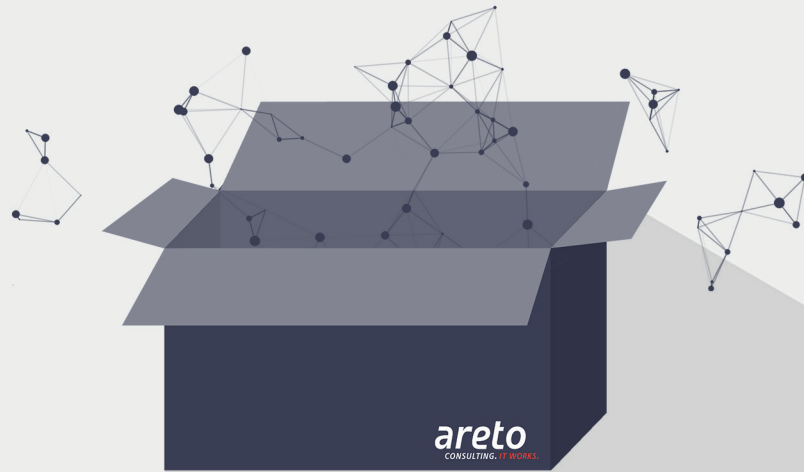# BI in a Box
Data. Analytics. Ease of Use.

Less Time.   **Save Ressources.**   **Reduce risks.**

Want to get our Enterprise Data Warehouse up and running quickly, easily and safely? Do you want to save precious human resources, time and money? Do you want to mitigate risk and do more with your data?
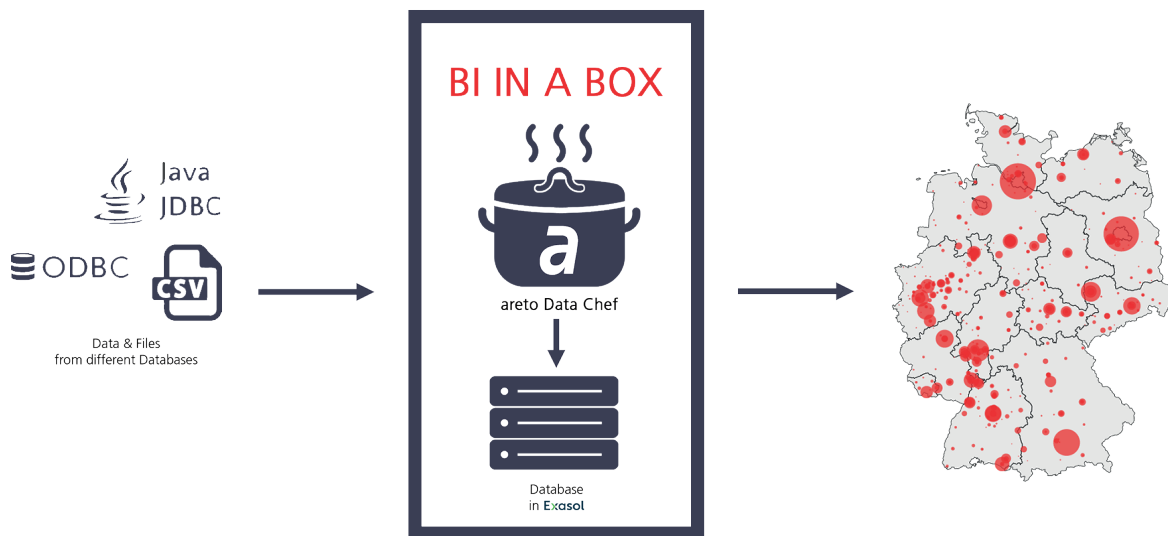*Then talk to us.*

Daniel Olsberg - Sales Director

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Our world is analytics.
We create value added from your data, turning information into insights.

BI in a Box - Your all in one solution.

How?
The steps are surprisingly easy. We analyse your needs and use proven methods to ingest, structure and organize your data according to your requirements. We create individual reports and visualizations according to your needs. And all that with use of the latest and greatest in artificial intelligence and data science.

Save it, Store it, Access it
We use a simple unified tool stack to fit your nExasol has developed the fastest analytical database in the market that is virtually maintenance-free. Complex performance optimizations, such as indexing or partitioning of the data, are not necessary, since the database optimizes itself based on usage statistics. This not only makes a user's life simpler, but also saves time and effort by eliminating performance tuning a bane fro also every data project. Exasol performance features of massively parallel processing (MPP), columnar storage, compression, and it being in-memory make performance issues a problem of the past. Furthermore, by harnessing its User Defined Functions (UDFs) it allows the Data Scientist drive innovation without the data leaving the database that capitalises of speed and the ability to use the results iteratively. Exasol is deployed either „on premise" or in a cloud environment. The speed, maintenance-free-

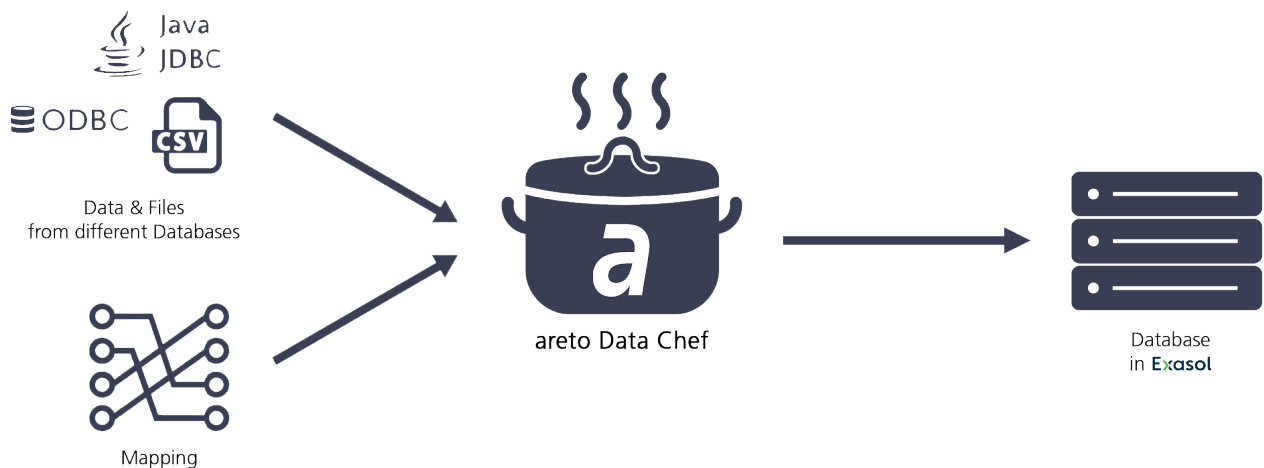ness and deployment options form the heart of our BI in a Box solution.
Using a Data Vault structure in the analytic database is modular and ready for current and future requirements. Data and new data sources can be added without having to redesign the base layers (Stage, Core, Access).

areto Data Chef
The areto Data Chef integrates data effortlessly. The areto Data Chef is a Data Warehouse Automation (DWA) tool that automates the essential steps for data integration. By just using the interface and mapping files the data models, integration processes, access layer and process control are generated automatically. There are two major benefits here. Firstly, this process saves at least 50% of the implementation effort. By not only reducing implementation time it also increases the data quality by reducing manual errors and makes adding new data simple and easy. It also stores the leaves the data in a full Data Vault 2.0 schema. Data Vault is ideally suited for agile projects where new and divergent data sources are easily integrated without complicated interface work.
The areto Data Chef preps, sorts and stores data from files and relational databases.
The use of Data Vault Methodology and an agile implementation method balances the need for IT governance with users' needs for

areto Data Chef - ease of integration.

easy for data integration and blending. Additionally, the areto Data Chef repository contains all metadata and information on the executed processes and can be queried via SQL and integrated into monitoring solutions.

Apache Kafka for IoT and SQL

We use Apache Kafka, a distributed streaming platform, to ingest data from SQL data sources and to process streams of records as they occur. We use triggers to perform an export from the data source and to load them using the areto Data Chef to ingest them into the Data Vault schema on the Exasol database.

Furthermore, Kafka is used to upload IoT data into the snowflake database, making BI in a Cloud idea for hybrid solutions – combining semi and structured data. We do not believe that there such a thing as unstructured data!

The centre of it all the database in a Box: Exasol

The software components for data integration and modeling essentially refer to the creation of the business and technical data model and to the implementation of the integration processes. The data sources to be integrated and the necessary transformations of the data are implemented according to the procedure defined in the concept phase.

Using the recommended procedure for data warehouse automation with the *areto Data*

Chef, only the modeling of the business-driven data model remains. The technical implementation is done by the *areto Data Chef*. This reduces the susceptibility to errors to a minimum.

Exasol

Many users in modern organizations want to speed up the implementation of new solutions that better address their requirements and give them greater flexibility to extract insights from data. Traditionally, business units were hindered by infrastructure challenges and tools which did not enable them to analyze their data quickly and when needed.
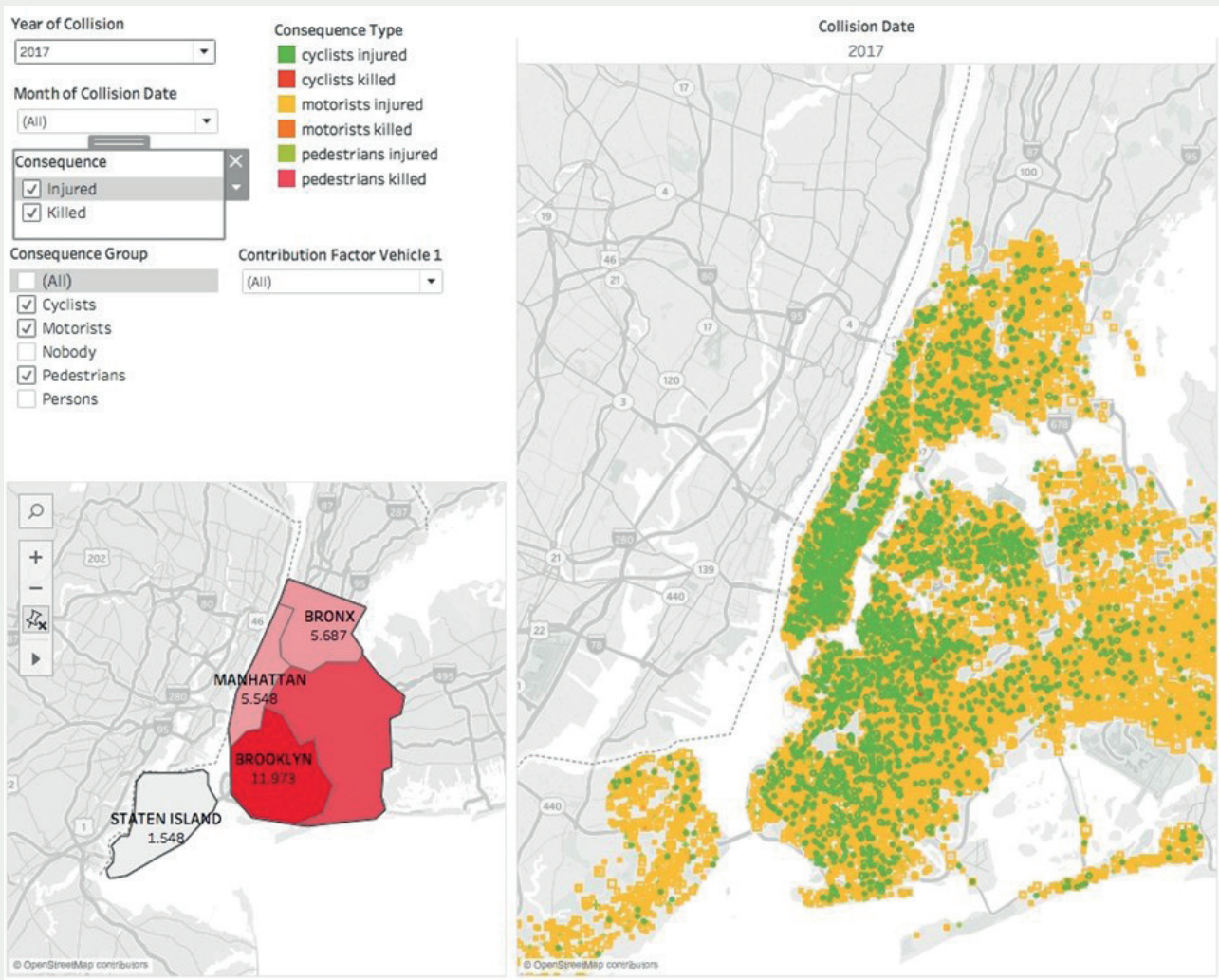
Unfortunately, most Data Scientists today spend 80% of their time on data wrangling and cleansing rather than on what they were expensively trained to do: generating actionable insights from data. *BI in a Box* allows speeding up the cleaning/wrangling process and enables data scientists to do their real job. They can rely on a data source that adheres to company data warehouse standards in terms of quality, integrity and governance. This reduces the need for investment in expensive and complicated data integration experts and tools. Correspondingly, they can start generating value right away, without suffering from lengthy and complicated infrastructure and setup procedures. It's all easy and accessible,

with the mundane work in setting up an analytics infrastructure taken care of by BI in a Box.

Powerful analytics and visualizations: Tableau

Seeing is believing. After having your data ingested, collated, sorted and stored, we favour using Tableau software to analyse. Tableau lets you, the user, securely share interactive dashboards, keep abreast of developments and use storytelling to share insights clearly. Tableau empowers the user to ask and answer questions interactively, as well as use advanced analytics, calculations, and statistics all topped with our award-winning visual interface. Tableau partners well with dedicated statistic languages like R and Python to show the data and the meanings and brings its own advanced analytic functions like segmentation and cohort analysis, scenario and what-if analysis, time-series and predictive analysis, as well as sophisticated calculations and statistical functions like nesting basic aggregations to statistical calculations such as standard deviation, mode, kurtosis, skewness, correlation, and covariance.

Example for visualization with Tableau.

Making sense of it all with Data Science

Data Scientists can use open source tools like Jupyter Notebook Server for a multiuser experience governed with a single point of truth. They broaden their analytic scope by using all the data that has been ingested. They are further able, by using the managed self service capability to input new data by themselves. Furthermore, they can run algorithms directly in the database, creating the basis for next best actions for a wider user community.

areto your all in one partner. Process, Methodology, Competence, Infrastructure, Expertise.

areto consulting gmbh is a consultancy specialized in Business Intelligence (BI), Data Warehouse (DWH) and Data Science. areto is a niche provider concentrating on analytics, exploration and storage of data. areto lives and breathes analytics. We understand Business Intelligence to covers all aspects, methods and processes around data storage and reporting; starting from the selection of the right database , its architecture, the design of the ETL and data ingestion, as well as the de-velopment of standard and ad hoc reporting with the appropriate use of information design and visualization and continuing to with Data Science and Data Governance. In short, we only do BI!

We have built solutions since 2007, at first with a concentration on traditional technologies. However, with time, we have focused more and more of designing solutions that are agile and innovative. We now always use a Data Vault 2.0 schema and require a flexible database with dynamic storage and the right amount of processing power when we need it.

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