

RESEARCH PAPER

How to become an analytics powered enterprise

Key insights from the early adopters

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Executive summary

Applied data and analytics promise great advantages to organisations of all sizes, offering new insights and decision-making tools as well as real-time feedback. But all too often such projects struggle to go beyond proof of concept. In fact, Gartner reports that only two out of five data and analytics initiatives go beyond piloting and experimentation. So what makes for a successful outcome?

The truth, as revealed by a *Computing* and Sopra Steria survey, is that whilst there is a lot of endeavour in the market, and organisations are becoming more mature, not all organisations have the necessary structure and mindset to deliver these initiatives. In order to succeed, organisations must first lay the groundwork through executive level leadership, a coherent strategy and proper data governance. Further, the project needs to focus on a discrete business outcome and use data and analytics to create a real business advantage.

This report explores the aspirations of data and analytics projects as well as investigating the key to successful delivery and execution. It suggests that the scaling of data and analytics projects into production requires organisations to consider their level of technical and organisational maturity.

The promise of analytics and insight

Organisations across all sectors are coming to understand the power of data and analytics. In the past, the quantities and types of data that could be practically analysed were restricted by the relational database structure and the price of storage. Data was structured, generally internally generated, and the analytics mostly served to report on events that had already occurred supporting internal requirements for management information, or serving external regulatory compliance.

Fast forward to today's connected, digital world and we see a far greater promise. Instead of vast, intractable swathes of data separated from the business by many layers, advanced analytics has the potential to tap into real-time information from outside and inside the organisation, generating invaluable insights that are actionable and therefore have real benefits for the business and their customers.

Rather than simply reporting past events, organisations are turning to analytics to improve the customer experience, increase business agility, safeguard against fraud, make trend predictions, and ensure data is managed and secured to appropriate regulatory standards. Newer systems based on distributed and non-relational technologies have replaced or augmented legacy Enterprise Data Warehouses (EDWs) and are adding near-real-time capabilities.

A *Computing* survey of more than 120 IT decision makers across the private and public sectors looked at the benefits and aspirations of data and analytics projects and the barriers to successful delivery of such ventures. It found a strong demand for business analytics, with 68 per cent indicating that their organisation had started or implemented a specific data and analytics project within the past three years.

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Organisations also recognised that in order to reach their aspirations, they required better data management, quality and security. Operational reporting and data integration also featured as important focus areas (Fig. 1).

Fig. 1 : In order of importance please rate the following areas of focus for data & analytics within your organisation



These are all key areas for medium and large organisations, particularly with regard to regulatory compliance and financial best practice. This accurately reflects the evolution of Data and Analytics over the last few years as we see investment moving from the heartland of operational reporting to more value add activities that support the customer and citizen experience.

We also asked our respondents about where they believe the actual value of data and analytics lies (Fig. 2).

Fig. 2 : Where does the value of data & analytics lie, in your opinion?

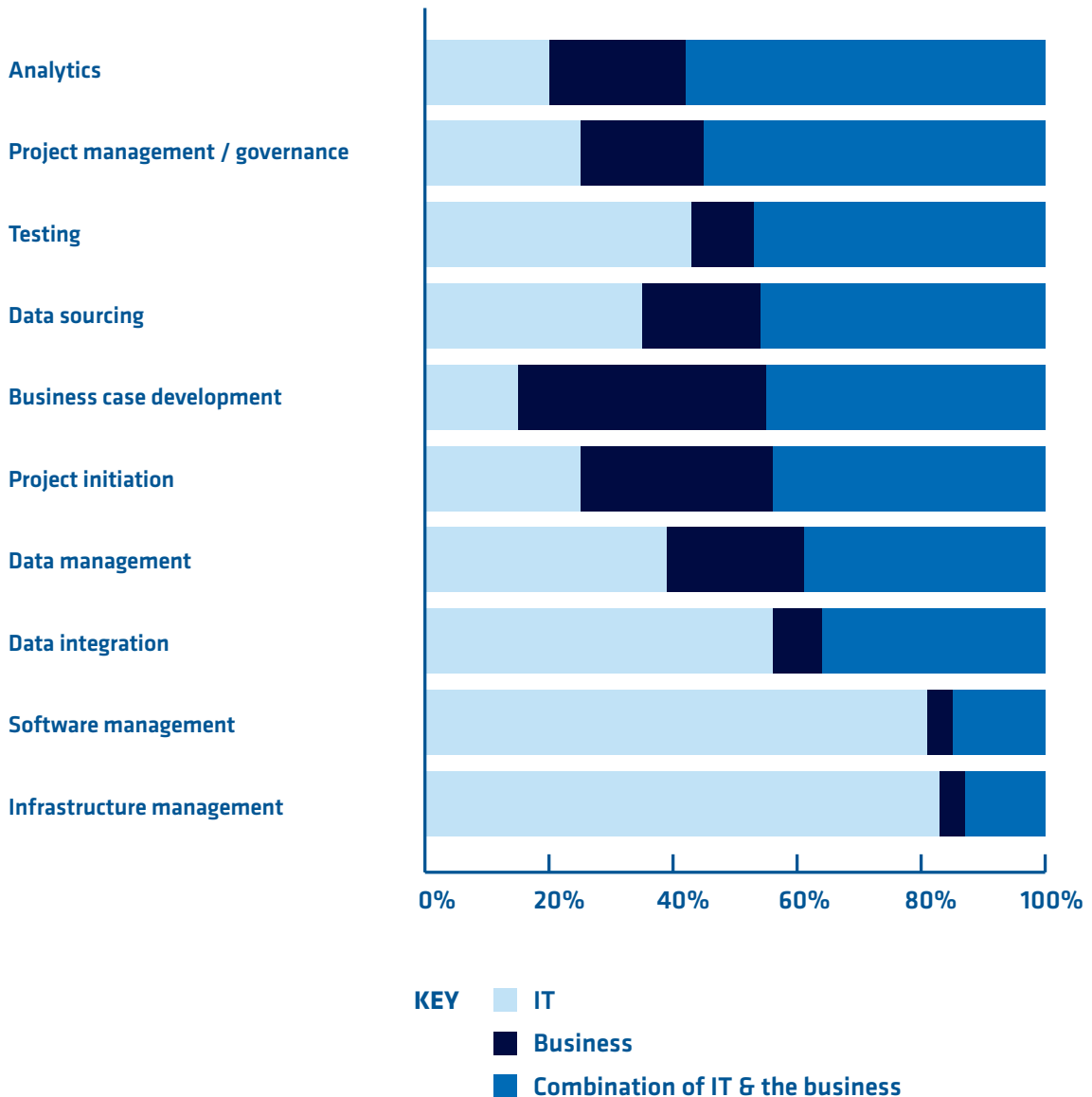


Two priorities came out well ahead of the others: real time decisioning analysis and the prediction of behaviour. This points to a change from the old-style backwards-looking BI systems towards real-time streaming and big data type solutions, even if some were at pains to point out they don't consider what they are doing as "big data" at all. The conclusion from this is that companies want to use their data to build a picture of what is happening right now and what is likely to happen in the future. In time, we would expect to see the introduction of prescriptive analytics which provides further insight to organisations, helping them to predict a customers' next best action.

Analytics is changing

Once the preserve of data specialists, analytics has been democratised in recent years. As Fig. 3 shows, the majority of survey respondents (57%) reported that responsibility for analytics is now shared by IT and the business; a further 22 per cent said the business is in the driving seat, with just 20 per cent saying IT. This marks a major break from the past and demonstrates that organisations are now extracting value from their data as part of a collaborative and business-led process rather than one driven by technologists.

Fig. 3 : Within your organisation, who is responsible for the following aspects of your data and analytics activities?

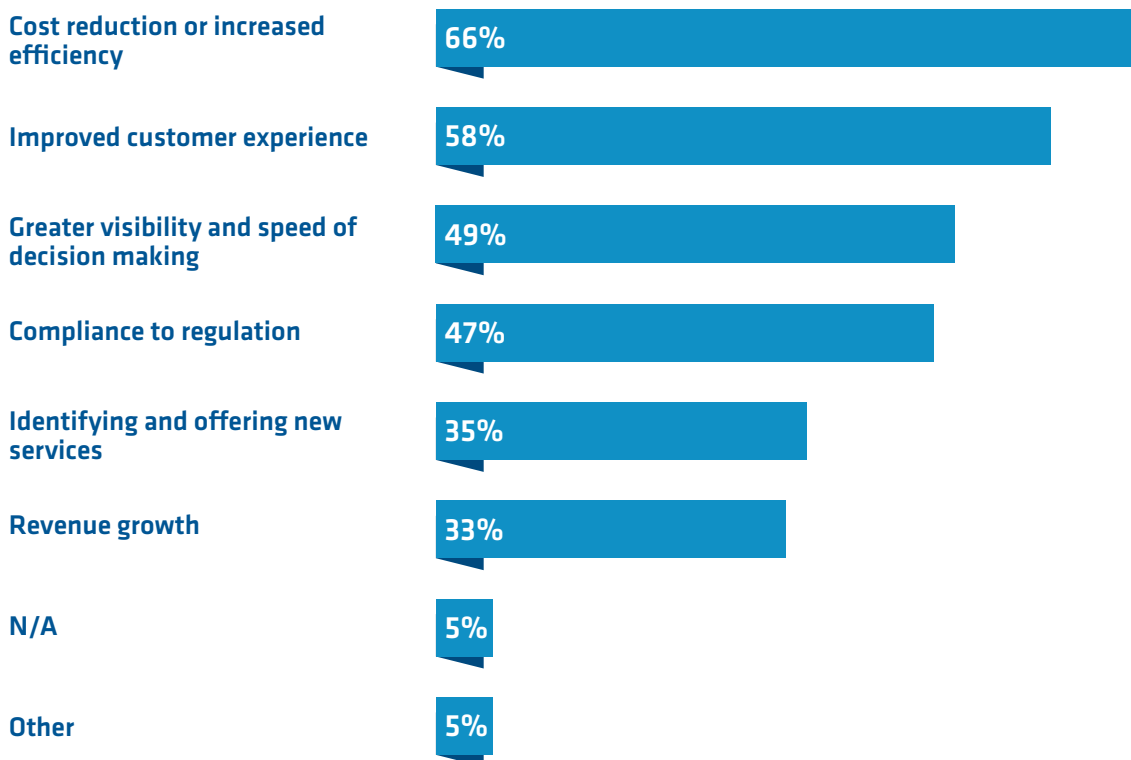


Business outcomes

Successful projects that deliver genuine lasting value to organisations should always be conceived and planned collaboratively by the business and its technical teams. This is because the value derived from data and analytics is shared broadly across the enterprise, from enhanced decision making, to improved customer experience to increased efficiencies and regulatory compliance, which are the business of the board. This illustrates why it is essential that the business is involved at an early stage.

There is always a danger with IT projects of the tail wagging the dog, with initiatives given the go-ahead before a specific and quantified business outcome is identified.

Fig. 4 : What business outcomes are you looking for from data and analytics?



In terms of business outcomes, two-thirds of our respondents were focused on operational efficiencies and cost reduction – classic IT goals (Fig. 3). Second came improving the customer experience, which ties in very closely with the digital agenda currently being pursued by many organisations. Third came greater visibility and speed of decision making, again something that places the emphasis on real-time feedback. In the minority of cases the research also showed that some organisations were realising benefits without a business outcome being defined. This highlights an experimental side to data and analytics projects with business benefits being created despite not being planned.

If those are the business goals, how well aligned are the data and analytics projects designed to achieve them?

Organisational maturity

One of the tools frequently used by third-party experts to assess the alignment of delivery to business objectives is the organisational maturity model. Such models assess the readiness of an organisation by looking at a number of factors and variables.

When asked to rate their organisations' data maturity using a simple 5-point scale, only twelve per cent said their organisation was optimised, having the tools and skills needed to derive maximum value from its data (Fig. 5). The largest group were a little more modest, saying they proactively manage their data but felt they were not making the absolute most out of it. At the other end of the scale, 18 per cent were reactive, their efforts piecemeal and their data of dubious quality. This shows us that whilst only 12 per cent are truly exploiting the value of their data, 45 per cent of respondents are managing their data and have it under control.

Fig. 5 : How mature is your approach to data & analytics?

Optimised – Our data is our biggest asset – we use various tools to derive maximum value from it	12%
Managed – We proactively manage our data but could be extracting more value from it	33%
Defined – We have a defined strategy but tend to stick to more traditional tools and technologies	19%
Repeatable – Our data and analytics strategy is tactical with lack of board level ownership/direction	18%
Initial – Our activity is reactive and varies in quality. We understand the benefits but are struggling to action	18%

Our research also showed that whilst only 17 per cent of projects were being delivered on time, 67 per cent of projects we being delivered to meet or exceed the original specification of the project further highlighting the value of data and analytics initiatives. This also suggests the need for flexibility in delivering Data and Analytics projects to ensure value creation is part of an ongoing process as business drivers change and tools and techniques advance.

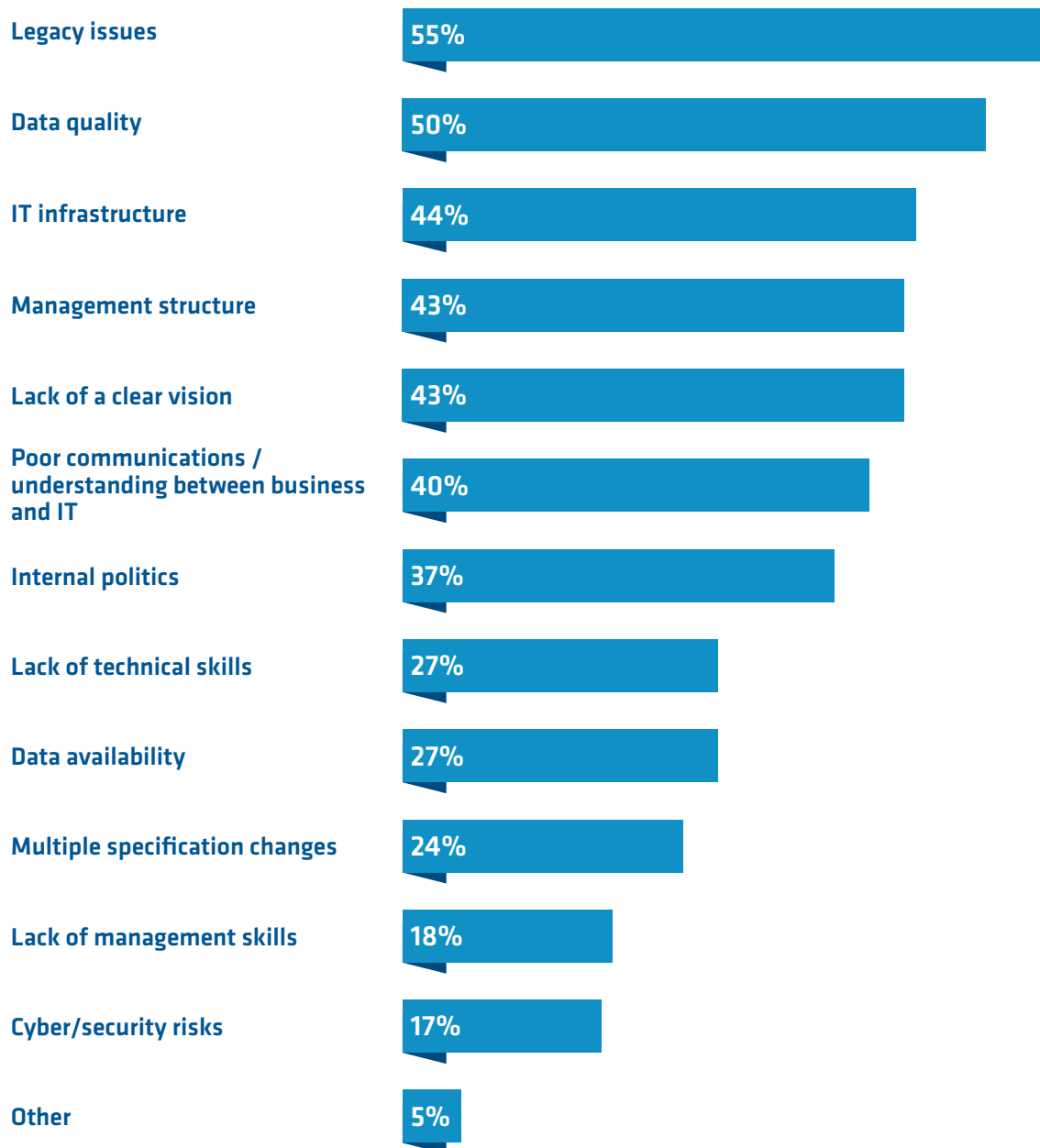
Success factors

We asked our respondents to tell us about the challenges they are currently experiencing. Legacy technology was the most frequently mentioned hurdle, followed by data quality and IT infrastructure, management structure, lack of vision, poor communications and then issues of poor communications and politics (Fig. 6, *see next page*). The broad mix of issues illustrates the complexity of such projects. It can be hard, especially in larger organisations, to pick up all these strands and weave them into a system that works as intended.

Data and analytics projects have many moving parts, all of which need to be co-ordinated if they are to succeed at the right pace and scale. Underestimating their organisational and technological complexity is typical of larger organisations, and a key challenge to project success.

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Fig. 6 : What specific challenges has your organisation experienced with regards to implementing your data & analytics initiatives?



Internal politics

Internal politics was an interesting thread throughout the survey results. Planning data and analytics initiatives against a background of different departments with diverging goals and interests is intrinsically difficult.

There is a need for a clear business objective and vision as well as committed project ownership and support from the top of the organisation to stave off interference from vested interests. The organisation must be willing to embrace new ways of working (for instance, agile development and a willingness to be data-led) and to work within a data governance framework.

As we saw in Fig. 3 (page 5), most activities around data and analytics fall within the remit of both business and IT, the exceptions being the management of infrastructure and software which sit naturally with IT. This shows us that organisations recognise the interdependency on both functions to create value and consciously work together in synergy.

Conclusion

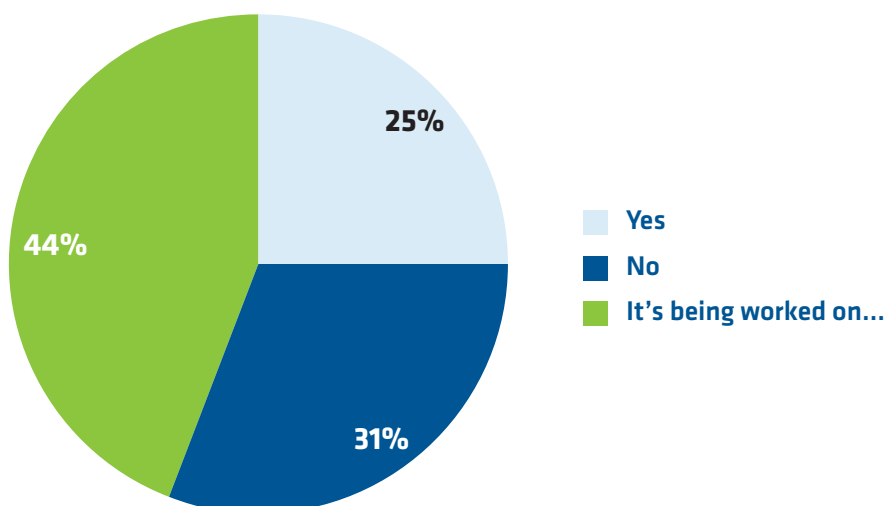
So, how can organisations achieve more from data and analytics?

Our survey indicates that organisations understand the promise of data and analytics, from both a business intelligence standpoint and future gazing towards real-time data analytics, with 29 per cent of respondents planning new data and analytics initiatives within the next 12 months.

However, with nearly half of organisations failing to regularly focus on business-led outcomes in planning projects, there in some cases, remains a gap between the vision and the practical implementation of such initiatives. Our research suggests 3 focus areas for organisations looking to achieve more from their projects.

1) The first is a well-defined strategy for data and analytics. Only 25 per cent of respondents currently have a well-defined strategy; with a further 44 per cent considering their work in progress. Fig. 7.

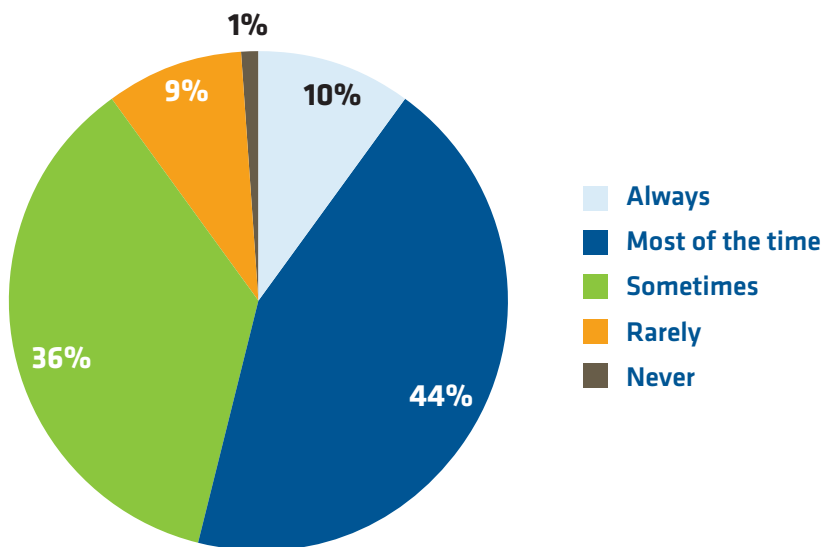
Fig. 7 : Do you have well defined strategy for driving organisational value from data & analytics?



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2) Secondly, is the focus on a clear business outcome. Surprisingly, only 10 per cent of organisations polled were working towards a concrete business outcome, followed by 44 per cent who are doing this most of the time. This leaves almost half saying business objectives are only sometimes the driver behind such projects (Fig. 8).

Fig. 8 : Do data & analytics projects within your organisation focus clearly on a concrete business outcome?



3) Finally, elsewhere in the survey, only 34 per cent said that data governance and management was at the heart of their organisation's project frameworks. This is also a surprise and is perhaps dependant on organisational maturity.

In the main, organisations are creating value through data and analytics. Many of the problems that prevent analytics initiatives from scaling can be mitigated through experience, alongside forward-looking joint responsibility for data and analytics between IT and the business. This experience may be usefully sourced by bringing in outside expertise – as 62 percent of those surveyed have done. For those organisations that are less mature, third-party expertise can help to fill the gaps in experience when undertaking complex data and analytics projects that are frequently beset by contradictory business goals. Meanwhile, for more mature organisations that are already seeing some success, a third party can provide guidance and support in exceeding their current goals, expanding their horizons and optimising for future growth.

About the sponsor, Sopra Steria

Sopra Steria, a European leader in digital transformation, provides one of the most comprehensive portfolios of end-to-end service offerings on the market: consulting, systems integration, software development, infrastructure management and business process services.

Specialising in Data and Analytics, Sopra Steria delivers successful transformation programmes that address organisations' most complex and critical business challenges. Combining high quality and performance services, added-value and innovation, Sopra Steria enables its clients to make the best use of information technology.

We have a strong local presence across the UK with around 6,700 people in locations in England, Scotland, Wales and Northern Ireland. Sopra Steria supports businesses in the full technology lifecycle – from the definition of strategies through to their implementation. We add value through our expertise in major projects, knowledge of our clients' specific businesses, expertise in technologies and a broad European presence.

For more information:

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