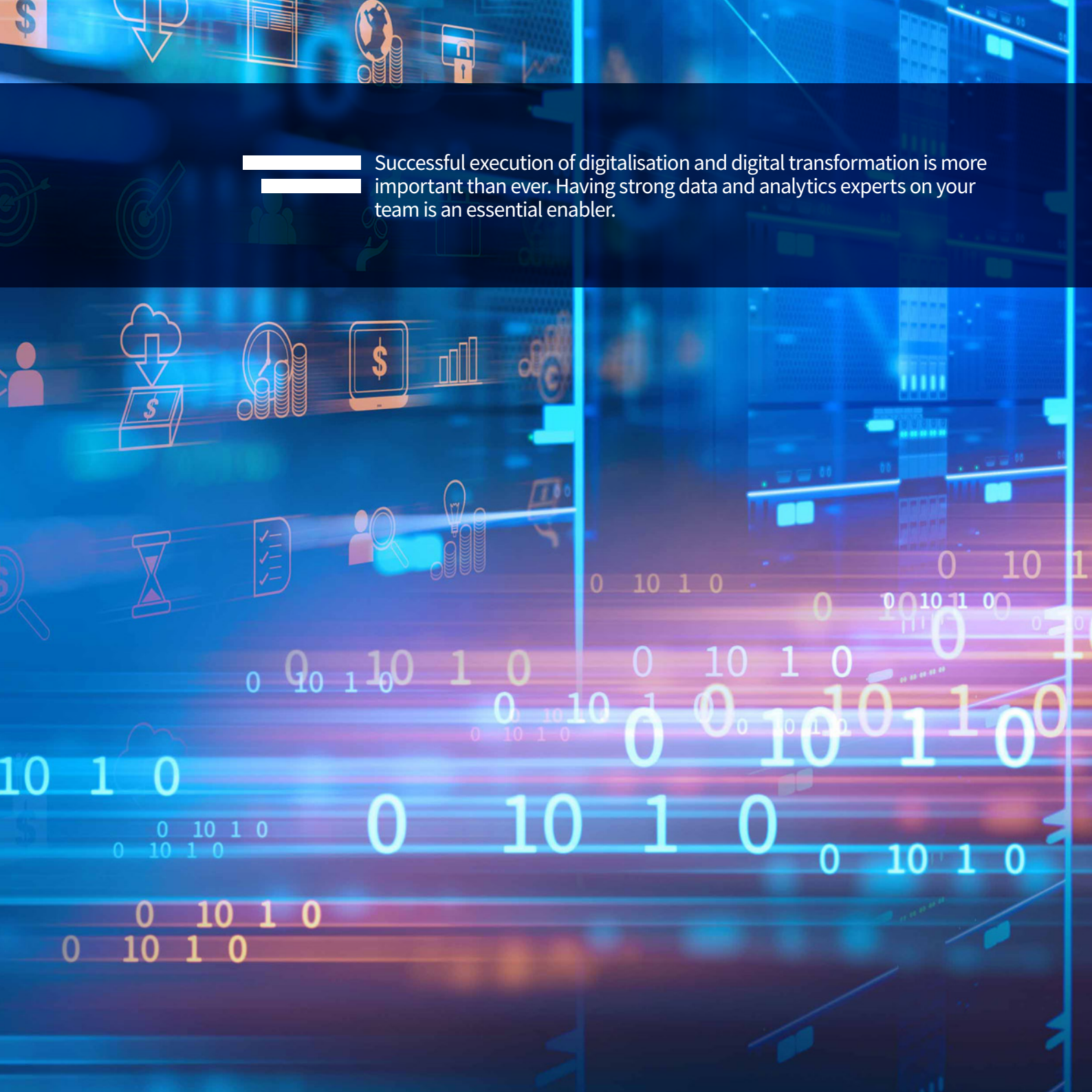




Digital transformation of the business and digitalisation of risk management



Successful execution of digitalisation and digital transformation is more important than ever. Having strong data and analytics experts on your team is an essential enabler.



Why is data & analytics essential for your business success?

FTI Consulting puts data and analytics to work in first, second and third line settings for banks, asset managers and insurers, helping them to achieve successful digitalisation and digital transformation outcomes. We enable clients to solve once and for all the intractable data and analytics problems that hold back their digital projects. What sets FTI Consulting apart from competitors, is the depth of our data and analytics expertise. This is reinforced by unrivalled credentials in forensic data analysis and investigations.

Financial institutions, mirroring the broader economy, are digitalising and digitally transforming to stay competitive. This trend has accelerated due to the human impact of COVID-19. Fast, effective, remote work modalities, to support delivery of financial products and services that are necessarily and fundamentally digitally transformed, are now necessities. But digital products and services are complex and data intensive. The skills and experience needed to successfully execute digital change are rare. They include mastery of the mathematics involved and adeptness with the technologies: big data, cloud, open source tooling and code. These building blocks of digital

change operate upon foundations of data and analytics. If direct experience of successful execution of these new methods and technologies is not present on your team, FTI Consulting can provide the support you need to ensure successful outcomes.

FTI Consulting's digital data and analytics capabilities cover digital transformation of the business and digitalisation of risk management. We are typically engaged by C-levels, business heads, digital officers, data officers, transformation and change leaders, Chief Risk Officers and leaders of risk sub-functions, internal audit, and regulators.

Digitisation, digitalisation, digital transformation

These terms may often be conflated, but they have specific meanings and contributions to make to the achievement of your business objectives. Digitisation refers to creating a digital representation of physical objects or attributes. Digitalisation refers to enabling or improving processes by leveraging digital technologies and digitised data. Digital transformation is really business transformation enabled by digitalisation.



Key considerations

A great many things matter when a business undertakes digital transformation. However, in our experience most dollars are wasted, objectives not met, and deadlines missed as a result of four things:

- Data (i.e. access to data that is fit-for-purpose in a digitalisation context)
- Machine learning and artificial intelligence
- Client and end-user experience
- Behaviour (i.e. the impact of digitalisation and digital transformation upon people)



Data

Digital transformation requires data. Vast amounts of it. The data needs to be in forms that can be consumed by digitalisation. It must, for example, be structured and labelled in ways that support training machine learning and artificial intelligence models. It is necessary to obtain internal and external approvals for movement and distribution of data. This may involve explaining what individual data features (or data fields) in sources of data are required for. This may be very difficult to do up front, for example when unstructured data analytics are going to be used. The challenge may be exacerbated by poor data lineage. Strong data governance is necessary, but many development techniques in digital settings are iterative and exploratory. Governance must be balanced with the need for speed and flexibility.



Machine learning, artificial intelligence

Data must be confronted to models. Models produce outputs, for example in the form of forecasts. Robotic processes can be intelligent and convert forecasts into actions. But the right models are required for financial settings. These may be implemented via well-known open source tools (for example tensorflow, or PyTorch), but finance is different (typically very low signal to noise) so model selection, training, and deployment must fit the finance setting.



Client and end-user experience

The end state of a digital transformation is an easy to use and compelling client experience that generates a desired return on investment. In the background, client and end-user experience depends upon a complex set of integrated technologies that provide interactions between the user and a set of applications, processes, content, and services. These in turn have several components, including content management, search, analytics, collaboration, social and mobile tools. But from the client or user's perspective, they should simply have an experience that is easy, intuitive, inspiring and authentic. The relationship between client and end-user experience on the one hand and machine learning and artificial

intelligence on the other is symbiotic. We might think of it this way: machine learning and artificial intelligence models can select optimal sets of clients and products. Financial mathematics and econometrics can ensure that the products thus selected are priced and hedged or otherwise risk managed correctly. Good client and user experience ensures that none of this is the concern of the user, because they are simply enjoying an intuitive, compelling and memorable client journey.

The skills and mindset of user-experience people is very different to that of data scientists and programmers. Bringing these skills together in a way that is complementary can make or break digital transformation. Aligning them with clients and end-users productively to achieve successful digital transformation outcomes is yet more important still.



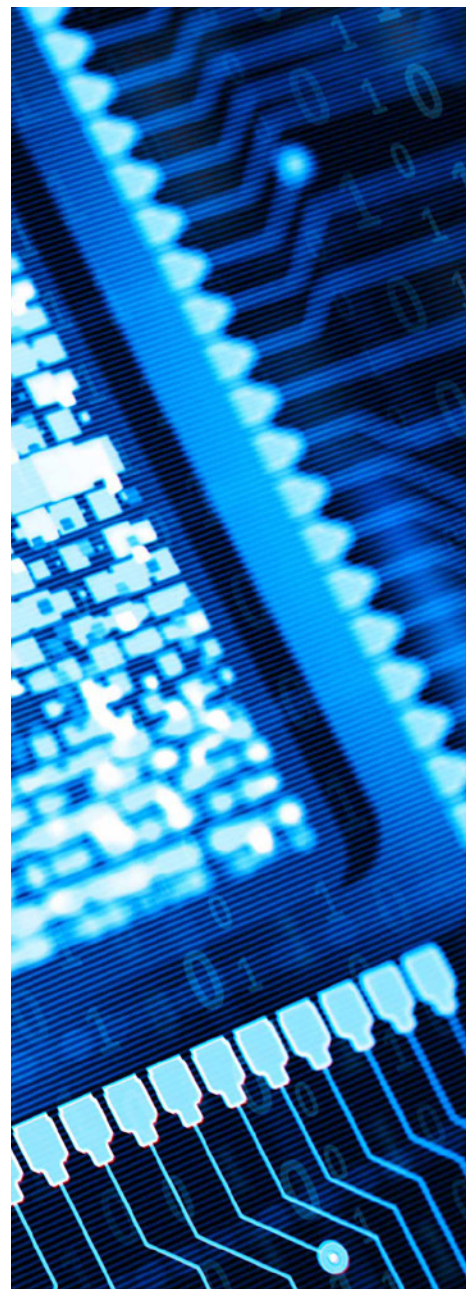
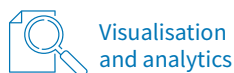
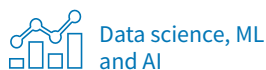
Behaviour

People may feel threatened and the new business opportunities presented by digital transformation may not be perceived as opportunities by all. Stakeholders might want to pay particular attention to how the digital transformation deals with these challenges. For example, is a clear and actionable plan in place for client and user engagement, training, up-skilling, re-skilling, and redeployment? Communications and education play an important role too. Digital concepts may be new to many. Are the benefits of the digital transformation effectively communicated? Is success recognised and celebrated?

Digital transformation

Digital transformation therefore involves the transition of a financial business or function from manual, semi-automated, or even in parts fully automated forms, into a platform-based digital form that leverages advanced technologies. It involves the creation of new experience for clients; in banking, it may be called virtual banking, next-generation payments, open banking, and banking-as-a-service. In insurance, it may be called insurtech. To the client, it means simpler, faster, and more convenient. For the project team, it means cloud, complex data challenges, machine learning (ML) and artificial intelligence (AI), training, explaining, deploying models, and using analytics to create user experiences that are meaningful and compelling. We have seen a profound increase in the use of ML and AI in financial services. In turn we are confronted with its flaws, for example social and ethical issues such as privacy, bias, and privilege. This has provided a more nuanced understanding of the role ML and AI can play and increased senior management willingness to support properly conceived projects.

FTI Consulting's experts can bridge skills gaps whilst experience and confidence in these new digital paradigms is built. We can help you to start your digital transformation journey or take it to the next level. Areas in which we excel include:



Digitalisation of risk management

Many risk metrics and the surrounding governance in financial institutions was formulated a decade or more ago. A regulatory impetus often drives. For the course of most of our careers risk has predominantly looked backwards; end-of-day, weekly, and monthly risk reports show what happened: yesterday, last week, or last month. The data upon which risk exposures are based may be older still. Metrics have tended to real-time only in certain areas: trading and portfolio risk monitoring, for example. But digitised finance, conceived much more recently, generally takes place in real-time. Banks advertise ‘Digital Mortgages’, with sub-minute approval. Credit card approvals are ‘instant’, so that digital teams constructing credit card approval workflows target sub-second end-to-end. Real-time digital business gives rise to real-time credit, market, liquidity, operational, cyber, and franchise risks. Digitising risk management by harnessing cloud, big data, ML, AI, visualisation and analytics enables risk management to keep pace with the digitised business. Regulation has also begun to expect this:

“Supervisors expect that in times of stress/crisis all relevant and critical credit, market and liquidity position/exposure reports are available within a very short period of time to react effectively to evolving risks. Some position/exposure information may be needed immediately (intraday) to allow for timely and effective reactions.”

BCBS239 Article 71

Data may inhibit risk management’s efforts to keep pace with digitisation of the business. Systems that have different reference data, for example a counterparty id that differs from system to system, inhibit the automatic aggregation of data by client or counterparty to compute exposures. Clean data is a necessary and sufficient condition for digital projects, since models are only as useful as the data they train upon. If a financial institution were to train a model with poor data, then the model would produce poor predictions.

FTI Consulting specialises in the digitalisation of credit, market, liquidity, operational, and cyber risks. As leading data and analytics experts, we can help you digitalise risk management and achieve faster, more complete, accurate, and adaptable risk metrics. Our capabilities include:



Data gathering and preparation



Model building, validation, and deployment



Risk digitalisation strategy, project management, and governance for the digital transformation of risk management



CASE STUDIES

Digital transformation of the business

A member of the FTI Consulting team led an engagement to assist an Asian insurance company to amplify its services and solutions through innovative applications of AI, digital and mobile communications technologies. Our specialist helped the client to effectively engage with a broad range of internal and external stakeholders, including customer focus groups, in order to imagine, then define, a digital insurance strategy based upon a best-in-class customer journey. Clear steps were set out to deliver the strategy, highlighting delivery of tangible business value, quick wins and cost reductions. The client was able to quickly take things to the next level with rapid delivery of digital prototypes, to prove concepts, gain stakeholder buy-in and approval. From the customer focus groups there were three areas which were identified that drive a best-in-class digital insurance journey: ease, choice, and advice. Rapid delivery of digital prototypes demonstrated that innovative products sold through digital channels can be taken to market faster and at much lower cost. Artificial intelligence, machine learning, advanced data and analytics enabled this. The result: an uncluttered, clean, and straight-to-the-point digital insurance customer journey.

Digitalisation of risk management

A member of the FTI Consulting team led an engagement to assist a major global financial institution to digitalise risk management in its global securities finance and collateral management solutions business. Stock lending is a core securities financing activity in the delta one business. When a security is loaned it creates unconventional data on volume and borrowing costs. The project team helped the client use machine learning (ML) to identify strategies providing stronger returns from lending patterns and to execute and risk manage them. Our specialist helped the client to write ML algorithms to analyse very large amounts of position and transactions data over time, thereby determining stocks with instantaneously higher lending rates compared to their lending histories. The neural networks were configured to analyse multiple classes of problems within the same datasets. For example, stock that was not widely circulated in the loan market was also identified, based on assumptions that the market viewed these stocks as fair value. The result: optimal delta hedges for the portfolio, forecast by ML, plus algorithmic execution of the risk management strategies.



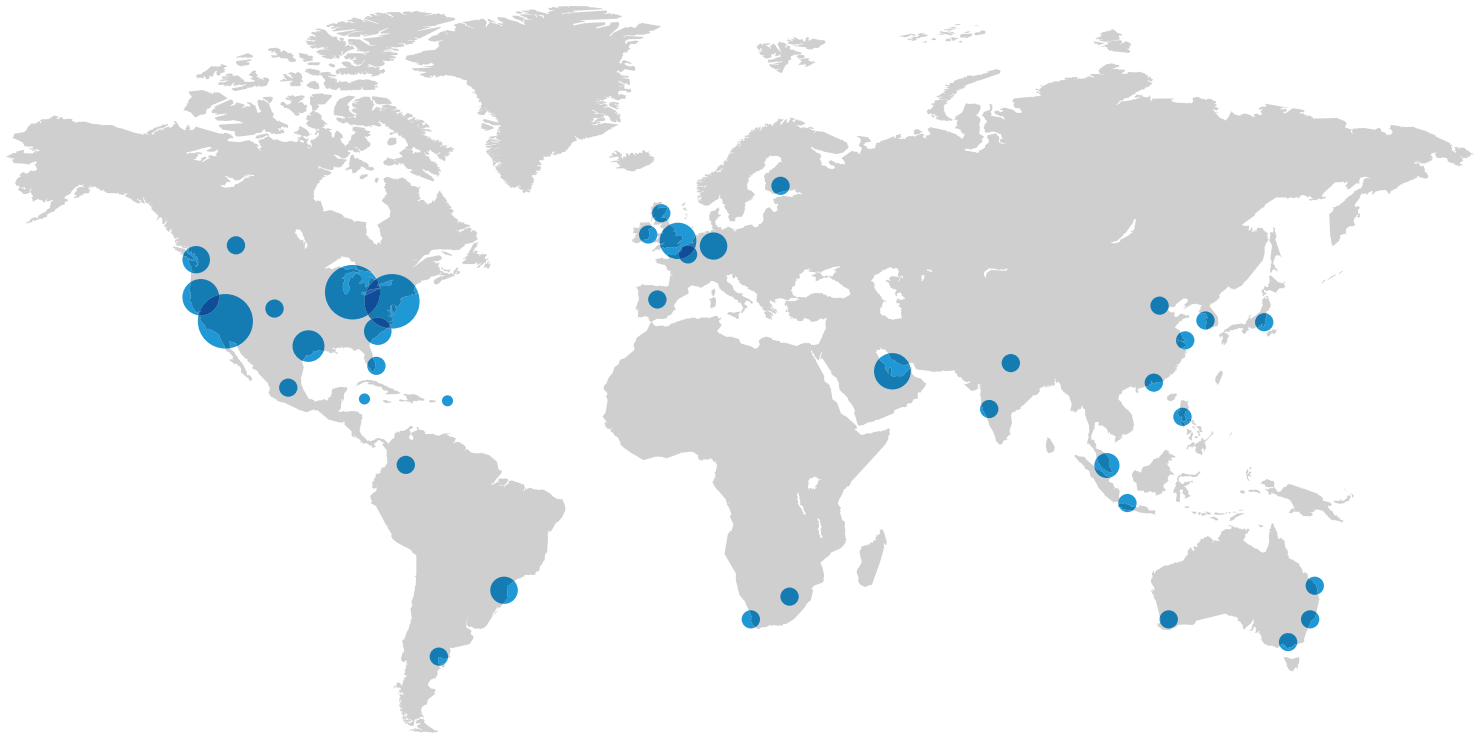
About FTI Consulting

FTI Consulting is an independent global business advisory firm dedicated to helping organisations manage change and mitigate risk: financial, legal, operational, political & regulatory, reputational and transactional.

Individually, each FTI Consulting practice is a leader in its specific field, staffed with experts recognized for the depth of their knowledge and a track record of making an impact. Collectively, FTI Consulting offers a comprehensive suite of services designed to assist clients across the business cycle – from proactive risk management to the ability to respond rapidly to unexpected events and dynamic environments.

Our Largest Industry Groups

	Construction & Real Estate		Construction & Real Estate		Transportation
	Healthcare & Life Sciences		Healthcare & Life Sciences		Public Sector
	Telecom, Media & Technology		Telecom, Media & Technology		Environmental



A Leader Among Leaders

With more than 5,700 employees and offices in 27 countries on six continents, FTI Consulting's breadth and depth extends across every major social, political and economic hub around the globe.

**Number of total shares outstanding as of April 23, 2020, times the closing share price as of April 30, 2020.*

NYSE:FCN

Publicly traded

53

53 of Fortune Global 100 corporations are clients

\$4.7B

Equity Market Capitalisation*

8/10

Advisor to 8 of the world's top 10 bank holding companies

1982

Year Founded

96/100

Advisor to 96 of world's top 100 law firms



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Recognised in annual **America's Best Management Consulting Firms** list (2016-2020)



Named **International E-Discovery Solutions Advisory of the Year**, ACQ Global Awards (2017)



A Leader in Worldwide E-Discovery Services 2017, **Vendor Assessment** 2017 IDC Marketscape



The global business intelligence practice has been recognised in The Economist as the **leading player** in the industry



Recognised as having the **deepest and strongest capabilities in Forensic Investigations** by Kennedy Consulting Research & Advisory

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EXPERTS WITH IMPACT™

FTI Consulting is an independent global business advisory firm dedicated to helping organizations manage change, mitigate risk and resolve disputes: financial, legal, operational, political & regulatory, reputational and transactional. FTI Consulting professionals, located in all major business centers throughout the world, work closely with clients to anticipate, illuminate and overcome complex business challenges and opportunities.

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