To: Chief Executives
      Directors of Finance
      Heads of IT

Via email

Reference: AC/219/caf
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Dear Colleague

Request for support on data analytics

I am writing to ask for your support as we modernise our work, with the aim of securing benefits for Audit Wales and also for the bodies we audit.

In our increasingly digital world, data is becoming a hugely important enabler for us, as it is for every organisation. As such, we have bold ambitions to transform the way we use data.

Our Data Analytics team has begun to make real progress, including:

- Publishing interactive data tools as a new type of product from our audits. These data tools add value to our work by making better use of the data we have collected and by generating more insightful analysis for exploration by the public, politicians, press and public bodies.

- Creating bespoke apps to automate aspects of our work. These apps have considerable potential to streamline our work, creating efficiencies for Audit Wales but also for the bodies we audit, mainly through eliminating the repetitive and time-consuming work associated with data collection and transfer.

- The team has a specific remit to collaborate with other public bodies. We have held numerous 'show and tell' sessions with other bodies, to talk about our new approaches and share our learning so far. We have also shared training materials that we have used to upskill our data analytics team. Please contact the team at data.analytics@audit.wales if you want to know more.

I am delighted with what we have achieved so far but we can do so much more, as set out in the Appendix to this letter.

The next critical step for us is to secure routine data downloads from the principle financial systems of the bodies we audit. This is why I am writing to you. Historically, our data requests have been ad hoc, and dependent on the area of testing being undertaken by the auditor. This can be onerous for your officers, and inefficient for my audit teams. Instead, we are now looking to routinely request data downloads, and here are the specific details of what I am asking for:

- Initially we will request a full download of your general ledger data for 2019-20 financial year for comparative purposes. We will then request downloads of your general ledger data for the 2020-21 financial year at interim and final audit stage. In future years, we may request this data on a quarterly or even monthly basis. We will also move on to requesting data from other key financial systems such as payroll and fixed assets.

- I would be grateful if you could convey your in-principle support to your Directors of Finance and Heads of IT, whom we are likely to speak with directly about accessing your organisation's data.

- We have invested in a Data Analytics Storage Solution based on Amazon Web Services' workspaces, which will underpin all of our future work on data analytics. This safe and secure environment will allow us to store and work with large datasets as well as sensitive data. We will work with you to determine the best way to transfer your data to us, which may be through the use of Objective Connect (an online transfer portal) or possibly via a specialist third party (that can directly link to your financial system).

In the medium term, we hope this new approach will save everyone time and effort by virtually eliminating the current data request process, which is sometimes protracted and repetitive. But more than that, these routine data downloads are a major steppingstone towards a higher-quality audit approach, based on a significantly larger evidence base, and which produces greater assurance and insight for organisations like yours.

I am hugely excited about the future for data analytics at Audit Wales so I would be more than happy to talk to you directly about this should you want to. Thank you in advance for your support and please don't hesitate to get in touch if you have any questions or concerns.

Yours sincerely

ADRIAN CROMPTON
Auditor General for Wales

Appendix: Details of our future vision for data analytics

Our Long-Term Vision for data analytics sets out a deliberately ambitious plan for the future, including:

- Streams of live data from public bodies allowing us to analyse performance and risks in real time.

- Use of machine learning and artificial intelligence to automatically cleanse data and flag high-risk issues for further consideration by auditors.

- Automatic linking and matching of data to detect fraud and anomalies.

- A move towards predictive analytics, to help us be more forward-looking in our commentary and recommendations.

Achieving this vision will be difficult and will take time but it is essential that we push ourselves.

A key change commitment within my Annual Plan 2020-21 is to improve how we "source, acquire and analyse data". We are determined that this will lead to further improvements in the quality and efficiency of our work, and allow us to provide earlier, more insightful analysis to organisations like yours.

One of our most important projects is called Analytics Assisted Audit. This seeks to place data at the centre of our accounts work. There are four stages which underpin this project:

- **Data ingestion.** This is the most difficult stage. We need to be able to efficiently and securely transfer/ingest data from public bodies. However, public bodies have different systems. For example, Welsh public bodies use over 15 different financial ledger systems, excluding those used in support for HR, payroll, assets, schools, primary care, social care, etc.

- **Processing.** Once we have the data, we need to process it into a format that it can be easily read by our applications whilst ensuring its integrity. This will enable us to reproduce the trial balance from the source data, reconcile it to the accounts and automate analytical review. Auditors will have access to data at their fingertips, enabling them to drill down to transaction level data.

- **Testing.** We have developed applications to carry out key audit tests, freeing up our auditors to evaluate the outcomes and evidence their judgement. Examples include risk assessing transactions, selecting audit samples, linking to external data sources to independently verify transactions and balances (e.g. Land Registry, Companies House).

- **Visualisation.** Visualising the results of the data analysis will pave the way for more effective, interactive reporting of our audit work which we can share with our audited bodies.

The data downloads we will request from your financial systems will primarily be used within our Analytics Assisted Audit approach. We hope this approach will lead to more efficient audits, that have a more comprehensive evidence base, allowing us to create new insights and additional value to the bodies we audit.