BIRMINGHAM CITY COUNCIL

PUBLIC REPORT

Report to:	**AUDIT COMMITTEE**
Report of:	**Assistant Director, Audit & Risk Management**
Date of Meeting:	**25th September 2018**
Subject:	**Birmingham Audit: Data Warehouse**

Wards Affected:	**All**

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1. PURPOSE OF REPORT

1.1 To provide an overview of Birmingham Audits Data Warehouse and the range of functions it performs.

1.2 To outline 'All City Risking' (ACR), an ongoing development of the Data Warehouse that utilises advanced automated data processing to detect and prevent fraud or error.

2. RECOMMENDATIONS

2.1 Members are asked to note this report.

3. LEGAL AND RESOURCE IMPLICATIONS

3.1 The Internal Audit service is undertaken in accordance with the requirements of section 151 of the Local Government Act and the requirements of the Accounts and Audit Regulations 2015. The work is carried out within the approved budget.

4. RISK MANAGEMENT & EQUALITY ANALYSIS ISSUES

4.1 Risk Management is an important part of the internal control framework and an assessment of risk is a key factor in the determination of the Internal Audit plan.

4.2 Equality Analysis has been undertaken on all strategies, policies, functions and services used within Birmingham Audit.

5. COMPLIANCE ISSUES

5.1 Council policies, plans and strategies have been complied with.

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Birmingham Audit: Data Warehouse

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1. Overview

1.1   The Data Warehouse (DW) was originally developed by Birmingham Audit in 2004 in response to the need to streamline and enhance investigation processes. The DW allows audit investigation officers to run a single intelligence search instead of having to access multiple systems or databases, which is time consuming and inefficient. Bringing together this intelligence helps to identify patterns and trends that may not have otherwise been apparent supporting the detection and investigation of fraud and error.

1.2   Early in its development the DW held just two sets of data and only a few thousand records. Today, closer to 10 million records are held from more than 40 sources, including; Blue Badges, Debtors, Housing Register, Homelessness, Customer Services, Burials and Cremations, Trading Standards, Animal Welfare, Environmental Health, Council Tax, NNDR, Housing Benefit, Electoral Roll, Housing Tenants / Rents, Market Traders, Occupational Pensions, Payroll, Right to Buy, Personal Alcohol Licences, Private Residential Care Homes, Taxi Drivers, Direct Payments, Council Tax Reduction, Social Care, HMO Licences, Planning Applications, Libraries. These records are refreshed regularly (daily for the most part) in order to keep records up to date and accurate.

1.3   In order to maximise value the DW has been embedded as a proactive tool within 20 services across the Council and partner organisations to support service delivery.   Users generally access the DW for one of two reasons, either for 'validation', i.e. to proactively verify service entitlement, like discounts in respect of Council Tax or the provision of housing, or 'investigation' e.g. Trading Standards, Licensing, Birmingham Audit and Environmental Health. More recently, the DW has been expanded so that it can be also used to help trace missing pupils as well as help with debt management.

1.4   The DW is also used by a number of partner organisations, including West Midlands Police; local Registered Social Landlords and neighbouring Local Authorities. Importantly, this gives them 24/7 access to intelligence and helps in protecting resources and citizens across organisational boundaries.

1.5   The DW now has in excess of 300 users, which collectively make around 50,000 enquiries a year. It is estimated that this reduces information gathering overheads by roughly 90%, based on an average user having to access more than one information source. The security of the data held is taken very seriously. User access rights are closely controlled and there is a full audit trail of all enquires. The level of access is determined by a user's job role and activity is monitored by Birmingham Audit directly. It is important to note that users don't have the ability to view all data, only the ability to search across it. Only information relevant to their search terms is returned.

1.6   Creating the DW required us to develop in-house routines to extract data from the different systems. This meant gaining detailed knowledge of those systems and service areas. This knowledge has enabled us to enhance our audit processes and produce additional management information, which would not otherwise have been available to service areas.

1.7   The DW also gives us a unique global perspective on the information held by the Council; this has enabled us to identify efficiencies that would not otherwise have been seen.

2.   'All City Risking' Overview

2.1   The bulk matching of data has been used for many years by Birmingham Audit to identify fraud or error. Likewise the Cabinet Office (National Fraud Initiative) and private enterprise (Credit Reference Agencies amongst others) have also done the same.   However, these have tended to be one off exercises run at periodic intervals, which by their very nature only identify fraud or error at a given point in-time. If fraud or error occurs the day after the match, it may go undetected for months or even years.

2.2   As the DW holds the necessary data, it has been developed to undertake bulk / intelligence lead data matching far more frequently. When a specific set of parameters or algorithm is met a service alert is raised enabling proactive action to be taken. This is a highly efficient way of preventing fraud or error.   We refer to this process as 'All City Risking' (ACR).

2.3   The goal of ACR is to identify fraud or error within 1 to 7 days and effectively prevent it, as oppose to it being detected months or even years later. ACR has been designed to continual check eligibility on a rolling basis (daily or weekly), even where a service has been provided appropriately in the first instance. This will help identify changes in circumstances and help keep records up to date and accurate. Whilst the development of ACR is in its early stages, the initial pilot exercises have been extremely encouraging.

3. ACR Pilots

3.1 Care Home Admissions

3.1.1 Failure to take into account a care home admission can result in Council Tax and rent being charged incorrectly and affect entitlement to benefits. Additionally, there may also be cases where property will need to be recovered and re-let, which is especially important with housing being a scarce resource.

3.1.2 Care home admissions originally relied upon a manual process of notification, with three service areas having to be individually informed. Work pressures meant that the process was prone to human error and subject to delays. The first ACR routine was created so that any admission or extended care home stay was automatically identified and matched with Council Tax Reductions, Council Tax, Benefits and Housing records. Where a match was found, the ACR routine securely notified the services so that they could take appropriate action. This routine now automatically runs weekly to ensure that prompt action is taken and any impact on the person or service is limited.

3.1.3 This exercise initially identified 483 cases involving 100 council properties where records needed to be updated. It is estimated that the value to the Council would be in excess of £500,000 in terms of benefit overpaid, rent not being charged correctly and the value of property that could be returned for re-let.

3.2 Council Tax (Single Persons Discounts [SPD] and Student Exemptions [SE])

3.2.1 Approximately 140,000 people claim a SPD each with a minimum value of £250 (18/19 rates) and 6,000 claim a SE each with an average value of just over £1,000. Whenever an SPD or SE is awarded incorrectly or is no longer applicable, the Council loses valuable income.

3.2.2 An ACR routine was created which indicated that potentially anything up to 10,000 SPD's or SE might be incorrectly granted based on conflicting information held elsewhere in the Council. Of these a sample of 300 has been selected for detailed checking to determine the validity of the conflicts. Whilst this validation work is ongoing, testing currently shows that:

- roughly 60% of the cases sampled have arisen due to inconsistences in data – matching routines are being refined to reduce these false hits;

- of the remaining cases 61 are regarded as a valid match, and of these 44 require detailed investigation; and
- to date SPD with a value of £35,000 (not the final value) have been removed and 22 cases raised for criminal investigation.

If the sample is representative of the whole 10,000 population then charges could be increased by in excess of £1m.

3.2.3 Following the successful completion of these pilot exercises we will be looking to implement additional ACR routines to run on a proactive basis to further improve processes and help eliminate fraud and error.

4.   Conclusion

4.1   The DW has become a sophisticated and comprehensive intelligence hub that goes beyond the detection and prevention of fraud or error.

4.2   The development of automated matching routines will help in delivering future efficiencies and help in driving service improvement.