London Counter Fraud Hub

Evaluation Report Issue 3.0

16th January 2019

Foreword

The Evaluation report is part of the governance process for taking the LCFH platform towards go live and service. In combination with the User Acceptance Testing and Report it confirms the original vision and intent is correct and that the work conducted by CIPFA and the Pilot Authorities (Ealing, Croydon, Camden and Islington) has provided assurance that the solution is technically viable.

The Evaluation report is targeted at the four Pilot Authorities. Its' original intent was to provide the output of the test phases conducted and also an assessment on Value for Money. However, in recognition that the report will be read more widely than originally anticipated the report has been updated and now includes two sections.

Section A provides background into the LCFH programme and gives an overview of the need for London-wide collaboration on Fraud and also an overview of the system being deployed to provide a refresh to those Authorities that have not been involved through the Pilot.

Section B is the Evaluation Report and provides detailed output from the work conducted to date.

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Section A
Background Information

1   Introduction

Recent studies suggest that UK Local Authorities lose approximately £1.9bn per annum to non-compliance, waste and fraudulent misuse of a variety of benefit schemes. Fiscal pressures and demands for Authority services are increasing, coupled with wide scale adoption of digital channels for service delivery. Against this backdrop, the opportunities for, and incidents of fraud are escalating.

While many Local Authorities have systems in place to detect certain types of fraud through matching systems, organised criminals and fraudsters continue to target public services in increasingly complex ways – the challenge is to stay ahead of the curve. Advancements in fraud detection technology and solutions, and accurate pin-pointing of suspicious behaviours to prevent fraud, present a significant opportunity for innovation and improvement within Local Government.

The insight needed to distinguish fraud from honest behaviour is often hidden across a web of data sets, and uncovering this insight relies on building an intelligent picture of the extended network of information around the citizen. Operationally, there is a growing need to move detection up-stream in order to prevent fraud and to uncover non-compliant behaviour before it becomes a problem.

There is an opportunity to leverage the leading edge thinking pioneered in Insurance, Financial Services and large public sector organisations such as HMRC that tackle fraud and wider criminal activities using large scale data analytics. These industries and bodies use data analytics to identify fraud and criminal large scale fraud networks such as money laundering using leading edge but well proven products delivered by some of the most forward thinking technology companies in the UK.

At the heart of what we need to achieve is collaboration and data sharing. With the data of all 33 London Authorities combined with third part data such as credit reporting we have the opportunity to detect crime across the London geography and wider. Once we have cracked data sharing for the initial fraud types we have a mechanism, process and culture to add further data sets to the data lake and use multiple techniques to find fraud as it is happening. This is the future of LCFH and the prize that is up for grabs.

2   The Need For A Counter Fraud Hub

Counter Fraud Hub

A Proven Solution

- Proven technology, developed by BAE Systems, which has prevented and detected over £3bn in central government and the insurance and banking industries.

- A single place to review all data quickly and consistently, rather than having to operate multiple systems.

- A reduction in false positives resulting in more focused cases of high-risk fraud.

- Access to Open Source resources and, because we are fraud experts, constant refreshes of this.

Adding value for London

- Value added Investigation services to augment current resources

- Access and input into the national picture via CIPFA Counter Fraud Centre Partners to include NCA, NFIB, IFB.

Fraud detection is a paramount concern to the public sector. The threat has grown exponentially as services have shifted towards digital channels with an increased level of business to business integration. The threat landscape is evolving and becoming better financed and criminally organised.

The prevalence of Local Government Fraud has advanced from being amateur and accidental, to becoming organised and well funded. Organised crime groups are investing in resources to exploit the burgeoning opportunities they see in financial crime. To combat fraud, the **Fighting Fraud and Corruption Locally** strategy, has resulted in many positive outcomes. Local Authorities have responded well. Many have already taken practical steps to help identify, remove or reduce potential loopholes and opportunities for fraud. The Strategy advocates using robust systems to prevent fraud occurring, but also recognises benefits through **increased integration of data and use of analytics to support the early detection and future prevention of fraud.**

Fraudsters do not respect boundaries of any type – they attack neighbouring local authorities, other agencies and commit other frauds. Through collaboration and working across boundaries, Local Authorities will be better placed to detect and prevent the range of fraudulent activity carried out by individuals and organised gangs. The Counter Fraud Hub, provided by CIPFA and underpinned by robust core technology offered by BAE Systems, **reduces and eliminates many of the stress points** identified. It delivers actionable insight through an innovative use of data, within a comprehensive understanding of data protection rules, which enables:

Wider data sharing with a collaborative group of London Authorities;
Consistency of process and ease of case management;
Flexibility to tailor the approach to local threats, issues and operating environment in future development.

Beneficiaries of the Hub have an opportunity to enhance and develop their ability to uncover waste and misuse. This can result in the protection of services and finances and help to improve performance in Fraud Detection.

An end-to-end service offering improved outcomes in the detection and prevention of fraud

3   Commitment to a shared vision and partnership

Our vision is to help **prevent, detect, deter and disrupt fraud across London**, to the benefit of all participants, the wider public sector and citizens.

By using cutting-edge technology and a credible, trusted team, LCFH will help to **protect reputations, prevent loss and increase revenues**. The goal has always been to create a single, powerful Counter Fraud Hub which will help to tackle fraud activity across London. The benefits of the solution will extend far wider than counter fraud in isolation.

As an innovative and ambitious initiative, we believe that there is an opportunity to capitalise on the excitement and momentum generated by embedding new innovations in all areas to include:

- **One-Stop Fraud Service** - expanding the scope of the analytics, to create a one-stop service for fraud analysis across London.

- **Expansion of the Hub** - exploiting CIPFA's unique position in the local government and anti-fraud communities to cement buy-in and drive new initiatives.

- **Embrace Technology Innovation -** taking advantage of the advancements in technology being adopted and implemented within the wider supply chain of the private and public sector and bringing them into the Hub.

Expansion of the Hub

The opportunities afforded by the Hub extend far beyond just data sharing. As participating authorities join the Hub, this will provide the ability to:

- **Inform Policy** - identify trends such as Authority-wide hotspots for fraudulent applications, but also for rapid increases in homelessness, and use this to inform evidence-based policy-making.

- **Regional Improvement** - benchmark local authorities against each other, to identify and promote areas of best practice across the whole of London.

- **Collaboration** - develop a community of analysts and investigators across London who can share approaches for identification, prevention, disruption and prosecution.

- **Leading the Field** - ensure the London's counter fraud community is actively and appropriately represented in national discussions and is recognised as a leader in the field.

- **Increase Counter Fraud Services** - set up a local government 'fraud desk,' similar to that in place at the National Fraud Intelligence Bureau.

Expanding fraud types

Over the course of the programme, the number of in-scope fraud types will need to be extended. As the the core of the Hub is able to ingest a wide range of data types, expansion to additional fraud types should not prove problematic, constrained only by the amount of data available to support analysis.

CIPFA supports the recommendation from SLT that future fraud type development should be subject to their own investment cases with prioritisation agreed on a pan-London basis.

In terms of wider collaboration, the City of London Police (COLP) run the National Fraud Intelligence Bureau (NFIB) and through CIPFA, with the agreement of the Hub to run cases through COLP, and get results back via NFIB, there is the opportunity to help develop the national picture.

Another example of this is the CIPFA relationship with the NCA. The NCA supports the CIPFA survey and therefore the alerts delivered jointly will be provided free at point of use.

4   The Counter Fraud Hub Solution

Fraud and error detection have become more critical for organisations as budgets become tighter, while service demand continues to increase. Every pound lost to fraud and error is a pound which cannot be spent on providing services to the community. In a recent home Office report, "The scale and nature of fraud: a review of the evidence", July 2018, it was highlighted that incidents of recorded fraud continue to rise; increasing by 5% from 2016 – 2017.

The landscape for fraud and error detection capability is extremely varied, with solutions offering a range of sophistication and maturity (as well as a range of price points), as depicted in the diagram below, showing the options available to organisations wishing to respond to the fraud challenge.
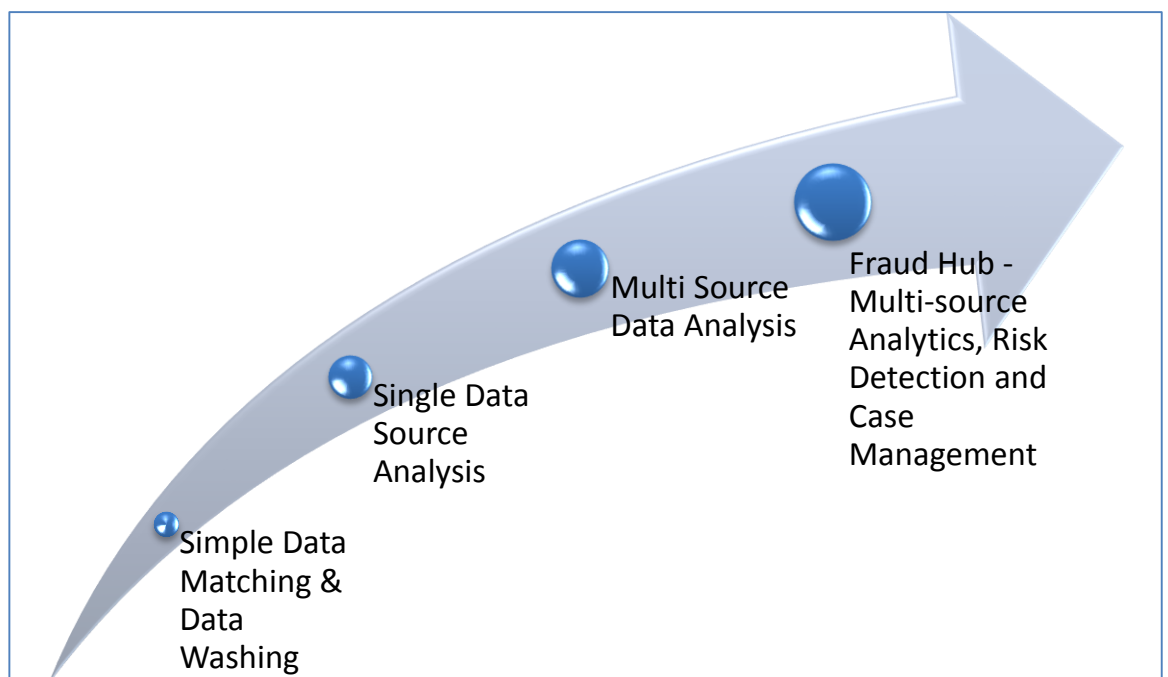
Solutions at the simpler, less mature end of the spectrum may include simple data matching (data washes), single source data analytics and small-scale or ad-hoc data sharing. At the more sophisticated and mature end of the spectrum, initiatives can offer ongoing multi-source data analytics, proactive risk detection, rule and behaviour-based risk detection and case management. The CIPFA LCFH solution is one such solution.

The table below outlines the various solutions that Authorities across London are likely to be using and contrasts them with the London Counter Fraud Hub and what it delivers differently.

Solution	Approach	Impact	Benefits	Drawbacks
Simple data matching/data washing	Analysis of a single data source around a single service (e.g. council tax). A matching service is used to enrich data with additional information for validation.	Data Enrichment with added attributes can help to improve decision making.	Large selection of service providers offering specialist services; relatively quick to perform; low cost.	Poor hit rates for fraud detection; no use of analytics to filter out 'low' or 'no risk' events.
Single source data analytics	Analytics on a single data source. Looking for patterns, trends, outliers, etc. Helps prioritise data records to investigate further.	Helps to determine patterns and introduces a risk-based approach to alert prioritisation.	Improved hit rates as compared with data matching; ability to match workload with capacity.	Single source analysis is limited in its ability to create a holistic view of risk and behaviour.
Multi-source data analytics	Combine multiple data sources to create richer data sets for detecting a particular fraud type or building a more complete picture of an entity.	Use multiple data sets to help create a more risk-based approach to detection and prioritisation.	Single view of entities to analyse for risk detection; potential for detection of multiple fraud types in parallel; prioritisation of alerts on a range of data points.	Typically, not embedded into business as usual processes; treated as ad-hoc analysis; typically, no historical analyses.
London Counter Fraud Hub	Combine multiple data sources to create richer data sets for detecting multiple fraud types in parallel, conduct behaviour analysis; build a more complete picture of entities and their networks of relationships.	Use of multiple data sets, including third party data sets for enrichment and validation. Creates a comprehensive holistic view of entities' behaviours and that of their network of associates and related entities.	Comprehensive holistic view with identified risks presented to investigators for rapid triage and decision making. Detection of multiple types of fraud and behaviours in parallel, including analysis of historical data. Employs social network analytics to establish relationships and understand the risk presented by those relationships. Automated detection and alert generation; embedded into business processes to enable maximum exploitation of the capability. Scalable to additional data providers, consortium partners and fraud types.	Potentially longer time to ROI as compared with alternative approaches. May require business change activity in parallel to fully exploit the benefits.

Industry Benchmarking

CIPFA have reviewed current solutions used by financial services and fraud practitioners to ascertain best practice and fraud detection rates. This allows CIPFA to put any results from the LCFH into fair comparison.

The current LA detection rates based upon the use of NFI and other bespoke data matching services achieve a success rate between 3% and 5%. Substantial resources are invested in the review of any output from these solutions to risk assess false positives, as well as any additional cost of data handling and extraction.

The Insurance Sector referral retention rate (the volume of alerts accepted for investigation) is on average between 14% and 16% (60% for the highest risk 'Red' alerts), of which they typically achieve a successful outcome in 40% of cases. Insurance sector investigations are thorough and detailed as the average value of detected fraud in motor insurance is £18k.

The NetReveal product developed by BAE has been recognised as a market leading product for fraud detection and prevention with the following examples of customer reviews:

- BAE Systems a 'Niche Player' of Managed Security Services based on their ability to execute and their completeness of vision. - Gartner Inc.
- BAE Systems NetReveal® financial crime and compliance platform recognised as a "Leader in Link Analysis and Visualisation" - Aite Group.

The London Counter Fraud Hub has the potential to add significant value to the anti-fraud activities at a local and regional level, tackling cross boundary and organised fraud and corruption attempts, as well as addressing new risks. The solution has the capability to cover a wide range of fraud types and address numerous business problems to help target non-compliance, opportunistic evasion and sophisticated organised attacks.

We have started the journey

We have already delivered the foundation steps to creating a London wide Analytics capability that targets fraud but we are on a much bigger journey. With the right focus and evolution of thinking the LCFH can deliver numerous benefits.

Complete/Unique Solution - A truly end-to-end solution

Beyond Data Matching - A powerful solution, combining advanced data matching with intelligent analytics and deep local government and counter fraud expertise, delivered by best-in-class partners who will add value across all areas of the process of preventing and detecting fraud.

Collaborative/Common Risk Register - A common risk register across London, preventing fraud through sharing knowledge, leads and best practice, and leading to earlier detection.

Proven & Effective - Access to technology which has prevented and detected over £3bn in central government and the insurance and banking industries. The service is being operated by counter fraud specialists and local authority-experienced staff.

Increase Accuracy at Scale – By evaluating every individual, provider, or other entity, the solution is able to uncover patterns of relationships and quickly identify previously undetected methods of fraud; fusing and interrogating both internal and available third-party data sources.

Earlier Intervention, Investigation and Resolution – Investigators will become more empowered through intelligent risk prioritisation and the use of intuitive research tools. This will help to simplify incident response and reduce time spent on investigations from weeks to days or hours.

Enables High-Value Detection – Increased efficiency and more effective use of resources will mean that additional time can then be spent on detecting high value organised cross-council fraud, higher POCA claims; while helping to prevent future fraud.

Automated Non-Compliance Assessment – The solution allows cases to be triaged and in turn, identify those assessed as low level or non-compliance. These cases can then be handled by personalised, automated treatments, to further improve the efficiency of London's investigators.

Real-Time Risk Assessment – The solution can operate in real-time at point of transaction or registration; therefore, protecting from threats such as sophisticated repayment frauds.

National Impact – Potential to access and input into the national picture via the Counter Fraud Hub Partners, including NCA, NFIB and IFB.

In summary, the London Counter Fraud Hub will help to simplify counter fraud activity, making it easier to focus resources on high risks. It will also provide high quality data and information to take cases forward more efficiently, thereby raising savings, protecting reputations and recovering assets to ensure that fraud does not pay. The prevention aspects of our solution will help authorities stop fraud at the door and has the potential to deliver significant returns on investment.

The Technical Solution

The London Counter Fraud Hub includes the following components.

- o **Fraud Hub Engine** - A data integration and analytics solution, NetReveal™, provided by BAE Systems will facilitate data sharing and risk analysis.
- o **Enquiries Service** – Provides front line staff the ability to search for risk associated with an entity.
- o **Case Management** - Aligned to NetReveal™, a common Case Management tool can be provided which would allow greater collaboration between beneficiaries.
- o **External Data Sources** – OS, HALO, Equifax.
- o **Training & Education** - Training, policies and best practice guidance for fraud investigators around the Region.
- o **Investigation Services** - An optional case investigation service, to provide additional capacity to Local Authorities.

The Counter Fraud Hub solution incorporates the following processes and services:
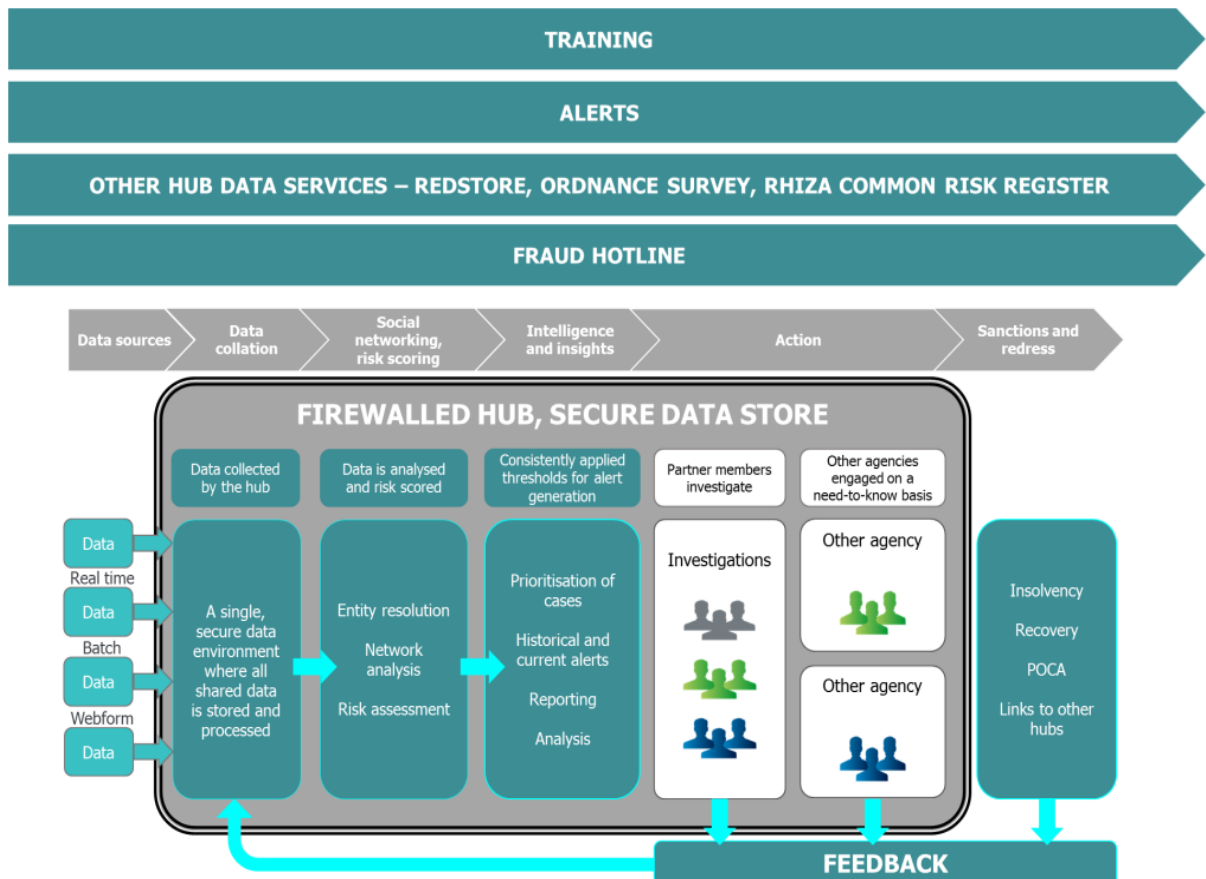
The Hub will automatically ingest data that has been provided by participating authorities – removing the requirement for manual uploads of files, which can introduce delays, inconsistencies and errors. As data is ingested into the solution, it is enriched with key metadata to provide direct lineage between the Hub's analysis and participants' data sources, and to enable investigators to trace the source of the original data record so that they can review the original source data system as necessary.

Figure 1, below, illustrates the high-level data flow through the Hub analytics engine, and how this generates data for the end user interfaces.
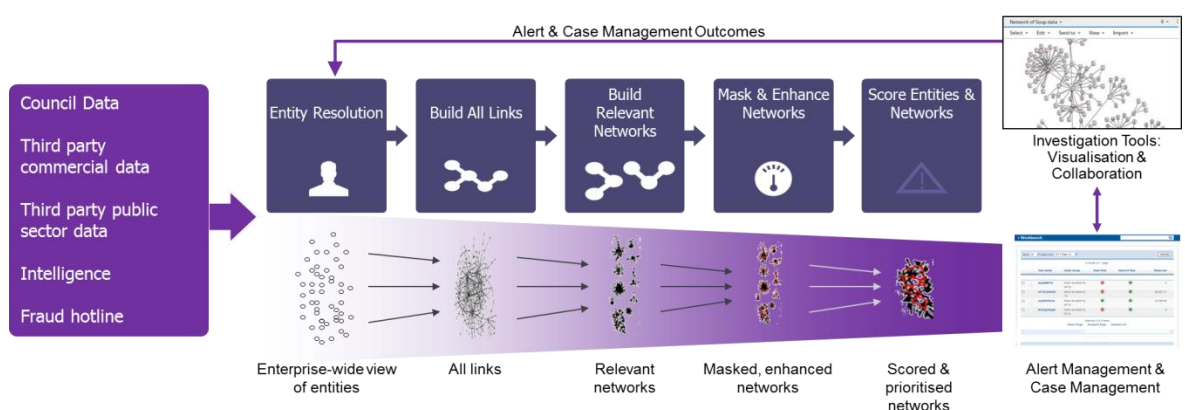
Figure 1 How the Hub's data analytics engine ingests, analyses and presents data

End-users will have a consistent set of interfaces to the data and cases – this will enhance many aspects of the operation, in particular a direct impact on consistency in the presentation and dissemination of information, and training more focused on achieving results than operating many different tools.

Access to the data is through a solution engineered for compliance with data protection regulations and is enhanced by a service wrapper which can include direct hotline support and optional investigative services.

5   Evolution and Innovation

The fraud types managed initially within the Counter Fraud Hub will create the foundations for robust policies, processes and technology. This will grow, adding additional fraud types and more participating authorities.

However, the long-term benefits of LCFH can go far beyond countering fraud across the region. There are many by-products, outcomes and other services within London that could benefit from our innovative approach; helping to improve services beyond counter fraud and having a positive impact on the lives of communities across the region.

We see the LCFH crossing multiple geographic boundaries – aligned to the fact that fraud also crosses geographical boundaries. Our solution is able to link to additional datasets to widen the net, making more connections and uncovering more fraud, to a point where the service itself becomes the deterrent.

CIPFA is at the fore-front of the anti-fraud movement, from the establishment of the Counter Fraud Centre, to the advisory activities undertaken to National and Local government organisations.

Section B
Evaluation Report

1   Executive Summary

The results obtained throughout the development and testing of LCFH over the past 12 months show:

- LCFH Platform technically performs and can ingest and combine data from multiple London Authorities

- It benchmarks well in terms of fraud detection rates having matched or surpassed current solutions used across London but with the additional benefit LCFH is always on and always ingesting data, it's not a once a year activity

- Delivers a compelling commercial outcome for authorities in terms of return on investment, with even worst case predictions showing a payback in year 1. The value for London as a whole is between £15M and £32M per annum based on worst and best case scenarios that have been calculated on the back of the test results of just the first three fraud types

- Delivers a platform we can build on as we start to understand the data available across London as a whole. This could be the basis for data sharing well beyond fraud to allow London wide analysis and reporting. It should be seen as an asset for London that can be exploited in myriad ways over the coming years

- Delivers a leading edge solution that is already proven for fraud detection at a fraction of the cost of each London Authority trying to deliver this step change individually.

LCFH has had a difficult two years of pulling together data sources from four separate Pilot Authorities (PAs) but has successfully created a standard for data sharing, worked with the PAs to extract the data and delivered a platform that can ingest the data and build a network model to look for fraud and anomalies. This is a great achievement that sets the foundations for the future. It has taken effort from all parties and we shouldn't underestimate the achievement. There is ongoing work in this area and the opportunity to set and align national standards working with bodies such as CIPFA but also embryonic organisations such as the London Office of Data Analytics (LODA).

In addition to the collaboration that has taken place to deliver the technology component, we are also now looking at the commercial model that best fits London, allowing Authorities more freedom to exploit the platform as needed and giving full control over the future development. There is also a joint driver to improve on the Value for Money proposition by moving from a PbR model to a fixed yearly fee ensuring London is again in complete control of the solution and where it goes in the future.

2 A Brief History

The LCFH Project was established to stand up the services offered as part of CIPFA Counter Fraud Hub. In conjunction with Ealing, the Lead Authority, a detailed plan was created with key deliverables and milestone.

The project is broken down into several phases including a Proof of Concept (POC), Industrialisation (Develop and test) and Onboarding. The onboarding phase includes working with each of the onboarding authorities to plan the implementation of LCFH and includes a continuous improvement cycle.

A critical success factor of the project was the involvement of the POC Authorities throughout the entire project lifecycle, from requirements gathering to testing. POC Authority representatives helped define the indicators and scoring rules and later, performed user and output testing that will feed into the continuous cycle of improvement throughout the lifetime of the service.
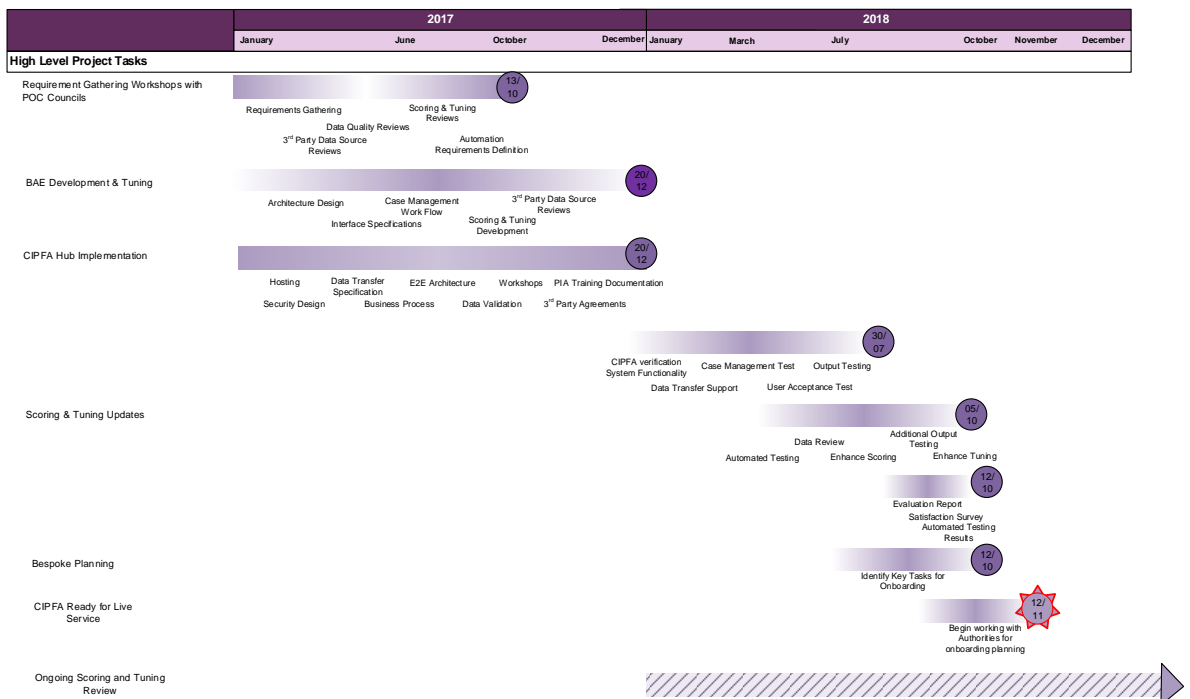
Key Achievements

The key premise of the LCFH Solution is dependent on the sharing of data not only from the local authorities, but from 3rd party data providers. This solution required buy-in from all participants and a willingness to work with the CIPFA and BAE teams thoughout the development and test phase to provide the data extracts necessary to start building a picture of the potential fraud happening across the London Authorities.

An example of some of the key achievements are:

- Each POC authority entering into a Data Sharing Agreement that not only allowed their data to be used in the detection and prevention of fraud within their own Authority, but that the data could be used by LCFH to identify potential fraud across Authority boundaries
- New Privacy Impact Assessments created and agreed across all POC authorities to provide assurance that the data would be controlled and secure per local authority guidelines
- ICT teams in each POC authority working with the CIPFA team to extract the data in an agreed format and work together to identify any format or data issues that could prevent the local authority data being used to create alerts
- Working with SMEs in each POC, jointly agree between all teams the data elements necessary to create a new extract for Business Rates
- 3rd party data providers agreed to provide data for our POC phase in order to enable the creation of alerts for review during workshops and test
- Collective agreement across all SMEs on requirements for building LCFH where agreement was reached as a whole rather than at an individual local authority level
- Extremely high level of participation and willingness to travel to workshops and testing despite other commitments

3 Workshops and system testing

The London Counter Fraud Hub (LCFH) project followed a standard system development cycle for the creation, configuration, tuning and testing of a product designed by local authorities, for local authorities. Tasks were split into several workstreams and included:

- Solution Design
- Solution Configuration
- System Tuning
- Assessment Workshops
- User Acceptance Testing (UAT)
- Off Site Testing

Test phases were split between the users acceptance of a product against the design specification and the quality of the output produced.

For testing phases, outcomes could be categorised in the following manner:

Accepted (Valid Alert)	An alert that has been reviewed against Authority systems and considered suitable for investigation.
Rejected (Valid Alert)	An alert that has been reviewed against Authority systems and considered unsuitable for investigation due to: • The Authority is already aware of the information • The Authority is already investigating the matter • The alert was generated due to poor Authority data provided
Rejected (Invalid Alert)	An alert that has been reviewed against Authority systems and considered unsuitable for investigation due to: • Incorrect names/addresses being linked (Entity resolution issues) • Incorrect linking of third party data to and individual/address • The alert is not an indicator of fraud
Defect	The system is not working as designed and no review of an alert can be carried out.

Solution Design

Solution design workshops were attended by a selection of service matter experts (SME's) from key business areas across the Authority where fraud may be prevelant. The objective was to discuss how fraud was being perpetrated, how it could be identified using available data, how advanced analytics could be used to improve the quality of output and how Authorities would like the output presented to them in a user interface.

Solution Configuration

The purpose of the solution configuration workshops was to show SME's how the solution networks were built, using pre defined indicators and scorecards, along with the agreed scoring thresholds and appropriate logic created as part of the solution design. This was also an opportunity to discuss cold-listing and possible improvements in network linking and Visualizer configuration.

System Tuning

The purpose of the system tuning workshop was to allow counter-fraud SME's to review examples of alerts generated as part of the pre defined indicators and scorecards, along with the agreed scoring thresholds and appropriate logic. SME's provided feedback on quality and relevance of these alerts and the workshop concluded with a discussion on possible improvements to indicator scoring, thresholds, data cleansing and cold listing.

Assessment Workshops

Conducted in October 2017, fraud SMEs were invited to assessment workshops and to bring their work laptops, with access to any source systems needed with a view to making an initial decision on the acceptance or rejection of an alert, also known as Triage.

SME's were asked to record the outcome of their reviews to assist in measuring performance, as well as provide examples of alerts where further system improvements were required.

User Acceptance Testing (UAT)

User acceptance testing (UAT) was carried out in May 2018 and consisted of a process of verifying that the solution worked for the user. This took place in a controlled environment, led by a Test Manager and a lead SME and ensured that test plans were followed, test cases were executed correctly, results were documented, and any errors or defects were reported and fixed in the timeframe allowed.

During UAT a number of test plans are executed to confirm functionality of the system was performing as designed, in line with what would occur in real-life scenarios. UAT acts as a final verification of the required business functionality and proper functioning of the system, however also allowed for further testing of alerts for quality and validity. The results of UAT testing (test plans) and further quality checks can be found in this document.

Off Site Testing

At the request of participating authorites, an additional test phase was added to the project allowing further testing of alerts produced by the NetReveal solution to review quality. Participating authorities recorded the results of these tests and outcomes are detailed below.

4   Assessment Workshop

The purpose of this workshops was to review the progress of the London Counter Fraud Hub (LCFH) solution for the Proof of Concept (POC), including the data used for analytics purposes, output produced as a result of fraud indicators, and the scoring used to generate these outputs.

Camden						
Test Outcome	Housing		Business Rates		Council Tax	
Accepted (Valid Alert)	18	41%	1	13%	21	43%
Rejected (Valid Alert)	0	0%	0	0%	0	0%
Rejected (Invalid Alert)	26	59%	7	88%	28	57%
Total	44	100%	8	100%	49	100%

Croydon						
Test Outcome	Housing		Business Rates		Council Tax	
Accepted (Valid Alert)	7	18%	1	10%	22	49%
Rejected (Valid Alert)	0	0%	0	0%	0	0%
Rejected (Invalid Alert)	32	82%	9	90%	23	51%
Total	39	100%	10	100%	45	100%

Ealing						
Test Outcome	Housing		Business Rates		Council Tax	
Accepted (Valid Alert)	8	22%	8	36%	22	56%
Rejected (Valid Alert)	0	0%	0	0%	0	0%
Rejected (Invalid Alert)	29	78%	14	64%	17	44%
Total	37	100%	22	100%	39	100%

Islington						
Test Outcome	Housing		Business Rates		Council Tax	
Accepted (Valid Alert)	17	53%	12	38%	27	48%
Rejected (Valid Alert)	0	0%	0	0%	0	0%
Rejected (Invalid Alert)	15	47%	20	63%	29	52%
Total	32	100%	32	100%	56	100%

Housing Alerts	Number Tested	Valid	Not Valid
Camden	44	41%	59%
Croydon	39	18%	82%
Ealing	37	22%	78%
Islington	32	53%	47%
	Average	33%	67%

Business Rates Alerts	Number Tested	Valid	Not Valid
Camden	8	13%	88%
Croydon	10	10%	90%
Ealing	22	36%	64%
Islington	32	38%	63%
	Average	24%	76%

Council Tax Alerts	Number Tested	Valid	Not Valid
Camden	49	43%	57%
Croydon	45	49%	51%
Ealing	39	56%	44%
Islington	56	48%	52%
	Average	49%	51%

5   User Acceptance Testing (UAT)

Although the primary function of UAT was to verifying all aspects of the solution worked as designed, this provided for a further opportunity to review the quality of alerts generated.

It should be noted that not all fraud types could be tested for each Authority due to either a lack of Authority resource or insufficient alerts generated for this phase of testing.

Camden						
Test Outcome	**Housing**		**Business Rates**		**Council Tax**	
Accepted (Valid Alert)	30	33%	5	71%	10	30%
Rejected (Valid Alert)	0	0%	0	0%	0	0%
Rejected (Invalid Alert)	60	67%	2	29%	23	70%
Total	90	100%	7	100%	33	100%
Defects	20		0		1	

Croydon						
Test Outcome	**Housing**		**Business Rates**		**Council Tax**	
Accepted (Valid Alert)	13	76%	0	0%	5	83%
Rejected (Valid Alert)	0	0%	0	0%	0	0%
Rejected (Invalid Alert)	4	24%	2	100%	1	17%
Total	17	100%	2	100%	6	100%
Defects	0		6		0	

Ealing						
Test Outcome	**Housing**		**Business Rates**		**Council Tax**	
Accepted (Valid Alert)	36	63%	6	43%	0	0%
Rejected (Valid Alert)	0	0%	0	0%	0	0%
Rejected (Invalid Alert)	21	37%	8	57%	0	0%
Total	57	100%	14	100%	0	0%
Defects	14		4		0	

Islington						
Test Outcome	**Housing**		**Business Rates**		**Council Tax**	
Accepted (Valid Alert)	19	27%	6	100%	22	27%
Rejected (Valid Alert)	0	0%	0	0%	0	0%
Rejected (Invalid Alert)	51	73%	0	0%	60	73%
Total	70	100%	6	100%	82	100%
Defects	15		4		26	

Housing Alerts	Number Tested	Valid	Not Valid
Camden	90	33%	67%
Croydon	17	76%	24%
Ealing	57	63%	37%
Islington	70	27%	73%
	Average	50%	50%

Business Rates Alerts	Number Tested	Valid	Not Valid
Camden	7	71%	29%
Croydon	2	0%	100%
Ealing	14	43%	57%
Islington	6	100%	0%
	Average	54%	46%

Council Tax Alerts	Number Tested	Valid	Not Valid
Camden	33	30%	70%
Croydon	6	83%	17%
Ealing	0	0%	0%
Islington	82	27%	73%
	Average	35%	40%

6 Off Site Testing

At the request of participating authorites, CIPFA provided each with a random sample of alerts (randomisation methodology agreed by the lead authority) that had been generated after defects identified during UAT had been resolved.

Results are as follows:

Camden						
Test Outcome	**Housing**		**Business Rates**		**Council Tax**	
Accepted (Valid Alert)	4	20%	9	45%	4	20%
Rejected (Valid Alert)	11	55%	0	0%	2	10%
Rejected (Invalid Alert)	5	25%	11	55%	14	70%
Total	20	100%	20	100%	20	100%
Not Tested	0		0		0	

Croydon						
Test Outcome	**Housing**		**Business Rates**		**Council Tax**	
Accepted (Valid Alert)	2	18%	6	30%	0	0%
Rejected (Valid Alert)	7	64%	0	0%	0	0%
Rejected (Invalid Alert)	2	18%	14	70%	0	0%
Total	11	100%	20	100%	0	0%
Not Tested	9		0		0	

Ealing						
Test Outcome	**Housing**		**Business Rates**		**Council Tax**	
Accepted (Valid Alert)	0	0%	8	40%	5	25%
Rejected (Valid Alert)	7	35%	3	15%	3	15%
Rejected (Invalid Alert)	13	65%	9	45%	12	60%
Total	20	100%	20	100%	20	100%
Not Tested	0		0		0	

Islington						
Test Outcome	**Housing**		**Business Rates**		**Council Tax**	
Accepted (Valid Alert)	0	0%	7	35%	0	0%
Rejected (Valid Alert)	15	75%	0	0%	0	0%
Rejected (Invalid Alert)	5	25%	13	65%	9	100%
Total	20	100%	20	100%	9	100%
Not Tested	0		0		0	

Housing Alerts	Number Tested	Valid	Not Valid
Camden	20	75%	25%
Croydon	11	82%	18%
Ealing	20	35%	65%
Islington	20	75%	25%
	Average	67%	33%

Business Rates Alerts	Number Tested	Valid	Not Valid
Camden	20	45%	55%
Croydon	20	30%	70%
Ealing	20	55%	45%
Islington	20	35%	65%
	Average	41%	59%

Council Tax Alerts	Number Tested	Valid	Not Valid
Camden	20	30%	70%
Croydon	0	0%	0%
Ealing	20	40%	60%
Islington	9	0%	100%
	Average	23%	77%

7 Comparison

The following tables show a comparison between the results achieved during the different test phases:

Housing	workshops		UAT Testing		Off Site Testing	
	Number reviewed	Valid	Number reviewed	Valid	Number reviewed	Valid
Camden	44	41%	90	33%	20	75%
Croydon	39	18%	17	76%	11	82%
Ealing	37	22%	57	63%	20	35%
Islington	32	53%	70	27%	20	75%
Average	Average	33%	Average	50%	Average	67%

Business Rates	workshops		UAT Testing		Off Site Testing	
	Number reviewed	Valid	Number reviewed	Valid	Number reviewed	Valid
Camden	8	13%	7	71%	20	45%
Croydon	10	10%	2	0%	20	30%
Ealing	22	36%	14	43%	20	55%
Islington	32	38%	6	100%	20	35%
	Average	24%	Average	54%	Average	41%

Council Tax	workshops		UAT Testing		Off Site Testing	
	Number reviewed	Valid	Number reviewed	Valid	Number reviewed	Valid
Camden	49	43%	33	30%	20	30%
Croydon	45	49%	6	83%	0	n/a
Ealing	39	56%	0	n/a	20	40%
Islington	56	48%	82	27%	9	0%
	Average	49%	Average	47%	Average	23%

Housing	Camden	Croydon	Ealing	Islington	Average
Workshops	41%	18%	22%	53%	33%
UAT	33%	76%	63%	27%	50%
Off Site Testing	75%	82%	35%	75%	67%

Business Rates	Camden	Croydon	Ealing	Islington	Average
Workshops	13%	10%	36%	38%	24%
UAT	71%	0%	43%	100%	54%
Off Site Testing	45%	30%	55%	35%	41%

Council Tax	Camden	Croydon	Ealing	Islington	Average
Workshops	43%	49%	56%	48%	49%
UAT	30%	83%	n/a	27%	47%
Off Site Testing	30%	n/a	40%	0%	23%

Housing Alerts

	Workshops	UAT	Off Site Testing
Camden	41%	33%	75%
Croydon	18%	76%	82%
Ealing	22%	63%	35%
Islington	53%	27%	75%
Average	33%	50%	67%
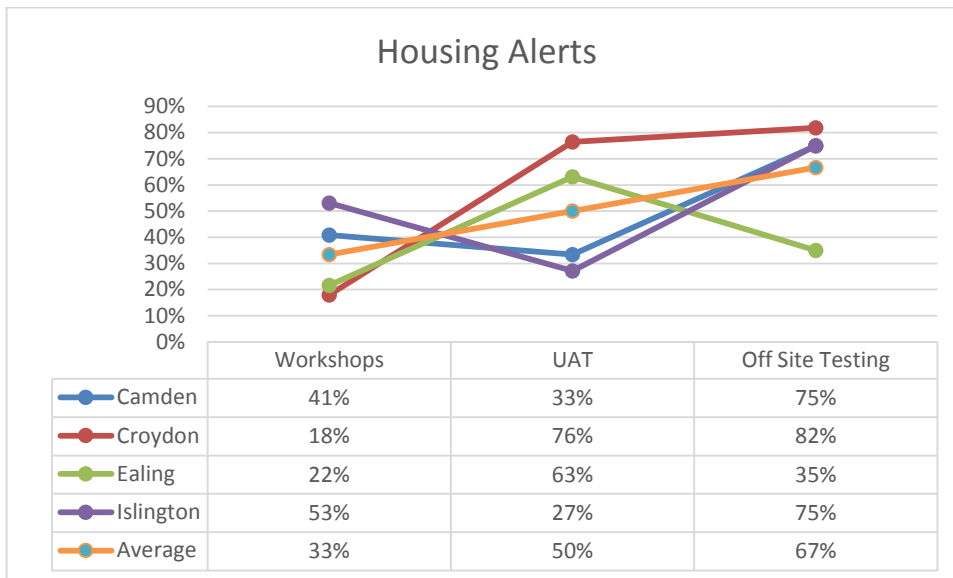
There has been a consistent improvement in the volume of housing alerts reported as valid from an average of 33% during initial workshops to 67% during off site testing. Three of the four participating authorities reported a better than average valid alert rate with one experiencing a drop in output quality.

Business Rates

	Workshops	UAT	Off Site Testing
Camden	13%	71%	45%
Croydon	10%	0%	30%
Ealing	36%	43%	55%
Islington	38%	100%	35%
Average	24%	54%	41%
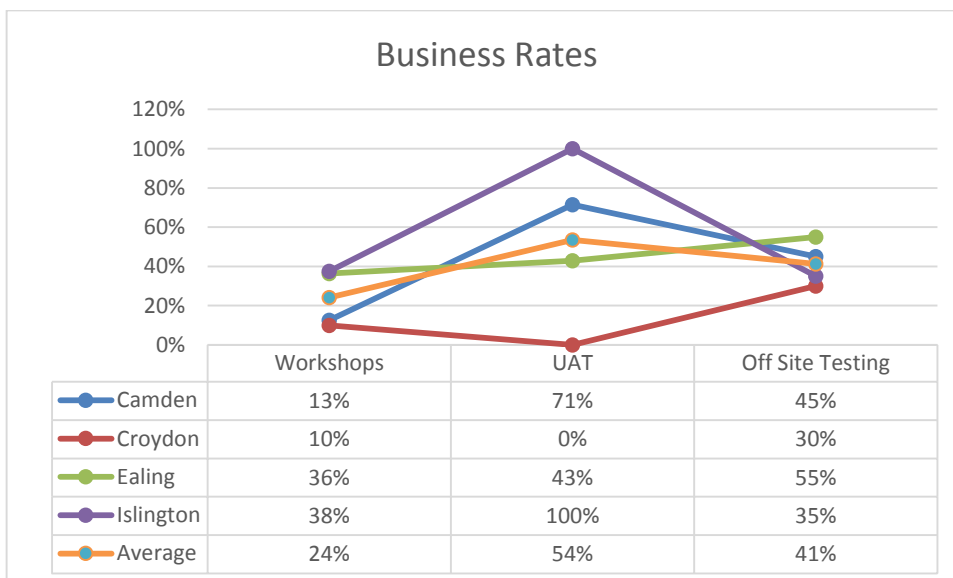
There has been a measured improvement in the volume of business rate alerts reported as valid from an average of 33% during initial workshops to 41% during off site testing. UAT All four participating authorities reported a valid alert rate higher that the average experienced during the initial workshops.

Council Tax

	Workshops	UAT	Off Site Testing
Camden	43%	30%	30%
Croydon	49%	83%	0%
Ealing	56%	0%	40%
Islington	48%	27%	0%
Average	49%	47%	23%
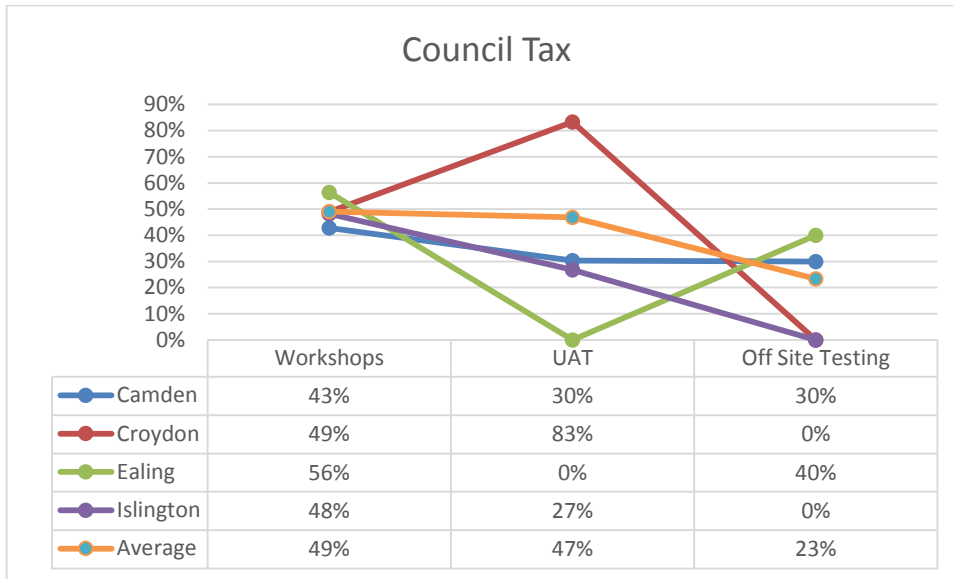
Whilst there was a consistent result in the volume of business rate alerts reported as valid during workshops and UAT (almost 50%), the results from off site testing reported only 23%. This was due to poor results from one authority who tested less than half of their sample and experienced entity resolution errors.

8 Value For Money

Introduction

Value for money calculations in this evaluation report were compiled by the lead authority (Ealing Council) using information obtained duing pilot test phases and data provided by pilot authorities or available in the public domain.

Some things to be aware of include:

1. The pilot phase of the LCFH focussed on three fraud types:
    - Council tax single person discount (SPD)
    - Housing
    - Business Rates

2. Testing was carried out by four pilot authorities:
    - Camden
    - Croydon
    - Ealing
    - Islington

3. The results were calculated on the outcome of three test phases:
    - Workshops
    - User Acceptance Testing
    - Off Site Testing

4. The results of test phases were used to extrapolate the full year impact that the hub would achieve if all 33 authorities in London were included

5. The pilot results came from processing live data, so fraud cases identified are additional to any counter fraud work already carried out by the pilot Authorities, although there was some overlap where fraud cases had been identified by the Authorities but not actioned.

6. The evaluation information for Council Tax in this report is based on the following assumptions:
    - Projections assume that all London authorities will join the LCFH
    - All figure are based on a full year of operation
    - Testing results are averaged across four pilot authorities
    - Financial figures are based on the original contract pricing model, although an alternative subscription model is being considered.
    - All costs are based on the acceptance of alerts only and do not include the cost of investigations carried out by CIPFA
    - Year 2 volumes will reduced by 50% on the assumption all historic cases are dealt with in Year 1

Headline Summary

Results showed that under the current payment by results (PBR) model, authorities would save between £15m and £32m in the first year and in addition, recover 1,500 to 2,500 council homes currently being illegally sublet.

LCFH - extrapolated total full year savings for London	Year 1	Year 2
Best case	£32,082,158	£16,041,079
Worst case	£15,379,867	£7,689,933

Below is a breakdown of savings by fraud type:

Best Case

Fraud type	Year 1 Savings	Year 1 Valid Alerts	Year 2 Savings	Year 2 Valid Alerts
Council Tax SPD	£16,398,550	48,437	£8,199,275	24,219
Housing	£10,798,678	2,553	£5,399,339	1,277
Business Rates	£4,884,930	1,035	£2,442,465	518
Total	**£32,082,158**		**£16,041,079**	

Worst Case

Fraud type	Year 1 Savings	Year 1 Valid Alerts	Year 2 Savings	Year 2 Valid Alerts
Council Tax SPD	£4,015,730	11,862	£2,007,865	5,931
Housing	£6,479,207	1,532	£3,239,603	766
Business Rates	£4,884,930	1,035	£2,442,465	518
Total	**£15,379,867**		**£7,689,933**	

The cost for London in the first year, based on the current PBR model would be between £650k and £1.12m, an average Return on Investment (ROI) of 2,600%

Cipfa charges full year for London	Year 1	Year 2
Best case	£1,123,874	£561,937
Worst case	£656,666	£328,333

It should be noted that over the course of the LCFH contract and under the PBR model, the number of fraud types will be expanded, subject to investment cases approved and prioritised by SLT.

Detailed Summary

Council Tax

VFM Indicators extrapolated from pilot results	YEAR 1		YEAR 2+	
	Best Case	Worst Case	Best Case	Worst Case
Average percentage of total taxpayers with SPD for which alerts generated	9.68%	6.90%	4.84%	3.45%
Average percentage of alerts generated accepted as fraud cases	49%	23%	49%	23%
Alerts accepted as percentage of total taxpayers with SPD	4.6%	1.1%	4.6%	1.1%
Average value of total saving (£)	713,834	227,922	356,917	113,961
Lowest total saving (£)	19,325	4,732	9,662	2,366
Highest total saving (£)	877,856	214,972	438,928	107,486
Unit CIPFA price (£)	43	43	43	43
Average value of CIPFA cost (£)	63,115	15,456	31,558	7,728
Lowest CIPFA cost (£)	3,569	874	1,785	437
Highest CIPFA cost (£)	96,856	23,718	48,428	11,859
Total savings for London (£)	16,398,550	4,015,730	8,199,275	2,007,865
Total CIPFA cost for London (£)	2,082,810	510,045	1,041,405	255,023
Net saving for London (£)	14,315,741	3,505,685	7,157,870	1,752,843
Average authority ROI	687%	687%	687%	687%

Projected Year 1 results										
		Lowest Alert Accept Rate				Highest Alert Accept Rate				
Borough	SPD Removals	SPD Saving - (£)	Cipfa Cost at £43 per case (£)	Net Saving (£)	ROI	SPD Removals	SPD Saving - (£)	Cipfa Cost at £43 per case (£)	Net Saving (£)	ROI
Barking & Dagenham	247	87,020	10,601	76,418	721%	1,007	355,352	43,291	312,061	721%
Barnet	480	172,311	20,657	151,654	734%	1,962	703,646	84,356	619,290	734%
Bexley	336	127,901	14,433	113,468	786%	1,371	522,295	58,939	463,355	786%
Brent	373	133,073	16,060	117,013	729%	1,525	543,414	65,583	477,831	729%
Bromley	486	169,384	20,899	148,485	710%	1,985	691,693	85,343	606,350	710%
Camden	410	145,342	17,633	127,710	724%	1,675	593,518	72,005	521,513	724%
City of London	20	4,732	874	3,858	441%	83	19,325	3,569	15,755	441%
Croydon	552	214,972	23,718	191,254	806%	2,252	877,856	96,856	781,000	806%
Ealing	346	117,707	14,874	102,833	691%	1,413	480,666	60,739	419,927	691%
Enfield	442	163,608	18,998	144,610	761%	1,804	668,107	77,579	590,528	761%
Greenwich	417	140,871	17,933	122,938	686%	1,703	575,259	73,233	502,027	686%
Hackney	434	144,312	18,677	125,635	673%	1,774	589,310	76,269	513,041	673%
Hammersmith & Fulham	319	80,498	13,738	66,760	486%	1,305	328,718	56,100	272,618	486%
Haringey	389	148,172	16,720	131,452	786%	1,588	605,073	68,277	536,796	786%
Harrow	222	90,499	9,563	80,936	846%	908	369,559	39,052	330,507	846%
Havering	348	139,052	14,969	124,082	829%	1,422	567,829	61,128	506,701	829%
Hillingdon	327	113,770	14,048	99,722	710%	1,334	464,590	57,367	407,223	710%
Hounslow	307	107,615	13,194	94,421	716%	1,253	439,456	53,880	385,576	716%
Islington	383	129,299	16,460	112,839	686%	1,563	528,003	67,218	460,785	686%
Kensington & Chelsea	328	88,381	14,102	74,279	527%	1,339	360,911	57,588	303,323	527%
Kingston-upon-Thames	193	84,659	8,285	76,374	922%	787	345,713	33,834	311,879	922%
Lambeth	522	170,914	22,435	148,479	662%	2,131	697,940	91,614	606,326	662%
Lewisham	526	188,921	22,602	166,319	736%	2,146	771,473	92,296	679,177	736%
Merton	230	81,644	9,891	71,753	725%	939	333,400	40,391	293,008	725%
Newham	342	106,462	14,713	91,749	624%	1,397	434,748	60,083	374,665	624%
Redbridge	265	97,670	11,381	86,289	758%	1,081	398,843	46,475	352,368	758%
Richmond-upon-Thames	250	102,385	10,748	91,637	853%	1,021	418,097	43,888	374,209	853%
Southwark	507	159,424	21,818	137,606	631%	2,072	651,020	89,094	561,926	631%
Sutton	276	105,961	11,847	94,113	794%	1,125	432,699	48,380	384,319	794%
Tower Hamlets	393	122,599	16,913	105,686	625%	1,606	500,642	69,064	431,578	625%
Waltham Forest	330	126,980	14,201	112,779	794%	1,349	518,532	57,990	460,543	794%
Wandsworth	447	78,194	19,212	58,981	307%	1,825	319,310	78,455	240,855	307%
Westminster	415	71,397	17,846	53,552	300%	1,695	291,556	72,874	218,682	300%
LONDON	**11,862**	**4,015,730**	**510,045**	**3,505,685**	**687%**	**48,437**	**16,398,550**	**2,082,810**	**14,315,741**	**687%**

Projected Year 2 results									
	Lowest Alert Accept Rate					Highest Alert Accept Rate			
Borough	SPD Removals	SPD Saving - (£)	Cipfa Cost at £43 per case (£)	Net Saving (£)	ROI	SPD Removals	SPD Saving - (£)	Cipfa Cost at £43 per case (£)	Net Saving (£)	ROI
Barking & Dagenham	123	43,510	5,301	38,209	721%	503	177,676	21,646	156,030	721%
Barnet	240	86,156	10,329	75,827	734%	981	351,823	42,178	309,645	734%
Bexley	168	63,951	7,217	56,734	786%	685	261,147	29,470	231,678	786%
Brent	187	66,537	8,030	58,506	729%	763	271,707	32,791	238,916	729%
Bromley	243	84,692	10,450	74,243	710%	992	345,847	42,671	303,175	710%
Camden	205	72,671	8,816	63,855	724%	837	296,759	36,002	260,756	724%
City of London	10	2,366	437	1,929	441%	42	9,662	1,785	7,878	441%
Croydon	276	107,486	11,859	95,627	806%	1,126	438,928	48,428	390,500	806%
Ealing	173	58,853	7,437	51,417	691%	706	240,333	30,369	209,963	691%
Enfield	221	81,804	9,499	72,305	761%	902	334,053	38,790	295,264	761%
Greenwich	209	70,436	8,967	61,469	686%	852	287,630	36,616	251,013	686%
Hackney	217	72,156	9,339	62,818	673%	887	294,655	38,135	256,520	673%
Hammersmith & Fulham	160	40,249	6,869	33,380	486%	652	164,359	28,050	136,309	486%
Haringey	194	74,086	8,360	65,726	786%	794	302,536	34,138	268,398	786%
Harrow	111	45,249	4,782	40,468	846%	454	184,780	19,526	165,254	846%
Havering	174	69,526	7,485	62,041	829%	711	283,914	30,564	253,350	829%
Hillingdon	163	56,885	7,024	49,861	710%	667	232,295	28,684	203,611	710%
Hounslow	153	53,808	6,597	47,211	716%	627	219,728	26,940	192,788	716%
Islington	191	64,649	8,230	56,419	686%	782	264,001	33,609	230,392	686%
Kensington & Chelsea	164	44,191	7,051	37,139	527%	670	180,456	28,794	151,661	527%
Kingston-upon-Thames	96	42,330	4,143	38,187	922%	393	172,856	16,917	155,939	922%
Lambeth	261	85,457	11,217	74,240	662%	1,065	348,970	45,807	303,163	662%
Lewisham	263	94,460	11,301	83,160	736%	1,073	385,736	46,148	339,589	736%
Merton	115	40,822	4,946	35,876	725%	470	166,700	20,196	146,504	725%
Newham	171	53,231	7,357	45,875	624%	699	217,374	30,041	187,332	624%
Redbridge	132	48,835	5,690	43,144	758%	540	199,421	23,237	176,184	758%
Richmond-upon-Thames	125	51,192	5,374	45,819	853%	510	209,048	21,944	187,104	853%
Southwark	254	79,712	10,909	68,803	631%	1,036	325,510	44,547	280,963	631%
Sutton	138	52,980	5,924	47,057	794%	563	216,349	24,190	192,160	794%
Tower Hamlets	197	61,299	8,456	52,843	625%	803	250,321	34,532	215,789	625%
Waltham Forest	165	63,490	7,100	56,390	794%	674	259,266	28,995	230,271	794%
Wandsworth	223	39,097	9,606	29,491	307%	912	159,655	39,227	120,428	307%
Westminster	208	35,699	8,923	26,776	300%	847	145,778	36,437	109,341	300%
LONDON	5,931	2,007,865	255,023	1,752,843	687%	24,219	8,199,275	1,041,405	7,157,870	687%

Comparative analysis

The LCFH performed on a par with other solutions in identifying fraud cases. The Hub offers the ability to automate the processing of SPD cases by interfacing directly with an authority's council tax system. This is not typical of other solutions, although at least one supplier offers a service that manually inputs all information. The unit cost at £43 is higher than the unit cost of other suppliers, which are in the range £8 to £16. This anomaly is explained by the automation offer, saving valuable Authority resources and time. The automation process has been successfully tested and individual Authorities can choose when this is deployed. System tuning is a continual process with the aim of achieving improved results to a point where Councils are willing to deploy automation.

Housing

VFM Summary - Housing Tenancy Fraud				
VFM Indicators extrapolated from pilot results		YEAR 1		YEAR 2+
	Best Case	**Worst Case**	**Best Case**	**Worst Case**
Average percentage of total social rental properties for which alerts generate	1.8%	1.2%	0.92%	0.59%
Average percentage of alerts generated accepted as fraud cases	33%	50%	33%	50%
Alerts accepted as percentage of total social rental properties	4.6%	1.1%	4.6%	1.1%
Average value of total saving (£)	381,616	236,827	190,808	118,413
Lowest total saving (£)	47,908	28,745	23,954	14,372
Highest total saving (£)	1,726,541	1,035,925	863,270	517,962
Unit CIPFA price (£)	350	350	350	350
Average value of CIPFA cost (£)	30,687	18,368	15,344	9,184
Lowest CIPFA cost (£)	4,439	2,663	2,219	1,332
Highest CIPFA cost (£)	85,367	51,220	42,684	25,610
Total savings for London (£)	10,798,678	6,479,207	5,399,339	3,239,603
Total CIPFA cost for London (£)	893,393	536,036	446,696	268,018
Net saving for London (£)	9,905,285	5,943,171	4,952,643	2,971,586
Average authority ROI	**1109%**	**1109%**	**1109%**	**1109%**

Projected Year 1 results										
		Lowest Alert Accept Rate					**Highest Alert Accept Rate**			
Borough	**Properties Recovered**	**GF Saving - (£)**	**Cipfa Cost to HRA at £350 per case (£)**	**Net Saving (£)**	**ROI**	**Properties Recovered**	**GF Saving - (£)**	**Cipfa Cost to HRA at £350 per case (£)**	**Net Saving (£)**	**ROI**
Barking & Dagenham	68	114,960	23,705	91,256	385%	113	191,600	39,508	152,093	385%
Barnet	38	33,456	13,313	20,143	151%	63	55,760	22,188	33,572	151%
Bexley	-	-	-	-	-	-	-	-	-	-
Brent	31	138,974	10,768	128,206	1191%	51	231,624	17,947	213,677	1191%
Bromley	-	-	-	-	-	-	-	-	-	-
Camden	90	1,035,925	31,497	1,004,427	3189%	150	1,726,541	52,496	1,674,045	3189%
City of London	8	28,745	2,663	26,082	979%	13	47,908	4,439	43,469	979%
Croydon	53	157,511	18,515	138,996	751%	88	262,518	30,858	231,660	751%
Ealing	46	148,849	16,261	132,588	815%	77	248,082	27,102	220,980	815%
Enfield	40	88,670	14,118	74,552	528%	67	147,784	23,530	124,254	528%
Greenwich	83	458,820	29,126	429,694	1475%	139	764,701	48,544	716,157	1475%
Hackney	86	155,220	29,952	125,268	418%	143	258,700	49,920	208,780	418%
Hammersmith & Fulham	48	204,453	16,654	187,798	1128%	79	340,754	27,757	312,997	1128%
Haringey	60	198,675	21,050	177,625	844%	100	331,125	35,083	296,042	844%
Harrow	19	91,803	6,604	85,199	1290%	31	153,005	11,006	141,998	1290%
Havering	37	93,066	12,973	80,093	617%	62	155,110	21,622	133,488	617%
Hillingdon	39	314,380	13,564	300,816	2218%	65	523,966	22,607	501,359	2218%
Hounslow	50	297,035	17,637	279,397	1584%	84	495,058	29,395	465,662	1584%
Islington	99	299,668	34,689	264,980	764%	165	499,447	57,815	441,633	764%
Kensington & Chelsea	27	121,657	9,322	112,335	1205%	44	202,761	15,536	187,225	1205%
Kingston-upon-Thames	18	101,623	6,395	95,228	1489%	30	169,372	10,658	158,714	1489%
Lambeth	92	551,336	32,371	518,965	1603%	154	918,894	53,952	864,942	1603%
Lewisham	56	145,543	19,679	125,864	640%	94	242,571	32,799	209,773	640%
Merton	-	-	-	-	-	-	-	-	-	-
Newham	61	136,891	21,312	115,580	542%	101	228,152	35,520	192,633	542%
Redbridge	17	122,664	6,001	116,664	1944%	29	204,441	10,001	194,440	1944%
Richmond-upon-Thames	-	-	-	-	-	-	-	-	-	-
Southwark	146	566,484	51,220	515,263	1006%	244	944,139	85,367	858,772	1006%
Sutton	23	66,151	8,044	58,107	722%	38	110,251	13,407	96,844	722%
Tower Hamlets	45	307,400	15,848	291,553	1840%	75	512,334	26,413	485,921	1840%
Waltham Forest	39	113,511	13,665	99,846	731%	65	189,186	22,775	166,411	731%
Wandsworth	65	313,779	22,864	290,915	1272%	109	522,965	38,106	484,859	1272%
Westminster	46	71,957	16,226	55,731	343%	77	119,928	27,043	92,885	343%
LONDON	**1,532**	**6,479,207**	**536,036**	**5,943,171**	**1109%**	**2,553**	**10,798,678**	**893,393**	**9,905,285**	**1109%**

Borough	Lowest Alert Accept Rate					Highest Alert Accept Rate				
	Properties Recovered	GF Saving - (£)	Cipfa Cost to HRA at £350 per case (£)	Net Saving (£)	ROI	Properties Recovered	GF Saving - (£)	Cipfa Cost to HRA at £350 per case (£)	Net Saving (£)	ROI
Barking & Dagenham	34	57,480	11,852	45,628	385%	56	95,800	19,754	76,046	385%
Barnet	19	16,728	6,656	10,072	151%	32	27,880	11,094	16,786	151%
Bexley	-	-	-	-	-	-	-	-	-	-
Brent	15	69,487	5,384	64,103	1191%	26	115,812	8,974	106,838	1191%
Bromley	-	-	-	-	-	-	-	-	-	-
Camden	45	517,962	15,749	502,214	3189%	75	863,270	26,248	837,023	3189%
City of London	4	14,372	1,332	13,041	979%	6	23,954	2,219	21,735	979%
Croydon	26	78,755	9,257	69,498	751%	44	131,259	15,429	115,830	751%
Ealing	23	74,425	8,131	66,294	815%	39	124,041	13,551	110,490	815%
Enfield	20	44,335	7,059	37,276	528%	34	73,892	11,765	62,127	528%
Greenwich	42	229,410	14,563	214,847	1475%	69	382,350	24,272	358,078	1475%
Hackney	43	77,610	14,976	62,634	418%	71	129,350	24,960	104,390	418%
Hammersmith & Fulham	24	102,226	8,327	93,899	1128%	40	170,377	13,879	156,499	1128%
Haringey	30	99,337	10,525	88,813	844%	50	165,562	17,541	148,021	844%
Harrow	9	45,901	3,302	42,600	1290%	16	76,502	5,503	70,999	1290%
Havering	19	46,533	6,486	40,046	617%	31	77,555	10,811	66,744	617%
Hillingdon	19	157,190	6,782	150,408	2218%	32	261,983	11,303	250,680	2218%
Hounslow	25	148,517	8,819	139,699	1584%	42	247,529	14,698	232,831	1584%
Islington	50	149,834	17,344	132,490	764%	83	249,724	28,907	220,816	764%
Kensington & Chelsea	13	60,828	4,661	56,168	1205%	22	101,381	7,768	93,613	1205%
Kingston-upon-Thames	9	50,812	3,198	47,614	1489%	15	84,686	5,329	79,357	1489%
Lambeth	46	275,668	16,185	259,483	1603%	77	459,447	26,976	432,471	1603%
Lewisham	28	72,771	9,840	62,932	640%	47	121,286	16,399	104,886	640%
Merton	-	-	-	-	-	-	-	-	-	-
Newham	30	68,446	10,656	57,790	542%	51	114,076	17,760	96,316	542%
Redbridge	9	61,332	3,000	58,332	1944%	14	102,220	5,000	97,220	1944%
Richmond-upon-Thames	-	-	-	-	-	-	-	-	-	-
Southwark	73	283,242	25,610	257,632	1006%	122	472,070	42,684	429,386	1006%
Sutton	11	33,075	4,022	29,053	722%	19	55,125	6,703	48,422	722%
Tower Hamlets	23	153,700	7,924	145,776	1840%	38	256,167	13,206	242,961	1840%
Waltham Forest	20	56,756	6,833	49,923	731%	33	94,593	11,388	83,205	731%
Wandsworth	33	156,890	11,432	145,458	1272%	54	261,483	19,053	242,430	1272%
Westminster	23	35,978	8,113	27,865	343%	39	59,964	13,521	46,442	343%
LONDON	**766**	**3,239,603**	**268,018**	**2,971,586**	**1109%**	**1,276**	**5,399,339**	**446,696**	**4,952,643**	**1109%**

Comparative analysis

Data could be obtained for only one comparable case study. The LCFH performed on a par with the other solution, successfully identifying a comparable number of fraud cases overall, although the Hub achieved a much lower level of false positives (50% as opposed to 89%), creating less abortive work for investigators.

Business Rates

Additional assumptions:

1. Results ignore collection fund accounting issues
2. No results are given above for identification of heraditaments not in rating. This is because it is not possible to assign a value until the RV has been determined

VFM Indicators extrapolated from pilot results - Charitable Relief	YEAR 1	YEAR 2+
Average percentage of total ratepayers with Charitable Relief for which alerts generated	1.64%	0.82%
Average percentage of CR alerts generated accepted as fraud cases	23%	23%
Alerts accepted as percentage of total ratepayers with CR	0.4%	0.4%
Average value of total CR saving (£)	59,883	29,942
Lowest total saving (£)	17,741	8,870
Highest total saving (£)	313,013	156,507
Unit CIPFA price (£)	125	125
Average value of CIPFA cost (£)	284	142
Lowest CIPFA cost (£)	125	63
Highest CIPFA cost (£)	625	313
Total savings for London (£)	1,976,141	988,071
Total CIPFA cost for London (£)	9,375	4,688
Net saving for London (£)	1,985,516	992,758
Average authority ROI	**21179%**	**21179%**

VFM Indicators extrapolated from pilot results - SBR Relief	YEAR 1	YEAR 2+
Average percentage of total ratepayers with SBR Relief for which alerts generated	4.56%	2.28%
Average percentage of SBRR alerts generated accepted as fraud cases	32%	32%
Alerts accepted as percentage of total ratepayers with SBRR	1.5%	1.5%
Average value of total SBRR saving (£)	88,145	44,073
Lowest total saving (£)	11,198	5,599
Highest total saving (£)	125,551	62,775
Unit CIPFA price (£)	125	125
Average value of CIPFA cost (£)	3,765	1,883
Lowest CIPFA cost (£)	500	250
Highest CIPFA cost (£)	6,375	3,188
Total savings for London (£)	2,908,789	1,454,395
Total CIPFA cost for London (£)	124,250	62,125
Net saving for London (£)	3,033,039	1,516,520
Average authority ROI	**2441%**	**2441%**

Business Rates Charitable and SBR Reliefs - Summary by Borough									
	Charitable Relief				**Small Business Rates Relief**				
	Successful alerts	Total Saving (£)	Cipfa Cost (£)	Net Saving (£)	ROI	Successful alerts	Total Saving (£)	Cipfa Cost (£)	Net Saving (£)	ROI
Barking & Dagenham	0.8	17,741	125	17,616	14093%	21	65,023	2,750	62,273	2264%
Barnet	2.0	52,539	375	52,164	13911%	32	100,391	4,000	96,391	2410%
Bexley	1.0	28,239	250	27,989	11196%	30	91,372	3,875	87,497	2258%
Brent	1.8	35,046	250	34,796	13919%	38	120,186	4,875	115,311	2365%
Bromley	1.6	40,200	250	39,950	15980%	32	95,259	4,000	91,259	2281%
Camden	3.5	296,967	500	296,467	59293%	23	72,741	2,875	69,866	2430%
City of London	1.0	60,324	250	60,074	24030%	4	11,198	500	10,698	2140%
Croydon	1.9	38,060	250	37,810	15124%	42	102,542	5,375	97,167	1808%
Ealing	1.5	33,101	250	32,851	13140%	42	125,551	5,375	120,176	2236%
Enfield	1.8	25,888	250	25,638	10255%	30	99,540	3,750	95,790	2554%
Greenwich	1.9	42,606	250	42,356	16943%	26	75,130	3,250	71,880	2212%
Hackney	2.6	58,139	375	57,764	15404%	40	113,834	5,125	108,709	2121%
Hammersmith & Fulham	1.3	45,805	250	45,555	18222%	20	66,092	2,625	63,467	2418%
Haringey	1.6	25,268	250	25,018	10007%	37	113,938	4,625	109,313	2364%
Harrow	0.9	20,475	125	20,350	16280%	25	76,379	3,125	73,254	2344%
Havering	1.4	20,833	250	20,583	8233%	28	87,089	3,625	83,464	2302%
Hillingdon	1.7	40,164	250	39,914	15966%	32	88,130	4,125	84,005	2036%
Hounslow	1.3	25,133	250	24,883	9953%	24	74,285	3,000	71,285	2376%
Islington	3.2	100,980	500	100,480	20096%	25	86,310	3,125	83,185	2662%
Kensington & Chelsea	1.5	91,309	250	91,059	36424%	14	46,428	1,875	44,553	2376%
Kingston-upon-Thames	0.8	29,831	125	29,706	23765%	20	55,680	2,625	53,055	2021%
Lambeth	2.7	76,615	375	76,240	20331%	41	111,206	5,125	106,081	2070%
Lewisham	1.9	35,144	250	34,894	13957%	33	101,718	4,250	97,468	2293%
Merton	1.3	24,018	250	23,768	9507%	21	68,790	2,750	66,040	2401%
Newham	1.5	46,673	250	46,423	18569%	38	117,219	4,875	112,344	2304%
Redbridge	1.3	20,476	250	20,226	8091%	31	91,086	3,875	87,211	2251%
Richmond-upon-Thames	1.4	41,571	250	41,321	16529%	24	65,481	3,000	62,481	2083%
Southwark	3.1	126,914	500	126,414	25283%	43	118,066	5,500	112,566	2047%
Sutton	0.7	24,115	125	23,990	19192%	21	67,910	2,625	65,285	2487%
Tower Hamlets	2.7	67,455	375	67,080	17888%	51	123,284	6,375	116,909	1834%
Waltham Forest	1.0	23,889	250	23,639	9455%	38	117,748	4,875	112,873	2315%
Wandsworth	1.6	47,611	250	47,361	18944%	32	100,410	4,125	96,285	2334%
Westminster	5.0	313,013	625	312,388	49982%	18	58,771	2,375	56,396	2375%
London	**59**	**1,976,141**	**9,375**	**1,966,766**	**20979%**	**976**	**2,908,789**	**124,250**	**2,784,539**	**2241%**

Comparative analysis

Data could be obtained for only one comparable case study in which 2.66% of alerts converted successfully into 7 fraud cases at a cost of £20,000. The Hub achieved 23% to 32% successful conversion (1,035 alerts) at a cost of £129,375.

Other Comparative analysis

- The Hub will expand its activities to cover more fraud types over the course of operation.

- The Hub's performance will improve over time as it ingests more data and improves its algorithms for finding fraud.

- The Hub provides a case management system for investigators to use and record results. This is not offered by any other solution.

- The Hub will take monthly data extracts from authorities and provide a steady stream of alerts. Other comparable data matching exercises are one off in nature.

- The Hub provides other services including an online enquiries facility and the capability to take on investigations.

9   Further Entity Resolution Tuning

During test phases, SME's identified a number of issues where a named individual or address (entities) had been misread or misrepresented by the solution, causing the entity to be either over or under linked:

Overlinking – Where an entity has been grouped together with other entities that are not the same

Underlinking – Where two or more entities have been created for the same individual/address

Improvements – During testing, improvements were identified to help reduce the number of false positives created due to over or under linking. These included:

- Cleansing leading zeros in 3rd party data, E.g. "0010 King Street"
- Improving the identification of sub buildings, road names and counties
- Improving postcode cleansing
- The addition of several compound keys, linking together more Individual entities

These improvements were implemented during three tuning cycles and each was tested by reviewing the quality of alert based on the information used to trigger indicators and displayed in the network for each alert. For the purpose of this testing CIPFA focused measuring the number of valid/invalid alerts, these are broken down as follows:

Valid Alert – An alert requiring further interrogation and/or investigation by the Council. These will include alerts which have been correctly generated, however are later rejected due to Council data errors.

Invalid Alert – Where an alert has been generated due to system errors, including the over/under linking of entities or the incorrect interpretation of Council data.

It should be noted that not all changes implemented during tuning had an overall positive effect to the solution. There will always be a margin of error within entity resolution resulting in a number of false positives being generated, mainly due to the complexity and variety of data capture. There will be occasions where a change designed to improve entity resolution in one area has a greater negative impact in another.

During the tuning cycles it was possible to identify which changes had a net improvement and which, whilst improving some aspects of the solution had a net negative effect. A decision was made to only implement changes that had an overall positive effect.

The results from each testing cycle are detailed below:

Cycle1				Cycle2				Cycle3		
Business Rates	40			**Business Rates**	40			**Business Rates**	40	
Accept	38	95%		Accept	34	85%		Accept	39	98%
Reject	2	5%		Reject	6	15%		Reject	1	3%
Council Tax (SPD)	40			**Council Tax (SPD)**	40			**Council Tax (SPD)**	69	
Accept	28	70%		Accept	16	40%		Accept	55	80%
Reject	12	30%		Reject	24	60%		Reject	14	20%
Housing	38			**Housing**	38			**Housing**	37	
Accept	20	53%		Accept	19	50%		Accept	36	97%
Reject	18	47%		Reject	19	50%		Reject	1	3%
Total	118			**Total**	118			**Total**	146	
Accept Rate	73%			Accept Rate	58%			Accept Rate	89%	
Reject Rate	27%			Reject Rate	42%			Reject Rate	11%	
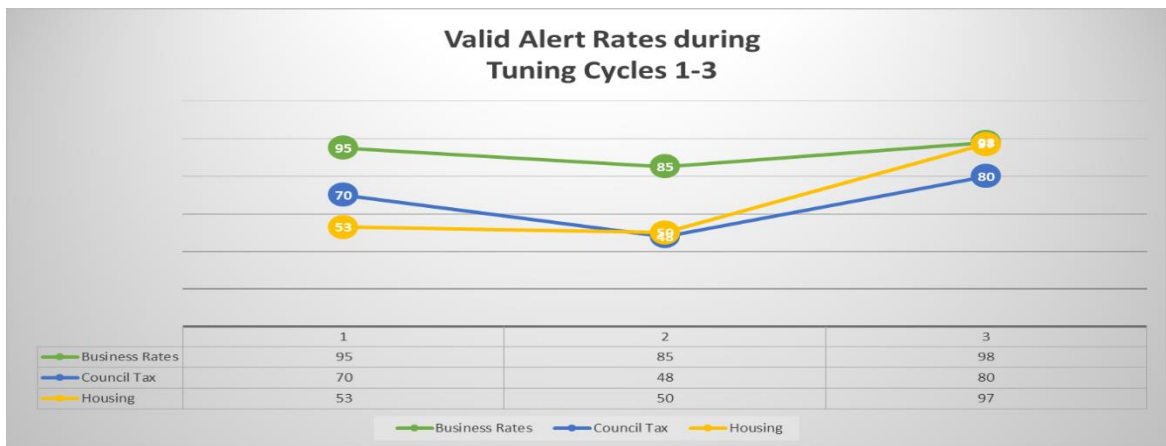
In summary, there was a significant improvement in the quality of Housing alerts and a marked improvement in the quality of Council Tax alerts, whilst valid Business Rates alerts remained high.

Entity resolution improvements will continue during operation with analysis of accepted/rejected alerts contributing information allowing further changes. Testing has now also been conducted in conjunction with the Pilot Authorities which was completed on the 28th and 29th of November 2018 to confirm the results being seen through internal testing. The results of this testing are given in the table below.

	% Valid Alerts Against All Alerts Raised					
	Business Rates		**Housing**		**Council Tax**	
	Sample Size	**Valid %**	**Sample Size**	**Valid %**	**Sample Size**	**Valid %**
Camden	20	60%	20	90%	20	40%
Croydon	20	60%	20	90%	20	40%
Ealing	21	90%	49	80%	20	90%
Islington	17	71%	29	69%	19	74%
Overall	78	70%	118	81%	79	61%

10 Pulling it all together

Testing the platform with real data at volume has provided challenges for both CIPFA and the pilot authorities involved. We believe the testing to date shows that we have between us built a solution that has significantly surpassed the industry bench mark of 3-5% success rates in actual detection, this is proven out by the results at each stage of testing.

The output based testing has gone on to prove that the results obtained are a good indicator that actual fraud is being detected and we draw this conclusion from a combination of new fraud cases that would be suitable for further investigation and also because we are finding fraud cases that due to the age of the test data, are already under (or have been under) investigation due to them being found by the pilot authority teams and systems.

There is still much work to be done in building out the fraud detection capabilities and tuning the platform to ensure we have the best balance between detecting fraud vs false positives and we continue this work as described in the following sections.

The key to developing a London-Wide counter fraud platform is to have the available data in a central data store, collected on a regular basis, allowing us all to look for new patterns and attempts at fraud on a regional basis. We believe we have a joint solution for delivering not only fraud alerts but also reporting and operational information which will help improve London's ability to tackle fraud in the long run.

Lessons Learnt

During the development and testing cycles, CIPFA noted some key lessons learnt that will inform how we should address the false positive rate as an ongoing exercise. In conjunction with BAE NetReveal advanced analytics systematically working to resolve entity issues, we plan to work with each Authority to help identify potential areas where improving data quality will have a positive impact on the false positive rates.

During the pilot, data quality and availability issues presented significant challenges to the success of the pilot. Although the NetReveal solution can do a great deal to help resolve entity issues, we must ensure that we create the correct balance of managing data issues within the solution, while not programming out actual instances of fraud. The issues we have encountered have also been documented with other data analytics pilots across London. A recent LODA pilot of HMO detection has also reported similar issue which slowed their progress. However, we believe we have made great strides in this area far surpassing other initiatives in the completeness of vision for data sharing.

Some of the key areas we should collectively look to address through the life of the contract are:

Missing Data: Data submitted by POC Authorities required significant analysis to understand where the likely entity resolution issues may reside. Linking a single property records across multiple council data sources continues to be a challenge where the UPRN information is missing from the data files.

Data Collection: Due to the nature of the ICT structure in some Authorities, collecting data from different sources provided challenges for timescales and quality.

Aged Data: During test, alerts were created which resulted from records such as deceased persons not being removed from housing files, or housing waiting lists not being updated created false positives that could not be removed without verification and confirmation by an investigator

Automation Testing

CIPFA has worked with London Borough of Ealing's Business and ICT team in order to confirm that the LCFH solution is technically capable of providing two-way integration between the Hub and authority system for automation of recovery. Testing took place between October 2nd and October 22nd. The test case files contained all the data elements requested as part of the solution design, and 100% of test cases have been run successfully and signed off by Ealing ICT and business team.

Although CIPFA has now proven automation of recovery is technically possible, the decision to automate simple cases, and the business process surrounding this decision will be made on an authority by authority basis. CIPFA is committed to ensure the solution is accessible to all onboarding authorities and will provide necessary support to enable this feature as required.

Satisfaction Survey

The following two pages contain the results of the Satisfaction Survey exercise. After an initial review it was agreed that Ealing would approach their procurement team to re-mark the survey using a tried and tested methodology used in the evaluation of bids in response to a tender. This resulted in a significant increase in the scoring which we believe more accurately depicts the system delivered than the initial scoring provided by the Pilot Authorities.

	Using the BAE Enterprise Investigation Management (EIM) Tool	Camden	Croydon	Ealing	Islington				
A		**Score**	**Score**	**Score**	**Score**	**Weighting**	**Total**	**Maximun**	**Summary**
1	The Enterprise Investigation Management (EIM) interface layout of NetReveal is simple and easy to navigate	3	4	4	2	150%	19.5	30	Answers vary by authority and some have been marked down due to the volume of work required to review an alert, or the quality of the alert information, despite this not forming part of the question.

The main issue here was the quality of alerts i.e. false positives too high. |
2	Alert information is easy to understand	3	3	4	3	200%	26	40	
3	Alert information is a valid indicator of fraud risk, as defined during workshops	4	3	4	2	200%	26	40	
4	Alert information is accurate and are not merely false positives	2	2	3	2	200%	18	40	
5	Alert information is sufficient to support an investigation	2	3	4	2	200%	22	40	
B	**Value for Money**	**Score**	**Score**	**Score**	**Score**	**Weighting**	**Total**	**Maximun**	**Summary**
1	The cost of an alert investigated by the Council (SPD - £43) leading to a successful outcome/recovery represents value for money.	1	3	2	2	100%	8	20	All councils have answered this based on the additional resources required to review and investigate alerts to a successful income. Answers contradict the VFM work carried out by Ian that shows a significant ROI once all costs are taken into account.

New commercial model being looked at which will address some of the VFM issues. |
2	The cost of an alert investigated by the Council (Housing - £350) leading to a successful outcome/recovery represents value for money.	3	4	2	2	100%	11	20	
3	The cost of an alert investigated by the Council (Business Rates - £350) leading to a successful outcome/recovery represents value for money.	1	4	3	2	100%	10	20	
4	The cost of an alert investigated by the CIPFA (SPD - £1,857) leading to a successful outcome/recovery represents value for money.	1	2	DNA	2	100%	5	20	
5	The cost of an alert investigated by the CIPFA (Housing - £4,250) leading to a successful outcome/recovery represents value for money.	1	3	2	2	100%	8	20	
6	The cost of an alert investigated by the CIPFA (Business Rates - £5,899) leading to a successful outcome/recovery represents value for money.	1	3	2	2	100%	8	20	
C	**Data Cleansing**	**Score**	**Score**	**Score**	**Score**	**Weighting**	**Total**	**Maximun**	**Summary**
1	Reports have been provided to my Council on data quality and errors.	3	3	4	4	100%	14	20	All error reports were provided to councils, however it was the length of time that this took to resolve was the main issue.
D	**Automation**	**Score**	**Score**	**Score**	**Score**	**Weighting**	**Total**	**Maximun**	**Summary**
1	Automated process for SPD has been demonstrated to work effectively	DNA	4	4	4	200%	24	40	Camden/Civica and CIPFA need to carry out end to end testing.
E	**Enquiries**	**Score**	**Score**	**Score**	**Score**	**Weighting**	**Total**	**Maximun**	**Summary**
1	The cost of processing an Enquiry Portal request on a new application (£0.50) represents value for money	2	4	3	2	100%	11	20	The enquiry portal was shown to SMEs during testing and demonstrated in a test environment. SMEs were offered an opportunity to test themselves but declined due to the fact the enquiries function was simple to use.
CIPFA cannot be accountable for councils not taking the opportunity for further testing.
2	The enquiry portal is easily accessible	DNA	DNA	4	DNA	200%	8	40	
3	The enquiry response is received in a timely manner	DNA	DNA	4	DNA	200%	8	40	
4	The enquiry response is relevant to my request	DNA	DNA	4	DNA	200%	8	40	
F	**Management Information**	**Score**	**Score**	**Score**	**Score**	**Weighting**	**Total**	**Maximun**	**Summary**
1	Management information reports are easily accessible for PAs	DNA	DNA	4	DNA	150%	6	30	Management reports were shown to SMEs during testing and demonstrated in a test environment. SMEs were offered an opportunity to test themselves but declined due to their acceptance that they returned the expected results.
CIPFA cannot be accountable for councils not taking the opportunity for further testing.
2	Management information reports are user friendly and easy to understand	DNA	DNA	4	DNA	150%	6	30	
3	Management information reports are relevant	DNA	DNA	4	DNA	150%	6	30	

G	Registering with the CIPFA HUB	Score	Score	Score	Score	Weighting	Total	Maximun	Summary
1	Registering on the website to join the hub was a straight forward process	DNA	4	3	DNA	100%	7	20	All councils were registered on the LCFH by a key contact via a simple registration email at the beginning.
2	Information on the LCFH website is relevant and all links work	DNA	4	3	DNA	100%	7	20	Councils had not utilised the Hub website since they first registered.
H	Data Sharing	Score	Score	Score	Score	Weighting	Total	Maximun	Summary
1	It was a simple process for getting the Data Sharing Agreement approved for our council	3	4	4	3	0%	0	0	This was an information gathering exercise on council internal processes and did not contribute to the scores.
2	It was a simple process to obtain approval of the LCFH contract	3	3	4	DNA	0%	0	0	
3	It was a simple process to obtain data for LCFH use	2	2	4	3	0%	0	0	
4	It was simple to extract the data requested by the LCFH in the agreed format	2	2	3	3	0%	0	0	
5	Transferring data to the LCFH was easy	3	4	3	4	0%	0	0	
I	On-boarding Process	Score	Score	Score	Score	Weighting	Total	Maximun	Summary
1	The on-boarding process accommodated our Councils internal decision making and mobilisation requirements	3	3	4	3	100%	13	20	Lack of transparency from CIPFA at the beginning of the process but this has improved.
2	Communication was open and transparent during the on-boarding process	2	3	3	2	100%	10	20	Scores reflect the beginning of the journey and not how the situation is at present.
J	Stakeholder Engagement	Score	Score	Score	Score	Weighting	Total	Maximun	Summary
1	The workshops arranged by CIPFA were well organised and informative	3	4	3	3	100%	13	20	Poor communication early on but this has improved over time e.g. short notice of when testing workshops were being held. Councils felt more open feedback by CIPFA would have helped as they felt at times there was not a two-way communication channel.
2	The level of input my organisation had in the development of the overall LCFH product was satisfactory	3	2	3	2	100%	10	20	
3	Questions related to the CIPFA hub product and deliverables were answered in full by CIPFA	3	3	3	2	100%	11	20	
4	Questions related to the Contract and fees were answered in full by CIPFA	3	3	3	3	100%	12	20	
5	CIPFA's overall level of stakeholder engagement was satisfactory	3	2	3	3	100%	11	20	
		60	88	111	64		346.5	780	
		35%	52%	65%	38%		44%		

11 Oversight Board Summary

Oversight Board Evaluation Summary (6th November 2018)

Minimum Standards (Schedule 13):	Oversight Board Evaluation	Pass/Fail	CIPFA Mitigation
1) Detection of Fraud: Simple Cases			

Fraud Type	Pilot Phase Target
Council Tax SPD	1,105
Housing tenancy	166
Business rates	183

Fraud Type	Offsite Testing Result (VFM)
Council Tax SPD	1,691
Housing tenancy	N/A
Business rates	N/A

Pass
N/A
N/A

*Note: All Housing tenancy and Business rates classified as Complex Cases

Detection of Fraud: Complex Cases

Fraud Type	Pilot Phase Target
Council Tax SPD	4
Housing tenancy	166 + 22 = 188
Business rates	183 + 37 = 220

Fraud Type	Offsite Testing Result (VFM)
Council Tax SPD	N/A
Housing tenancy	288
Business rates	1,050

N/A
Pass
Pass

*Note: All SPD classified as Simple Cases

Minimum Standards (Schedule 13):	Oversight Board Evaluation	Pass/Fail	CIPFA Mitigation
2) Integration: • Provided that Participating Authorities data is accurate, the Hub can ingest agreed data feed without error at all times. • The Hub can combine multiple third-party data sources (a minimum of 3 different third-party data sources) for use in the fraud risk rules engine. • Combination of the Hub engine (and third-party data) and Participating Authority fraud risk rules can result in a Simple Case and a Complex Case.	The Hub generated both Simple and Complex Cases and therefore meets the standard required	Pass	• CIPFA to complete end to end integration testing with Camden/Civica

Minimum Standards (Schedule 13):	Oversight Board Evaluation	Pass/Fail	CIPFA Mitigation
3) Satisfaction Survey: Achieve at least 80% score	47% achieved Quality of alerts needs to improve i.e. false positives need to reduce in order to allow SPD automation Value for money in terms of the pricing structure needs to be reviewed	Fail	• Further work required on entity resolution and tuning i.e. addresses, names and missing data issues • Risk scores need to be enhanced to create the most accurate indication of fraud and increase confidence in alerts • Commercial model proposal to be agreed along the lines of an upfront payment and CIPFA to relinquish its right to investigate these cases

In conclusion after careful deliberations, it was agreed that the way forward is to seek clarification from CIPFA on the timescales to resolve the issues that are leading to the poor user satisfaction score. When these are satisfactorily addressed the Oversight Board would be minded to-sign off the Pilot phase. In addition, CIPFA to update the Evaluation Report to include the satisfaction survey results and the Oversight Board evaluation summary. Also, CIPFA to separate the Evaluation Report into two sections: first part CIPFA's contextual information and the other being the detailed evaluation outputs.