

Transform or be left behind:

Winning the Data Analytics race
of transport & logistics



Content

Discover the game changer: How data is your key to winning in the logistics arena	03
Stuck in neutral: The technical roadblocks holding back your success	04
The shift towards business-led digitalization	05
The rise of GenAI: A catalyst for transformation	06
The blueprint to drive your logistics business forward with data	07
Case studies and best practices	08
Conclusion: The time for digital transformation is now	10
Contact	12

Discover the game changer: How data is your key to winning in the logistics arena

In the rapidly evolving transport & logistics sector, data has emerged as a gamechanger. It is empowering companies today to gain competitive advantages in a crowded marketplace.

This whitepaper explores the importance of adopting a business-centric approach to data analytics. It helps you to look beyond conventional approaches, in which data analytics is siloed within your company's IT or data departments. Effectively leveraging data goes beyond collecting and analyzing. The key is to apply your data strategically and in line with your strategic vision. This approach ensures that data analytics support and drive decisionmaking processes, optimizing operations, enhancing customer experiences and ultimately helping to grow your market share.

As the industry shifts toward an accelerated digital landscape, it's more important than ever to integrate online and digital services into your business strategies. This also requires a shift in how you think about data and digitalization. It's important to recognize that ownership of digitalization should lie with your business units. They must each be equipped with the right digital and data capabilities to achieve their overarching goals.

In the sections below, we'll help you explore what this shift means for your business. It offers practical insights and strategies to help you harness the full potential of data analytics for your business.



Stuck in neutral: The technical roadblocks holding back your success

The transport & logistics sector faces major challenges in fully leveraging data analytics. This is largely because many companies in the industry still rely heavily on their IT and data departments to develop and manage data related activities.

This traditional approach often leads to complex long-term projects that deliver little to no short-term business value. No matter how technically sound these projects are, they will never provide real opportunities for optimization and growth if they are not properly aligned with your organization's strategic goals and operational needs.

Ideally, technical developments should work hand in hand with the business side of your organization. This results in practical use cases, where technology can help you make better decisions and come up with innovative solutions. Unfortunately, many organizations lack a unified, pragmatic vision for integrating all their business units into their digital transformation, which results in a fragmented approach. This presents a major roadblock to progress. It slows down the timeline for implementing digital, data-driven projects and pulls valuable resources away from the areas where you could immediately generate quick wins for your company's bottom line.

To make matters worse, this isolated approach to managing your data prevents your company from swiftly responding to market changes. In an era where data is leading, the ability to quickly translate data insights into actionable business strategies is crucial. The current conditions within the transport & logistics sector – in which technical obstacles and departmental silos are the norm – undermines agility and competitiveness throughout the industry.



The shift towards business-led digitalization

In response to the challenges described above, the transport & logistics sector is now witnessing a pivotal shift towards business-led digitalization. This strategic shift means companies are giving their business units direct ownership over digital and data analytics initiatives. This is because they recognize that business units are better positioned to align digital projects with the company's strategic objectives and operational needs. As a result, digitalization contributes more directly to adding business value, instead of being confined to technical achievements with limited immediate impact.

This business-led approach gives organizations a more agile, responsive digitalization strategy, in which decisions and projects are driven by business needs and opportunities rather than technological capabilities alone. It empowers business leaders to take ownership of digital initiatives, fostering a culture of innovation and rapid adaptation to market changes. In addition, this shift promotes a collaborative environment in which technical and business teams work together towards common goals, breaking down silos and sharing expertise.



The rise of GenAI: A catalyst for transformation

Generative AI (GenAI) technologies are setting the stage for a major transformation in the transport & transport sector. GenAI leverages sophisticated methods to generate text, analyze data and automate tasks that traditionally required human intervention or extensive teams of specialized personnel.

The importance of GenAI in this sector cannot be overstated. Transport & logistics involve a myriad of text-intensive tasks ranging from scheduling and routing documentation to regulatory compliance and customer service communications. Traditional approaches to managing these tasks are often labor-intensive, involving large teams and significant time investments.

GenAI is now revolutionizing these key business functions. It is capable of handling these processes with unprecedented ease and accuracy, significantly lowering the amount of human labor they require. This streamlines operations while also opening up new avenues for optimization and service improvement that were previously deemed challenging or unattainable.



The blueprint to drive your logistics business forward with data

The business-led digitalization approach offers many benefits, including faster project turnaround times, more efficient resource allocation and the realization of tangible business outcomes. By embedding digitalization throughout your business, your company can achieve a more integrated, strategic application of data analytics. This enhances your competitiveness and puts you on a path for future growth.

To navigate the shift towards business-led digitalization effectively, organizations in the transport & logistics sector must adopt certain strategies and frameworks that facilitate the integration of data analytics into business operations. Central to this approach is fostering a culture of collaboration between technical and business units, ensuring that data analytics initiatives are directly aligned with business goals.

01.

Establish cross-functional teams: Create teams composed of members from both technical and business backgrounds to ensure projects are approached with a holistic view, blending data expertise with business insight.

02.

Define clear objectives: Align data analytics projects with specific, measurable business objectives, ensuring that every initiative has a clear purpose and expected outcome that contributes to the company's strategic goals.

03.

Adopt agile methodologies: Implement agile project management practices to allow for flexibility and rapid iteration, enabling projects to adapt quickly to changing business needs and market conditions.

04.

Focus on data literacy: Invest in training programs that enhance data literacy across the organization, empowering business users to understand and leverage data analytics in their decision-making processes. This also helps your teams adapt to changes with greater resilience.

05.

Implement shared KPIs: Develop key performance indicators (KPIs) that reflect both business and technical success, ensuring both sides are working towards common goals and can measure the impact of their efforts.

By embedding these strategies throughout your operations, your organization can ensure that its data analytics initiatives are more closely aligned with its business objectives. This leads to more impactful outcomes and strengthens your competitive position in the market.

Case studies and best practices

Below, we showcase use cases where we at Eraneos have played a pivotal role in driving business-led digitalization through analytics and insights.



Event-Driven Insights: Pioneering Data-Driven Strategies for Urban Mobility – Empowering Public Transport with Strategic Insights for Unprecedented Service Excellence

Eraneos and a large municipal public transport operator transformed urban mobility for events. We achieved this by turning ticket-fare data into strategic insights to offer an excellent public transport experience. This collaboration focused on unique travel patterns among people attending events, such as the unexpected discovery of university students traveling to Scheveningen beach on New Year's Day for a traditional Dutch event, a group and behavior previously unknown to the operator.

Leveraging advanced data analytics, we identified and catered to new customer segments, enhancing travel experiences during citywide events. This strategic approach improved service planning and marketing, while also underscoring the power of data in driving business-led digital transformation in planning.



Intermodal logistics: Blueprint for enhanced shipment visibility – creating seamless shipment experiences with strategic data integration

Eraneos teamed up with one of Europe's biggest shipping companies to tackle the complex challenge of enhancing visibility across intermodal container transports, a critical aspect for customers seeking precise updates on their shipments. This partnership focused on the pivotal first and last miles of shipment – traditionally murky stages for visibility due to the involvement of multiple logistics parties, each with their own standards and communication protocols.

Our solution was a streamlined architecture designed to facilitate easy communication between all parties involved, ensuring a cohesive and transparent view of the entire shipment process. This initiative improved customer satisfaction by providing accurate expected times of arrival (ETAs) and real-time shipment status, while also opening avenues for new revenue streams through additional value-added services.

By implementing this architecture, our client made a significant leap toward a global communication strategy that accommodates diverse regional requirements and development plans. It also enabled them to integrate third-party portals and interfaces, further enriching the information available to their customers and enhancing their overall experience.



Personalized Journeys: Crafting the Future of Swiss Rail Travel – Tailoring Travel Experiences with Advanced Routing Solutions

Eraneos and a national Swiss rail operator set out to redefine the travel planning experience, moving beyond the conventional search for the quickest route to embrace a holistic view of personalization in travel. This partnership centered around the development of a custom travel-planning app capable of integrating a multitude of factors — from comfort and cost, to carbon emissions and transfer times — to offer travelers not just a route, but their ideal journey.

Our goal was to create a solution that fully accounts for the diverse preferences and needs of today's travelers. That's why we designed an app that adapts to the user's wishes, whether that means prioritizing minimal walking distances, selecting specific modes of transportation or balancing speed with environmental impact. This level of customization ensures each traveler is presented with options that resonate with their unique priorities, enhancing their overall experience.



Rail Maintenance: A Predictive Breakthrough for Germany's Biggest Rail Operator – Maximizing Efficiency and Reducing Costs with Advanced Predictive Maintenance

In a groundbreaking collaboration, Eraneos and Germany's biggest rail operator redefined maintenance strategies in the rail sector, focusing on optimizing wheelset maintenance to achieve remarkable cost savings and operational efficiency. This partnership paved the way for a shift from traditional maintenance practices to a predictive maintenance model, leveraging advanced forecasting to anticipate wear and tear on critical components.

By implementing a wheelset maintenance system capable of accurately forecasting wheel wear, we helped our client make a significant advance in their maintenance technology. The new system predicts the optimal intervals for maintenance and reprofiling based on the current state of each wheel. As a result, our client has successfully streamlined their workshop operations, minimized material waste and reduced vehicle downtime.

This predictive approach enhances the predictability of maintenance tasks while also substantially decreasing the risk of unforeseen failures. The insights that our client has gained from predictive analytics also promote knowledge sharing and improve their training activities, leading to further optimizations in their maintenance processes across mechanics and workshops.

The results speak for themselves: an estimated cost reduction of €18 million across a fleet of regional trains over their lifespan. This collaboration with Eraneos showcases the transformative potential of predictive maintenance, setting a new standard for scalable, efficient and cost-effective maintenance operations in the transport sector.



Driving the future: A train operator transforms vehicle operations with digital twins – enhancing reliability and safety through innovative digital twin technology

Eraneos worked with a train operator to transform vehicle operations with an innovative maintenance and reliability approach leveraging digital twins technology. This cutting-edge strategy is a major step forward compared to traditional preventive maintenance. It has enabled our client to shift to a more efficient, predictive model powered by remote monitoring and sophisticated data analysis.

By creating a digital twin for each vehicle in the client's fleet, we allowed for a comprehensive and accurate representation of the vehicle's condition. This simplifies the mapping of sensor data to actual conditions and facilitates early detection of anomalies. With a proactive approach like this, our client is far better equipped to preemptively identify potential failures, reduce downtime and improve overall service reliability.

In addition, we also helped our client to implement a mechanic app that enables them to investigate failure codes and vehicle statuses remotely, streamlining the maintenance process even further. This capability allows them to immediately assess potential issues, so they can distinguish between issues requiring in-person repairs and those attributable to external factors. As a result, they minimize the risk of unnecessary service interruptions.



Strategic cost management:

Transforming spare parts optimization – leveraging predictive data analytics to solve an age-old challenge

Eraneos has championed a paradigm shift in cost reduction strategies within maintenance and operations, focusing on the critical area of spare parts optimization. This approach addresses a common challenge for organizations: the balancing act between minimizing stock levels to reduce warehousing costs while still ensuring sufficient availability to maintain reliability and service quality.

By leveraging advanced data analytics and probabilistic forecasting methods, Eraneos has devised a strategic buying and stocking model that optimizes the inventory of spare parts. This model predicts the optimal quantity of each part needed to prevent overstocking and understocking, while also aligning purchasing strategies with actual demand. As a result, it enhances operational efficiency and reduces unnecessary expenditures.

By applying this strategy, our client now saves €60,000 each month on a subset of materials. This success story underscores the potential of data-driven approaches to transform traditional cost management practices. Predictive data analytics strategies like these offer a scalable solution for achieving compound savings in many areas of maintenance and operations.

Conclusion: The time for digital transformation is now



In conclusion, our examination of data-driven changes in the transport & logistics sector underscores a crucial message: adapt or risk becoming obsolete. Data has become indispensable for businesses aiming to thrive in a highly competitive environment, offering not just insights but also a pathway to innovation, efficiency and customer satisfaction.

It's clear that organizations need to shift towards a business-oriented approach to digitalization, where data initiatives are closely aligned with overall business objectives. By empowering business units with digital and data analytics efforts, companies can foster agility, collaboration and a strong focus on delivering tangible business value.

As we have seen, data-driven approaches hold the potential to transform the industry, from improving urban transportation to revolutionizing maintenance strategies and beyond. By integrating data analytics into your business operations and adopting collaborative frameworks, you open your organization up to numerous benefits: faster project completions, better resource allocation and the achievement of tangible business outcomes.

In summary, the time for digital transformation is now. The success stories above show how the right combination of strategy, innovation and collaboration with an experienced digitalization partner can put your transport & logistics business on the path to greater agility, efficiency and growth.

Moving forward with Eraneos:

01.

Strategic consultation: Begin your journey with a strategic consultation session to explore your digitalization and data analytics ambitions and how Eraneos can help realize them.

02.

Customized solutions: Leverage our expertise to develop customized solutions that align with your specific business needs and objectives.

03.

Ongoing support and innovation: Benefit from our ongoing support and commitment to innovation, ensuring your business remains at the forefront of the transport & logistics sector.



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