

# *Data Analytics in the Logistics Sector*

## In the slipstream or the fast lane?

*What potential does data analytics offer the logistics sector? And how can this potential be leveraged? Our survey of 200 European logistics operators has found answers to these and other questions.*



# Data analytics in the logistics sector

## In the slipstream or the fast lane?

### Management Summary

Increasing digitisation brings both challenges and great opportunities for our economy and society. New, dynamic markets are emerging, while existing ones are disappearing or are being fundamentally transformed by new market players. Companies need to adapt their business models, and consumers are ratcheting their individual demands ever higher. These developments are changing companies in every respect, because they not only affect their production and sales departments, but also their support processes – for example, in the HR, controlling or accounting departments.

Information is generated, processed and brought together by a multitude of systems in different company functions. Large quantities of data of all kinds are generated – with increasing speed. Modern technologies make it possible to evaluate these data in real time and analyse them in relation to issues relevant for decision-making.

In our survey of managers from 200 German and European logistics companies, we investigated how the logistics sector is positioned in relation to the issue of data analytics and how the use of business intelligence (BI) and Big Data will affect its actions in the next two years.

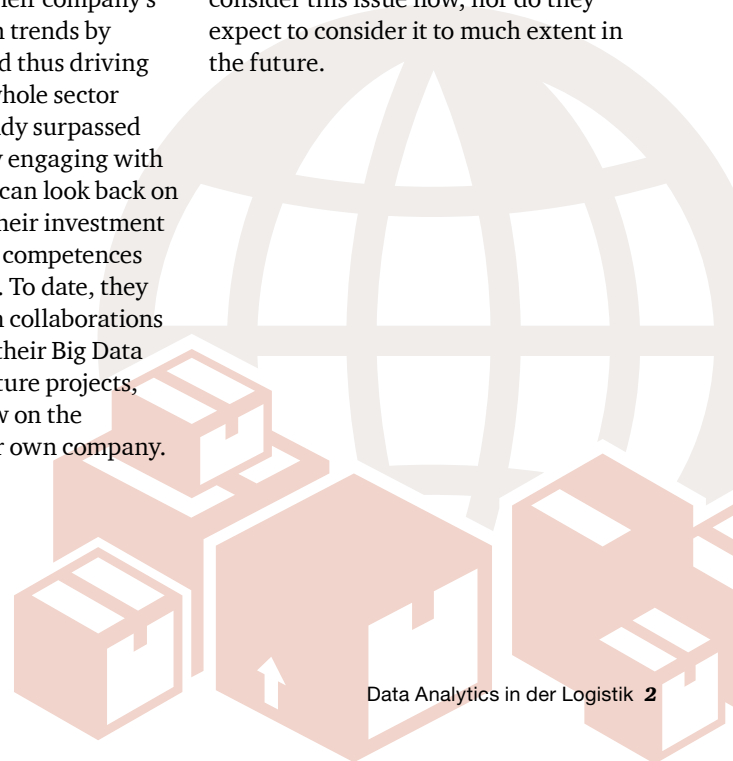
One conclusion is that logistics operators have so far been reserved when making large investments in this area. They may recognise the potential offered by data analyses and they especially hope to be able to reduce their costs. But as soon as concrete measures are at issue, more specifically, making a budget available, the respondents are more reluctant.

In this context, the interviewees can be divided into three types. We describe them as “trend-setters”, “early adopters” and “observers”. These groups are based on self-assessments by the interviewees of how they generally deal with trends. Company size and nationality do not seem to have a big influence: each of the three groups is composed of companies of all sizes and from all countries. Nevertheless, there is an evident connection between how they deal with trends in general and their level of “maturity” as regards data analytics.

The small group of trend-setters has already engaged with their BI – that is, the systematic collection, evaluation and representation of the structured data available in the company. Their particular focus is, however, on the trend of the moment, Big Data. This involves analysing extremely large quantities of structured and unstructured (polystructured) data, which are drawn from a variety of sources, including those outside of the company. This 12% of trend-setters described their company’s attitude as engaging with trends by actively shaping them and thus driving the development of the whole sector forward. They have already surpassed the phase of theoretically engaging with the issue of Big Data and can look back on their first few projects. Their investment in establishing their own competences is also already paying off. To date, they have principally relied on collaborations with external experts in their Big Data projects. However, for future projects, they are planning to draw on the competences within their own company.

When asked how they deal with trends, the early adopter group, which at 34% represents a good third of those surveyed, says that they always stay informed on current and future trends and try to prepare for them before they impact the market. This is also evident in their engagement with data analytics. They may not be as deeply rooted in this issue as the trend-setters, but in most cases they show themselves to be more innovative than an average company in the industry.

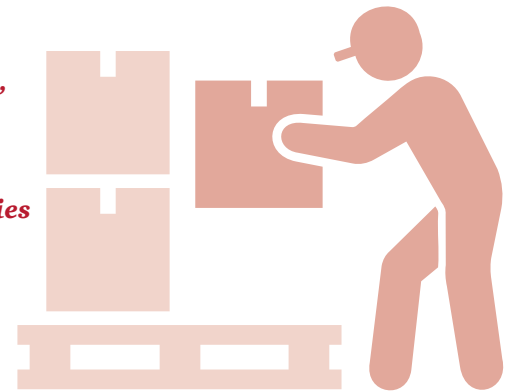
A large number of logistics companies – 54% of respondents – assess themselves as reactive in the face of new trends (observers). In line with this, to date almost all the companies in this group have concentrated on processes that are immediately connected with capacity utilisation and their direct business management when using and expanding their BI systems. They are even more reserved in their engagement with Big Data. They see little potential here and state that they do not want to further consider this issue now, nor do they expect to consider it to much extent in the future.



## Overview of all results

**1** *Based on the maturity level of a company's business intelligence, the logistics operators have some ground to cover. To date, they have principally used their BI systems to collect and store data and produce reports. However, when it comes to analysing the data, the intensity of usage falls. And even in real-time mode, logistics companies are not yet utilising the possibilities of their business intelligence systems.*

In particular, small logistics companies with low turnover levels are not getting the full potential from their BI systems. The respondents' limited use of BI systems to date is also due to the fact that only 11% of them use an established standard BI solution. A good third of them even use their own solution or a manual solution without underlying system integration.



*Every **third logistics operator** uses a solution developed in-house or a manual one without system integration.*

**2** *The great majority of logistics companies are not yet strategically engaging with Big Data. Although every second logistics company already has experience of using Big Data, only 19% stated that Big Data is already a part of their value creation and is the basis for their business model. The trend-setters have already engaged deeply with the topic of Big Data.*


A good third of the logistics operators surveyed had not yet engaged with the issue of Big Data and over 70% of them did not intend to in future either. It is thus not surprising that the respondents assessed the maturity of the topic of Big Data in their industry as generally lower than among their suppliers and customers.

**35%** *of all logistics operators have not yet engaged with Big Data.*

 An illustration in a reddish-brown color showing a laptop computer. A magnifying glass is positioned over the laptop screen, focusing on a 3D cube icon. The cube is also in the same reddish-brown color.

**3** *The respondents themselves perceive the important obstacles to Big Data in their own organisation and its processes (45%), in the current lack of a strategy on this issue (50%) and to some extent, in the lack of knowledge and skills among their own employees (47%).*

While the concerns of the majority of logistics operators are hence more fundamental in character, the trend-setters see the greatest hurdles in the practical implementation of Big Data projects – that is, increasingly in the company’s organisation and processes (70%) as well as in data protection (57%) and data quality (52%). Comparing German logistics operators with their competitors from other European countries, the Germans are much more sceptical.



**7 out of 10**  
*of the logistics operators who assess themselves as trend-setters see the greatest hurdles when implementing Big Data solutions in their company’s organisation and processes.*

**4** *Over 50% of the logistics operators surveyed reported that the chief information officer (CIO) or chief executive officer (CEO) holds responsibility for business intelligence and Big Data. However, the companies frequently lack a specific body for BI and Big Data and integration with the specialist departments (such as controlling, HR or sales), for example, via a BI competence centre.*

Only 2% of the respondents had introduced a “Head of BI” position. Besides the approximately 60% of companies in which the CIO or CEO has responsibility for their BI, a very fragmented picture emerges for all respondents. When we look at who has principal responsibility for the issue of

Big Data, an almost identical picture emerges. The only substantial difference is that almost every fifth respondent did not identify anyone who is responsible for Big Data. The important links between the specialist departments and the IT departments were often still lacking.

**19%**

*have not yet identified a person responsible for Big Data.*

**5** *The hope that Big Data will allow them to reduce costs is considerable among all logistics operators. In addition, the trend-setters want to use Big Data to retain customers and attract new customers.*

The logistics operators see potential through the use of Big Data in relation to their costs and customers. However, one central theme identified by them – and particularly by the German logistics companies – is the potential for cost reductions, particularly through optimised capacity and fleet management. Among the European logistics operators, attracting new customers is a top priority in Big Data projects. Among the trend-setters, 70% recognise the potential for completely new business models through the use of Big Data; the industry average is 51%.

**German logistics operators focus on cost reductions.**

**European logistics operators focus on attracting new customers.**

**6** *The current fields of application for business intelligence and Big Data are above all finance and controlling as well as transport and route network management.*

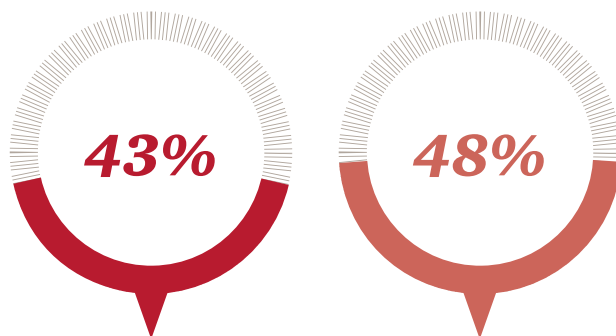
In their BI and Big Data applications, the logistics operators principally concentrate on the areas that very immediately affect their operative business: transport and route network management. Likewise, they focus on the areas that directly influence their business management: finance and controlling.

In addition, the trend-setters also include sales and customer service. They recognise the potential of modern data analyses to facilitate customer acquisition and retention and want to make use of it. Unlike many other logistics operators, they have understood that using modern data analyses offers great potential

even beyond a logistics operator’s key processes. They are already analysing their range of customers and also plan to introduce Big Data solutions in their HR processes in the next two years; for example, through precise forecasts for employee turnover. Application examples for these and other business areas can be found in the full study:

1. Insurance optimisation through product shipment monitoring
2. Margin simulation
3. Export controls
4. Demand forecasting
5. Employee turnover forecasts

*The trend-setters also focus on the customers in their data analyses:*



*use Big Data for their sales.*

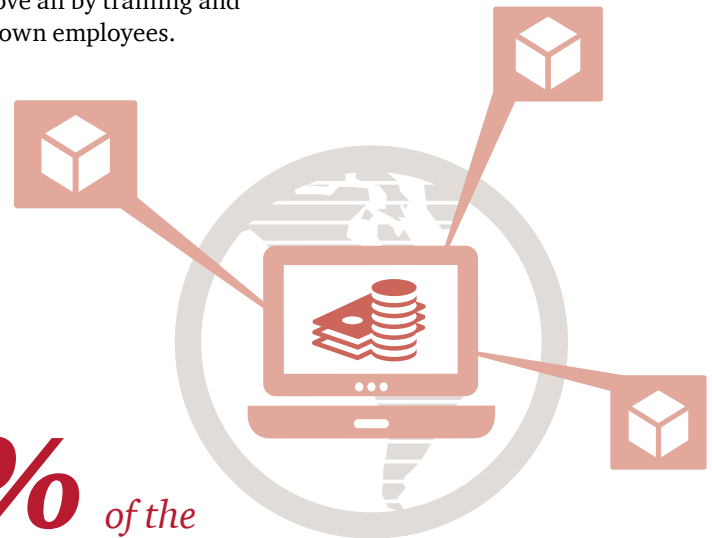
*work with Big Data for their customer service.*

## 7

***In general, logistics operators have been reserved when planning for and investing in data analytics. There is a basic readiness to invest, but many logistics operators do not have a clear idea in what areas. Budgets are seldom allocated, and when they are, the amount is low.***

An additional expansion of BI is principally planned in the key areas in which the logistics operators are already active. They do not plan to use BI in new business areas. Their investment in Big Data is also still so low that they have not been able to develop sufficient competences in relation to this issue in their companies. The small group of trend-setters has invested more heavily in Big Data up to the present, and in the next two years, they will also make more investments than the industry average – despite the fact that, on average, they generate a lower turnover. Their investment is now being reflected in a rise in their own Big Data competences. They have steadily

developed this in the last few years by making company purchases, employing Big Data operators, known as data scientists, and above all by training and specialising their own employees.



**35%** of the logistics operators plan to invest in Big Data in the next two years.

But **41%** of them do not know how much.

## Conclusion

The transport and logistics sector still has many tasks to master if they wish to keep pace in the era of Industry 4.0. This is particularly relevant given the increasingly complex demands on logistics providers and the emergence of new market participants from other sectors. Modern data analysis and preparation using BI or Big Data – for example, in the form of management dashboards – could markedly increase the pace of digitisation. Many logistics operators are adopting a wait-and-

see approach instead of thinking ahead and hence benefiting from the development. But now is the time to act: new customers can be acquired, relationships with existing customers can be improved and the company's management can be supported in their decision-making with better information. What is more, the opportunity is there to enter new markets and to develop new business models.

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### About us

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