Akveo

Contributing to Open Source

Delivering for business

Akveo Data Engineering services overview

July 2020

Fast Facts

2015
Founded

70+
Consultants,
Designers & Engineers

10
Trending Open Source Products

60k+
Stars on GitHub

100+
Projects

50+
Clients

1000+
Happy Product Customers

How we stand out

Data Engineering

Provide transparency to your business and discover valuable insights out of data.

Our Team is Certified By Microsoft

AZ-300 Microsoft Azure Technologies

Microsoft Azure Solutions Architect Expert

Microsoft Azure Administrator Associate

AZ-301 Microsoft Azure Architect Design

Why Customers Choose Us

Why Customers Choose Us

We drive cost effective solutions, designed to match your goals, your timeline and your budget

We combine BI technical expertise with business domain expertise

We are experts at Data Engineering

We have a proven track record of successful project delivery

Our Expertise

Data & Analytics

Our skills

Data platform design and engineering	Database development
IoT Real Time Analytics, Big Data	Business intelligence, reporting and advanced visualization
Performance optimization	ML & Data science, computer vision and OCR
Data Warehousing	ETL/Streaming

Azure · Power BI · Spotfire · Hadoop · R, Python · Spark · Tesseract · OpenCV

Our Expertise

Data & Analytics

Key expertise our team delivers

Real time asset monitoring and immediate failure notifications	Automated process of gathering Data
Detection of data anomalies and hints for fixing it	Modern cloud-based technology stack (Azure, AWS)

Azure · Power BI · Spotfire · Hadoop · R, Python · Spark · Tesseract · OpenCV

Our Team

Vlad Yanum

Microsoft Azure Solution
and Big Data Architect

- Azure Certified Architect
- Azure Certified Administrator
- Azure Certified Developer
- Azure Certified Data Engineer

Alexey Mayer

Microsoft Azure
Solution Architect

- Azure Certified Architect
- Azure Certified Administrator

Alexandr Stadolnik

Microsoft Azure
Solution Architect

- Azure Certified Architect

Pavel Belski

Microsoft Azure
Solution Administrator

- Azure Certified Administrator

Dzmitry Durasau

Microsoft Azure
Solution Architect

- Most Valuable Professional (MVP)

Product - BI Dashboard for Delivery Companies

Insights Delivery

Ready-to-use dashboard for Delivery companies. Allows to process **up to 100%** of orders on time and increase profit **up to 25%**.

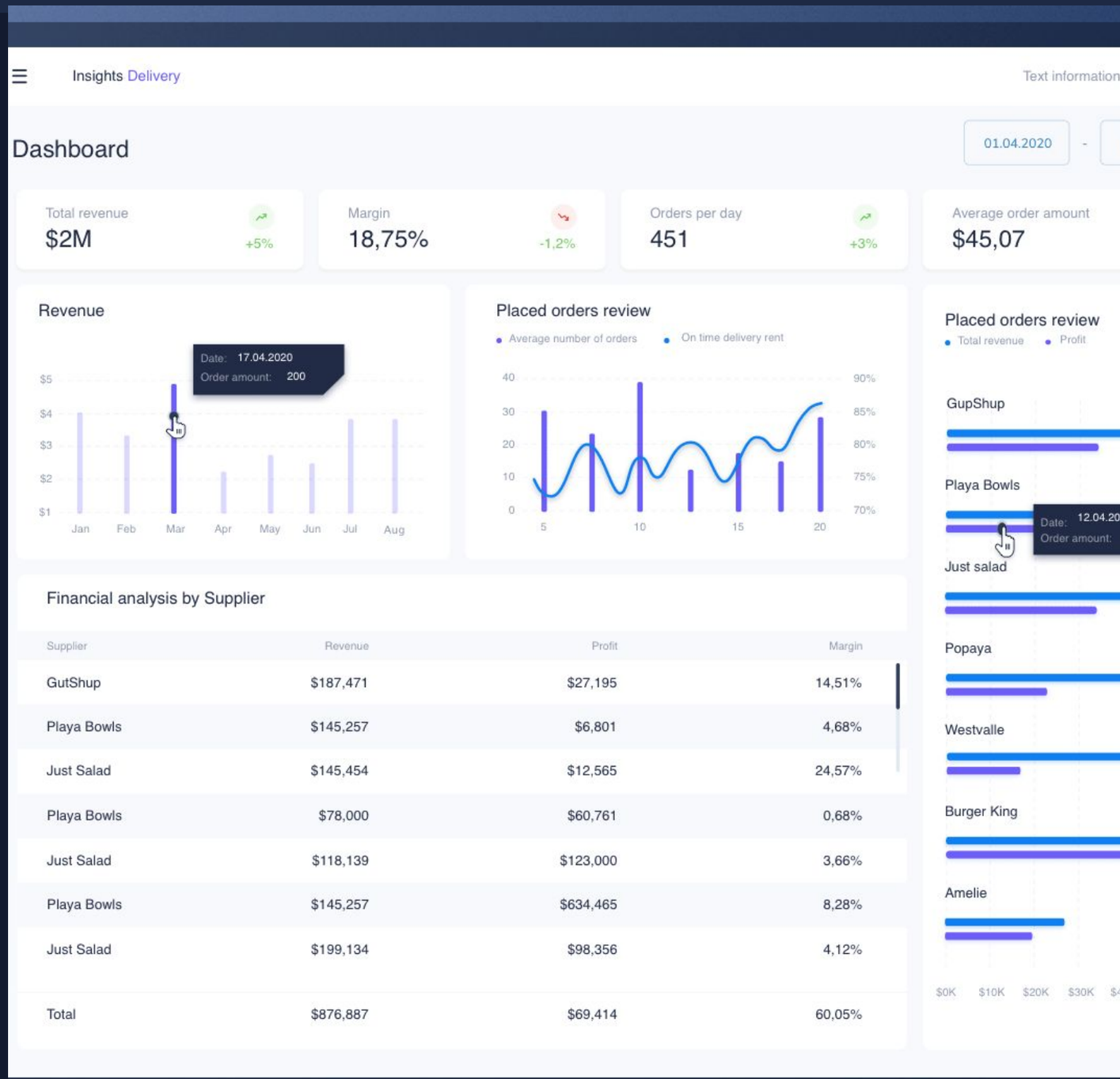
The showcase demonstrates capabilities of the application for a food delivery company.

However Insights Delivery can be applied for many delivery businesses with different business models. Behind the scenes of the application is a cloud database which is optimized for analytical tasks.

This database can handle data from various sources - be it large ERP systems, web applications or Excel files.

[Learn More]

[Watch Demo]



Product - Healthcare Dashboard For Delivery Companies

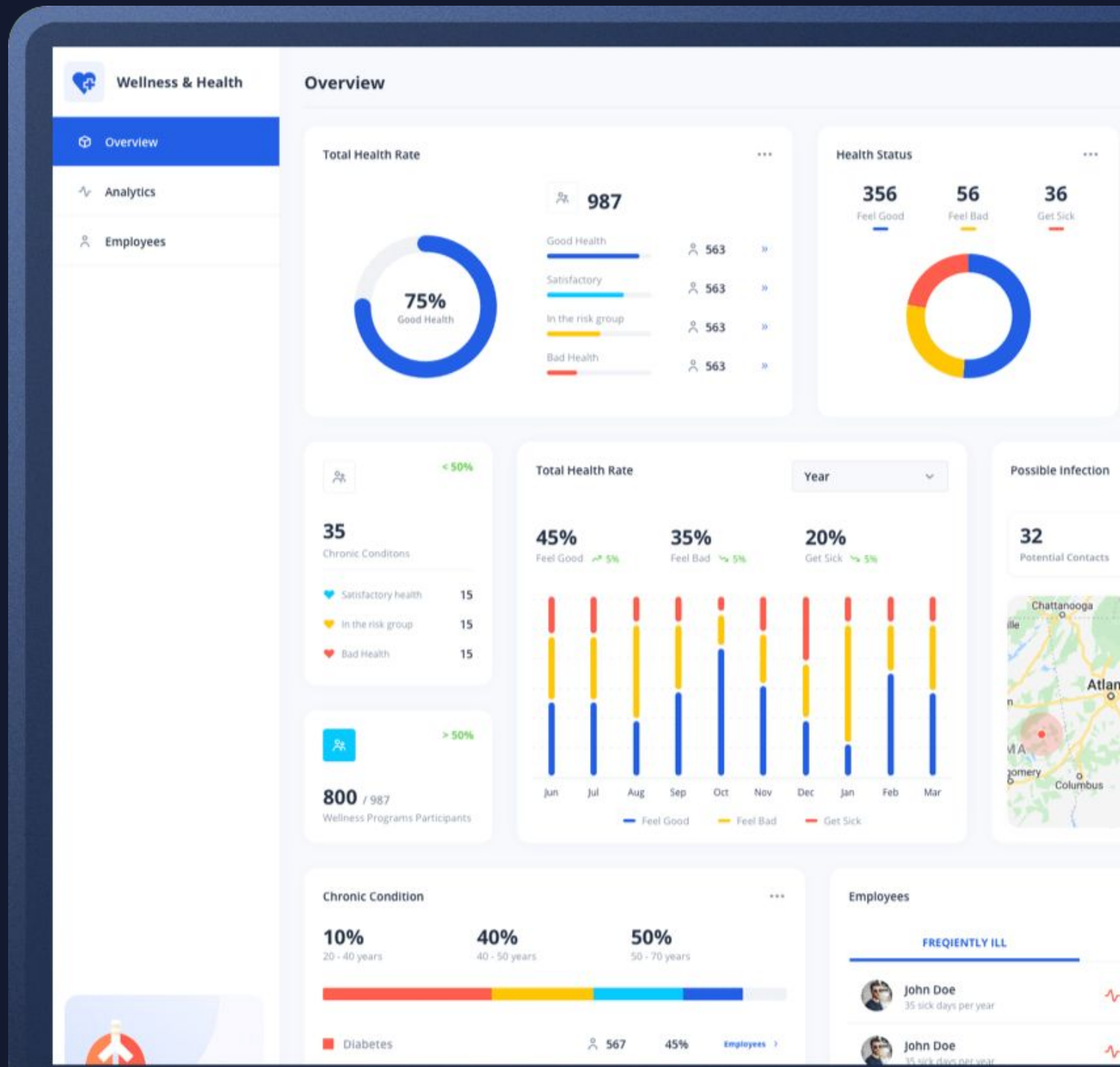
Wellness & Health

Ready to use dashboard for delivery companies. Helps to track couriers health state and prevent cost risks to lead business more effectively.

The showcase demonstrates capabilities of the application for delivery companies.

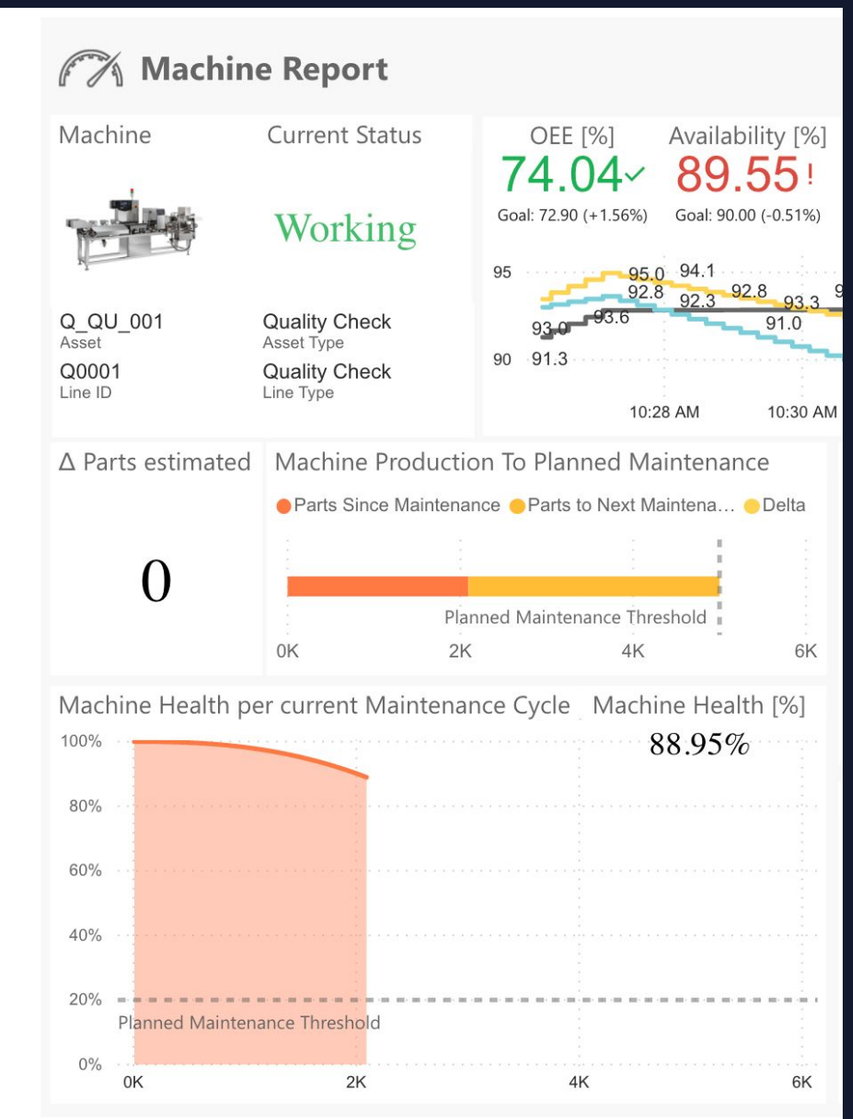
It's main goal is to **increase** the company's **operational** efficiency due to tracking and improving employees' health state quality.

Learn More



Case Study - PwC

Reduction of unplanned production downtime by over 20%



Challenges

The client wanted to create a system for predictive maintenance to sell licenses to large manufacturers. At the same time when the first clients came in, they needed to quickly adapt the solution according to their needs.

Solution

Akveo provided the customer with KPIs and business insights kept in BI reports created based on the collected data integrated within the web app to allow more convenient navigation. To enable automatic events' sending, we set up a continuous process of collecting data from customer's ERP. Then we created and deployed the flow of delivering notifications. The collected data allowed us to generate reports to predict and analyze tools' consumption. Also, we provided a BI report for analyzing notification trends.

Results

- Reduction of unplanned downtime by 20+%
- Platform was built and PwC is signing up it's customers, such as StanleyBlack&Decker

Tech Stack

Azure stack, AzureSQL, Azure Data Factory, Power BI, NodeJS, React, Docker, MongoDB

Case Study - How we did refactoring of an inefficient reporting solution 1/2

Implementation of Data Warehouse, ELT process, Reports and Customer Portal.

Challenges

The customer is a US-based developer of a messenger platform. They had a reporting system for the messenger, but it was implemented without proper engineering approach:

- each feature was implemented with no regard to the whole solution, cause there was no thorough architecture;
- it was impossible to find where specific feature had been implemented, as a whole bunch of tools and technologies were used: mix of cloud/on-premise, mix of languages (Python, Perl, sql, bash);
- the documentation was missing.

Solution

We started from analyzing and documenting the existing solution and requests for improvements. The second step was to design a new solution's architecture and suggest a set of software tools which would cover required features, would be able to scale and cost-effective.

From scratch we implemented Data Warehouse, ETL process, Reports and Customer Portal. As well we enabled direct access to data in multi tenant Data Warehouse.

Results

- By 40% faster design development of web app
- Reduce development efforts by 58%

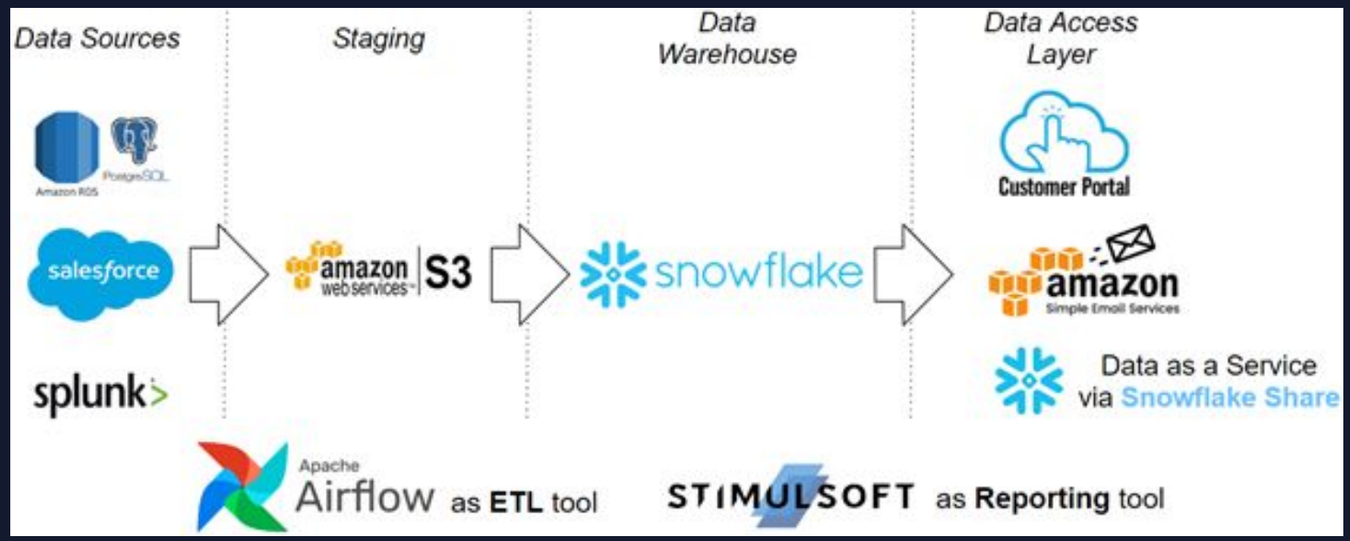
Case Study - How we did refactoring of an inefficient reporting solution 2/2

Technical Details

- Data Warehouse size – 400Gb
- ETL runs 1 time/day processing 1Gb
- 150 tenants in single Data Warehouse
- 3000 reports being generated and emailed daily

Toolset

- Snowflake for Data Warehouse
- Apache Airflow for ETL
- AWS EC2 for hosting Airflow and other tools
- AWS RDS for supporting relational database
- AWS S3 for File Staging and Storage for Generated Reports
- AWS SES for reports delivery via email
- StimulSoft for reports generation



Team Composition

- Project Manager,
- Data Architect,
- 4 Developers,
- 1 DevOps,
- 1 QA,
- 1 BA

Case Study - Implementing Electronic Car Parts Catalogs 1/2

Implementation of Data Warehouse, ELT process, Reports and Customer Portal.

Challenges

The customer is a supplier of technology solutions in the automotive industry. For years they have been acquiring electronic parts catalogs spending $5000-50000$ per month for each catalog. Our team accepted a challenge to design and implement a solution which would generate and update the catalogs for 5 parts manufacturers from source data.

Solution

Each manufacturer has their source data in their own format - text files, xml, excel, databases (.MDF) and even EBCDIC - the format used since the 50s on IBM mainframes. The goal was to build ETL pipelines which would transform diverse source data and enable a single set of APIs to query all catalogs.

On **Stage** raw data is imported into MS SQL Database, cleaned and validated. Stage only contains a set of data being processed (it is cleared at the beginning of each ETL run).

Data Warehouse is a permanent data storage with all data sets integrated and normalized (not a canonical data warehouse).

Deliverable Database contains data with applied business rules and transformations required for enabling access by API. APIs are implemented as SQL procedures.

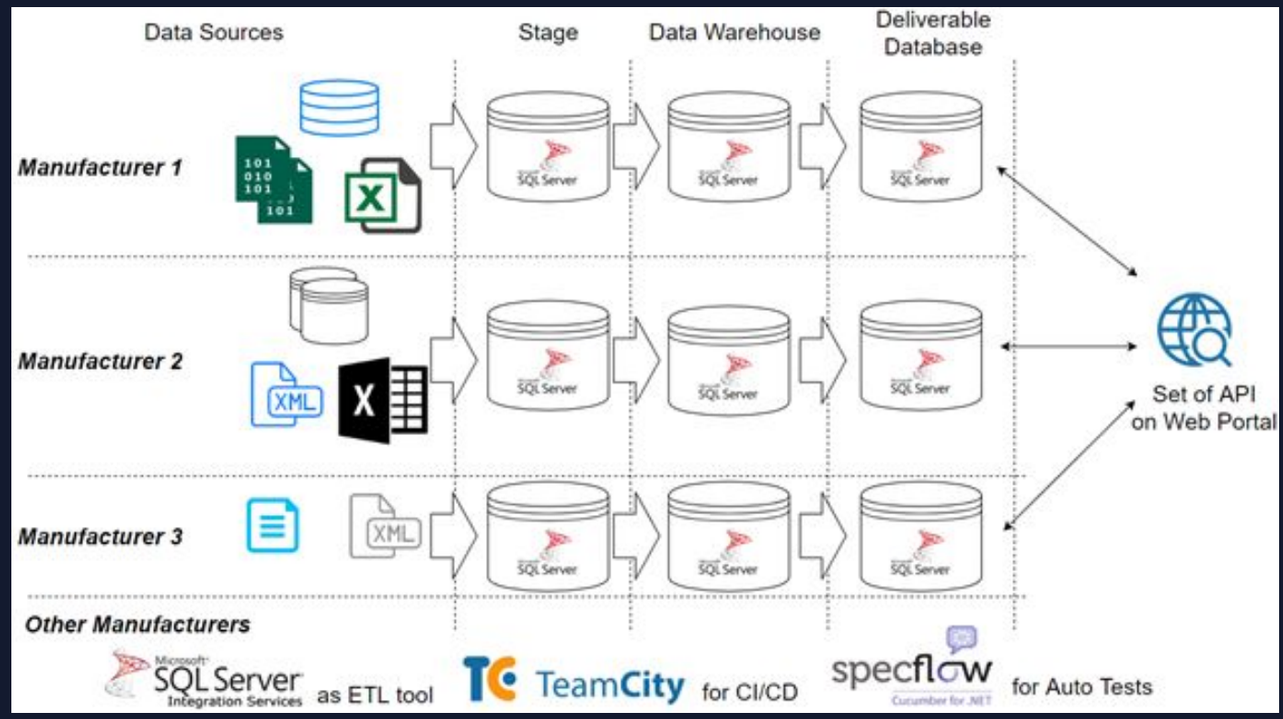
Results

- Customer saves approximately $100,000 per on subscriptions
- High quality of catalogs which saves resources on maintenance
- Full access to catalogs and ability to update catalogs at any time

Case Study - Implementing Electronic Car Parts Catalogs 2/2

Technical Details

- ETL runs 1 time/month for each manufacturer, processing time 1-8 hours
- Largest Deliverable Database is 150Gb
- APIs response time is 300ms (required a lot of optimization)
- TeamCity is configured to run integrity checks, auto tests and build catalogs on full data sets
- Auto tests cover ETL and all APIs, implemented on SpecFlow



Toolset

- On-premise Microsoft SQL Server for all databases
- Microsoft SSIS for ETL
- TeamCity for Continuous Integration
- SpecFlow for auto tests

Team Composition

- Project Manager
- 6 Developers
- 2 QA
- 1 BA

Case Study - Management reports automation for vacation rentals business 1/2

Implementation of Data Warehouse, ELT process, Reports and Customer Portal.

Challenges

The client is vacation rentals and holiday resorts business. They used to collect the data such as management reports manually. However, with a high volume of data, the client was unable to prepare customer reports for each house owner. To streamline the process, our team needed to automate the process of data management and report distribution. Reports format and look-and-feel should be saved as much as possible.

Solution

The key result – our team created a solution that automates the preparation of management reports and property owners reports.

ETL pipeline extracts data from sources, validates it, places it in historical storage, processes data mart, and generates individual reports to send them according to the distribution list. Notification & Management system was created for administrator to manage distribution list, be aware of sent reports and be aware of any error such as missed data source, wrong email address, etc.

Results

- Saving up to 40+ hours of manual work per week.
- Customers of the business are supported by timely and accurate reporting.
- Data quality was improved.

Case Study - Management reports automation for vacation rentals business 2/2

Technical Details

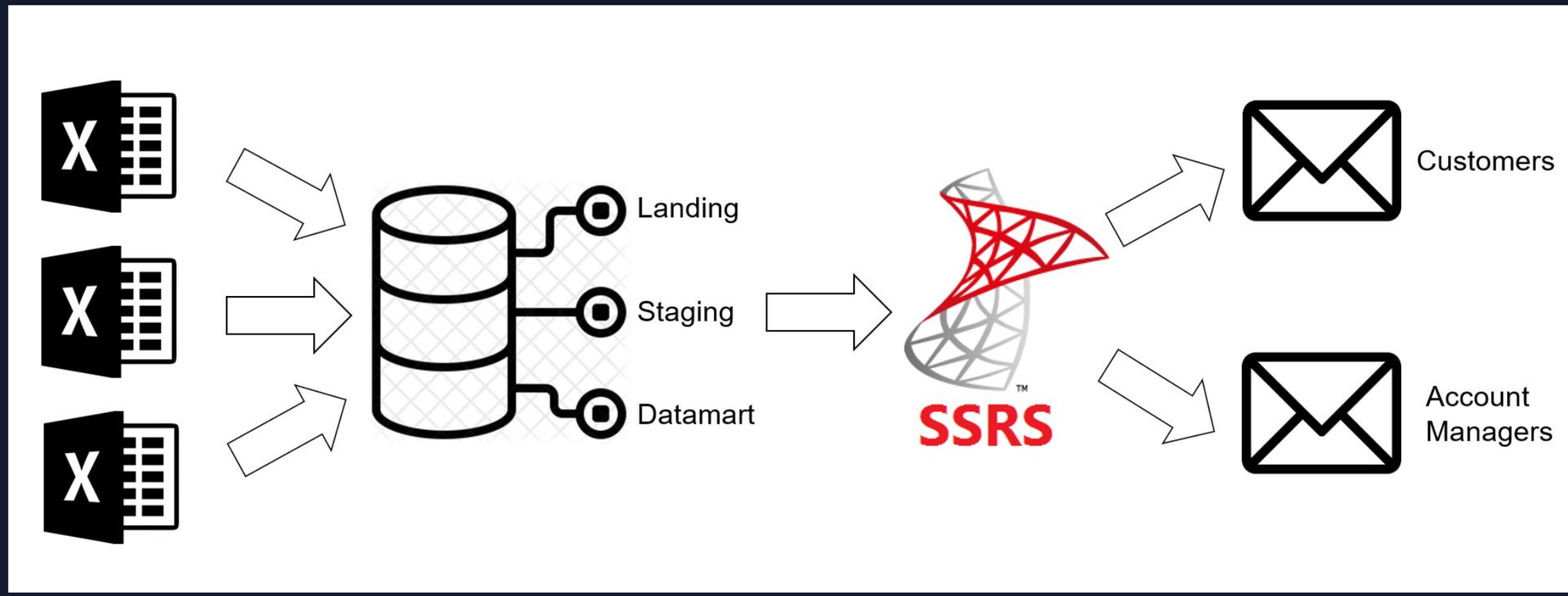
- ETL runs 1 time/day for each type of holiday location, generates and emails 20 managers' reports and about 1000 customer reports.
- Database size is 1Gb.
- Data quality management and logging systems were implemented.

Toolset

- On-premise Microsoft SQL Server for all databases
- Microsoft SSIS for ETL
- Microsoft SSRS
- Tableau

Team Composition

- Project Manager,
- 3 Developers,
- 1 QA.



Case Study – Reporting Solution for HealthCare company 1/2

Challenges

- Create a Spotfire-based dashboard for monitoring the ARTWORK process.
- Evaluate if Spotfire-based Dashboards can be used for reporting
- Decrease time to market
- Reduction of revision cycles for Artwork revisions increasing effectiveness, time and quality
- Data from ARTIS system related to creation, approval and storage of the secondary packaging materials for the vet products.
- Within ARTIS system Reporting is difficult and needs to be improved.
- To improve the ARTWORK process by identifying and improving the most time consuming steps in the process.
- Create a solution for extraction data from the system and use it for reporting needs

Solution

Goal of the project is creation of a solution including several parts. First, it includes design of data storage for information from system that support full cycle of development package for medical products. Second part is developing an ETL process for exporting data from the source system and loading it with transformations to all layers of data storage. And the final part is creation of an analytical dashboard. It shows major KPIs as a throughput time, # of cycles, rate of tasks in time, and provide possibilities go to the details. Intention of the dashboard is to provide management possibility to analyze the situation and make business decisions.

Results

- Artwork process making it more transparent and improve the process in effectiveness, time and quality
- Dashboard helps to monitor ARTWORK process
- Dashboard fit reporting needs.

Case Study - Reporting Solution for HealthCare company 2/2

Technical Details

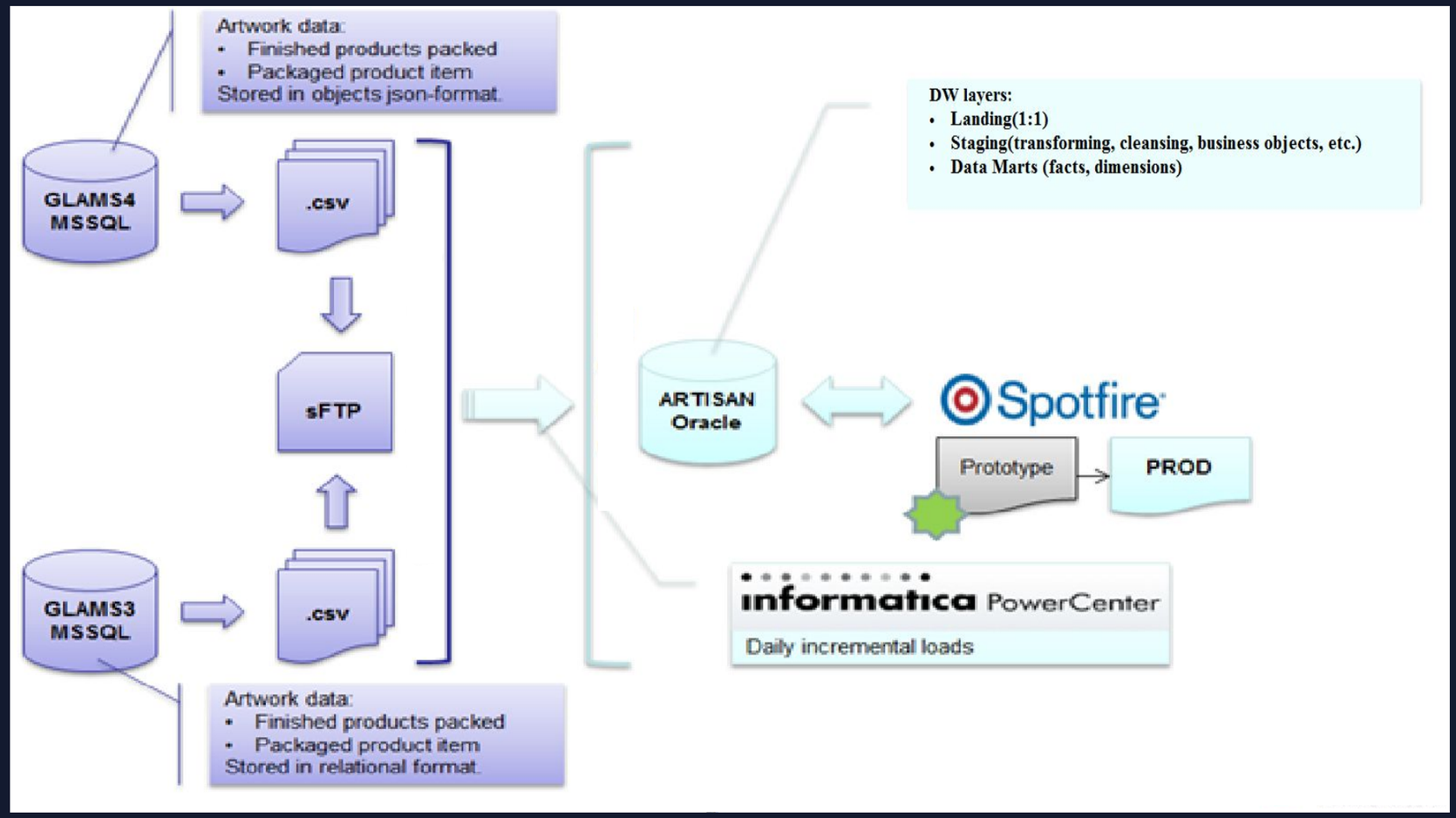
- Sources are archives with set of csv-s at sFTP server.
- Loaded and transformed in Data warehouse.
- Reporting in Tibco Spotfire is based on datawarehouse.
- 60 MB Initial upload
- Initial upload (60 Mb - zipped) + incremets daily upload (1 MB - zipped) (30 minutes)

Toolset

- On-premise Microsoft SQL Server
- Tibco Spotfire
- PL SQL
- Oracle
- Informatica Cloud

Team Composition

- Project Manager,
- 3 Developers.



We Work With

“They do an excellent job, are always transparent, have deep attention to detail. In addition, as we’ve worked with over a dozen different development firms all around the world, I must say that Akveo has been by far the most trustworthy which is to be the most important trait when considering outsourced software development.”

@Travo Tae Lee, CEO

“I worked with Akveo for a very challenging and high-profile project and was extremely happy with the quality of their work and their commitment form beginning to end. I’ve worked with several companies in the past and I must say that Akveo was the one that provided the best software development service.”

@UNHCR Carlos Pavao, Solution Architect

“We can absolutely recommend Akveo to anyone looking for a competent, professional partner in the area of software development; they’ve always gotten the job done.”

@SC-Networks Tobias Kuen, CEO

TRAVO

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