YOUR MOST IMPORTANT CORPORATE ASSET:

Powering digital transformations with data

Amid significant increases in the volume and availability of data, many organisations are sitting on an as yet unrealised opportunity to translate the information they already own into insights that can fuel innovation, drive top and bottom line performance improvement and provide the basis for completely new business models.

Over the past decade, the pace of technological change has been unprecedented.

New technologies and cross-industry collaboration platforms are fundamentally challenging and changing business models. An example is IONITY, a joint venture of BMW Group, Ford Motor Company, the Volkswagen Group with Audi and Porsche, and Daimler, with the objective of establishing the most powerful, fast-charging network in Europe. The plan is to launch approximately 400 High-Power-Charging stations by 2020.

Another example is Ford and Amazon teaming up to offer consumers the ability to access their car from home, and call up other features from their vehicle via Alexa – Amazon's cloud-based voice service. Users can listen to audiobooks inside the vehicle, search and transfer local destinations to navigation, request news, play music, add items to Amazon shopping lists and more. Available home-to-car features allow electric vehicle owners to start and stop their engine, lock and unlock doors, and monitor vehicle readings, including fuel level and battery range.

Traditional businesses are finding themselves in competition with start-ups and tech companies, who by their nature tend to be more agile, able to react to changing market conditions and have very different shareholder expectations around what the business model is expected to deliver.

In response, nearly all businesses, large and small, are looking to leverage new digital technologies to develop innovative, new or enriched products and services, strengthen customer engagement and improve operational effectiveness – improving the business of today and enabling the business of tomorrow. But such digitally and data enabled business transformation also brings new challenges.

Improving the business of today and enabling the business of tomorrow

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Many organisations are not well-equipped to deal with the exponential growth in the volume of data being captured about their consumers, customers, products, services and operations. They often lack a coherent strategy and vision for acquiring, managing and securing such large volumes of data, and have no clear approach to harnessing new data analysis techniques such as machine learning and cognitive computing that can translate such data intouseful information and insight.

There are also practical issues such as how to do this cost-effectively, for example deciding what capabilities to build in-house versus source from partners and take advantage of the decreasing processing costs associated with cloud computing.

To realise the potential of new digital technologies, organisations need to treat data as their most important strategic asset and establish the governance, processes, infrastructure and tools needed to realise the value of that asset – in short an Operating Model for data and information management. Harnessed properly in this way, data becomes the fuel of digital transformation – enabling new ways of working, making possible collaboration across the enterprise and beyond and so driving innovation and improving decision making.

Not only is effective information management a critical enabler of digital transformation, but more and more organisations are seeing it as an essential platform for growth and, ultimately, survival.

Data is the fuel for Digital Transformation

Digital Transformation is about leveraging new technologies to improve and transform the business of today and create the new businesses of tomorrow.

Common themes that run through both of these are more agile approaches to innovation, virtual communities enabled by new collaboration platforms and, right at the core, the ability to access and use a vast array of different types of data in ways that only a few years ago would have been thought impossible.

The data-driven organisation is intelligent, adaptive and continuously improving – it's a 'learning organisation'. It uses information and insight at all levels to understand its environment, evaluate the results of its investment choices and leverage the learnings everywhere.

To leverage information as a strategic asset that drives the business agenda, data-driven organisations need a clear strategy around the capture, management and use of information across the business, as well as standards for certain core types of information that facilitate sharing and comparison across functions and across the business.

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Embedding new ways of working

Becoming a data and insights driven organisation is a daunting task. The increasingly easy accessibility to inexpensive computing power combined with the influx of data from user generated content created via social media platforms, improved mobile connectivity and 'Internet of Things' devices, creates both opportunities and challenges.

We should not also forget the need to support people in adopting new ways of working. Change is not easy and only happens sustainably through effective change leadership and management. Leaders are needed to shape and drive the digital and data journey for the organisation, helping the organisation to embrace and adopt the immense cultural shift to ways of working where the use of data lies at the heart of shaping commercial offerings, improving operational effectiveness and deepening the engagement between employees, customers and consumers.

Through Alvarez & Marsal's (A&M) work with clients across multiple industries and sectors, observing the results of both successful and less well-executed data-driven Digital Transformations, we have identified five critical steps for transforming data into a strategic asset that can drive business value and support the digital transformation:

1 Define a clear vision and strategy for the management and exploitation of data, aligned to wider business driven digital transformation goals.

2 Define a fit-for-purpose Information Management operating model to support the specific ambitions of the business.

3 Implement the Information Management operating model, recognising the change challenges and integrating the different dimensions of governance, management, processes, accountabilities and quality metrics.

4 Define a scalable and connected technical architecture to keep up with future business needs.

5 Embed the use and capture of information into ways of working throughout the business to create a truly 'learning organisation'.

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Five critical steps for transforming data into a strategic asset

Define a clear vision and strategy for Data Management

The technology, data strategy and operating model must be driven by the business strategy. Whether the goal is to use predictive analytics to drive pricing and margin improvement or build telematics into new generations of electronic products that deliver consumer insights to drive new product development, the need must be clear.

Demonstrating how the use of analytics and information is driving action and meeting business goals is fundamental to the transformative change agenda. Demonstrating clear successes helps drive adoption and form the basis for driving future improvement opportunities.

It's hard to sell the need for a common data inventory and governance when the payoff seems nebulous and difficult to quantify. In the context of digital transformations where initiatives need to prove value quickly, the data focus should be on the information needed to fuel those areas where improvements can be made tangibly and quickly.

Using success as a springboard enables the rollout of more early ambitious initiatives and supports the business case for the industrialisation of Data Management and analytics across the enterprise.

Netflix (subscription-based video streaming service) – Netflix has created its own ecosystem. It licenses content, distributes that content and owns the platform on which that content gets consumed. The strength of Netflix is to use collected consumer data to assemble the best collection of movies and shows to meet the needs of each viewer. With over 125m total subscribers worldwide, Netflix splits viewers up into more than two thousand taste groups and uses machine learning and algorithms to match viewers to content they might not have initially chosen. Data-driven platforms are also giving high-quality, original content a place to shine. In the case of House of Cards, Netflix leveraged data to understand consumers' viewing history including which shows viewers watched and which producers and actors they liked. They identified that viewers who watched the 1990s original BBC version of the series also watched films starring Kevin Spacey and films directed by David Fincher. As a result, the Netflix version of House of Cards starred Spacey and the pilot was directed by Fincher.[1]

[1] Netflix's Data-Driven Strategy Strengthens Claim For 'Best Original Content' In 2018 – Forbes May 2018

Data Can Enhance Creative Projects — Just Look at Netflix – HBR January 2018
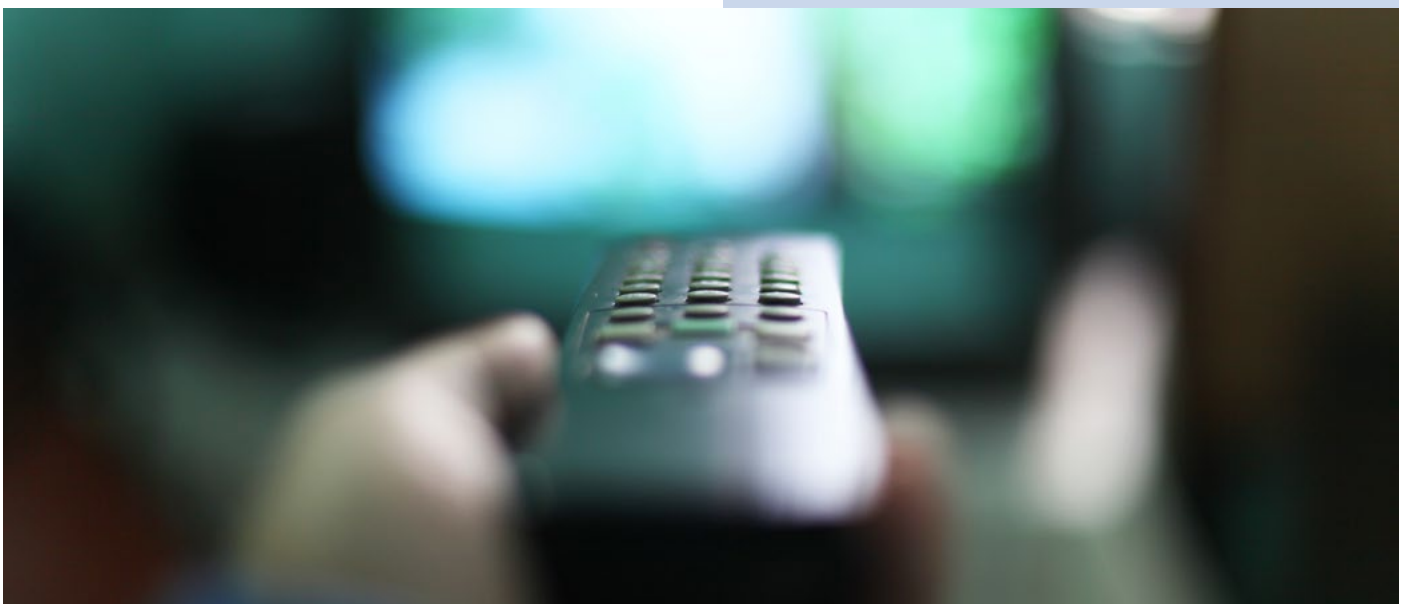
Define a fit for purpose operating model for Information Management

Establishing an effective operating model for Information Management and exploitation is absolutely fundamental to embedding true digital transformation. The implications are pervasive enterprise-wide and include governance, policies, processes, guidelines and controls for managing the acquisition, management, protection and use of information. The governance model needs to provide a clear steering mechanism; driving the strategy, vision and oversight of Information Management at an enterprise level in line with business strategies. Information Management processes will touch roles right across the enterprise and the RACI model (Responsibilities, Accountabilities, Consulted and Informed) needs to be clear. Hence the change challenge. The governance of information also needs to consider the legal and regulatory requirements – which are increasingly onerous, e.g. the new General Data Protection Regulation (GDPR).

Most progressive organisations recognise that an Information Management hub or core team lies at the heart of the Information Management operating model. The role of the hub is to be a catalyst of change and ensure that the foundational components of Data Management are in place to facilitate the data-driven and learning organisation. This includes providing the basics of data governance such as management, process and business ownership, while also supporting digital transformation through the provision of advanced analytics tools, capabilities and processes.

In 2011, **GE** launched its Industrial Internet initiative to move toward an outcome-based business model focused on optimising asset performance and operations with big data and analytics at the core. Digitally enabled outcomes-based approaches helped GE generate more than $800 million in incremental income in 2013. In 2015, GE made the next step, with dramatic changes to its strategy and operations, to emphasise and capitalise on its digital capabilities with the creation of GE Digital. This move has helped GE bring together all the digital capabilities from across the company into one organisation with a bold ambition to create a digital show site and grow software and analytics enterprise from $6 billion in 2015 to become a top 10 software company by 2020. This year they launched Predix, which is the world's first Industrial Internet platform. This includes an asset-centric data foundation designed to unlock new insights and new value across their operations. The platform delivers shared capabilities that industrial applications require: asset connectivity, edge technologies, analytics and machine learning, big data processing, and asset-centric digital twins.[2]

[2] World Economic Forum White Paper Digital Transformation of Industries: In collaboration with Accenture

Digital Enterprise January 2016

https://www.ge.com/digital/predix-platform-foundation-digital-industrial-applications

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Implement the Information Management operating model

Digital initiatives need to prove their value quickly to help support the enterprise-wide digital transformation journey. Having access to the right data and the right tools and skills to use that data is key. For example, engaging closely with customers requires the methods, tools and skills to capture and use customer data and be relevant and personalised at every touch point. Optimising manufacturing across a global footprint requires the methods, tools and skills to capture and use advanced telematics (IoT) data from every production line and action the insights this creates in terms of preventive maintenance. There are many other examples.

Highlighting and communicating such clear business benefits is critical to establishing the leadership consensus and buy-in needed to support the required changes in thinking, ways of working and operating model. The Information Management hub typically sits at the heart of this, a light central governance construct that establishes business-wide data standards, processes and infrastructure foundations. In the early days it also typically needs to support the specific data and analytical needs of the high priority digital quick-win initiatives that help build the case for longer term enterprise wide transformation. The Information Management hub is a key catalyst for enterprise-wide change.

As the adoption of good disciplines around the effective management and exploitation of information gains pace throughout the organisation, it is likely that the operating model will need to evolve, reflecting maturity and meeting increased demand for support. It may make sense to devolve some responsibilities and accountabilities through a more decentralised 'hub and spoke' model, where capabilities are embedded in business units while maintaining appropriate central coordination and leadership.

Again, making this work is not necessarily easy but there are some things that businesses can do to help ensure that the process of scaling and embedding is successful. Bringing 'digital natives' with the right skills into the business units is typically helpful. Establishing the right external partnerships can also be important. We see progressive organisations not only actively engage with leading external service providers such as Google, Microsoft, Amazon and IBM, but also invest in and/or acquire smaller up-and-coming tech organisations to expedite the change.

Data and analytics are core to **AMEX**'s historic DNA but the transformative opportunities presented through data and analytics have not come easy. Two of the critical challenges AMEX faced were around the adoption of new and immature technologies and the need to recruit new talent with skills in Big Data solutions and approaches. The company began its Big Data transformation by focusing on the low-hanging fruit of risk management. A machine learning system was able to evaluate thousands of data points on each transaction in less than two milliseconds, resulting in processing of fraud and credit risk on $1 trillion in charge volume across the AMEX network annually. To build its team, the firm opened a Big Data and Cloud Computing technology centre in Silicon Valley and, internally, the firm initiated a push to "democratise" data by putting Big Data tools and techniques into the hands of business decision-makers. The goal is to empower business people to "act locally", where they are closest to the customer. An example of marketing process improvement is the ability to provide "one-click cross-sell" which increases the options for customers within selected marketing channels, particularly important against the backdrop of an increasingly data-regulated industry.[3]

[3] McKinsey Interview - April 2016 Ash Gupta, Chief Risk Officer, American Express. 'How companies are using big data and analytics' https://www.mckinsey.com/business-functions/mckinsey-analytics/our-insights/how-companies-are-using-big-data-and-analytics

Forbes Apr 27, 2016 - Inside American Express' Big Data Journey https://www.forbes.com/sites/ciocentral/2016/04/27/inside-american-express-big-data-journey

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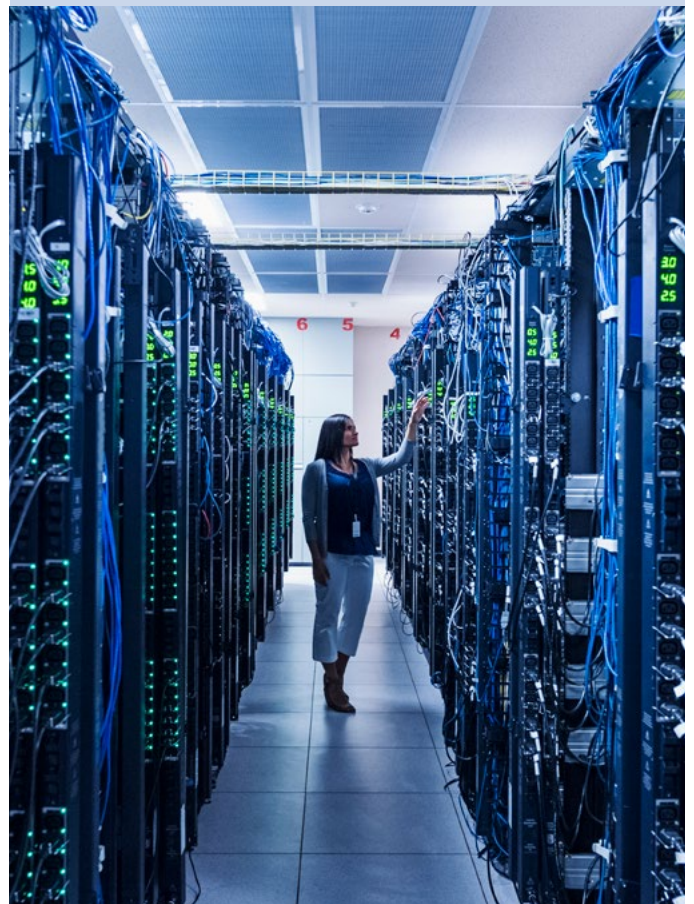# Define a scalable and connected technical architecture

Technology is a key driving force behind successful digital transformations but the enterprise architecture required is potentially complex and likely to include components ranging from master data quality and management tools to integration platforms (cloud/on-premise/hybrid repositories like AWS, Google Cloud Services, Hadoop and Spark) and analytics platforms and services. Add in new devices and hardware, such as Augmented Reality, that can support, for example, remote equipment maintenance and repairs, as well as introducing micro services to facilitate agile ways of working, and the picture becomes even more complex. The scalability and usability of platforms and tools is critical to managing the flow and analysis of data internally and with external service partners to the organisation.

The Information Technology architecture is the foundation layer and is a key building block of the wider Enterprise Architecture needed to support the realisation of the goals of the business. It also needs to be flexible and agile enough to adapt to future demand (i.e. start small and scale as needed). The challenges for the Information Technology architecture are on the rise, as software generators and today's low-code applications, such as Outsystems and Mendix potentially undermine stability and coherence, and as bottom up software development with the adoption of agile start to take over from the established enterprise and IT-architecture. Balancing the two is a key challenge for today's enterprise CIO.

In many instances, as the Information Management operating model evolves, so too do the skills requirements of employees across the business who are an essential part of the wider Information Management model and process. Acquiring and nurturing the right types of people and skills (internal and third parties) is critical to ensuring that the Information Management operating model is scalable and fit for purpose to meet the needs of the current and future business.

Verizon, a leading wireless network provider that designs, builds and operates networks, information systems and mobile communication technologies, wanted to accelerate and enhance its data analytics capability and improve archiving and recovery using a scalable big data platform. Nearly 90 percent of Verizon's enterprise data warehouse (EDW) platform was used for extract, load and transform (ELT) processes. The company needed to free up CPU capacity so that the EDW could be used for business intelligence and analytics. Verizon's new hybrid Hadoop and Teradata environment dramatically increased storage capacity and processing speed and reduced costs. The solution reduced CapEx by $33 million over five years, increased storage capacity 20x and achieved a 100x cost reduction per terabyte ($200K/TB for Teradata, $2K/TB for Hadoop).[4]

[4] Zaloni - Data Warehouse Augmentation to Increase Storage Capacity and Speed Processing
https://resources.zaloni.com/case-studies/enhanced-analytics-from-the-data-lake-with-extraordinary-results

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Embed the use and capture of information into ways of working throughout the business

Attempting to get organisations to work in a different way is challenging. Even with a rock-solid business case even the most urgent data-driven digital transformation can be crippled by organisational inertia. Businesses can expect a significant change management challenge, especially in large multi-national organisations with strongly engrained cultures and ways of working.

Starting small and demonstrating that effective Data Management disciplines and analytics can make a major contribution to the success of the business paves the way for an organisational mind-shift around how data is viewed as a strategic asset and used across the business.

In addition to the 'start small and show results' approach, the establishment of data as a critical business asset with clear governance and management must be supported by visionary sponsorship and robust change leadership to help the business understand the case for change, the expected benefits and the impact it will have upon processes, organisational structures and technology.

Over time, as data management disciplines are strengthened and data analytics capabilities increase, the effectiveness of (and trust in) data-driven decisions should improve and increasingly impactful business benefits be realised.

P&G is an innovation-led company and there is clear senior level buy-in to the concept that it's data and insights that help create the brands and keep them fresh. They use, for example, simulation analytics to design new products. Simulation analytics help to ensure optimal product performance by taking into account many different variables and creating and altering different models or designs virtually. For P&G, big data analytics and the visualisation of the data is extremely important. According to CIO Filippo Passerini, when talking about business intelligence P&G is "two or three years, perhaps more, ahead of anyone else". At P&G, managers have access to standardised datasets, powerful data visualisation tools, intuitive dashboards, and immersive conference rooms with large wall-screen data displays. More than 50,000 employees also have access to a "decision cockpit" that displays critical data in near real time. These methodologies collectively form a sort of common language across the global organisation.[5]

[5] Datafloq - How P&G Uses Big Data To Turn Diapers Into Insights
https://datafloq.com/read/pg-big-data-turn-diapers-insights/312

EnterpriseTech - How P&G Got Hooked on Analytics: 'High Value Problems People Were Willing to Pay For'
https://www.enterprisetech.com/2016/10/21/pg-got-hooked-analytics-high-value-problems-people-willing-pay/

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Summary

Becoming data-driven is a mind-set change, not a one-time project. It needs visible and tangible commitment to becoming a learning organisation that innovates fast, learns from its successes and failures, and leverages those learnings across the business – in every business unit and every market. The effective use of data lies at the heart of it, as the foundation for insight, knowledge sharing, collaboration and innovation. Small changes can make a massive difference. For example, consistent application of post-evaluation disciplines for every material commercial investment decision that capture the lessons learned in a way that can inform future investments can improve demand generation spend effectiveness by 20 percent plus. And when it comes to true digital transformation – improving the business of today and enabling the business of tomorrow – it will be data and insight that lie at the heart of transforming customer relationships, streamlining operational effectiveness and creating new business models. The challenge for businesses is whether they can successfully embed the changes needed.

Ready or not? Ask yourself these questions

If you find yourself unable to answer any of the following 10 questions positively then A&M can help you:

1 Do you have a clear vision and strategy for the management and exploitation of data, aligned to wider business transformation goals?

2 Do your routinely track Key Performance Indicators for the completeness and accuracy of data by major data type?

3 Do you have a fit for purpose Information Management governance and operating model to support the specific ambitions of the business?

4 Are you routinely able to combine data from different parts of the business and externally as a platform for optimising end-to-end business processes such as financial planning and analysis, new product introduction and sales and operations planning?

5 Do your information management initiatives have solid business cases and the active support and engagement from business and IT leaders?

6 Do you routinely demonstrate the value of information and analytics across the business?

7 Do you have a scalable and connected enterprise technical and data architecture to keep up with future business needs?

8 Do you embed the use and capture of information into ways of working throughout the business to create a true 'learning organisation'?

9 Are you confident that your data and IP are safe, secure and not unreasonably exposed to cyber attack?

10 Are you confident that you are compliant with the latest data related regulations such as GDPR?

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About Alvarez & Marsal

Alvarez & Marsal is the firm known for asking tough questions, listening well, digging in and getting our hands dirty. We are fact-driven and action-oriented. We move our clients forward, to where they need to be.

What we do

Uncover and implement the right solution, at the right time, in the right way.

A&M provides global leadership, problem solving and value creation for companies across industries and around the world. We work as advisers, interim leaders and partners who tell you what you need to know, not always what you want to hear.

How we help

Rapid diagnosis, exacting action, practical solutions and on-site leaders.

Complex problems, shifting demands and tumultuous business environments make today's high stakes even more dangerous. Our operational heritage helps us decipher your Information Management challenges and helps you to take the right decisions quickly and with confidence. Always at the ready, we stand with you.

What makes us different?

- We bring a senior team that have held CIO, technology business leadership and interim management positions.

- We have significant experience in Information Management Operating Model design and implementation.

- We are impartial and unbiased to technology platforms and providers; we are objective and pragmatic, with no audit conflicts and no implementation services to sell.

- We are operators who work pragmatically with management.

- We take ownership of situation and drive results.

- We have a proven track record in managing complex, high profile situations across multiple industries, including complex due diligence situations.

- We have an extraordinary track record of successful delivery through assured leadership and execution.

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ABOUT ALVAREZ & MARSAL

Companies, investors and government entities around the world turn to Alvarez & Marsal (A&M) when conventional approaches are not enough to make change and achieve results. Privately held since its founding in 1983, A&M is a leading global professional services firm that provides advisory, business performance improvement and turnaround management services.

With over 3000 people across four continents, we deliver tangible results for corporates, boards, private equity firms, law firms and government agencies facing complex challenges. Our senior leaders, and their teams, help organisations transform operations, catapult growth and accelerate results through decisive action. Comprised of experienced operators, world-class consultants, former regulators and industry authorities, A&M leverages its restructuring heritage to turn change into a strategic business asset, manage risk and unlock value at every stage of growth.

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