

Hawk Information Technology Services Pty Ltd

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Data Analytics / Computer Assisted Audit Techniques (CAATs) Capability, Experience and Expertise

Our primary data analytics architects and developers have in excess of 25 years' experience in IT audit and IT risk management and have substantial experience in data management, data analysis, logic design and investigations. Our data analytics resources operate across all industries, in government and non-government sectors, bringing a high level of data analysis experience, business system experience and technical skills.

Data Analytics and Our Objectives

Data analytics or computer assisted audit techniques (CAAT) are independent extract and analysis programs that can be utilised by management, audit and investigators. Our objectives are to gain an understanding and knowledge of the client's business in order to produce data analytic tools and services that provide proactive management assistance to our clients. These tools and services utilise efficient design and use of data to:

- provide the client organisation's management with an overall improvement in controls within their systems
- implement continual control monitoring and exception reporting
- develop independent repository of history data for trend analysis
- assess data and systems integrity
- conduct detailed data analyses in support of audit, management or investigations
- conduct e.forensics assignments; technical services to assist clients in understanding and uncovering the electronic facts from any electronic source (ie including computers of all types, electronic devices of all types, electronic communication devices of all types)

Our Experience

Our data analytic developers have had extensive and proven experience developing these tools and providing these services since 1988:

- developing **data analytics in support of audits** (external, internal, operational, financial, IT) conducted on a wide range of systems at government (including universities) and private sector organisations

Data Analytic / CAATs Capabilities

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- performing **end-to-end, multi-platform, multi-application reviews** such as:
 - detection of duplicate and inappropriate payments in and between various ERP systems (such as SAP, Ellipse, Finance 1 and Oracle Financials) and other supporting subsidiary systems (such as iCMS Purchasing Card systems and procurement systems - Ariba)
 - verification and reconciliation of inter-system interfaces with the use of data analytics run on point-of-sale and loyalty membership functionality within gaming, banking and general ledger system environments
- implementing **data analytic frameworks and systems** which address a variety of needs:
 - one off programs to be run on demand
 - suites of CAAT programs to be run in concert
 - CAAT to be run on an automated and scheduled basis
 - automated acquisition/download of production data for use by scheduled CAAT programs
 - automated audit trail and history facilities
 - real-time analysis of specific processing events and data elements utilising logged matter and diagnostics.
- developing **data analytics to support internal audit coverage** including test addressed to statistical anomaly analysis, exception reporting and Benford analysis
- utilisation of data analytics in a wide range of operational and business environments (eg rail entities, telecommunications, universities, health insurance, local government administration)
- **conducting investigations** for State government entities, utilising data analytical techniques
- developing a suite of data analytics to support a **fraud detection framework**
- developing and maintaining a **complex human resources and payroll reporting solution** for a State government cluster
- assisting in the **implementation and transitioning of major systems** shared by two State government entities, utilising data analytics to consolidate human resources data, remap data and assure the integrity of data, sourced from five enterprise systems
- developing data analytics and associated automated tools to perform **continuous monitoring ongoing data integrity and compliance checking** for key systems used by a major health fund
- developing a data analytics suite to service a management requirement to establish a **sophisticated monitoring and analysis** facility using a variety of

data sourced from logical, physical and building access security systems and devices

- developing **sophisticated menu systems and reporting systems** within the data analytics suites, facilitating operations and producing automated processing and high quality reports
- documenting data analytics facilities and operations, training client staff, conducting handover to client staff and providing ongoing support.

Our Tools and Methods

We utilise ACL as the preferred software to develop sophisticated and efficient data analytics solutions in complex environments. Visual Basic is also used to provide automation to more sophisticated data analytics routines. Our ACL based solutions:

- incorporate audit-specific functions, whether designed in support of audit/assurance, or not
- log and record all analytic activity performed, for quality assurance purposes
- are executed against downloaded data to ensure the data analytics routines cannot accidentally update production data as well as allowing the development of history data that may not be available in the source systems
- are read-only tools, unable to change/amend the data read (ensuring the integrity of the source data cannot be initiated by the data analytics programs)
- are efficient – can quickly process millions of records and provide multiple passes over the data supporting complex analytical requirements
- can read data from practically any source, and, automated data acquisition systems can be designed to improve efficiency and reduce manual intervention
- incorporate sophisticated menu, reporting and diagnostic systems using email or secured file repositories
- may be operated on-demand or incorporate automated scheduling and parameter driven processing logic.

Contact Information

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