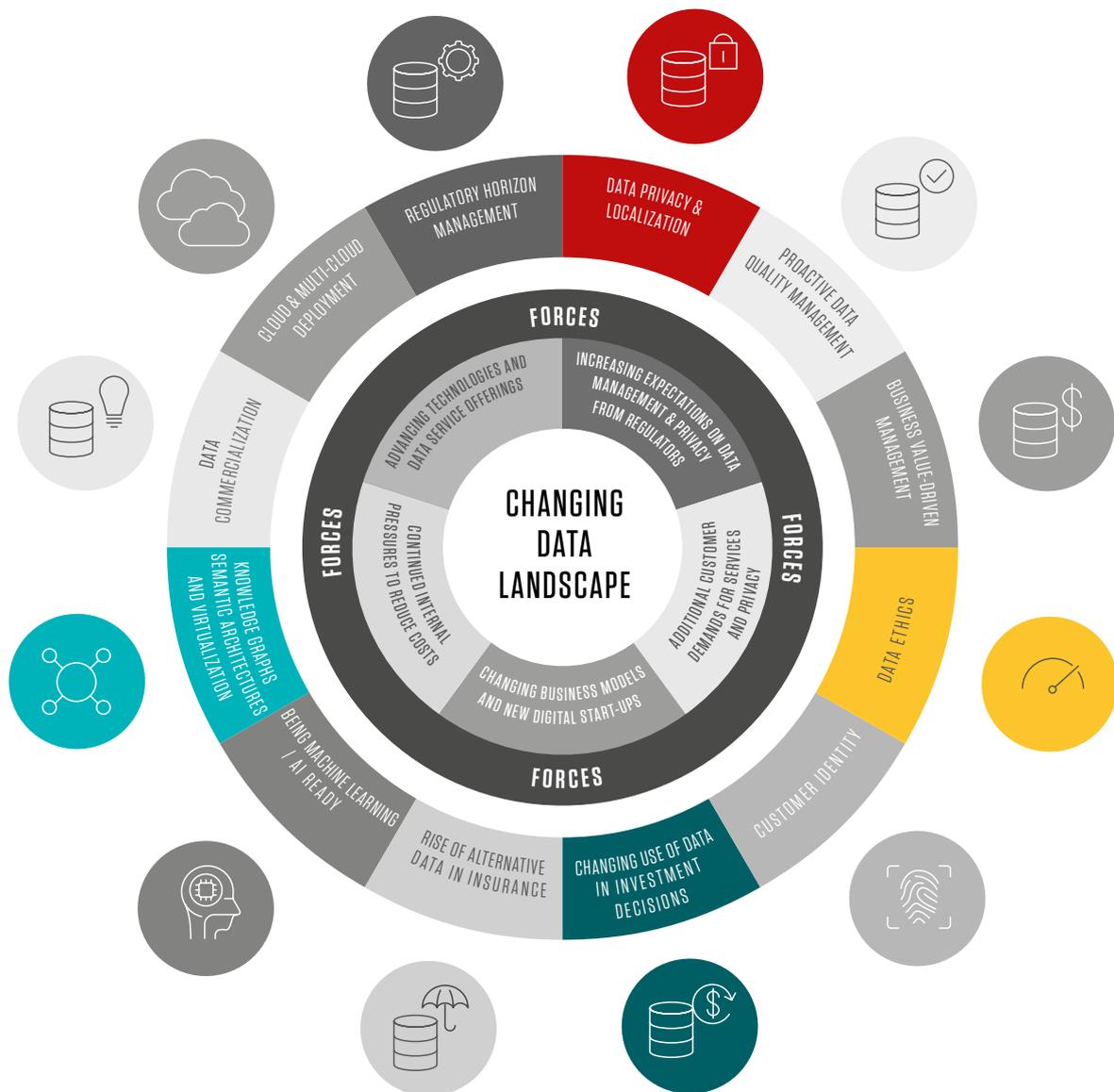


DATA DIFFERENTIATORS FOR 2020



The same characteristics that define data – volume, velocity, variety and veracity – can also be used to describe the deluge of solution offerings, service providers and technologies that store, manage, and aid decision-making using that data. A year has passed since our view of [2019's data differentiators](#), and it's been a busy twelve months. In 2020, we'll explore how the data landscape in financial services is shifting, and how business leaders are refining and evolving existing capabilities whilst discovering value in previously nascent areas.

As predicted, in 2019 we saw significant events in the data privacy space. GDPR bared its teeth, with almost half a billion Euros of fines issued¹, reiterating the need for strong information lifecycle management. There has also been significant development in firms recognizing the

importance of data ethics, with the formation of the UK government's [Centre for Data Ethics and Innovation](#), and [collaboration between the FCA and The Alan Turing Institute](#). In 2020, we can expect to see more emphasis on firms to evidence the ethical use of data.

We're pleased to see firms building knowledge graphs and semantic architectures and leveraging these to augment their data management capabilities with AI and machine learning. We expect this to significantly reduce the administrative burden of data governance, aid sustainability and enable a more value add data management solution set. A shift from reactive to proactive data quality management, driven by data profiling, AI and machine learning-driven root cause analysis, will create real business benefits this year.

¹ <https://www.enforcementtracker.com/>

Financial institutions will continue to work towards a single view of identity for customers, and knowledge graphs will support this journey. This single view of identity will enable new data commercialization opportunities, which must be controlled and managed using a well-defined framework. Furthermore, it will open new business models in the wealth and asset management and insurance industries – and firms that prioritize these new opportunities will reap the rewards.

With these developments, there remain persistent pain points for businesses looking to maximize value from their data. Using data as a differentiator requires a business culture that readily accepts and allows data science to influence its business strategy. Building this culture remains the key challenge for data leaders within financial institutions and underpins our 12 trends for 2020.



1 BUSINESS VALUE-DRIVEN DATA MANAGEMENT

Firms will continue to unlock the full potential of their regulatory data management spend through delivering a growing number of use cases. Data lineage will be used not just for regulatory evidencing, but as a tool to optimize cost by minimizing repetition and redundancy within applications and business processes. A key use case for this will be how data lineage can play an important role in the business resilience agenda. Once better understood, decommissioning, resilience planning, vendor negotiation, and total cost of ownership calculations (present and future) will become much easier.



2 REGULATION HORIZON MANAGEMENT

Data management capabilities will mature to ensure continued adherence to data-centric regulations focused around reporting, risk management and privacy. Firms must remain pro-active in understanding the impact of new regulations and their requirements for data management. In order to glean the most value from data management, financial institutions will leverage a consistent and holistic approach and re-use data assets to satisfy multiple regulations with the same spend. The Bank of England's announcement to develop a new data collection and reporting platform puts an additional level of expectation on firms to ensure quality and consistency of data management.



3 DATA PRIVACY AND LOCALIZATION

Regulatory and customer expectations on data privacy will continue to increase, and localization strategies will become key to dealing with changes likely to be brought about from Brexit and the shifting regulatory data landscape. Organizations will need to develop a deeper understanding of laws in relation to data privacy, localization and secrecy, and the risks of breaching these laws will need to be mitigated across their global footprints in an operationally effective manner. As part of this, legal considerations should be embedded in the design of IT infrastructure and operating processes. Solutions should be implemented for governing and controlling the flow of data both within and between jurisdictions, and with third-party data providers. Differential privacy techniques should be considered for delivering data insights while maintaining anonymity. Furthermore, data policies, standards and controls should be enhanced to cover the legislative angle, and training programmes should be delivered, to raise staff awareness of such risks and ensure compliance with the relevant mitigating controls. Firms who do not adapt to meet this legislation will see AI and ML opportunities missed due to non-compliance.



4 PROACTIVE DATA QUALITY MANAGEMENT

Financial institutions will transition from reactive data quality management, to a more proactive approach. Organizations will take measures to identify critical data quality issues closer to authoritative sources and achieve more effective root cause analysis and remediation. Traditional rule-based engines, which can be subject to biases and ineffective in complex data environments, will become increasingly augmented with AI and machine learning-driven data profiling. Firms should adopt new tools and processes to ensure data quality issues in streaming data are identified in near real-time.



5 DATA ETHICS

'Privacy by design' will soon no longer be enough. As the FCA and other regulators engage firms to define future data ethics regulations, financial institutions must be on the front foot and understand the criticality of ethically sourcing, sharing, processing and commercializing data. Financial institutions should develop data ethics principles and a supporting framework, with an education and awareness programme driven from the top. This will empower employees to act correctly in 'can I' vs 'should I' scenarios. As a result, banks will be able to incorporate 'ethics by design' into the development and approval lifecycle for new products and services.



6 CUSTOMER IDENTITY

Firms will place a heavy focus on identity across the organization, by creating a digital passport that allows customers to be managed in a centralized and consistent manner. This will improve the customer experience and become a significant driver for data analytics and new business opportunities. It will also reduce manual financial crime checks, and enhance fraud and risk management capabilities. Firms should begin to work collaboratively with governments to determine a single, universal identity.



7 CHANGING USE OF DATA IN INVESTMENT DECISIONS

Firms offering sustainable investments based on environmental, social and governance (ESG) criteria will prioritize developing a data strategy incorporating new alternative data sets, or build better analytical models in order to manage the growing costs and reputational risk associated with investment misclassification.



8 RISE OF ALTERNATIVE DATA IN INSURANCE

Insurers will leverage wearables and other forms of sensor data, in addition to unstructured social media data to improve product offerings and pricing. Firms will also use this data to aid underwriting, making it easier to assess risk more precisely. Understanding customer motivators and discovering the why, will provide competitive advantage for insurers who tailor their plans and services.



9 BEING MACHINE LEARNING / AI READY

Firms will see their data management investment result in less time spent wrangling data for analytics and free up time for modelling and identification of actionable business insights using ML and AI. Organizations will build analytics data pipelines upon strong data management foundations, with a focus on curation of re-usable data assets, which can be accessed and shared through common platforms. This democratization of data will make ML and AI initiatives scalable enterprise-wide, whilst reducing the marginal cost-of-insights. This will provide not only competitive advantage through the insights identified, but also comparative advantage through a virtuous circle of data culture improvements.



10 DATA COMMERCIALIZATION

Banks and other financial institutions will continue to define, refine and implement their data commercialization strategy, making significant considerations to data ethics. This will quickly become not only a potential competitive advantage, but the minimum requirement for providing a high-quality digital service to both their retail and corporate customers. Adopting an end-to-end data commercialization framework, is key to their success in deriving value from large data sets. This framework should ensure that challenges presented by the changing regulatory and market landscape are understood and addressed.



11 KNOWLEDGE GRAPHS, SEMANTIC ARCHITECTURES AND VIRTUALIZATION

Graph and semantic data solutions that link data across systems and silos, will enable financial institutions to unlock the value of disparate data sources - both internal and external. A semantic layer will become an essential part of data architectures, by allowing data virtualization to deliver consistent cohesive data. When designed well, data catalogues, control, and lineage emerge with evident value. More complex organizations will weave together graphs that describe aspects of the firms' operating models, to create its 'digital twin' mapping inter-dependencies and providing new levels of shared understanding. Point-solutions using graph will continue to grow in popularity, but the two enterprise-wide levers - semantic layers and digital twins - will be transformational for those who adopt them. Even the largest, most complex organizations will enjoy new confidence in their use of data, and their ability to transform, with agile, controlled, precision.



12 CLOUD AND MULTI-CLOUD DEPLOYMENT

As more organizations look to exploit the scale benefits of public cloud solutions for big data management, there are new challenges to navigate. These include data security and location, cost management, vendor selection and effective development practices. Understanding the function that cloud services play in a firm's data architecture, has the potential to unlock huge value, but the number of available solutions requires solution architecture discipline. Firms will need to incorporate cloud as part of their wider data strategy, to ensure that its potential is delivered sustainably.

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