

TRANSFORMATIONAL DATA ANALYTICS: GOVERNANCE & BENEFITS REALISATION

Data is everywhere in today's society. Now is the time to embrace it and use the power that it offers or get left behind. For organisations and individuals alike, the key is keeping up with the proliferation of data and, with the help of analytics, machine learning and artificial intelligence, learning how to use it to your advantage.



Fully embracing the opportunities that the vast amount of data creates requires a series of complex governance and technology decisions built around a comprehensive data management strategy. In this transformational data analytics paper, we look at the governance side of following a structured data management strategy. Our companion paper, Transformational Data Analytics: Technology & Machine Learning, explores the technology options.

Data technologies have emerged as one of the core disrupters in the digital age and analytics, defined as the discovery, interpretation and communication of meaningful patterns in data, is one of those. Analytics has become the new 'go to' competency within the business world, and data scientists, who carry it out, are today's pioneers, leading the way in the digital world.






1 GOVERNANCE CHALLENGES

Data governance is a critical pillar of any big data and analytics programme as it ensures policies and procedures written around the use of data are applied at the same level of scrutiny across all projects. Without data analytics governance, organisations open themselves up to risks, such as data breaches, unsustainable data models and onboarding data that is never used.

Adopting adequate governance poses challenges in two significant areas: firstly, in the adoption of governance into the corporate culture; and secondly, in setting up the appropriate level of security.

ADOPTION CHALLENGES

This explosion of data has created new possibilities which impact not only how data is stored and processed, but also the intrinsic value of the data and the insights that can be pulled from this data.

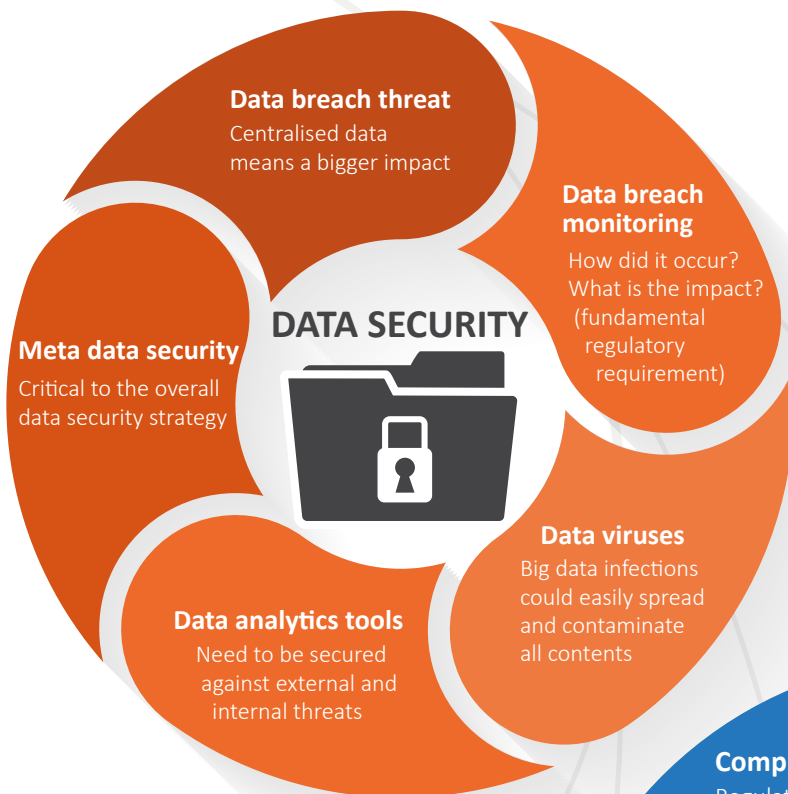
<p>Cultural change An underestimated challenge</p> 	<ul style="list-style-type: none"> Leaders need to command respect and be able to enlist the commitment of others with a top-to-bottom approach Firms need to onboard talented technical leaders who can implement the executive vision with new ways of thinking and diverse skill sets People need to understand the difference between a data-driven, and an insight-driven, approach It is not just about designing and executing a strategy, there is also a people factor: individuals need to be open to change
<p>New skills What is needed?</p> 	<ul style="list-style-type: none"> Business acumen- ability to keep up-to-date with, and understand, the industry and its products Technical acumen- understanding of technology stacks and infrastructure and the technical capability to deliver quality and value Soft skills- ability to lead and communicate at all levels, to manage time and expectations and build high-value relationships
<p>Business/data analysts Combination of data science and classic techniques</p> 	<ul style="list-style-type: none"> Must evolve and develop new techniques to complement their existing skill set Need to understand the business requirements and drivers behind each decision
<p>Developers/programmer analysts Work for IT engineers will increase</p> 	<ul style="list-style-type: none"> Need to expand their mathematical, modelling and statistical skills Go wide and develop broader data science programming skill sets similar to a full stack developer
<p>IT professionals Will play an important role</p> 	<ul style="list-style-type: none"> Must develop soft skills in addition to their robust technical acumen to thrive in leadership roles As banks transition to technology companies, those with a technical background will play an important part in the strategic planning and decision-making processes

SECURITY CHALLENGES

Collecting and storing vast amounts of data creates many security and privacy issues, making big data and data analytics a prime concern for IT security personnel at banks. The addition of cloud-based storage and distribution, with big data analytics layers, only serves to heighten these threats further.

Another part of the challenge is that most data security systems are designed to work on (small) amounts of data and cannot be adapted to big data volumes. Organisations must ensure that all big data databases are secured and vulnerabilities are addressed in real-time. For this purpose, full-time security and privacy teams are necessary for data streaming and big data analytics.

More specifically, banks must address the following issues when dealing with data security and privacy:



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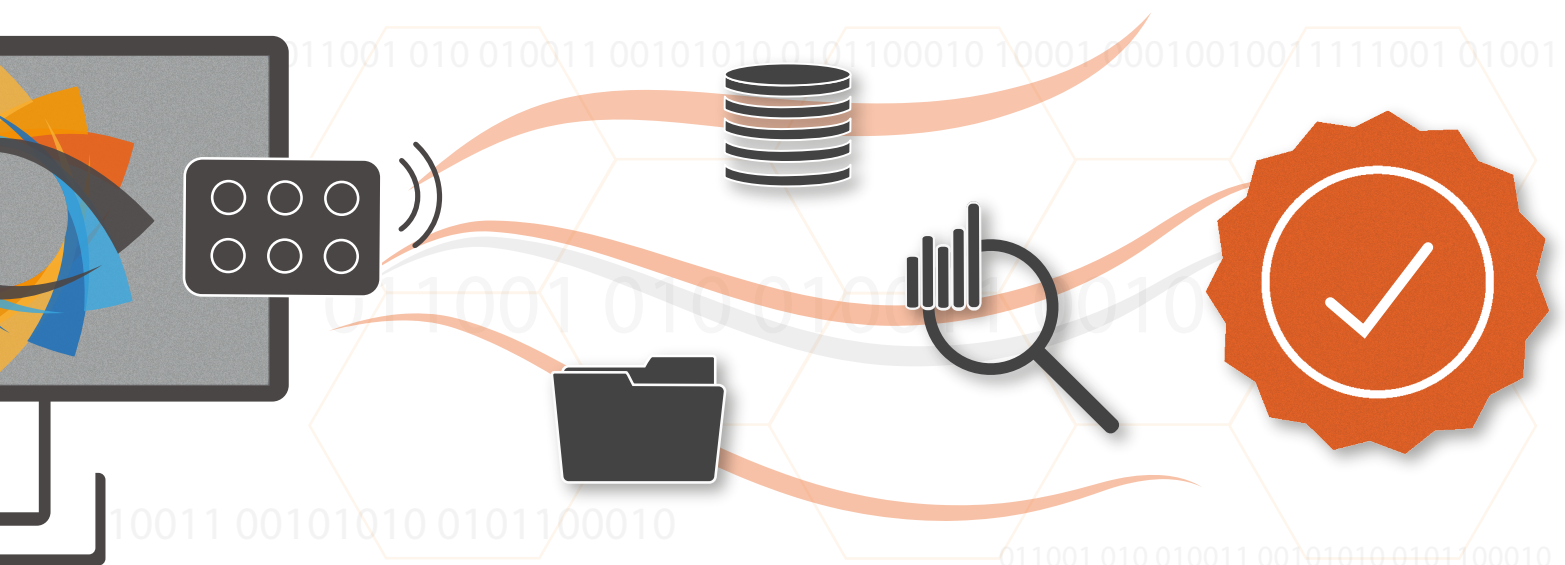
GOVERNANCE PRINCIPLES

Traditionally, access to data stores has focused on use-case management. Data is often not categorised in a consistent way, which leads to the all-too-familiar issue of data misuse across organisations and the proliferation of reconciliations.

The advantages of big data are its availability and a tight control of use-cases puts that at risk. Good transformational analytics governance consists of data management rather than use-case management.

Governance focus	Use-cases	Data
Characteristics	<ul style="list-style-type: none"> Control of the use of data Review of use-cases to ensure data definitions have been correctly understood 	<ul style="list-style-type: none"> Control the data available Review of taxonomy, definitions and security attributes of data as it is included
Intended goal	<ul style="list-style-type: none"> Reduction in errors from inaccurate data interpretation 	<ul style="list-style-type: none"> Make data available as widely as possible to uncover innovative insights through experimentation
Results	<ul style="list-style-type: none"> Long lead-time to data insights due to use-case review process Once access has been granted to an analyst for one use-case, it becomes difficult to enforce the approval process for additional use-cases for that same data set 	<ul style="list-style-type: none"> Ingestion of new data takes longer due to the need for review Once data is available, it becomes easy to extract and manipulate. Data insights are uncovered and shared amongst a community of analysts

To fully realise the benefits of transformational analytics, data and analytics tools must be made available as widely as possible across the business. Not only data scientists, but business users and other technologists must be able to experiment with data to accelerate the discovery of critical business insights.



3 ADDRESSING THE CHALLENGES

The emergence of the cloud and new analytics tools have enabled a self-service model of analytics. However, this only intensifies the need for a strong and comprehensive data governance programme to provide the policies, procedures and principles that are the foundation of data management.

Executive support for the data governance programme is imperative to its success. Additionally, the programme must be an enabler of data analytics, not an inhibitor, so that data can be brought directly to the people who understand what questions to ask about the insights.

Three critical aspects of a strong data governance programme:

- Conduct an assessment of the data capabilities to discover all the data in use, how current it is, and how many variants and versions of the same data exist and are in use (Brickendon suggests the EDM Council's DCAM Assessment)
- Build a cloud data infrastructure that allows users to share data that is vetted as current and accurate
- Define a process for onboarding new data sources to make sure they meet quality standards and availability criteria



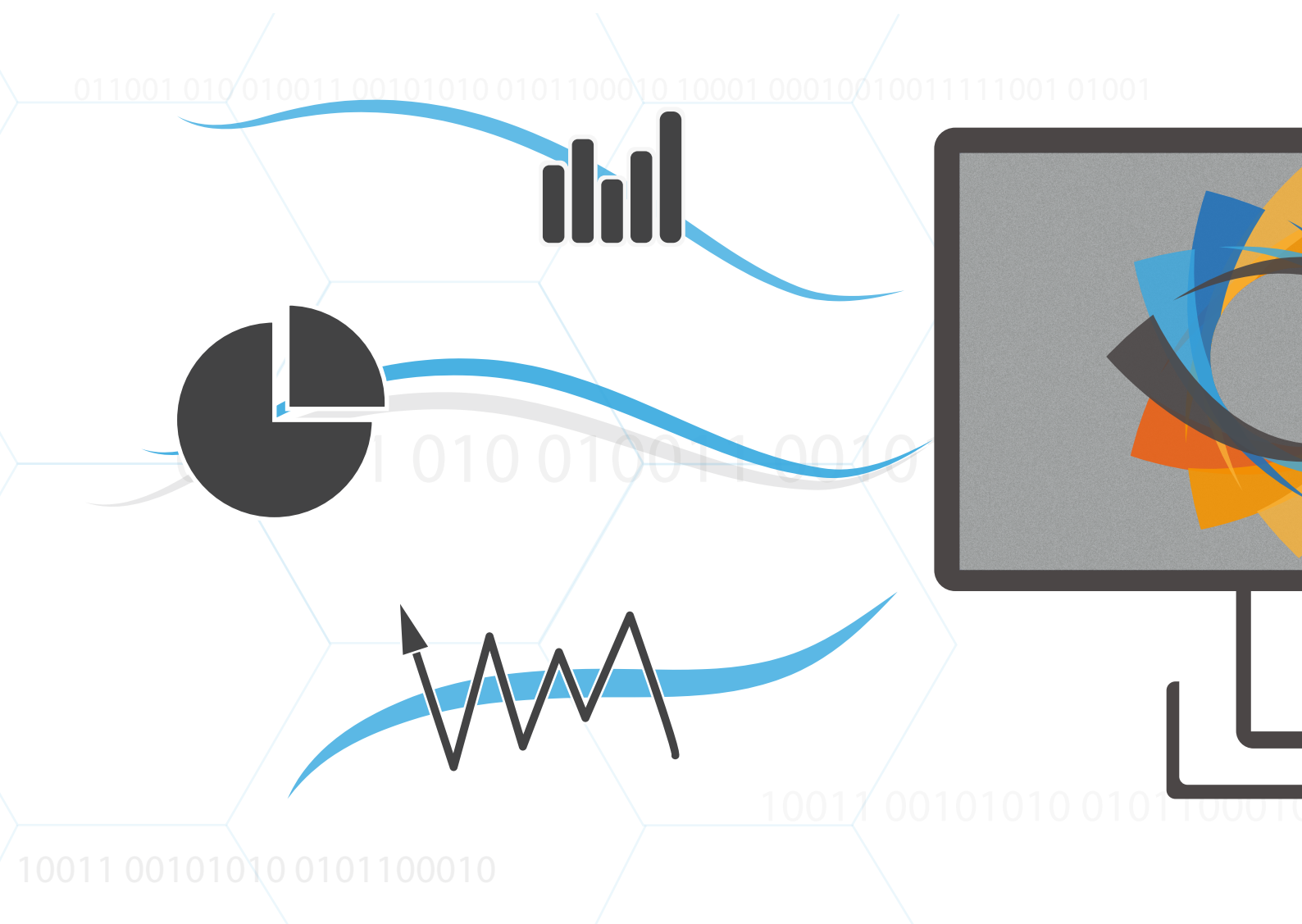
- Involve at least one champion at the executive level
- Create a team of business, technical and analytics professionals to establish the governance model

- Ensure proper data classification procedures are in place to protect data for legal or regulatory reasons (e.g. GDPR)
- Create entitlements for data access through leveraging appropriate access systems and implementing tools that allow for different levels of access based on user privileges

Data governance intersects the four fundamental types of analytics: descriptive, inquisitive, predictive, and prescriptive. Descriptive analytics looks to show what happened where as inquisitive analytics looks to explain why something happened. Predictive analytics determines the probability of what will happen next, and prescriptive analytics focuses on finding the best course of action for predicted future scenarios. Predictive and prescriptive analytics are then used to make recommendations rather than define what has happened or why, which is a typical shortcoming of descriptive and inquisitive analytics.



The key to a good data governance programme is how it enables, and not restricts, analytics. Showing the users how to access the analytics tools, rather than telling them what they can or cannot do is much more effective. In the same way, the key is to tell them how to get the data they need, rather than focus on which data they are not allowed to use. By enabling, rather than impeding, the data governance programme will be seen as a partner to get the right data to the right user, rather than a system to be worked around.



4 THE BRICKENDON SOLUTION

The Brickendon solution for a transformational analytics programme consists of a two-pronged approach featuring technology and governance. By bringing together these two dimensions, you will be able to establish a sound programme and ensure that it runs smoothly for years to come. This paper addresses the governance leg using the following approach:





BRICKENDON

transformational consulting

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Brickendon is an award-winning global transformational and technology consultancy specialising in innovative solutions that save our clients time and money. Our aim is to deliver transformational change across our three key offerings of Advise, Change and Do, through our five practice areas: Data, Quality & Testing, Risk & Regulation, Strategy and Digital. This helps our clients see positive results in weeks, not months or years.

Employing domain experts with over 10 years' respective experience in specialist sectors, Brickendon is built on providing lasting, cutting-edge solutions designed to improve profitability, efficiency, competitiveness and innovation across the financial services sector. We are passionate about what we do and thrive on transforming companies to increase their competitive edge.

Started in London in 2010, the driving force behind Brickendon's global strategy is transforming the traditional consultancy model. We now have multiple offices across Europe and the US, including London and New York.

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