eraneos

Study results

Generate Real Added Value
with Data Analytics & AI

Introduction

"Powerful tools from Data Science have created entirely new opportunities for data value creation. Data analytics is more important than ever for the future viability of organizations. But long-term added value only emerges when the use cases are consistently designed along the ‚data-to-value'. Today, this is only accomplished in a minority of organizations."

Christian Mauz, Partner, Eraneos

Christian Mauz
Partner, Eraneos

Jonas Dischl
Head of Data Analytics & AI

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Management Summary

These days, most organizations have access to large volumes of data containing valuable information. A data-driven corporate culture and an organization that is designed with the new requirements in mind produce better, fact-based business decisions, improved processes, happier customers, new services, and much, much more. Data offers a wide range of possibilities for generating real added value.

As part of an independent, international study, Eraneos surveyed companies in every sector of the economy regarding the extent to which they already use data analytics (DA) and artificial intelligence (AI), and what the main value added is for them.

The results of our survey show that many companies have recognized the strategic potential offered by making targeted use of data using data analytics. In practical terms, however, there is still some potential to improve the actual transformation of data into value.

We welcome the fact that as many as 87% of the companies that responded to the survey consider data analyses to be strategically important, and 81% are planning to expand their DA activities further. And that's not all. Most respondents (85%) consider themselves to have a good idea of the possibilities offered by artificial intelligence and machine learning, and see no shortage of ideas for corresponding use cases. But only 66% are also systematically pursuing these ideas, and just 39% of the companies that responded monitor the success of their data analytics solutions on an ongoing basis. The main obstacles reported were workforce skills (cited by 43% of respondents), a lack of tools and technologies (41%), and the quality of data (39%), while only a third of the companies surveyed claimed to lack the corresponding budget.

Data analytics and artificial intelligence are mainly used in the fields of finance, controlling, and planning (by 53% of respondents), followed by sales, marketing, and production (40% each).

In terms of value added, the focus in the finance, transport, and IT sectors is on reducing costs. The manufacturing and retail sectors, on the other hand, are mainly seeking to increase revenue. Respondents in the fields of financial services and IT also see corresponding potential. New, data-based business models involving data analytics are also an issue for many of the companies surveyed (particularly those in the retail sector, service providers, transportation companies, and insurers).

Results and Findings of the Survey
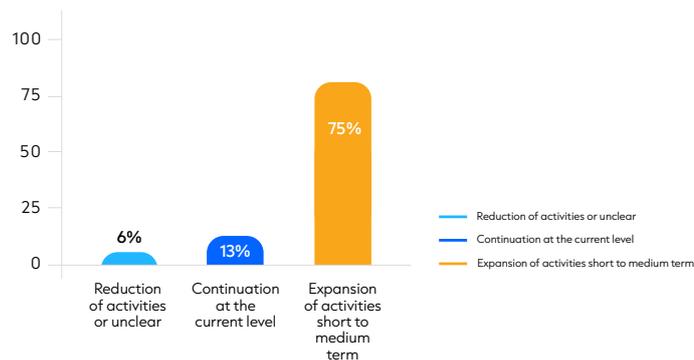
Strategic Significance and Degree of Maturity

Hereafter, the quantitative results of the survey for the individual subject areas are explained and complemented with additional details provided by selected statements taken from our interviews with participants.

→ **What role will data analytics & AI play in the future and where do organizations stand today?**
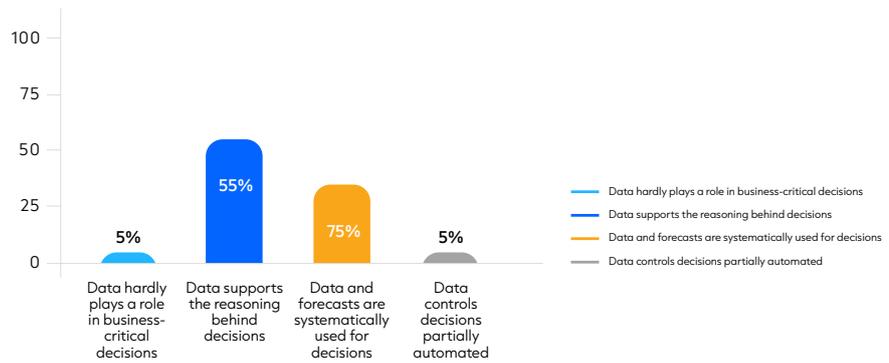The direction in which we are headed is clear. Of those surveyed, 87% stated that data analytics is strategically important for them. That is why 81% of respondents are planning to increase the value they generate from data in the near or medium term. However, many companies lack the necessary benchmarks for this in the form of use cases. Furthermore, 43% of the participating companies do not have the skills or resources required to implement data analytics use cases.

How important is data analytics & AI for the future development of your department/unit?

- Reduction of activities or unclear
- Continuation at the current level
- Expansion of activities short to medium term

How far advanced is your organization or your department currently in the «data-to-value transformation»?

Fifty-five percent of respondents stated that while they base their decisions on data to some extent, data is not (yet) used systematically in the decision-making process. Only 35% of respondents claimed the latter. What is more, just 5% indicated that some of their decisions are made automatically on the basis of data. This is more or less as anticipated, since this level requires a very high degree of maturity as well as suitable use cases, such as dynamic pricing.


Legend:
- Data hardly plays a role in business-critical decisions
- Data supports the reasoning behind decisions
- Data and forecasts are systematically used for decisions
- Data controls decisions partially automated

Fields of Application and Value Added

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How are data analytics and AI used, and what added value do they generate?

In which application areas do you use analytics & AI?

As expected, data analytics is most widely used in departments where the focus is on numbers. Leading the way is finance & controlling with 53%, followed by marketing & sales and production with 40% each. The significant proportion of use cases in IT (39%) is rather surprising. On the other hand, data analytics is still of secondary significance in all sectors in the fields of customer In which application areas do you use analytics & AI? service, quality management, strategy and governance, business development, portfolio and project management, HR, and research and development. Only 20% to 26% of respondents use data analytics in these divisions of their companies. Among the study participants, data analyses are even less important in the fields of security, logistics, procurement, and support.

53%	Finance & control
40%	Sales & marketing
40%	Production
39%	IT
26%	Customer service

0%   20%   40%   60%   80%   100%
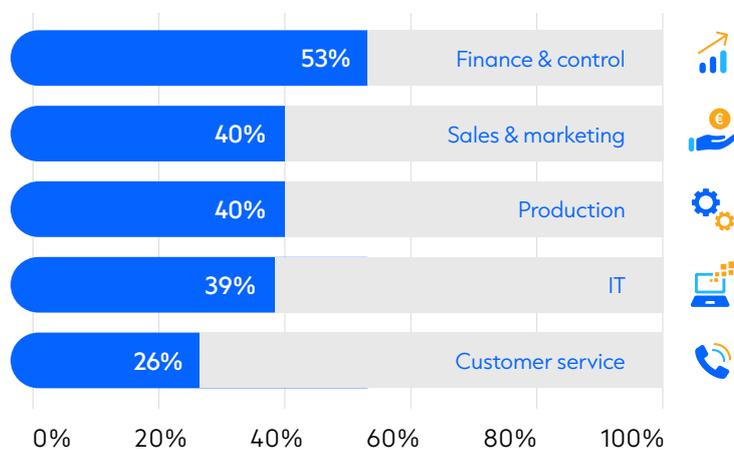
What kind of added value have you been able to achieve so far with the help of data analytics & AI?

40%	Cost savings
39%	Increases in revenue
26%	New Business Models

0% 20% 40% 60% 80% 100%
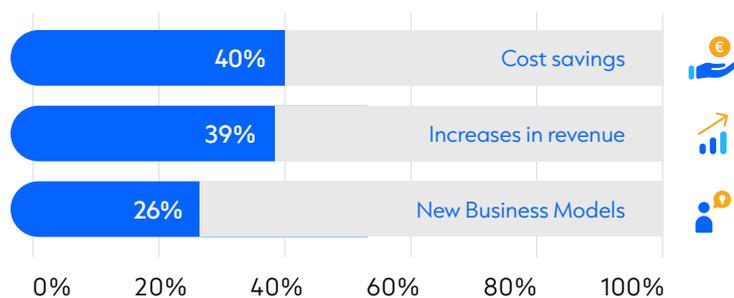
A closer look at the individual sectors reveals different patterns, although, unsurprisingly, finance & controlling always ranks very high.

The banking, insurance, and telecommunications sectors mainly use analytics to increase their focus on the customer and market their products better. One thing that is striking is that banks and insurance providers named «legal & compliance» (20%) and «security» (30%) surprisingly rarely as fields of application.

It is interesting to see that while data analytics is most often used for the purposes of strategy and governance in the public sector, the penetration rate is still low (38%).

Marketing and sales (83%) also come top in the retail sector, ahead of the optimization of logistics (67%).

The study participants are innovative when it comes to the value added that is generated. Although reducing costs (50%) and increasing revenue (44%) come top of the list, 40% of respondents have already used data analytics to successfully introduce new business models.

Establishing new business models on the basis of analytics can be thought of as the pinnacle because it requires a high degree of maturity. This is encouraging, because there are a lot of indications that in the future, the greatest potential for innovation and market volume will be offered by the commercialization of data sets and by the establishment of data-based business models and smart products.

"In the energy sector, innovation cycles are shorter and conditions are changing. In Asset Management, we mainly use data analytics in connection with the determination of capacity and the projection of demand, in order to gain information from a wide variety of sources that can help us make long-term investments in infrastructure."

Nils Beckhaus, Head of Asset Management, EKZ

Organizational Integration

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Where is the topic of data analytics & AI integrated in your organization and how many people work in this area in your organization?
Data analytics teams do not seem to grow in proportion to the size of a company. Unsurprisingly, almost 90% of companies with up to 500 employees have ten data analytics specialists or fewer. What is astounding, however, is that 60% of large companies with up to 5,000 employees also only have a maximum of ten dedicated data analytics experts.

Where is Data Analytics & AI embedded in your organization?
These experts and teams are organized on a decentralized basis across multiple departments at 39% of the participating organizations, in the business units at 23%, and in IT at 18%. Twelve percent of participating organizations have a dedicated analytics department, and 7% carry out data analyses in their innovation and development departments. This highlights the fact that analytics specialists can often be found in individual specialist departments with a strong focus on data, while data analytics issues are worked on in all other departments by IT or a dedicated analytics department.

Decentralized (Combination)	39%
Business units	23%
IT department	18%
Analytics department	12%
Innovation department	7%
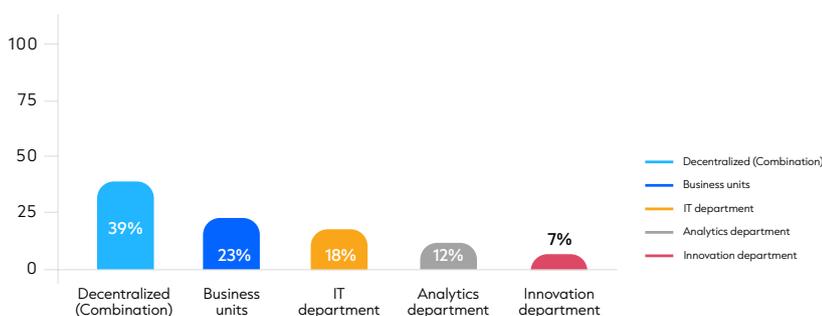
"We maintain a regular dialog between the business side and the ‚New Technology' team. We develop new ideas for use cases in joint workshops. A good, basic understanding on the business side of what analytics methods are capable of is essential in this regard."

Nils Beckhaus, Head of Asset Management, EKZ

"We have dedicated product owners who systematically work through challenges with management. The initial triage process, in which we decide what even qualifies as a machine learning topic, is followed by a pilot initiative."

Michael Hardegger, Lead Machine Learning Engineer, Digitec Galaxus
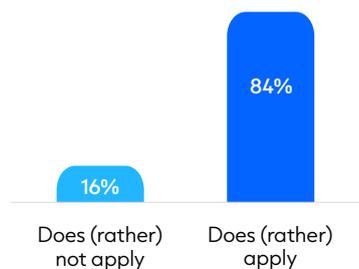
The Phases of Data-to-Value Transformation

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What are the challenges of transforming data into value?
The journey from data to value involves a four-phase process of transforming raw data into valuable information that organizations can use to create business value.
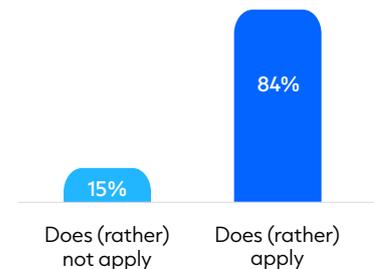
Phase 1: Recognizing Potential
Our survey clearly shows that the potential offered by artificial intelligence (AI) and machine learning (ML) is now much more widely understood than it was just a few years ago. Eighty-four percent of those surveyed indicated that they are aware of the new possibilities of AI and ML. There is also no shortage of ideas for data analytics use cases, as confirmed by 85% of participants in the study. However, only 66% take a systematic approach to the identification of use cases.

We understand the new opportunities that AI and machine learning can open up for us

16%	84%
Does (rather) not apply	Does (rather) apply

We have no shortage of ideas for data analytics use cases

15%	84%
Does (rather) not apply	Does (rather) apply

"Use cases are often discussed on the basis of data or analytics methods. However, this often winds up as starting with a solution and trying to find a suitable problem for it. It is better to start with problems and to use analytics translation to identify possible solutions, and to supplement them with case studies."
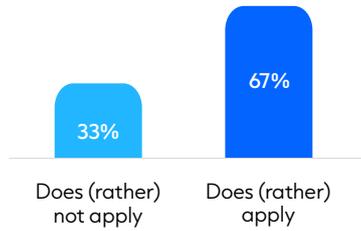
Norman Fiege, Head of Analytics, Innovation & Co-Creation, Siemens
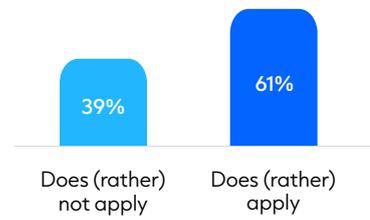
Phase 2: Laying the Groundwork

The absence of a suitable framework is still preventing many companies from putting their ideas into practice. This is because even though data analytics is strategically important to 87% of respondents, only 67% also have budgets for the implementation of corresponding use cases. Other reasons include insufficient availability of the necessary data (39%) and tools (40%). Fortythree percent of participants attribute the slow implementation of use cases to a lack of resources and skills.
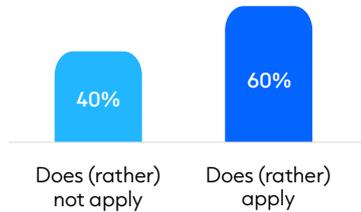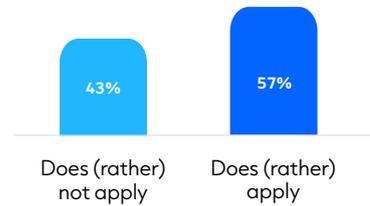
We have a budget

33%	67%
Does (rather) not apply	Does (rather) apply

We have the necessary data in the required quality

39%	61%
Does (rather) not apply	Does (rather) apply

We have the necessary tools and technologies

40%	60%
Does (rather) not apply	Does (rather) apply

We have the necessary resources and skills

43%	57%
Does (rather) not apply	Does (rather) apply

"It is important to have a bridging function between data-related and management matters. This is because neither the strategic standpoint of management alone nor a purely operational perspective is sufficient to get value added out of data for specific situations."

Andreas Grandy, Head of Data Analytics
General Secretariat of the Directorate for Health, Social Affairs and Integration

"Data analytics is not always the same as big data. Sometimes there just aren't huge volumes of data available. We then need to assess what information we can glean from just a few data points."

Roman Slovak, Risk Manager, Swiss Federal Office of Transport

"It is of course important to have data of sufficient quality, but this can only be achieved if those responsible understand what the value added is. We have had good experiences with automated error checking and dashboards that report the condition of data through to the corporate management level."

Nils Beckhaus, Head of Asset Management, EKZ

Phase 3: Evaluating Potential

The findings of the survey reveal that 88% of those surveyed work with proofs of concept before implementing a working solution. But only two-thirds also have a defined process for managing and evaluating their proofs of concept, and reaching a decision on how to proceed. As a result, too many proofs of concept are still abandoned and not pursued through to the operational creation of value (almost 30%).
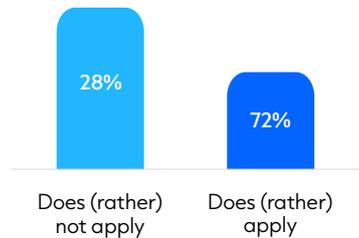
We work with proofs of concept before we implement a solution productively

12%	88%
Does (rather) not apply	Does (rather) apply
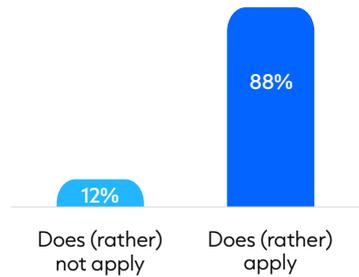
We have a defined process to manage and evaluate implemented use cases and to decide on the further procedure

34%	66%
Does (rather) not apply	Does (rather) apply
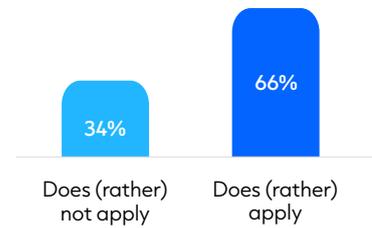
Proofs of concept usually peter out and are not followed through to productive added value

28%	72%
Does (rather) not apply	Does (rather) apply

"To ensure that successful PoCs can be transferred to production and that the appropriate resources are provided, commitment at management level is important. This requires intensive discussions and a demonstration of the added value with solutions that are as concrete and manageable as possible."

Norman Fiege, Head of Analytics, Innovation & Co-Creation, Siemens

"Our machine learning models are often refined or supplemented with business logic by specialists. This combination accounts for the added value."

Michael Hardegger, Lead Machine Learning Engineer, Digitec Galaxus

"Making data available, even if it is not yet perfect, is important in order to make the added value tangible at an operational level."

Nils Beckhaus, Head of Asset Management, EKZ

Phase 4: Implementing Added Value

The good news is that more and more organizations are successfully seeing their data-to-value transformations through to the value-added stage. Among the participants in our survey, 61% have done so, while 40% indicated that they have more than three operational analytics solutions in place. Only 14% have not yet developed any solutions at all through to productivity.

But there is still a lot to do. Sixty-one percent of those surveyed said that technical integration had proved challenging, and represented an obstacle. Almost half (46%) of participants confirmed that they do not have any experience of developing successful analytics proofs of concept through to productive operation. Thirtythree percent of respondents also encounter resistance when it comes to the acceptance of recommendations or instructions based on analytics. The goal should therefore be for companies of all sizes to develop a dataoriented mindset and entrench it among all of their employees in order to make better decisions in the long term.

Around a third of those surveyed stated that they consider proofs of concept to be finished solutions that can be directly applied to production. However, there is a significant risk in this context that issues relating to integration will be overlooked. The study confirms this assumption. Groups that treat proofs of concept as finished solutions without any reservations report encountering almost three times as many problems with technical integration (88%).
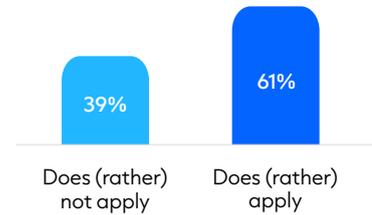
Only 39% measure the value added of productive analytics solutions on an ongoing basis. This shows that while companies have made significant progress on adapting analytics solutions, integration is still an ongoing process in many cases.
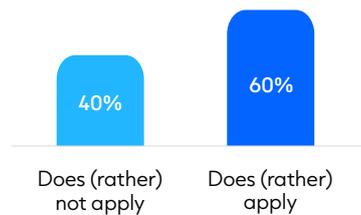
From our point of view, proofs of concept are already finished solutions and can be transferred directly to production

67%	33%
Does (rather) not apply	Does (rather) apply
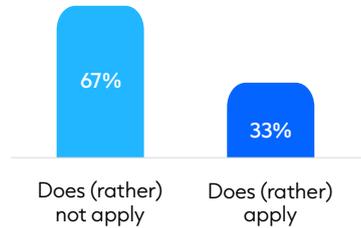
We have transferred several successful proofs of concept to production

39%	61%
Does (rather) not apply	Does (rather) apply

Technical integration is demanding and proves to be a major hurdle

40%	60%
Does (rather) not apply	Does (rather) apply

"It is important to give enough consideration to the change management and technical integration of analytics solutions. Data scientists cannot do the jobs of software developers, and vice versa."

Norman Fiege, Head of Analytics, Innovation & Co-Creation, Siemens

What did we learn from this Survey?

→

1

Despite the fact that 87% of the companies and organizations surveyed consider data analytics to be strategically important, almost 30% of use cases are still abandoned before they generate any productive added value.

2

The possibilities offered by artificial intelligence and machine learning are now much more widely understood than they were just a few years ago, and there is no shortage of ideas for use cases. Nevertheless, inadequate framework conditions such as a lack of skills, tools, and technologies are still preventing many companies from putting their ideas into practice.

3

Companies and organizations that systematically use data in their decision-making processes are still in the minority. At the same time, however, it is clear that almost all respondents are increasingly developing into «data-driven organizations», having recognized the strategic value of transforming data into added value.

Chapter

Recommendations

The data is usually already there!
Most organizations already have a data set that is good enough to start an analysis. The analysis of data and the expansion or improvement of the data set should interact on an iterative basis, and feed into each other.

A major data platform project is not necessary
to get started with data analytics! Centralized data platforms make sense. But they are not a necessity for data analytics. Any organization will no doubt already have interesting data that can be exploited without the need for a central data platform. The successful implementation of the first use cases automatically fuels a hunger for more, and the expense of setting up a data platform becomes easier to justify.

The specialist units must be brought on board!
Extracting valuable information from data requires expertise and a concept of what you want to achieve. Eraneos's data analytics experts apply their expertise to every project, working closely with our clients. By incorporating specialist expertise and taking into account the goals that our clients are hoping to achieve with their data analytics projects, we create data analytics solutions that generate tangible value added.

Analytics translation is a pivotal role that must not be overlooked.
The results of our survey show that there are many different ways to integrate analytics roles into an organization. Analytics translation is pivotal for the consistent identification and implementation of suitable use cases. People in this role understand the challenges and requirements from a specialist point of view, and are able to translate them into analytics issues. If ideas are lacking or use cases are not ideally suited to the creation of value added, this is often due to the absence of analytics translation.

Mission accomplished: start small and consistently work toward added value.
Agile methodologies and starting small are recognized best practices for analytics projects. A targeted focus on the operational rollout of a partially automated solution usually stands more chance of success than a fully automated solution that never makes it into production. However, «start small» also needs to be reflected on and developed into «grow fast.» The resources for development through to a productive solution should already be secured at the start of a proof of concept in order to effectively realize any identified potential.

**Additional information on the topic of our survey can also
be found in our Eraneos Focus «Data Excellence».**

Chapter

Methodology of the Data Analytics & AI Survey

The broad-based survey looks at how organizations from every sector of the economy deal with data analytics and AI. The goal of the survey was to help executives quickly and effectively get to grips with this important topic for the future, and to recognize and exploit the associated challenges and potential for their own organizations.

The study results are based on a survey using a structured questionnaire. In addition, we also looked at the subject areas addressed in more depth by interviewing selected participants. The focus was not so much on the actual data analysis, but rather on the prerequisites that enable the successful extraction of added value from data.

Breakdown of the Participants in our Survey

Our survey was completed by 127 decision-makers and professionals from the private and public sectors. Almost 60% of those who responded are based in Switzerland. The remaining survey participants are based in other European countries where we have projects ongoing. A large number of important market players were surveyed, including large companies with 500 employees or more (65%), and SMEs, which make a substantial contribution to Switzerland's GDP.

Our Consulting Group

Eraneos, with offices in Zurich, Bern, Basel, Lausanne and Luxembourg, is part of an independent international management and technology consulting group. Together with Ginkgo Management Consulting and Quint Group, we serve our clients in Switzerland, Germany, Luxembourg, Spain, the Netherlands, China and Singapore with more than 800 employees.

We know the business requirements and technologies of the future and are supporting digital transformation of organizations from a wide range of industries from strategy to implementation. Our services range from the development of digital business models, data analytics, cyber security and IT advisory to the management of complex transformation projects.

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Experienced in a wide range of industries

Eraneos Group is an international management & technology consulting group that provides services from strategy to implementation. It has emerged from the alliance of Ginkgo Management Consulting, Quint Group, and AWK Group, as announced in 2021. The Group serves clients across three continents where some 1,000 dedicated and highly skilled professionals work jointly to unleash the full potential of digital. Services range from the development of digital business models and data analytics to cyber security, and from sourcing and IT advisory to the management of complex transformation projects. Eraneos Group has offices in Switzerland, Germany, Luxembourg, Spain, the Netherlands, China, Singapore, and the USA. In 2021, Eraneos Group realized a turnover of close to 200m EUR.

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