

QLIK SENSE IMPLEMENTATION & BI REPORTS · KRAH GROUP

Informative offer - Krah Group

QLIK SENSE IMPLEMENTATION & BI REPORTS

INFORMATIVE OFFER - KRAH GROUP



1. Subject of the offer

We are glad that you recognized us as a potential partner in the field of comprehensive implementation of a solution for business intelligence (BI), so first we would like to thank you for the opportunity presented.

We believe that BE-terna is the right partner for the implementation of the required BI solution (Qlik Sense), because under one roof, in addition to experts in the field of data storage, data processing and modern business intelligence tools (Qlik and Microsoft Power BI), it also possesses the domain knowledge of **financial controlling** (hereinafter the **BE-terna FICO solution** for the field of financial controlling). As a big advantage, we would also like to point out the fact that we have more than **15+ years** of experience setting up projects on top of ERP systems such as SAP, Dynamics Navision and others.

As an important informative fact, **BE-terna** also offers “add-on” tools and services to support the **planning process, machine learning capabilities, certified instructor led Qlik trainings** etc. resulting in reducing investment costs in the later stages of the project.

Considering fact, that BE-terna team has strong previous experiences in manufacturing in combination with SAP knowledge, **we can offer predefined module frameworks and extensive KPI library**, which can help a lot in analysis phase of the project.

In accordance with the inquiry and initial meeting, we present to you this document, which is an offer for the implementation of a business intelligence solution and reports, based on Qlik Sense technology. Implementation includes the following parts:

Implementation includes the following parts:

1. Implementation of BE-terna FICO solution for financial controlling and implementation of sales module,

The total estimation of services for above described modules amounts to: **34.740 EUR**

After the completion of the implementation, we propose to conclude a maintenance/support contract for further cooperation.

Additional optional services after the implementation of the solution (phase 1):

2. Implementation of other modules, such as Distribution, Purchase, Inventory, Manufacturing, Human Resources and Quality.
3. Certified official Qlik trainings for advanced users.
4. Qlik complete Onboarding program.
5. Option to upgrade the solution with K4 Analytics add-on to support business planning process.
6. Option to upgrade solution with Machine Learning capabilities.

We hope that the offer will meet your expectations and if you have any additional questions, please feel free to contact us.



2. Qlik licenses

Description of Qlik Sense Enterprise Client-Managed and Qlik Sense Enterprise SaaS:

- QLIK SENSE ENTERPRISE CLIENT-MANAGED** - includes Qlik GeoAnalytics Base, all Qlik Web Connectors plus a Development and a Test Site. The minimum order is one Professional User. You will need to determine the configuration of Professional and Analyzer users to be able to calculate the price. Tiered pricing defines a price per unit within a range. With tiered pricing once a tier is exceeded, you move to the next tier and charge a lower price per unit. The net price is the blended price of the applicable tiers. All prices reflect annual subscription fees. Additional terms are published in the License Metrics document available to download from www.qlik.com/product-terms. (Please note all Qlik customers have free access to a comprehensive collection of online courses in Qlik Continuous Classroom ("New User" pathway) to help get setup and running with Qlik.)
- QLIK SENSE ENTERPRISE SAAS** - includes geo-analytics features and Qlik Cloud Service supported web connectors. The minimum order is one Professional User. You will need to determine the configuration of Professional and Analyzer users to be able to calculate the price. Tiered pricing defines a price per unit within a range. With tiered pricing once a tier is exceeded, you move to the next tier and charge a lower price per unit. The net price is the blended price of the applicable tiers. All prices reflect annual subscription fees. Additional terms are published in the License Metrics document available to download from www.qlik.com/product-terms. (Please note all Qlik customers have free access to a comprehensive collection of online courses in Qlik Continuous Classroom ("New User" pathway) to help get setup and running with Qlik.)

For new licenses (Client-managed or SaaS), **the pricelist for additional subscriptions is as follows:**

Qlik Sense License types	Yearly Subscription Amount
Qlik Sense Professional User license	750 €
Qlik Sense Analyzer User license	435 €
Qlik Sense Analyzer Capacity license*	1.080 €
SAP NetWeaver Connector license	12.600 €

**Analyzer Capacity usage is metered based on time. Time is measured in increments of 6 minutes, only when there has been activity. Analyzer Capacity is purchased in packs of 1000 minutes/month via subscription on an annual basis. The minutes purchased defines the monthly usage allowance, and resets at the end of each calendar month.*

A subscription commitment for 3 years will protect your initial price.

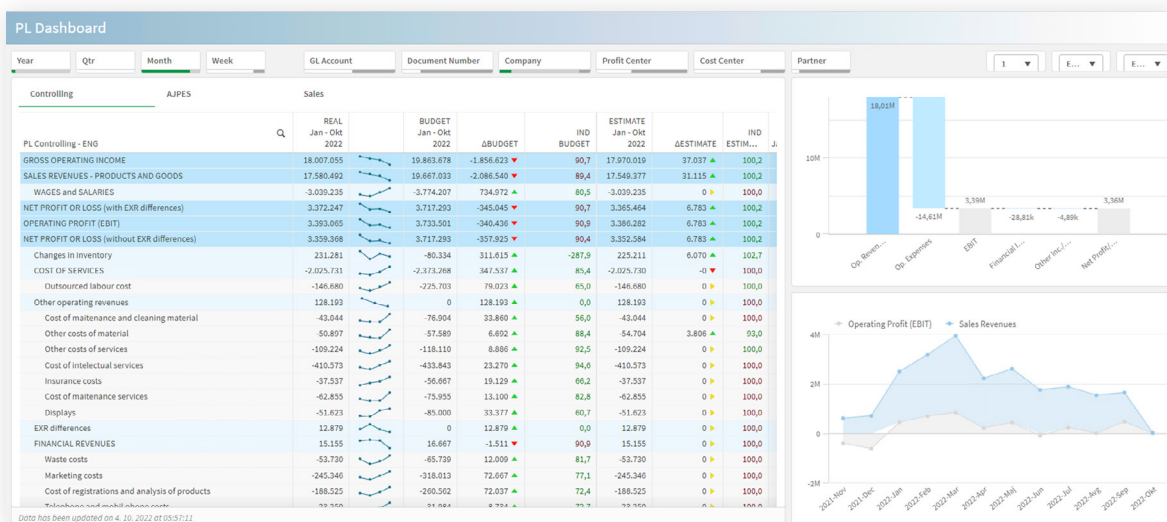
3. Scope of the offer

KRAH Group, Resistec, has sent inquires for described in excel. For Phase 1, where requirements are mostly financial, we propose:

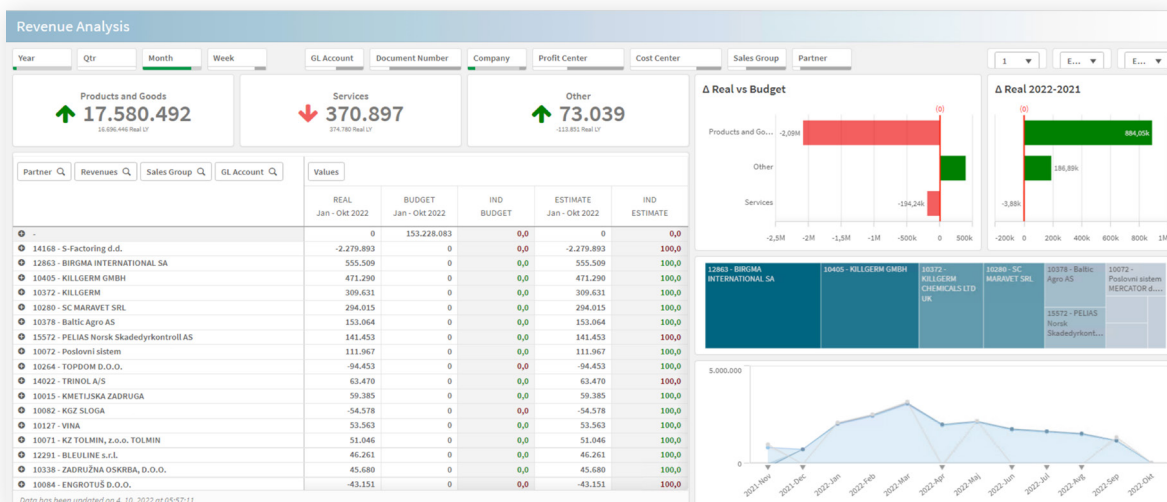
- Implementation of BE-terna FICO Pro solution for financial controlling,
- implementation of Sales module

1. IMPLEMENTATION OF BE-TERNA FICO

The implementation of the module and estimations assume the use of BE-terna FICO solution, which is described and evaluated below.

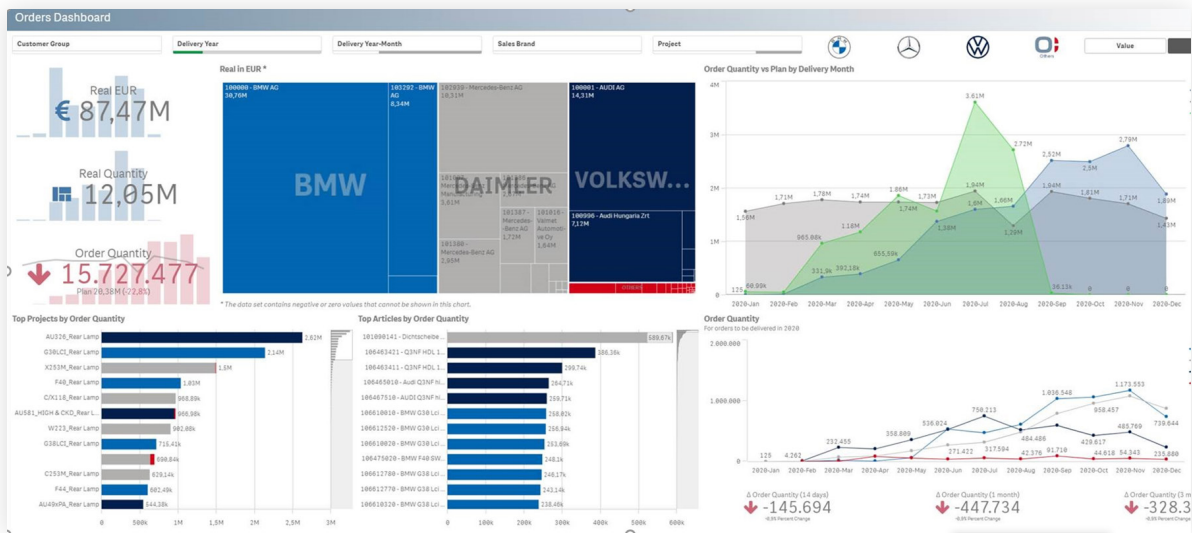


Example of PL Dashboard



Example of Revenue Analysis

2. IMPLEMENTATION OF SALES AND DISTRIBUTION MODULE



Example of Sales & Logistics (sales, billing, distribution)

4. Implementation services

For the purpose of evaluating the service estimations, we took into account the unified price of the services for project manager, consultant, developer, data analyst and solution architect (**90€/h, 720€/h**).

1. IMPLEMENTATION







BE-terna module description	Estimation (MD)	Value
Financial Controlling (Pro package + 8 MD) module	/	18.900 €
Sales module	15	10.800 €
Project Management	3	2.160 €
Analysis (2 workshops + preparation)	2	1.440 €
Key users training and go-live support (1 user, basic settings and usage of solution)	2	1.440 €

TOTAL (Services + BE-terna FICO package) 34.740€

The scope of services is assumed for one company. Any specifics for each company per module can be estimated after analysis phase. Current estimation is 5 MD per module per company. Any deviations in the services value from the table above are charged based on a time and material principle.

5. Description of BE-terna FICO solution for Financial Controlling

BE-terna FICO solution for financial controlling is a pre-built package that enables consolidation of multiple data sources, flexibility and interactive reporting. For the proposed scope of the project in this offer, Pro package will be used to implement the defined scope.

 <p>EFFECTIVE EXPENSE MANAGEMENT Discover the real costs of your business and find out new ways to save costs and increase profitability.</p>	 <p>REDUCE CLOSE CYCLES Save days and weeks off your data consolidation, preparation, and presentation efforts.</p>	 <p>IMPROVE DATA ACCURACY Benefit from built-in controlling mechanisms and data anomaly detection.</p>
 <p>OPTIMIZE FORECASTING By improving data transparency, the solution will help you optimize budget allocations and advanced forecasting.</p>	 <p>MANAGE REVENUE AND PROFITS With all your data in one place, you can easily discover opportunities for your business.</p>	 <p>STAY COMPLIANT Effectively align governance with your business. Make decisions while decreasing risk, penalties, and fraud.</p>

Key benefits

Many „out-of-the-box“ features provide an end-to-end business overview, flexibility and allow users to focus on making decisions, instead of preparing the data.

<p>DATA IMPORT</p> <ul style="list-style-type: none"> - ERP independent - Fast data processing - Business logic is in controlling hands - Import is supervised and controlled - Certified for SAP, Dynamics etc. 	<p>COST REALLOCATION</p> <ul style="list-style-type: none"> - Compare postings before and after allocation - Allocation keys controlled by controlling dept. - Original postings remain in application together with allocated postings 	<p>BUSINESS RULES & DATA CONTROL</p> <ul style="list-style-type: none"> - Data/process anomaly detection (with notifications) - Fast data corrections execution - Duplication / undefined transaction recognition - Accounting controls - Cost reallocation controls 	<p>CONTROLLING ADJUSTMENTS</p> <ul style="list-style-type: none"> - Fast data fixing - Original and revised report presentation - Reporting revision of closed periods w/o ERP intervention - BS kept balanced - Cross-check controls
<p>SELF – SERVICE FUNCTIONALITY</p> <ul style="list-style-type: none"> - Controllers are full empowered to search data and create their own reports - No need to wait for IT to publish new reports - Report creation on the fly 	<p>GL LINKED TO ANALYTICS</p> <ul style="list-style-type: none"> - Association between GL postings and detailed postings - P&L drill to invoice or posting line level - High-level and details in one screen 	<p>PLANNING AND BUDGETING*</p> <ul style="list-style-type: none"> - Comparison to various budgets and forecasts - Support for planning process (annual budgeting, operational planning, purchase planning etc.) 	<p>CONTROLLING CONSOLIDATION</p> <ul style="list-style-type: none"> - Import of reservations - Import of adjustments - Import of budgeting structure - Exclusion of inter-company transactions - Import of consolidated postings

Key modules and functionalities

Overview of commercial packages for BE-terna FICO. We propose adjusted PRO package to cover requirements for Phase 1:

	BASIC	PRO	PREMIUM
MODUL – DATA IMPORT	YES	YES	YES
GL prepared by data provider	Yes	Yes	Yes
Dynamics BC/FO or SAP Any		Yes	Yes
Multicurrency	No	Yes	Yes
MODUL – BUSINESS RULES & DATA CONTROL	YES	YES	YES
Number and type of reports included	(1) PL	(2) PL & BS & KPI	(3) PL & AP/AR & CF (ind.)
Multilanguage			Yes
MODUL – CONTROLLING ADJUSTMENTS	YES	YES	YES
Accruals posting		YES	YES
MODUL – COST REALLOCATION	YES	YES	YES
Excel with allocation keys	Yes	Yes (HR data)	Yes
Automatic reallocation calculation		Yes (1)	Yes (3)
MODUL – PLANNING AND BUDGETING			YES
Basic Planning process support	No	Yes	Yes
Advanced planning process support	No	Yes*	Yes*
MODUL – GROUP CONTROLLING	YES	YES	YES
No. of companies	Up to 2	Up to 5	Up to 10
MODUL – TOP MANAGEMENT REPORTING			YES
Web mashup for top mgmt. Dashboard	N/A	N/A	Yes
Sharepoint dashboard integration	N/A	N/A	Yes (Optional)
IBSC support	N/A	N/A	Yes (Optional)
PowerPoint template preparation	N/A	N/A	Yes (Optional)
Support for comments (input forms)	N/A	N/A	Yes (Optional)

ASSUMPTIONS FOR IMPLEMENTING BE-FICO MODULE FOR FINANCIAL CONTROLLING:

- Source tables for reports and KPI's are BKPF, BSEG and GLT0. Additional registers (ie. customers KNA1, vendors LFA1, cost centers CSKS) are included in offer.
- AR and AP part is replaced by implementation services needed for BS (1 structure) and KPI definitions.
- Budget (PL, BS) and HR data (HC and FTE) needed for KPI calculations, will be imported in Excel format. Import format is defined by contractor.
- All KPI's can be calculated based on PL and BS structure definitions, no additional sources are included.

ASSUMPTIONS FOR IMPLEMENTING SALES MODULE:

- Source tables for sales analysis are VBAK and VBAP (sales order), VBRK and VBRP (billing document).
- Additional registers (ie. customers KNA1, materials MARA) are included in offer.
- Budget will be imported in Excel format.



6. BE-terna Qlik Academy (optional)

BE-terna offers Qlik Sense trainings, where you can **learn designer skills to build insight-driven, self-service applications**. Step by step, you can learn how to build Qlik Sense applications from scratch, visualizations, data modeling, development and building of new reports.

What to expect from BE-terna Qlik Academy:

- ◇ Expert-led training,
- ◇ Qlik Sense certification,
- ◇ Hands-on experience.

Qlik Sense courses:

- **Create visualisations with Qlik Sense** (https://www.be-terna.com/sites/5ebfc39e232fb906a3dfc34b/assets/61cb0d64232fb9680867d86d/BE_terna_Qlik_Sense_Academy_Create_visualisations_with_Qlik.pdf)
- **Data modeling for Qlik Sense** (https://www.be-terna.com/sites/5ebfc39e232fb906a3dfc34b/assets/61cb0d64232fb9680867d870/BE-terna_Qlik_Sense_Academy_Data_Modelling.pdf)
- **Advanced Topics in Design and Development for Qlik** (https://www.be-terna.com/sites/5ebfc39e232fb906a3dfc34b/assets/61cb0d64232fb9680867d86e/BE-terna_Qlik_Sense_Academy_Advanced_topics_in_design_and_development_for_Qlik.pdf)
- **Create reports with Qlik Nprinting** (https://www.be-terna.com/sites/5ebfc39e232fb906a3dfc34b/assets/6225f403232fb90ec822fd8e/BE_terna_NPrinting_Course_Qlik_Sense.pdf)

7. Data Analytics & AI Onboarding program (optional)

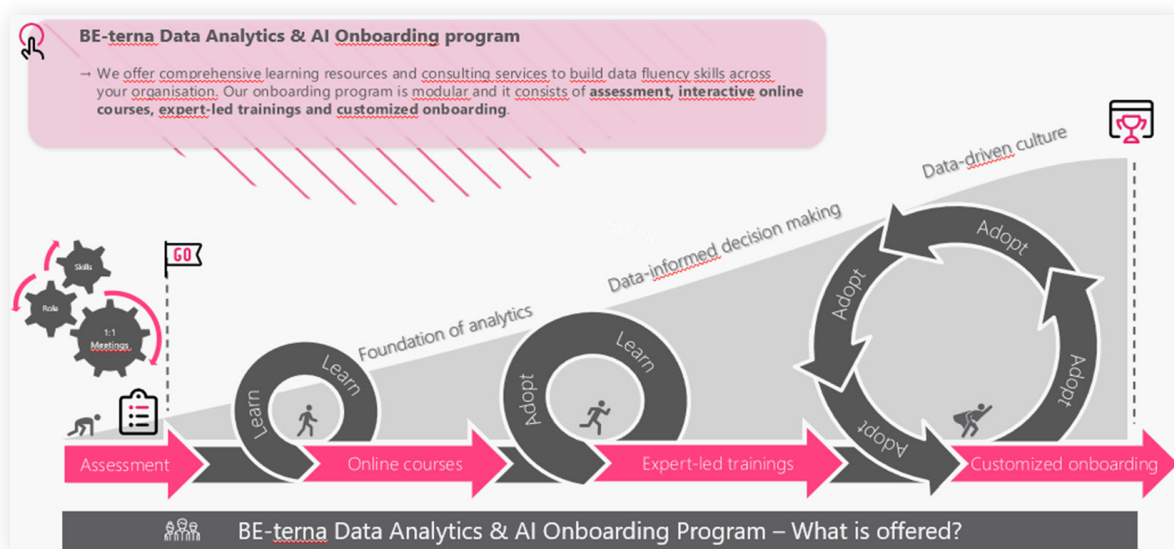
We offer comprehensive learning resources and consulting services to build data fluency skills across your organisation. Our onboarding program is modular and it consists of assessment, interactive online courses, expert-led trainings and customized onboarding.

What to expect from Onboarding program:

- ◆ **Interactive online courses** (self-paced learning)
 - Our online courses are video-based and supported with reference guides and quizzes.
 - They cover topics from data fundamentals to foundational analytics, data-informed decision making and advanced analytics.

- ◆ **Expert-led trainings**
 - Learn directly from our experts and receive the perfect mix of theory and hands-on experience;
 - Designed to best match your working environment - delivered remotely or at your own premises, when you need it;

- ◆ **Customized onboarding** (individual coaching)
 - The aim of this program is to apply the aquired knowledge in practice, as well as to solve real scenarios and challenges in your company with the help of our personal trainer.
 - Depending on your company's needs, our personal trainer will be available to your data analytics team to answer their questions, to work together on real-case scenarios, as well as give advice on how to improve some areas of the business with new technology.
 - We all know that onboarding isn't always a one-size-fits-all process. Customized onboarding can save a lot of time since you are only giving your employees the resources and training they absolutely need for their roles.
 - Based on years of experience, our Data Analytics and AI team developed this customized onboarding program for companies who want to build their own data analytics team and become more data-driven company.



8. K4 Analytics – Advanced business process planning support (optional)

K4 is an add-on extension to Qlik Sense for advanced business process planning support. Yearly pricelist is presented in a table below:

K4 Licenses Description	Quantity	Yearly Subscription Amount
K4 Server (up to 24 named users)	1	3.500 €
K4 extension for Qlik Sense	1	830 €
Named Users (dev, write-back)	10	2.100 €

*A subscription commitment for 2 to 5 years will protect your initial price. Otherwise the running pricelist at renewal date will be applied.

The screenshot displays the 'K4 CC Report FC' interface. At the top, there are filters for Year (2022), Month, Company, CC (1111 Kamernostem Omo...), CC Report Category, Account, Local Account, and SITE. Below the filters, the 'Forecast 2022' section shows a table with columns for Measure, Total, Protected, Locked, New Cell Value, and New Total. The 'FORECAST_GL_Amount' is -331639.99. The main table below has columns for Account No., Account Description, Local Account No., Local Account Description, CC Code, ICP Code, and a series of columns for financial data (PY, BU FY, BU Jan..Jul, ACT Jan..Jul, ACT/BU Jan..Jul, ACT Jul, Aug, Sep, Oct, Nov, Dec, Total FC, Comments). The table contains 16 rows of data, with row 7 highlighted in yellow.

Example of K4 analytics - advanced business planning support:

9. Machine Learning (optional)

Ordering and stock replenishment automation platform for end-to-end supply chain optimisation.

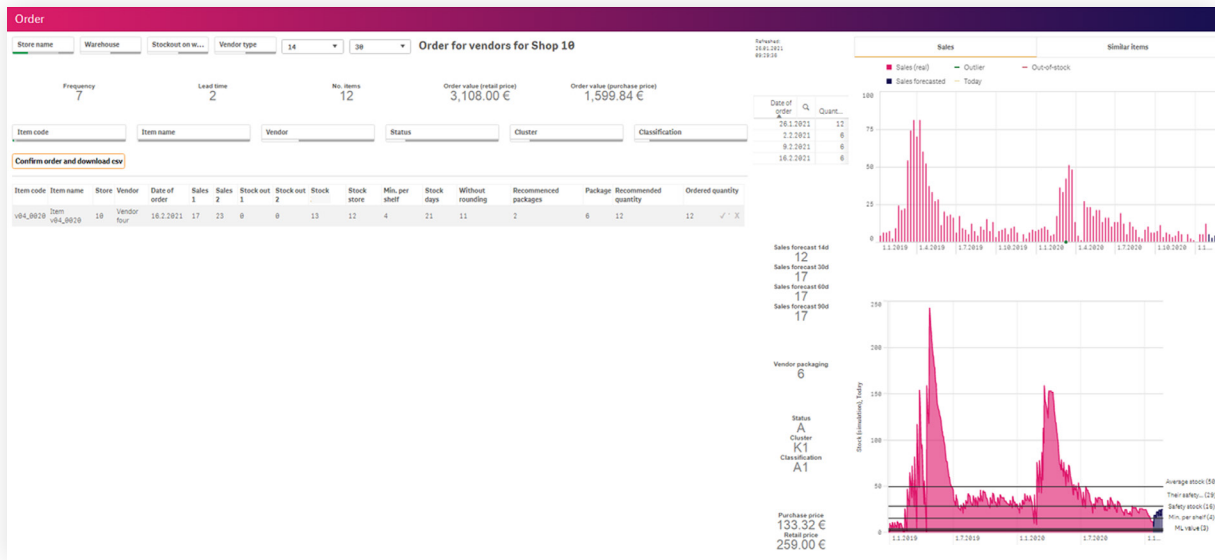
BE-terna Ordering Automation platform has state-of-the-art AI-based algorithms used for sales forecasting and inventory optimisation. It is tailor-made for various item types; standard items, slow-movers, seasonal items etc.

Making purchase orders using a platform's suggestion has proven to cut stock levels, but still decreases the number of stock-outs. It also decreases stock turnover time and helps warehouses run operations smoothly and avoid warehouse jams. Using state-of-the-art deployments on cloud allows customers to get top-level service and pay only for what they use, making platform usage really cost-effective. In addition, a customer can rely on the world-leading security and design of the whole platform.

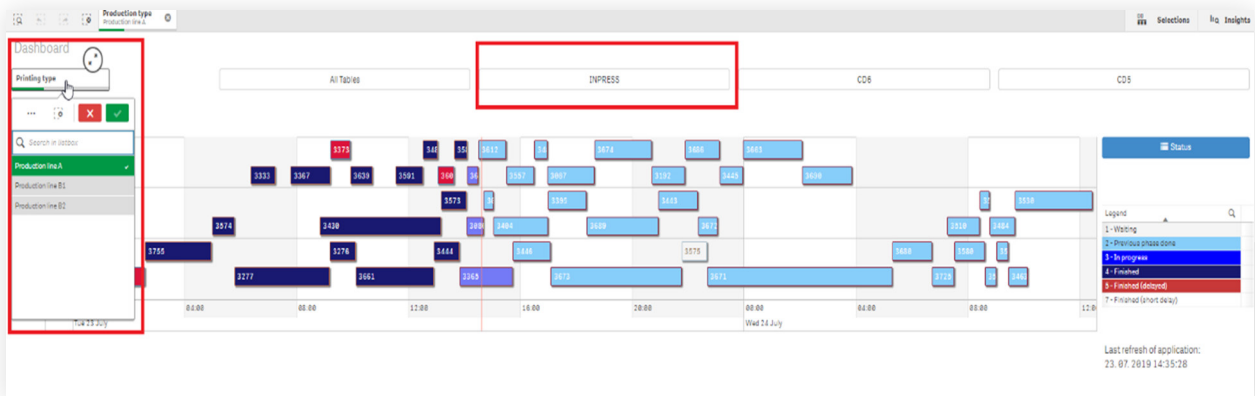
Key components of the solution are:

- **Demand Forecasting:** Algorithm forecasting sales based on historical data, 3rd party data and all relevant constraints
- **Stock Optimisation:** Optimisation algorithm providing user quantity to order based on all relevant constraints
- **Multi-location planning:** Stock optimisation based on goods distribution to multiple locations (warehouses or retail stores)
- **KPI's and reporting:** Comprehensive reporting of all relevant KPI's to help users with solution adoption and decision making
- **Transfers planning:** Modul dedicated to replenishment between stores in a complex retail environment
- **Cargo optimisation:** Module which makes optimal filling of each truck or container in order to lower transportation cost per unit
- **Seasonality analytics:** Drill-down insight into seasonal trends, comparison between locations, years, items etc.
- **Promotion planning:** Deep insight into promotion success helping a purchaser make orders and understand performance
- **Manufacturing:** Deliver raw materials and semi-product planning quantities derived from sales forecast and bill-of-materials information
- **Production planning:** Work orders schedule optimisation based on the plan and various other constraints





Example of ML Dashboard



Example of ML Dashboard (production lines)

10. Assumptions and Limitations

The offer is based on the „time and material“ principle, the estimations are based on the information from initial meeting and from comparable projects.

General assumptions are described below:

- ◇ Report definitions, calculation methodology and business logic for the execution of the ETL process (data sources) are known and understandable to the client and can be explained in writing to the contractor if necessary.
- ◇ If during the project it turns out that the necessary data is not available, it can be imported in Excel format. Import format is defined by the contractor. Later changes of the data source are not part of this offer. In case that customer would not be able to prepare data in needed form that will not be a reason for postponing the project.
- ◇ Only one iteration of data import is included, and two iterations of GUI development is included in the offer.
- ◇ 2 iterations of report layout represent:
 - The contractor makes reports/dashboards based on the information obtained during the preparation of the offer and during the analysis phase. Reports are made according to good practice and the technical limitations of the Qlik Sense system.
 - After key users testing, the customer provides feedback (within a maximum of 2 weeks) and the contractor adjusts the reports as necessary.
- ◇ Customer reports subject to BI implementation are not yet defined in detail. BE-terna therefore assumes that (these are guidelines / good implementation praxis we all should strive to follow):
 - Each of the above defined modules is supposed to be extracted into 1 Qlik application.
 - Each Qlik Application shall not include more than 5 Qlik sheets or more than 25 Qlik objects.
- ◇ After key users testing, the customer provides feedback (within a maximum of 2 weeks) and the contractor adjusts the reports as necessary.
- ◇ Initial testing is done by the contractor. All further testing is performed by the client. The customer is responsible for timely testing of data and solutions with each installation of new/updated functionality.
- ◇ Resolving data quality issues on data source side is not included in this offer.
- ◇ Any other data modelling activities (data cleaning, exceptions, transformation, legacy system merging, history data etc.), which also includes using data from other data sources with different structures, are not included in this offer.
- ◇ It is assumed that the chart of accounts, as well as the other dimensions (Items, Customers, Vendors, cost centers, cost holders, etc.) between companies, are consistent (master data management). Synchronization, cleaning, or synchronization of codes is not the subject of this offer. Chart of account and other dimensions shall not change during implementation.
- ◇ Offer assumes that all business logic and structure of data sources are well known from client's side and that those data sources and business logic will not be changing during the implementation.
- ◇ Offer assumes that in each area the client and Be-terna will have an internal content expert in the field as well as a technical one who will be able to provide the contractor with the competent information needed for a quality and efficient execution of the solution
- ◇ If there is a possible increase in the scope of work that is not foreseen in this offer, the contractor and the client must agree in advance on the content and amount of additional work.
- ◇ It is assumed that all companies have the same SAP solution.
- ◇ Project managers on both sides shall not change team members without previous notice.

In case of project scope changes, project managers on both sides will agree on price and timeline changes respectively.

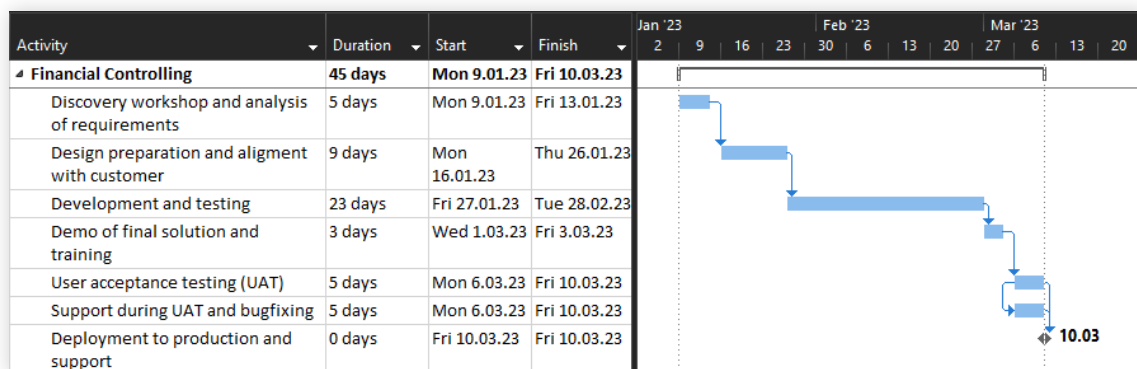
11. Timeline

The projected start of the project is **January 2023**. After initial analysis, a project plan for the implementation will be prepared. The duration of all project activities in phase 1 is estimated at approximately 4 months.

Project will be broken down into seven phases as there are seven modules. BE-terna and client will perform the following activities per each phase:

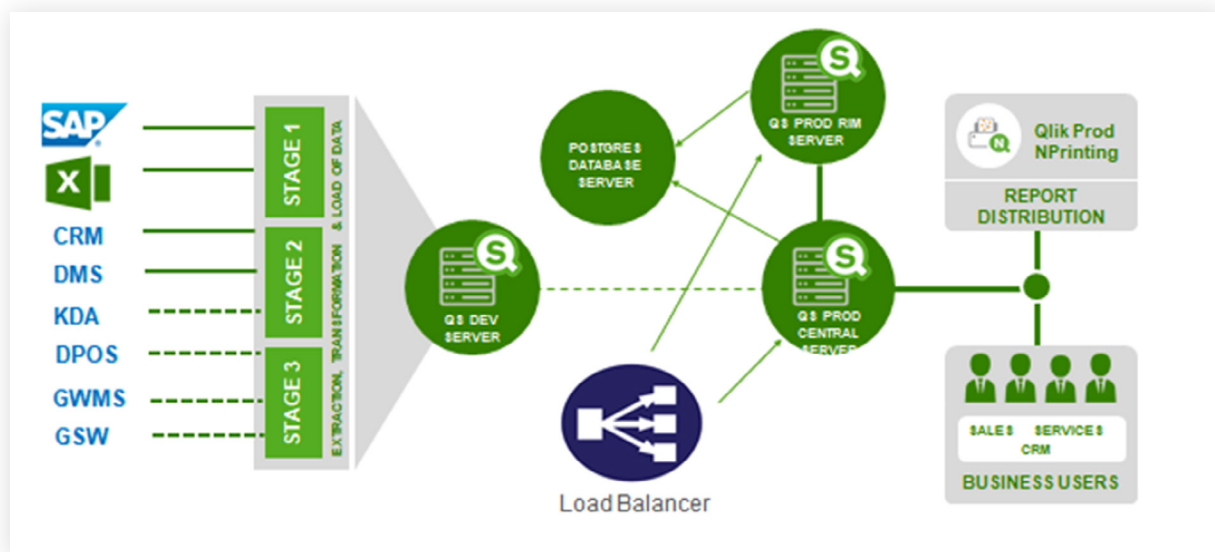
1. BE-terna conducts a discovery workshop with the client's key users and analyses the requirements.
2. BE-terna prepares detailed design and aligns it with the client.
3. BE-terna develops the solution and performs development testing.
4. BE-terna presents the final solution to the client's key users and delivers training to client's key users.
5. Client's key users perform user acceptance testing, thereby confirming the correct and appropriate functioning of the solution. BE-terna fixes any bugs discovered and provides support during testing.
6. The final step is the deployment of the solution to production environment and start of the support mode.

The diagram below depicts the approximate timeline for the module Financial Controlling. The other modules' timelines are dependent on their complexity (scope of work) in terms of duration, but in general have the same structure.



12. System requirements and Infrastructure

Proposed Qlik Sense architecture:



13. Invoicing and payment terms

All prices listed in this offer are in EUR and do not include VAT. If the tax rate changes, all items of this offer that have not yet been invoiced will also change in accordance with the tax rate change.

Invoicing BE-terna FICO solution and possible additional subscriptions

Payment for the BE-terna Pro FICO solution will be charged after signing the contract, as it is required for both the development and use of the solution.

- ◆ Contractor will issue an invoice in the amount of 18.900 EUR for BE-terna FICO Pro solution.

Invoicing the services

Implementation services that are subject to delivery of this proposal are invoiced monthly, based on the provided services during the previous month.

All services are invoiced in 8 days of the current month for previous month.

All invoices are due in 8 days.

You want to know more about BE-terna and our business solutions? We're there for you.

www.be-terna.com