development, while a third was more focused on the design of the user interface and user engagement.

¹¹ Please note that the image has been cropped. Each client will be linked on screen to a family and an address and have a unique person identifier. Workers are linked to teams

All of them worked closely with a consultant developer to overcome numerous challenges related to programming, data modelling and product design. Their new skills are transferable to other projects and have improved Camden's in-house capacity and capabilities.

"I have really gained a lot of skills. I've taken myself to levels I never thought possible."

Data analyst

"Being involved with the development side of things gave me a good knowledge of data architecture and how important it is to have a solid data model."

Data analyst

Responding more effectively to central government

Camden is required to submit regular Troubled Families returns to the Ministry of Housing Communities and Local Government. The project has allowed for these returns to be made in a much more efficient manner. The returns are also of a higher quality, with the most recent Family Progress Data assessment giving a 99 per cent data quality compliance rating across all measures returned.

A spot check of Camden's delivery of the national Troubled Families programme carried out by the Ministry in spring 2017 identified no errors in data monitoring.

Enhancing Camden's existing information architecture and security

By loading data from Camden's existing residents' index into a new environment, the project team was able to observe patterns of data matching and to identify potential improvements in the matching algorithms.

"We've seen a significant reduction in false negatives within the matching process."

Project manager

Staff are now able to gain access to information via a dashboard that incorporates a sophisticated permissions function. Previously much of this information might have been passed around via emails, stored in shared drives or made available in hard copy.

"There's a lot of detailed, boring work in maintaining data quality, but collectively it's really valuable. Frontline staff now have a greater incentive to keep their data clean because it feeds through into the dashboard. This also means analyst spend less time cleaning and presenting data and more time analysing it."

Principal strategy officer

Key learning points

A range of key learning points have emerged from Camden's digital transformation project. These include:

Transformation projects must be sensitive to organisational culture

As a council, Camden places a high value on relationships, connections and practice. Initiatives in the family support function are expected to answer the question "How is this going to be good for Camden families?".

Managers also recognise that frontline workers dealing with families with complex needs must balance many competing pressures and cases do not always proceed smoothly. The emphasis is on ensuring staff have a balanced caseload and on understanding the reasons behind progress – or lack of it – rather than taking a very rigid approach to performance management.

The information provided by the Camden's digital transformation project has given the council unprecedented data on team and individual performance. It was important for this information to be used in a supportive way that was seen to enhance rather than conflict with the organisational culture that the council promotes.

As an example of how things can go wrong, in the early days of the project, staff were presented with a report on Monday mornings with outstanding actions highlighted in bright red. The feedback from staff was that the timing and presentation of the report were demotivating – 'blood red Monday' was a bad way to start the new working week! Managers listened and changed the process and presentation of the report.

"Rather than focus on timescales and outstanding actions, we've championed what the system can do for staff and their families. Managers still monitor performance but take the approach of 'I wonder what's happening here'."

Service head

It is crucial to think 'customer' in both the design and roll-out

The project underlined once again the importance of involving users of a new system in its design.

The iterative process of testing versions of the system at different levels within the family support teams and making changes based on feedback clearly contributed to the successful development of the dashboard.

But so too did the personal rapport that the analyst leading the user engagement was able to build up with key members of frontline staff – to the point where the analyst would log in remotely to their desktop (with their permission) and hold informal discussions with them about how the dashboard could be improved while they used the system.

"We started with a few people from the teams. We picked people who were asking the most questions in team meetings."

Data analyst

It was also important for the analyst to show sensitivity to users' concerns. For instance, data protection is a key issue in family services because of the highly confidential nature of much of the information that staff collect. By showing how seriously he took the issue, the analyst was able to build up trust with his internal clients.

When it came to rolling out the system, Camden took a very measured approach, engaging managers first before extending the use of the dashboard to their staff. This meant that managers were able to familiarise themselves with the system and to resolve many of the initial queries their team members raised. It also allowed them to act as champions for the new way of working.

“One advantage of the new system is that the family support teams now have a common language and framework of information and systems against which to compare themselves.”

Project manager

Being associated with a national programme both helps and hinders

The Camden project was led by the team responsible for the data function associated with the national Troubled Families programme and, to a significant extent, the work represented an expansion in the scope and value of the team's responsibilities.

The close association with a national programme gave the digital transformation project a clear rationale and focus. On the other hand, there was a danger that the team's work would be pigeon-holed within the organisation, rather than being seen of wider benefit. The reporting requirements of the Troubled Families programme, particularly for the payment by results element of the scheme, were also very time-consuming and took up much of the team's time and energy at various points.

The project team responded by ensuring that it built relationships with services which would not necessarily be considered directly associated with troubled families. It provided these services with evidence of both the needs experienced by their clients and the impact of their interventions.

“Our ambition has been to develop the effective management of data in a way which can be scaled across the organisation and can bring benefit to users across a wide variety of services beyond the scope of the national Troubled Families programme. The support of the LGA through their Digital Transformation Programme has helped us a great deal in achieving this.”

Project manager

Screen grab showing a strategic view given by the Camden dashboard



Building the case for work on data is difficult in the current environment

The current environment of continuing change, increasing demand and diminishing funding in local government naturally makes officers skeptical of new initiatives that do not immediately seem to support their day-to-day work, however great their potential longer-term and strategic benefits.

This can lead to a tendency to approach both service provision and the use of data in a disjointed way. Getting buy-in to an ambitious project focused on linking data sets and changing the organisation's 'data culture' is therefore a challenge.

The Camden project team addressed this issue in several ways:

- By ensuring that the new system would deliver practical benefits to frontline staff – helping them to do their jobs more effectively, save time and give a better service to their customers – as well as strategic benefits to the council.

“It was really important to see an operational ‘use case’ emerge. It made it much easier to get buy-in than if we’d just focused on the strategic benefits. Also, because staff are using the data daily, they correct errors, so the quality of the data and our management information improves.”

Programme manager

“Because we had helped them in a practical way, senior managers in other parts of the council were willing to commit their staff’s time to extracting data from their source systems to meet our needs.”

Project manager

- By giving briefings to senior managers, strategic service leads and councillors at the early stages of the project and at key points in its progress to secure their support and raise the profile of the initiative.

A meeting with Camden’s cabinet member for finance, technology and growth was particularly helpful in giving the project lead valuable insights into building support for the system and encouraging him to emphasise the efficiency of the information gathering process when presenting the benefits of the dashboard.

- By identifying specific services within the organisation that had recognised the potential value of the work. The team deliberately involved these champions in the project through regular meetings and by offering tangible ‘products’ that would add value to key services or areas of work.

“We found that communicating and building support for our work was more successful in one-to-one meetings than in presentations to larger groups. Some parts of the council beyond the family support service – for instance, strategy and housing – were particularly receptive to the new approach.”

Project manager

- By linking to other associated areas of work that had been well received in the past. For instance, Camden had carried out an extensive journey mapping exercise which had tracked a single family over several years of engagement and had demonstrated the extent to which service provision and information handling was carried out in silos. The project team were able to present the digital transformation project as in many respects a response to the problems highlighted by the journey mapping exercise.

- By aligning the project with the creation of a new corporate data strategy that was going to be presented to the chief executive and cabinet members. The team was also able to support the work being carried out by the business intelligence team to transfer current management information processes into QlikView.
- By taking advantage of other changes underway in the organisation, such as the reshaping of the early help service, to influence new processes and the way work was designed.

“In the early part of the project, the early help services were being reorganised and new external appointments were being made. Although in some ways this made our life more difficult, the state of organisational flux also made it easier to influence the future direction of these services.”

Project manager

The technical challenges should not be underestimated¹²

Data modelling with the back-end of such a solution is a challenge because of the huge variety in the data sets being matched – all of them originating in different service areas and in different databases, each of which has been built for a specific purpose. Fortunately, the project team were able to call upon the support of Camden’s business intelligence function. The team took a lot of care to ensure that the first few data sets were matched in an effective way, as the results would influence the architecture of the whole system.

“We’ve deliberately designed the system so it’s scalable, which means we’ll be able to bring in more data sets over time.”

Project manager

A further issue was data quality in the source systems. The team deliberately avoided taking ownership of any data quality issues, as doing so would have required significant resources and would have taken the project down a different route.

However, they did share their learning on data quality with the different service areas and corporate groups that are addressing the issue of data quality across the council. And, in practice, the system has incentivised frontline family support staff to maintain their own data as accurately as possible, because this source data feeds directly through into the information that they and their managers use for their day-to-day interactions with clients and performance monitoring.

Defining and maintaining family groupings (which are important, for example, for longitudinal analysis of the impact of the council’s work) also proved challenging as the groupings vary according to different service areas. Meanwhile the daily updating of the dashboard required some complex background work to ensure that the extracts from the different databases were scheduled in such a way that the matching process could be successfully completed overnight.

Finally, the team had to address the challenge of communicating work that is technically and conceptually complex to managers and staff in the service functions. They found that they had to be very conscious of their audience’s knowledge, priorities and pre-conceptions when presenting the project.

¹² Camden’s project leader is preparing a separate technical paper which will be placed on the LGA website when it is completed

“We’ve come to realise how important metrics and data visualisation techniques are for making such a large and complex set of data available to decision-makers in a way they find intelligible and valuable.”

Project manager

Maintaining focus is crucial

A major learning point was the importance of maintaining focus on the agreed deliverables in a project like this, when the team is carrying out work that covers so many different areas of business and so many complex processes and data sets.

Over the length of the project, there were constant calls for the project team to become involved in other areas of activity. The project manager ensured the project received enough time by blocking off specific days in the week when analysts would focus primarily on the digital transformation work.

“It was really useful having the LGA challenge us consistently about deliverables and timescales. It helped us keep our focus on what we had committed to deliver.”

Project manager

Next steps

The new system offers Camden a range of exciting possibilities.

At an operational level, the priority is to extend the value and current use of the system. This might be done in several ways: by incorporating new data sets; by encouraging current users of the tool to exploit its potential in new ways; and by extending the use of the system to new functions and services.

“Camden is still a major landlord, but our tenants are getting older and more vulnerable. A lot of the issues they face are related to underlying issues rather than just repairs, arrears etc. So we’re looking to create a dashboard for housing officers. The great thing is that most of the hard technical work has already been done.”

Principal strategy officer

At a strategic level, the borough will get new insight into the needs of its residents in a way that cuts across current organisational silos. It will, for example, be possible to explore the relationship between financial exclusion and domestic violence.

“The project has affected the way the organisation thinks, for instance about how the position of people in need changes over time. It’s inspiring people to do more analysis.”

Programme manager

By isolating data on specific client groups, officers will be able to observe how the delivery of services changes their levels of need over time – for instance, the effect that rehousing a family has on their children’s school attendance levels. The system will also be able to generate information on the outcomes achieved by individual services, teams or even members of staff.

The new insights will help to challenge (or support) anecdotal beliefs about the relationship between different areas of need, as well as identifying patterns that may not have previously been considered. Equally important, the system should allow for more accurate predictive analysis and therefore more effective targeting of preventative interventions and early help.

“Sharing will be the next stage. How can we take what we know and apply it for the common good? For instance, can we use the information we have to identify local schools that need extra help?”

Service head

Overall, then, the project will have played a major part in informing service redesign and workforce development, as well as contributing to Camden's leadership in the field of data and digital services. In the longer term, it may even contribute to thinking about how the council's functions can be best structured to provide a more holistic and personalised service to residents.

“The project has helped us take linked data from an idea to a real possibility that everyone can see has benefits.”

Project manager

To ensure the assets developed through the project are useable more widely within local government, Camden held initial discussions with a small number of other councils about the possibility of running a trial implementation of the solution in their environment. Now that the project has reached the roll-out stage, the project team plans to pick up these discussions again.

Further information

For more information on this project, please contact:

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