

**ANALYTICS
ADOPTION**
Reengineering
Decision-Making

Research Report

June 23



CIONET
What's next.



cognizant



Contents

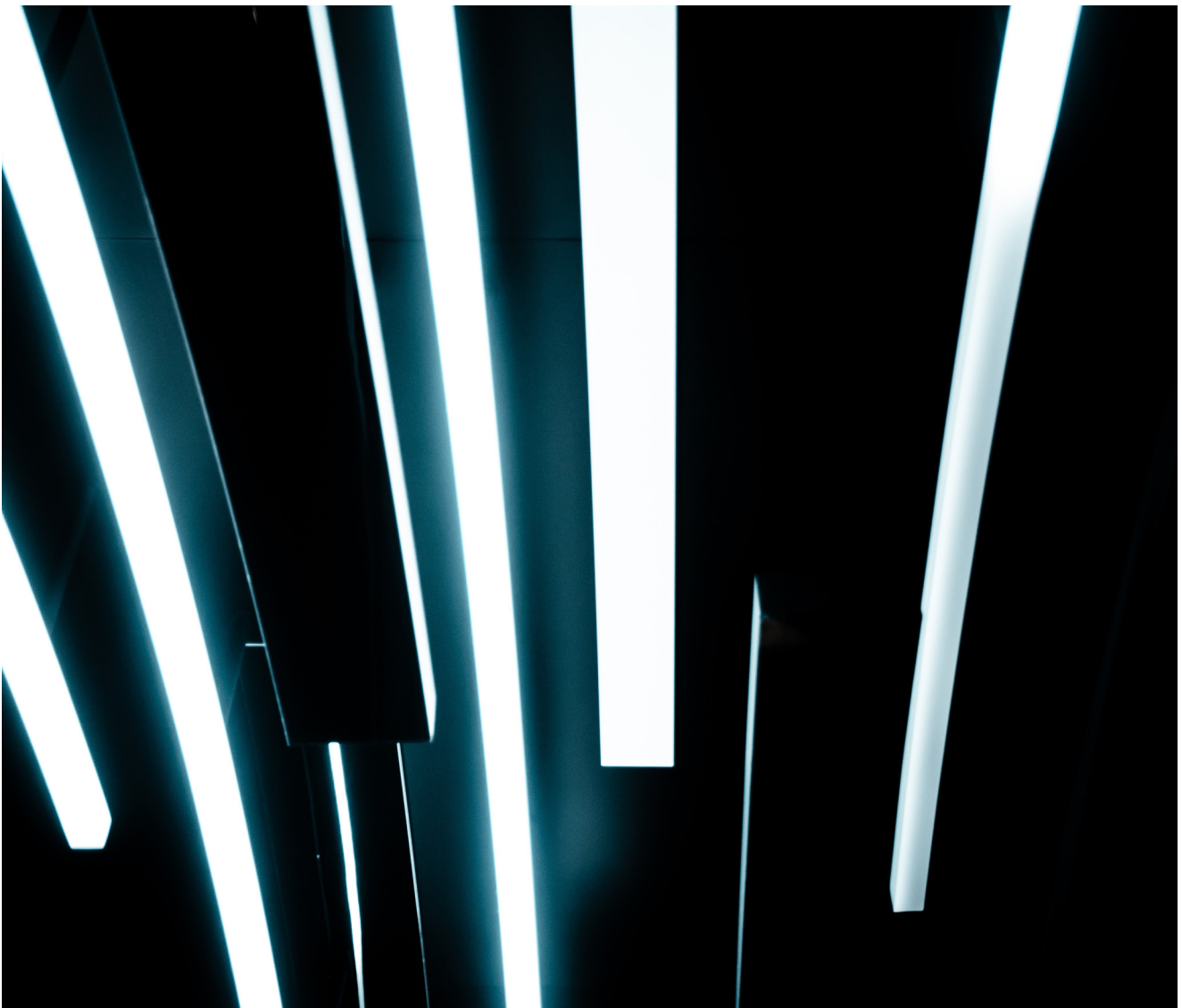


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Organisations embracing analytics achieve more



Organisations strive to gain maximal value from technology acceleration and ways of working supported by intense analytics. The CIO needs to inspire and enable his organisation to drive change and adapt to the new ways of working. Establishing this analytics organisation culture will create a use case driven value engine.



Executive Summary

In today's data-driven world, organisations must embrace analytics to unlock unprecedented value and gain a competitive edge. This study explores the adoption of analytics and its implications for delivering business value. It sheds light on the vital role of the CIO and/or CDO, the challenges they face, and the shift from technology-centric to business-centric approaches. By extracting actionable insights from analytics, organisations can make informed decisions and drive strategic planning.

Our study defines analytics as the extraction of actionable information from data, enabling informed decisions and strategic planning. With the right analytics techniques, organisations can uncover patterns and trends that lead to valuable insights and success.

Through our research, we have identified five key findings:

- 1. The Paramount Role of the CIO:** The CIO plays a crucial role in driving analytics adoption and adapting to new ways of working. They clarify the future state, foster collaboration, and serve as catalysts for transformative change.
- 2. Prioritising Business Value:** By prioritising business value over technological enhancements, organisations can achieve heightened efficiency and reap abundant gains. Cross-functional teams, with expertise spanning AI, IT, and subject matter, are key to delivering use cases effectively and achieving success.
- 3. The Analytics-Driven Culture:** Establishing an analytics-driven culture, where technology and human potential converge, unlocks the true value hidden within analytics. This convergence leads to superior results, benefiting customers, shareholders, and employees. Clear guidelines are essential to ensure flexibility and harmony within the organisation.
- 4. Maximising Analytics Capabilities:** To maximise analytics capabilities, organisations must consider four streams: establishing a common analytics infrastructure, attaining governance autonomy, maintaining data quality, and promoting the value embedded within the data. By embracing the idea that data quality is a means to an end, organisations can drive organic growth in analytics-driven decision-making.
- 5. Embracing a New Way of Working:** Embracing collaborative analytics and informed decision-making becomes imperative for organisations seeking to unlock the untapped potential of their data. This seismic shift requires cultural transformation, relentless stakeholder engagement, and the recognition that reengineering decision-making is essential in the face of complexity.

In conclusion, organisations must embrace the power of analytics adoption to thrive in the data-driven era. By aligning strategies with the findings of this study, organisations can unleash the untapped potential within their analytics and drive successful transformation. Let's embark on this journey, leveraging good enough, intensifying enthusiasm, and combining human and artificial intelligence to achieve actionable insights. Let's create a data-driven revolution that reshapes the future of our organisations and propels us to unparalleled growth and success.

Introduction on the research



In today's fast-paced business landscape, where technology acceleration and intense analytics drive success, executives are keenly aware of the pivotal role played by the CIO. As the driving force behind inspiring and enabling organisational change, the CIO allows your company to adapt and thrive in this analytics-driven era. By fostering an analytics organisation culture, the CIO has the power to create a formidable value engine fuelled by real-world use cases.

Data has become the lifeblood of successful organisations, offering invaluable insights into consumer behaviour, market trends, and internal operations. It holds the potential to revolutionise decision-making across your entire business, from enhancing customer experiences to optimising processes for efficiency and sustainability. However, bridging the gap between the potential of analytics and actually harnessing it effectively remains a significant challenge for many organisations. To extract true business value from your data and analytics strategies, a new breed of leaders must emerge. CIOs and analytics pioneers, including Chief Data Officers (CDOs), possess the vision and expertise to create compelling value propositions for data and analytics. They align these propositions with mission-critical business priorities and strategic objectives, ensuring that efforts directly contribute to driving tangible outcomes. The insightful guidance provided in IDC's (International Data Corporation) January 2023 report on creating a Three-Year AI/Automation Technology Road Map can serve as a valuable resource in this endeavour.

Our study, influenced by Gartner's ground-breaking research in 2022 on optimising business value from data and analytics investments, reinforces the importance of prioritising business value over technological enhancements. By focusing on business value, organisations can meet analytics delivery demands efficiently. In contrast, those burdened by monolithic data systems experience significant delays in their analytics delivery capabilities. Furthermore, our study revealed that successful organisations structure their AI use case delivery around cross-functional teams comprising individuals with

expertise in AI, IT, and the relevant subject matter. This approach ensures a harmonious blend of competencies that unlocks the true potential of AI-driven insights and innovations.

Our study revolves around several crucial themes that shed light on the adoption of analytics and its direct impact on delivering business value. To design our study, we embarked on a journey that began by acknowledging the fundamental importance of analytics and the presence of technology infrastructure within organisations. Recognising that analytics is the driving force behind decision-making processes, we explored a series of vital questions. By exploring these critical areas, our study aims to provide you with actionable insights and practical recommendations that empower your organisations to thrive in the analytics-driven era.

In our study we have focused on several aspects of analytics adoption. Firstly, we discussed the **role of the CIO**. Within an analytics-driven organisation, the CIO plays a central role in the adoption of analytics. We delve into the challenges they face and how analytics can be effectively leveraged within your organisation. We also zoomed in on the **decision-making processes**, examining how decision-making processes are structured, focusing on connectivity, contextuality, and continuity. Organisations must strike the right balance between augmentation, support, and automation in their decision-making activities. Understanding the most effective approach for different situations is crucial.

Subsequently we explored the **existing data platforms and analytical capabilities** within organisations. Integration of decision models, orchestration, governance, and learning is key to establishing a comprehensive analytics landscape.

Lastly, we delved into the **organisational culture and capability** surrounding data, focusing on effectively connecting technology and people.

The study was conducted using in-depth interviews with a sample of the CIONET Belgium community. The table below shows the list of interview participants.

Figure 1 – Sample of the CIONET Belgium community

Account	Name	Function Title
Agfa	Ive Callaerts	Global Head of IT Strategic Planning, Innovation & Enterprise Architecture
Bank J. Van Breda	Burt Vertongen	IT manager
Belfius	Pascal Guffens	Head of Data, Finance, Risk & AI
Bridgestone	Bart Kerkhofs	VP & Head of IT
Corona Direct	Bart Smets	CIO
Etex Group	Bert Schoofs	Global Head of IT Applications
Euroclear	Pierre Delville	CDO
Eurocontrol	Enrico Vigliani	CTO
Fluvius	Kristel Verwaest	ICT architecture, security & digital innovation
Gaming1	Steve Caulier	Delivery Director
Imec	Wim Vancuyck	ICT Data Architect
KBC Group	Dr. Barak Chizi	Chief Data and Analytics Officer
Melexis	Piet De Ceuleners	IT Business Solutions Manager
Milcobel	Robert Moeyens	ICT Director
NN Belgium	Tom Nauwelaerts	CIO
Proximus	Laurent Mons	Head of Data Governance & Quality
Proximus	Steven Pals	Head of Data Architecture & Transformation
Randstad Group	Günther Ghijssels	CDO & CIO
SD Worx België	Geert Peeraer	PMO, SMO, CI Manager
SD Worx België	Jurgen De Jonghe	Portfolio Manager Group/Data
Securex	Jocelyn Darbroudi	CIO
Umicore	Joris Peeters	CIO
Unilin	Jan De Witte	CIO
Vandemoortele	Benoit Dewaele	CIO & Group IT Director
Vivaldis Interim	Michael Moens	Digital Strategy Manager
Yara	Tom Wuyts	VP Digital Technology Europe
Yara	David Van Damme	VP Digital Technologies Americas

Embrace the power of analytics adoption

Analytics adoption has become a game-changer across industries, enabling self-service business reporting and data visualisation through tools like PowerBI and Tableau. Encouraging their use at all levels and departments has become standard practice. However, insights often face delays due to manual data collection and integration.

Our study revealed **distinct levels of analytics maturity**, ranging from companies just beginning to embrace data strategies to industries that have long utilised analytics for decision-making. While most participants take a reactive approach to analytics, a select few are pioneers, pushing the boundaries of predictive decision-making through machine learning and AI. These trailblazers adopted analytics over five years ago, leading to transformative outcomes.

During the implementation of a shared infrastructure, all participants established **analytics support teams** either horizontally or vertically. Horizontal teams serve the entire company as a cohesive unit, while vertical teams cater to specific departments. In both cases, these teams are entrusted with ownership, championing the untapped potential of analytics and driving change management. They become active agents of change, showcasing the remarkable benefits of an analytics-driven approach. Moreover, they promote knowledge sharing by disseminating analytics use cases across diverse business domains and communicating new features and guidelines.

Challenges arise in both horizontal and vertical team structures. Vertical teams within departments must maintain a holistic view that extends beyond their own purview, encompassing the entire organisation. Conversely, horizontal teams may face difficulty in gaining recognition for the inherent value of analytics across various domains.

1

Horizontally: face difficulty in gaining recognition for the inherent value of analytics across various domains.

2

Vertically: maintain a holistic view that extends beyond their own purview, encompassing the entire organisation.

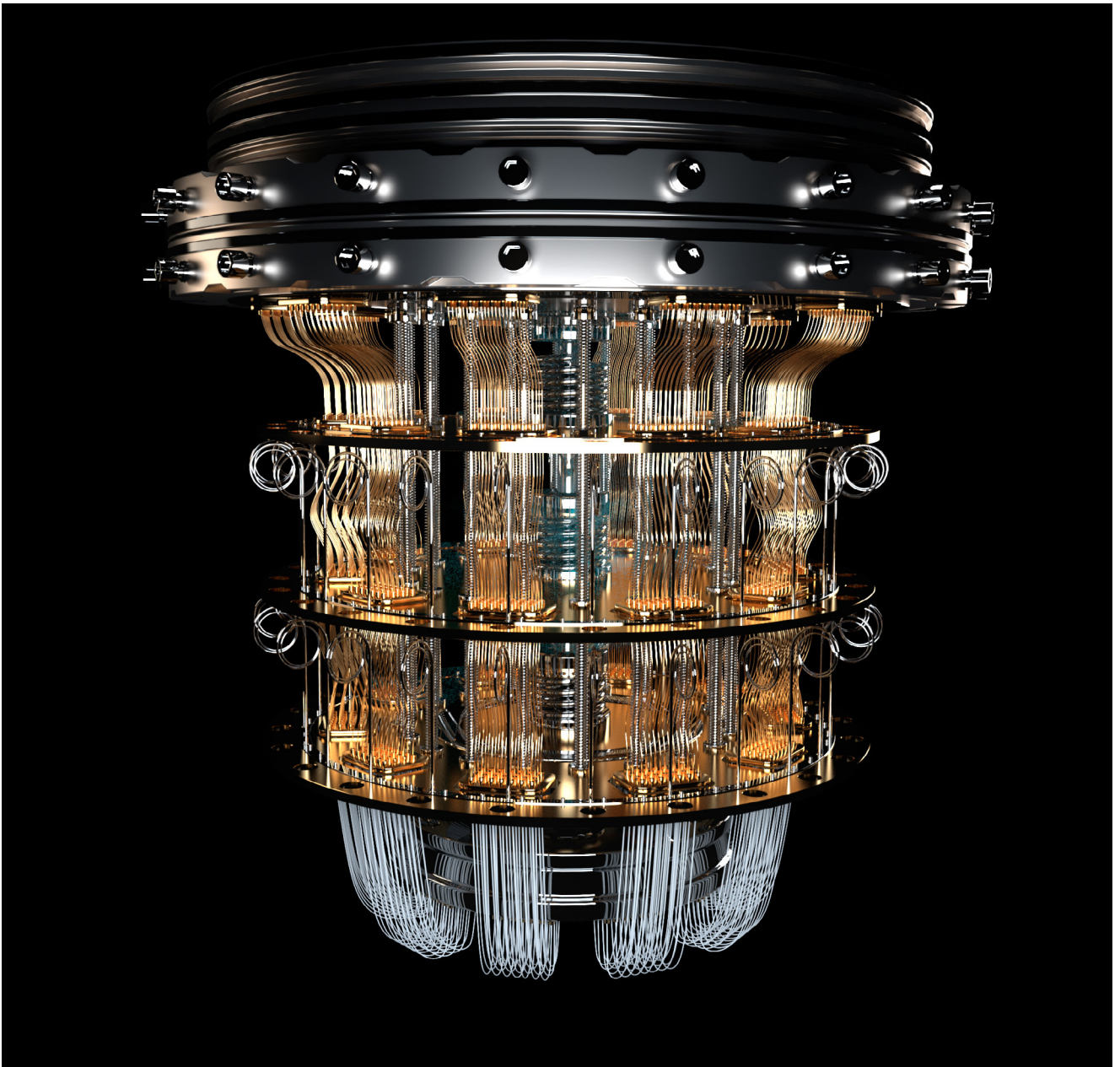
While **self-service analytics** empowers users, it often leads to significant duplication of analyses, data marts, reports, dashboards, and KPIs. To address this, companies are establishing **robust analytics governance frameworks**, defining a common glossary, and enhancing data literacy among key users. In mature companies, restrictions are placed on analytics CRUD (create, read, update and delete) rights to ensure less frequent updates of data products, allowing only individuals deeply experienced in data to make changes. A mindset shift has occurred, emphasising reusability and extracting value from existing data products. Additionally, the introduction of a data governance tool

mandates metadata and documentation requirements when creating new data products, fostering transparency and traceability. This approach enables each business domain to take ownership of their data, reporting, and data quality.

Proximus highlighted the importance of streamlining decision support by reducing waste, eliminating duplicate data marts, and promoting the use of certified master data and datasets. Meanwhile, Etex shed light on variations in results across production facilities due to disparities in process and transaction handling, emphasizing the pivotal role of analytics in aligning operations.

“ *To some extent, an overload of data can be harmful to the business.* **”**

As Vivaldis aptly stated



Pave the way for analytics

In our study we identified **four data platform key streams** that can enhance analytics adoption.

1

The **first stream revolves around establishing a common data infrastructure**, predominantly residing in the cloud. This infrastructure serves as a centralised hub, collecting data from various channels and sources such as legacy systems, ERP, AI-driven systems, and customer data. To ensure efficiency, the data is categorised into different zones, organised based on specific use cases or business domains.

2

The **second stream focuses on governance autonomy and data ownership**, distributed vertically across business domains or specific use cases. Empowering these business domains as data owners and stewards enables them to establish their own policies, including metadata management, master data definitions, and data access. This approach promotes consistency and autonomy in decision-making, allowing each domain to optimise reference data, data models, and data architecture. While granting autonomy, it's crucial to invest in data literacy and provide necessary training to empower these domains effectively.

3

The **third stream emphasises the importance of data quality**. Data engineers play a pivotal role in distilling, cleaning, and curating raw data, creating "certified datasets" with consistent definitions. It's important to note that pursuing "perfect data" should not be the ultimate goal. Rather, the focus is on utilising existing, actionable data. For instance, a next-best-action marketing campaign does not necessarily require perfect data; it thrives on leveraging available data to drive meaningful results.

4

The **fourth stream centres around communication and promotion of data value**. Small-scale use cases have proven to be an effective way to engage stakeholders and ignite enthusiasm. Many organisations have adopted a top-down approach, showcasing tangible benefits to inspire action and foster a snowball effect of analytics-driven decision-making. Interestingly, decentralised vertical teams, tailored to specific business domains, have generated a higher number of pull requests for use cases compared to horizontal teams. This approach accelerates the organic growth of analytics-driven decision-making within the organisation.

By aligning your strategies with these streams, your organisation can unlock the full potential of analytics-driven decision-making. Embracing an analytics-centric culture and empowering business domains to take ownership of their data will result in more informed and impactful decision-making processes. The success of analytics adoption lies in the ability to understand, inspire, and add value to the end users. It's about intensifying focus on the "what's next" and prioritizing optimisation rather than striving for perfect data. By creating human-centric analytics products, enthusiasm will grow and empower citizens to pull the insights they need.

Get the right analytics mindset

In today's ever-changing business landscape, organisations are realizing the immense value of analytics and the need to revolutionise their decision-making processes. CIOs and CDOs have long understood the significance of analytics in driving business success and have been championing analytics-driven approaches within their organisations.

Our study identified three key recommendations to propel the success of analytics adoption:



Embrace Simplicity: Rather than fixating on data perfection, organisations should shift their focus to the "what's next" and actionable insights. By optimising our efforts and resources, you can unlock tremendous value.

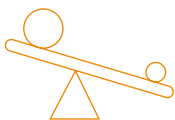


Foster Better Adoption: The key to success lies in designing analytics products with a human-centric approach. You want to inspire and empower your stakeholders to become enthusiastic data citizens, eagerly pulling insights from the data. To achieve this, we need to establish a new operating model that fully supports this cultural shift.



Value is the Driver: To accelerate adoption, we must place a strong emphasis on value stewardship. This involves clearly defining and categorising our value ambitions, differentiating between regulatory requirements and those that directly serve our business objectives.

Our study found three strategies to put these recommendations into action:



Intense Pursuit of Value: By leveraging the concept of "good enough," we can engage in an intense game of delivering value. Recognising that actionable insights can be derived without chasing perfection allows us to optimise our efforts and deliver tangible results.



Ignite Enthusiasm: Creating a pull effect for analytics-driven decision-making requires inspiring our stakeholders and fostering a sense of excitement. This can be achieved through effective communication, comprehensive training, and showcasing success stories that demonstrate the transformative power of analytics.



The Perfect Blend: To unlock the true potential of our analytics, we must combine the strengths of both human and artificial intelligence. By leveraging the unique capabilities of each, we can generate actionable insights that drive informed decision-making.

Transforming decision-making processes requires a holistic approach encompassing cultural transformation, change management, and effective collaboration. Overcoming resistance to change and strengthening collaboration are essential to break free from traditional cycles and enable analytics-driven, holistic decision-making. To effectively implement new ways of working, we have discovered that organisational agility is paramount. The ability to adapt and introduce analytics as a common thread throughout the organisation is crucial. In the current technology-driven landscape, agility is the key to success. Analytics is not a static element; it constantly evolves and provides valuable guidance for improved decision-making and future evaluations.

Motivation and effective leadership are vital components for success. By removing obstacles and celebrating small victories, an environment that fosters analytics-driven decision-making arises. Providing easy access to important data, establishing communities of users, and creating centralised information hubs are proven strategies for knowledge transfer and continuous improvement.

Organisations face the formidable challenge of reengineering their decision-making processes. The integration of analytics is pivotal in enabling timely and informed decisions, which are essential for achieving success in today's dynamic business landscape.



Enhance decision-making in a changing landscape



Decision-making processes have evolved in response to the changing and complex business landscape. Today, decisions are interconnected and can have wide-ranging impacts on organisations and their ecosystems. To make well-informed decisions, it is crucial to maintain situational awareness and consider all relevant factors. Additionally, organisations should explore opportunities for automated decision-making in appropriate areas, while ensuring personalised decision-making when interacting with customers.

In our study, we examined three levels of reengineering decision-making processes. The participants unanimously recognised the benefits of incorporating analytics into decision-making. While full predictive automation is not widely implemented, many organisations have plans to integrate it in the future. The level of automation varies based on factors such as the risk associated with a bad decision, the decision's impact, and the involvement of customers. Automation is more cautious in high-risk situations and when customer involvement is critical.

Automation has proven beneficial in scenarios such as routine claim handling in the insurance industry, where it reduces human effort and improves throughput. However, exceptions in claim handling still require human intervention to ensure accurate context. Similarly, in manufacturing, automated decisions are made to halt production when quality deviations are predicted. Meanwhile, human resources departments use tools to match profiles to job descriptions automatically, although human confirmation is preferred for better candidate responsiveness.

Concerns about bias in automated decision-making were also discussed. Bias exists in human decision-making as well, but machine learning and AI can be trained on high-quality representative datasets to minimise bias. The objective is to achieve unbiased decisions by combining human and artificial intelligence, while ensuring explainability.

Enabling decentralised decision-making is crucial for organisations to adapt to an agile and responsive way of working. Our study identified a growing trend towards decentralisation and leveraging analytics for relevant decision-making. Empowering employees is fundamental to the successful adoption of analytics. While the CIO facilitates the necessary technology, they also play a vital role in driving analytics adoption beyond data literacy.

Organisations in different sectors have successfully embraced analytics in decision-making. For instance, manufacturing benefits from improved situational awareness through analytics, enabling engineers to make more informed decisions. Call centres utilise a 360-degree view of customers, empowering agents to provide improved experiences and make better decisions during interactions. Sales teams receive real-time reports and recommendations to enhance customer results. Decentralisation of decision-making revolves around the value it brings to individuals in their daily tasks, expediting the adoption process.

Streamlining decision-making processes and refining them differ across industries. Organisations within the same industry may adopt distinct approaches based on the nature and scale of operations or how humans interact with the decision-making process. For example, automation is more prevalent in sectors like telecommunications, while sectors like banking have specific measures to reduce operational and regulatory risks.

In conclusion, organisations must embrace analytics-driven decision-making in a dynamic landscape. They should explore opportunities for automation while ensuring personalised decision-making when interacting with customers. Decentralisation of decision-making and empowering employees is key to successful analytics adoption. Each industry has its unique requirements, and organisations should prioritise value creation throughout the data and analytics supply chain.

Maximise value through analytics-driven transformation

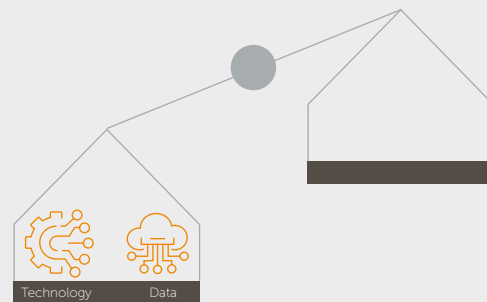


CIOs play a pivotal role in leading organisations through the journey of analytics adoption. To ensure success, CIOs must strike a balance between integrating technology and fostering a culture immersed in analytics. This equilibrium requires constant attention to maximise the benefits derived from analytics and propel the organisation forward.

Here is the journey CIOs guide their organisations through to foster analytics adoption:

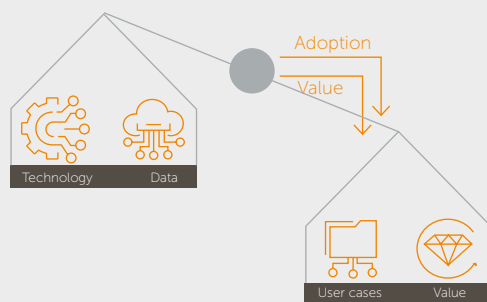
The Starting Point

CIOs provide the necessary technology and data resources that enable the organisation to embrace a new way of working. By modernising the data platform and leveraging AI solutions, CIOs lay the foundation for analytics transformation.



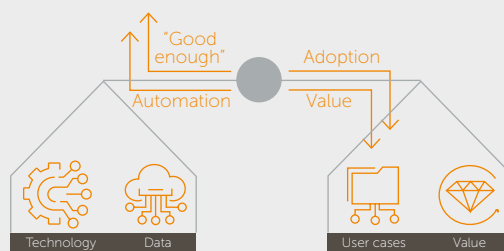
The Turning Point

CIOs take the lead in communicating the value of analytics at various stages of its lifecycle. They play a crucial role in driving awareness and promoting the benefits of analytics adoption throughout the organisation.



The Balancing

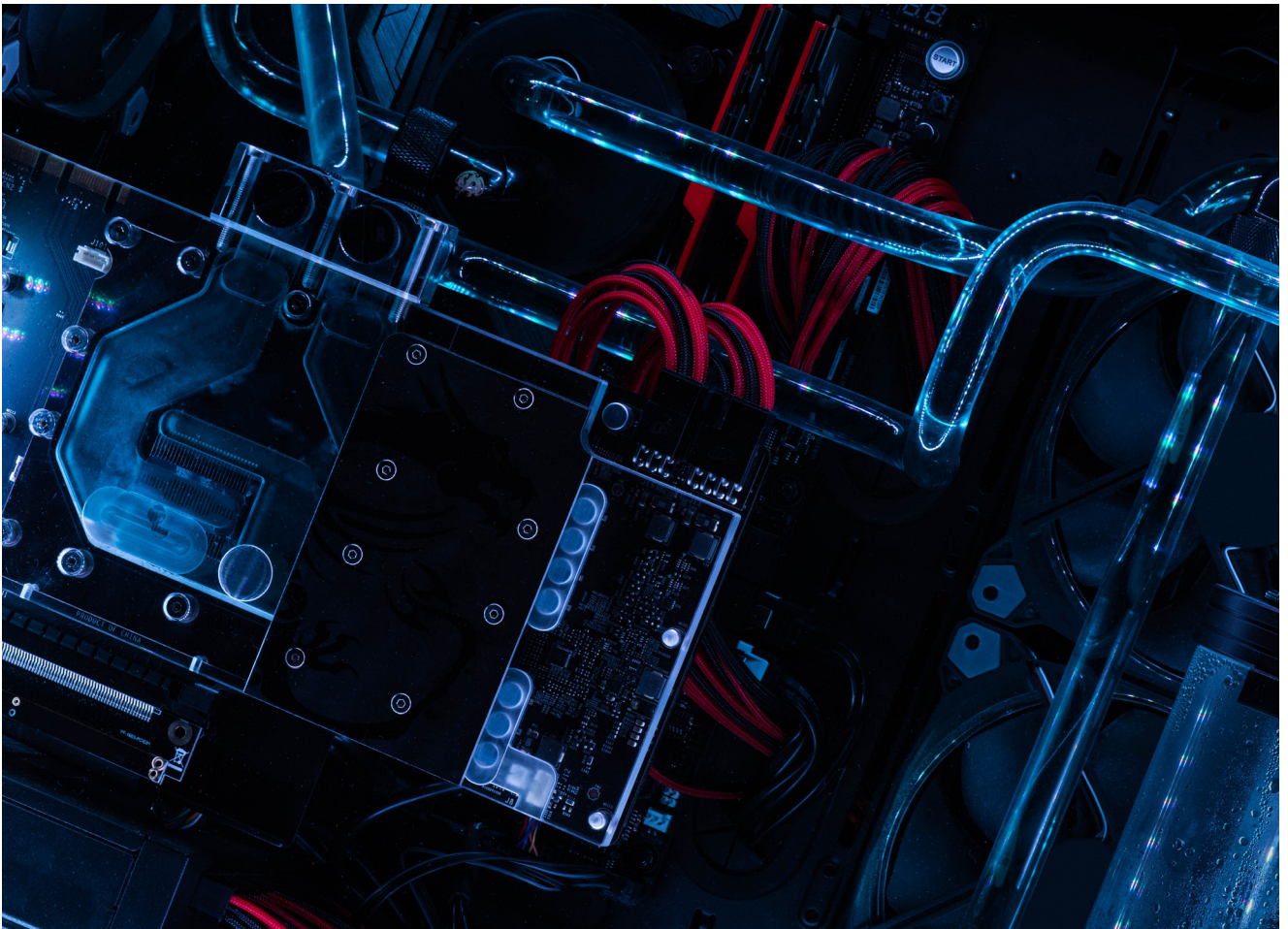
As analytics adoption gains momentum with the emergence of new use cases, CIOs must foster automation and embrace a "good enough" mindset. Maintaining a delicate balance between the elements that enable and accelerate analytics becomes essential.



Throughout this journey, four key factors emerge as drivers of successful analytics adoption and value maximisation within organisations. These factors provide valuable insights for the implementation and optimisation of analytics initiatives:

- **Encourage Self-Service for Wider Adoption:** Organisations that transition to self-service analytics witness higher adoption rates. By shifting from a push model, where the CIO initiates analytics adoption, to a pull model, where the organisation actively seeks out analytics insights, new business use cases are unlocked. Key consideration to emphasise the adoption even more is the human centric design of the analytics.
- **Discover the Value Supply Chain:** Recognising the business value at each stage of the analytics supply chain accelerates adoption. From maintaining data quality to utilising advanced machine learning algorithms, every step contributes to overall value creation. Acknowledging and commending the contributions of those involved in the analytics supply chain is vital to drive success.
- **Strive for the Best Human-AI Blend:** Combining human expertise with AI capabilities empowers organisations to make informed decisions efficiently. While AI excels at analysing large datasets and uncovering hidden insights, human intuition and judgement remain invaluable. Finding the optimal balance between human and artificial intelligence for different scenarios is crucial. CIOs should champion a culture of collaboration between humans and AI throughout the organisation.
- **Embrace a 'Less is More' Philosophy:** Aligning different aspects of analytics solutions is key to their creation, deployment, and scalability. Avoiding data discrepancies and wastage requires a focus on reusing and thoughtfully designing data marts and products. Prioritising value over perfect data quality allows organisations to derive insights from existing data. Clear definition and assignment of data stewardship roles within the organisation ensure effective data governance and quality.

By following these recommendations, organisations can unlock the full potential of analytics adoption and create a data-driven culture that drives success. With CIOs leading the way, organisations will thrive in the era of analytics and achieve unparalleled growth and value.



About the authors



Bart Moens
AI & Analytics Director

Bart is a data and analytics promotor with a mission to turn data into value. He holds a Master of Science in Statistical Data Analysis from the University of Ghent and has more than two decades of experience in the data area. His focus is on enabling data literacy and ignite data enthusiasm within organisations. He is a true believer in the power of combining human and artificial intelligence to achieve maximum results.



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With a degree in industrial and organisational psychology, Nicolas has accumulated more than ten of experience in developing people management strategies, including organisational change, performance management, organisational development and organisational design in various industries. Nicolas' passion is integrating people, business processes and technologies by translating changes into opportunities.



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Quentin holds a degree in business management and a post-graduate in business analysis. He is a digital transformation consultant with a strong background in the financial services and automotive sectors. He specialises in Business Analysis and Project Management to guide companies in their digital transformations and towards to improved and more performant IT-systems.

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“ The harmonious blend of human wisdom and artificial intelligence paves the way to remarkable business outcomes. ”

Bart Moens, Director Analytics and AI at Cognizant





About CIONET

CIONET is the leading community of IT executives in Europe and LATAM. With a membership of over 7000 CIOs, CTOs and IT Directors, CIONET has the mission to help IT executives achieve their aspirations. CIONET opens up a universe of new opportunities in IT management by developing, managing and moderating an integrated array of both offline and online tools and services designed to provide real support for IT executives, so they can do more than just keep up with change but ultimately define it.

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