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CargoCast

SEEBURGER BIS Platform

Cargo flow predictions based on integrated logistics data and artificial intelligence (AI)

CargoCast is an indispensable high-tech start-up for companies that seek to plan their resources efficiently. In an industry where margins are low and fixed costs are high, this is crucial for long-term success.

The company was founded with the support of Cargo Digital World (CDW) and garage33, two experienced start-up centers in the German Region of Ostwest-falen-Lippe (OWL), and CargoLine as a strong industry partner. With the services offered on the CargoCast platform, vehicle and personnel capacities or the handling of goods can be predictively planned using AI technology.

Using the methods of machine and deep learning, CargoCast makes precise forecasts about cargo flows and actual resource requirements from extensive data sources. By detecting complex patterns and correlations, information about planning and control tasks is made available. Customers are general cargo networks, forwarding agencies and logistics companies, which transmit their data volumes to CargoCast in order to receive daily updated forecasts.

Data integration and transformation via the SEEBURGER BIS Platform

The forecasts and business information are processed by a separate engine in the CargoCast Cluster. For this purpose, it accesses a central data warehouse in which the transmitted logistics data is collected. A major challenge lies in the connection of the various customer source systems. These systems are very heterogeneous with regard to the systems used and the available expertise and IT capacities. Another challenge involves the transformation of the different data into the required target structures for forecast generation.

Using the SEEBURGER BIS Platform, CargoCast is able to achieve a fast and smooth integration of all partners and systems, combining, simplifying and transforming data in line with actual requirements.

About CargoCast

CargoCast is an innovative logistics startup from the Ostwestfalen-Lippe (OWL) / Paderborn region, which was established in 2019 and has been operating on the market as an independent service provider since the summer of 2022.

Using state-of-the-art AI models, the company provides freight forwarders with precise forecasts of future cargo flows and production volumes on a daily and weekly basis. Using AI technology, it is possible to calculate the volatile development of cargo flows and provide an accurate preview of the optimal use of available resources.

www.cargocast.de

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Fast, secure and reliable integration of specific shipment data

The shipment data, barcodes and status messages from the shipping networks and logistics companies are provided in different ways. While the networks transmit extensive amounts of data to CargoCast directly via SQL, the SEEBURGER BIS Platform handles:

- Connecting freight forwarders and logistics companies with transport management systems via a REST API

- Connecting freight forwarders and logistics companies with any transport management or additional systems via FTP/SFTP

The current logistics and forwarding data form the basis of CargoCast services. Messages from the TMS systems (FORTRAS files) can be transferred in various ways. A special feature of this configuration is the complete and reliable transmission of all relevant data for the use of the services.
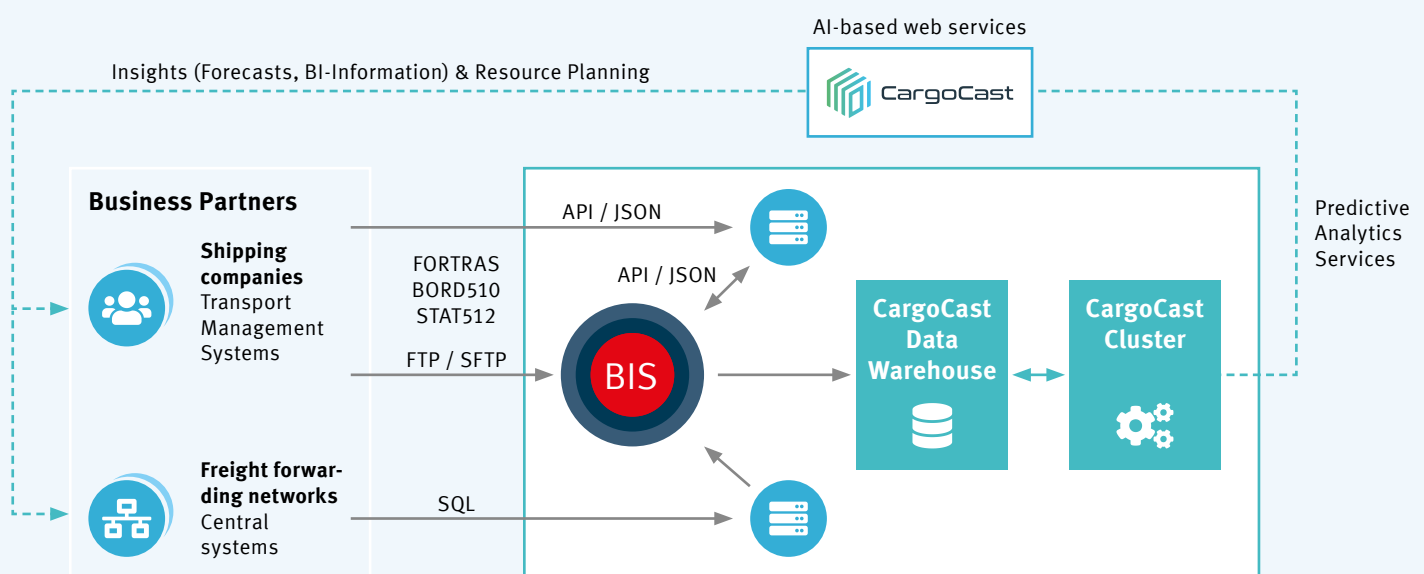
Benefits of the BIS Platform for CargoCast

- Increased scalability as a result of a simplified integration and connection process (Manual acquisition of the relevant data is a complex undertaking without BIS)

- Reliable processes and rapid corrective action when problems occur thanks to BIS monitoring

- Easy execution of a wide variety of mapping processes to transform raw data into target structures

"As a start-up based on the latest technologies like artificial intelligence, high connectivity for data acquisition and good data management is essential; that's why we rely on SEEBURGER to scale our business model.

BIS increases overall connectivity and enables simple and customer-specific data connection – despite heterogeneous source systems. The high level of flexibility, coupled with simple connectivity, enables customers with limited IT capacities to use our innovative services.

Simon Leontaris, General Manager, CargoCast

SEEBURGER BIS Platform for connecting data suppliers, consolidating transferred content and transforming it to AI-based computation.

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Automated consolidation and transformation of big data

From the arrival of the raw data to the actual use of the data by CargoCast, several process steps are necessary. Due to the different ways of transferring the data volumes, these process steps must be comprehensively validated, consolidated and complemented. The SEEBURGER BIS platform handles:

- Rule-based merging and unification of large amounts of data, taking into account duplicates and updates, non-uniform numbers and codes, as well as partner-internal numbers and data from different networks

- Automated transformation of the transmitted raw data into different target structures as basic building blocks of data-based AI and BI applications

For extensive database management, the SEEBURGER BIS Platform provides simple options for mapping, error handling, process activation and creation of data schemas.

Cooperation with SEEBURGER

- Cooperation with the company runs smoothly thanks to good and open communication.

- The CargoCast team appreciates the fast and efficient handling of their requests and the always friendly and helpful nature of SEEBURGER employees.

- The positive overall picture of the cooperation validates CargoCast's decision to work with SEEBURGER.

Importance of APIs in the conflict between skepticism and trust in artificial intelligence

As a new and often still guarded technology, AI is all about acceptance. In addition to technical aspects such as scalability, high availability, performance, flexibility and security, content-related requirements for data quality are also crucial. It is therefore necessary to meet high standards in data storage and computing as well as in data integration.

CargoCast's unprocessed logistics data is integrated via secure APIs, powered by the SEEBURGER BIS Platform, which are merged and loaded into the CargoCast Data Warehouse's target structure. API keys are used to determine the partner from which the data was sent and to prove its unique origin. Via different mapping tables, the data is transformed into the data warehouse target structure, and from there it's compressed, rectified and passed on to the CargoCast Cluster for calculation.

SEEBURGER's powerful integration technology for the underlying machine learning data and CargoCast's high-tech algorithms and deep expertise used for AI development, training and forecasting provide logistics companies with accurate forecasts and confidence in their value.

> " *The quality of the data, by means of artificial intelligence,*
> *is a crucial factor for accurate forecasting.*
>
> *A clear advantage of BIS is the central overview of all partner-specific processes,*
> *which enables us to perform targeted and efficient error analysis.*
> *This allows us to create a complete and qualitative database*
> *in order to offer our partners a reliable and high-quality product portfolio.* "

Christoph Schäfer, Lead Developer, CargoCast