

A BUSINESS INTELLIGENCE SOLUTION: WHEN DATA TELLS MEANINGFUL STORIES

"We were eager to adopt a BI solution as it unlocks the power of data and engages our employees in data-driven decision-making"

A Software Development company

Domain:
Service Company (Software Engineering)

Team:
Power BI developers, DevOps engineers, QA engineers, Business Analyst, Software Architect, Project Manager

Challenge

An IT provider is expected to be digital by default. But it's impossible to become digital once and for all. The best thing you can do is to keep up with a rapidly changing world by constantly developing new solutions and improving the existing ones.

Our customer's company was growing very fast (+30% annually) and their methods of data management and analysis were getting outdated and were no longer meeting their needs.The heads of the company felt that they did not possess the entire information about the company's state which made the management and coordination more difficult. Such a situation could slow down the company's growth.

The management team was really fragmented in terms of understanding the current business state. Lack of up-to-date information entailed the inability to make qualitative decisions. The company's managers needed valuable insights on how the business was functioning, what was perfectly working, and what had to be improved. It meant quick access to real-time metrics about various aspects of the company's state and life. It included but was not limited to project metrics, engineering power (e.g. seniority levels, the number of the developers on projects, bench status if there was any), the company's money flow, various kinds of sales order statistics, etc.

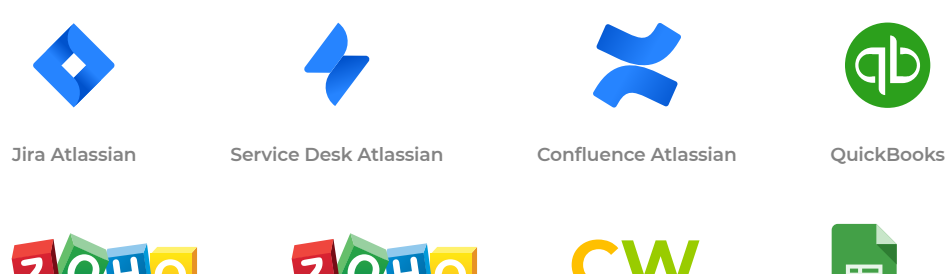
Our customer understood that Business Intelligence is not just about using technology to bring people and information together, it's about flexible experimentation at a rapid pace and fast decisions.

Business Tasks

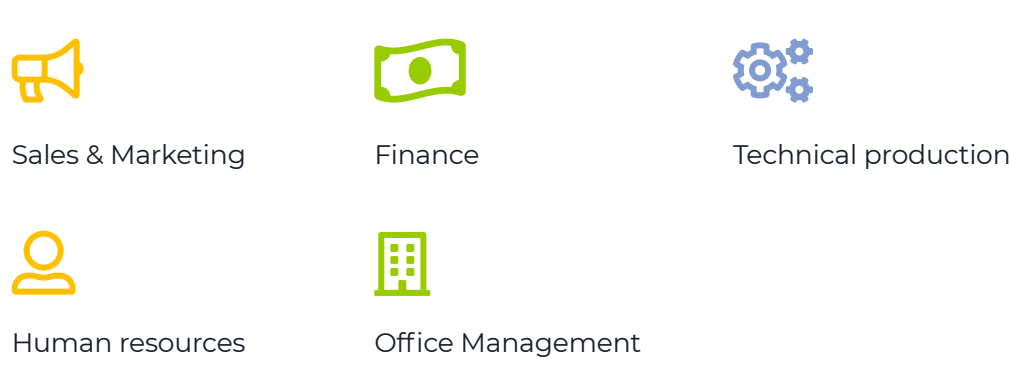
- to get real-time information, which is 3 hours' old at most
- to speed up the decision-making process
- to be able to analyze the work of the company's departments
- to change the approach to holding meetings by cutting out the part dedicated to gathering the information from the employees and sharing it among them

Technical Tasks

- to transform and place into one storage all the business information gathered from a variety of data sources the company was used to work with. The sources were the following:



- to prepare the transformed information for the analysis: to convert it into the readable format for the system
- to visualize data according to the rules defined by the requests of each particular dashboard and report
- to create dashboards with a variety of visualized reports of the working processes of the following business units:



- to implement the function of adding new metrics and reports and editing the existing ones
- to realize the function of reports generation on schedule with notifications
- to collaborate on and share customized dashboards and interactive reports
- to keep data secure while giving user groups access to the insights they need

Solution

Using Power BI and cloud technologies, we've scaled them according to the customer's needs. The relevant data is collected from sources, such as Jira Atlassian, Service Desk Atlassian, Confluence Atlassian, HQuickBooks, Zoho Recruit, ZOHO CRM, Closeweek, Google Sheets. Some part of this data goes straight to datasets, the other - to Azure Data Lake Storage, where all the actions described by a particular model are performed. After that, the information is presented in the dashboards. We've created 14 of them, which is not the final number, as, according to particular needs, the dashboards can be scaled up and down, grouped, and some derivatives can be added. Each dashboard represents an interactive analytical system and creates dozens of coherent reports with a variety of visualizations.

Our solution unifies real-time data from many sources and provides interactive, immersive dashboards for all the departments of the company: Finance, HR, Recruiting, Sales Management, Project Management, Development Units, BackOffice. Employees can easily integrate data, transform it into rich visualizations and reports, and then share those reports with stakeholders.

Key features

- self-service for enterprise analytics
- Azure cloud solution
- AI integration for quick insights finding
- Integration with in-house software

Value

With this BI solution, individual employees have self-service access to intelligence that they can slice and dice in whatever ways are most helpful to them. They've also got an easy way to view and share their insights through interactive visualizations. It's become possible to automate a lot of the preparation and reporting.

We have provided the decision-makers with all the metrics they need - gathered in one place - to do the job more efficiently and not have to wrangle the data to get the answers. The company's stakeholders, managers, and decision-makers have got an opportunity to evaluate the current state of their business in a quick and reliable way.

The company got several levels of just-in-time analytics:

- Project reports** enable Project managers to analyze different aspects of their projects and get real-time metrics. This saves days of work on preparing data.
- Production Unit reports** provide live info on metrics, KPIs, and plan/fact analysis to unit managers. This also saves 2-3 days of work per month and ensures data consistency and accuracy.
- Top-level company reporting** provides thorough analytics for main company processes. This saves months of manual work and enables data collection and analysis in a weekly cycle.

Benefits

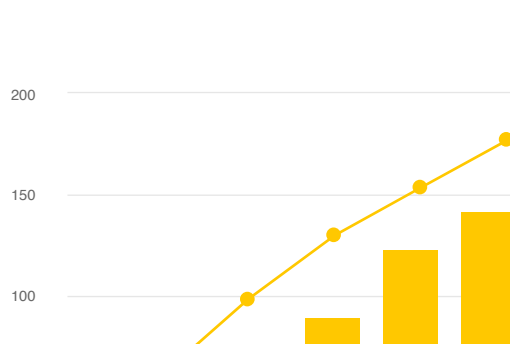
Each Unit got their own benefits of BI introduction into business processes.



Sales department:

- Due to continuous visualization of the sales pipeline it was defined that after the stage of "a clarification call", a pretty big number of potential clients "go dark". It took two months to prepare a fully new and unique methodology of "clarification calls" which brought the increase of conversion from this stage to the next sales step by 44%.
- The real-time visualization of each sales manager's KPIs allowed to identify weak points in the process of deal closing for every manager. The following actions were taken to strengthen the Sales Team:
 - young sales managers were mentored by the experienced ones in customly defined complicated spheres;
 - special sales courses were offered to some managers.

These measures allowed us to increase sales by 9,6% in the next 6 months.



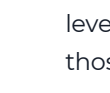
Human Resources department:

- Alignment of financial statement reporting, statutory reporting, and managerial reporting allowed to find out that the specialist of a certain proficiency level brings almost 11% less profit than specialists of other proficiency levels. It was decided to increase the amount of hiring of those specialists who bring 11% more profit to the company, rather than those who do not.



PMO:

- Detailed project analytics enabled a lot of optimizations of the project management practices resulting in ~4% project profitability increase.



Finance department:

- Systematic keeping control on KPIs and the ability to deliver quick financial reports to stakeholders, managers, and decision-makers allowed to identify undesirable financial expenses. The improvements made to avoid the expenses helped the company to save 84K within the next 6 months.



Office Management:

- The continuous visibility of the department processes allowed to redistribute the forces of the existing staff and avoid hiring more people, which helped to save about 17K of potential expenses within the following half a year.

Technologies

- Power BI
- SQL Server
- NoSQL database
- data models
- ETL (Extract, Transform and Load)
- OLAP
- REST
- R
- Python
- JavaScript