

# VISUAL BI PLATFORM

REAL-TIME DATA VISUALIZATION &  
MANAGERIAL DASHBOARDS

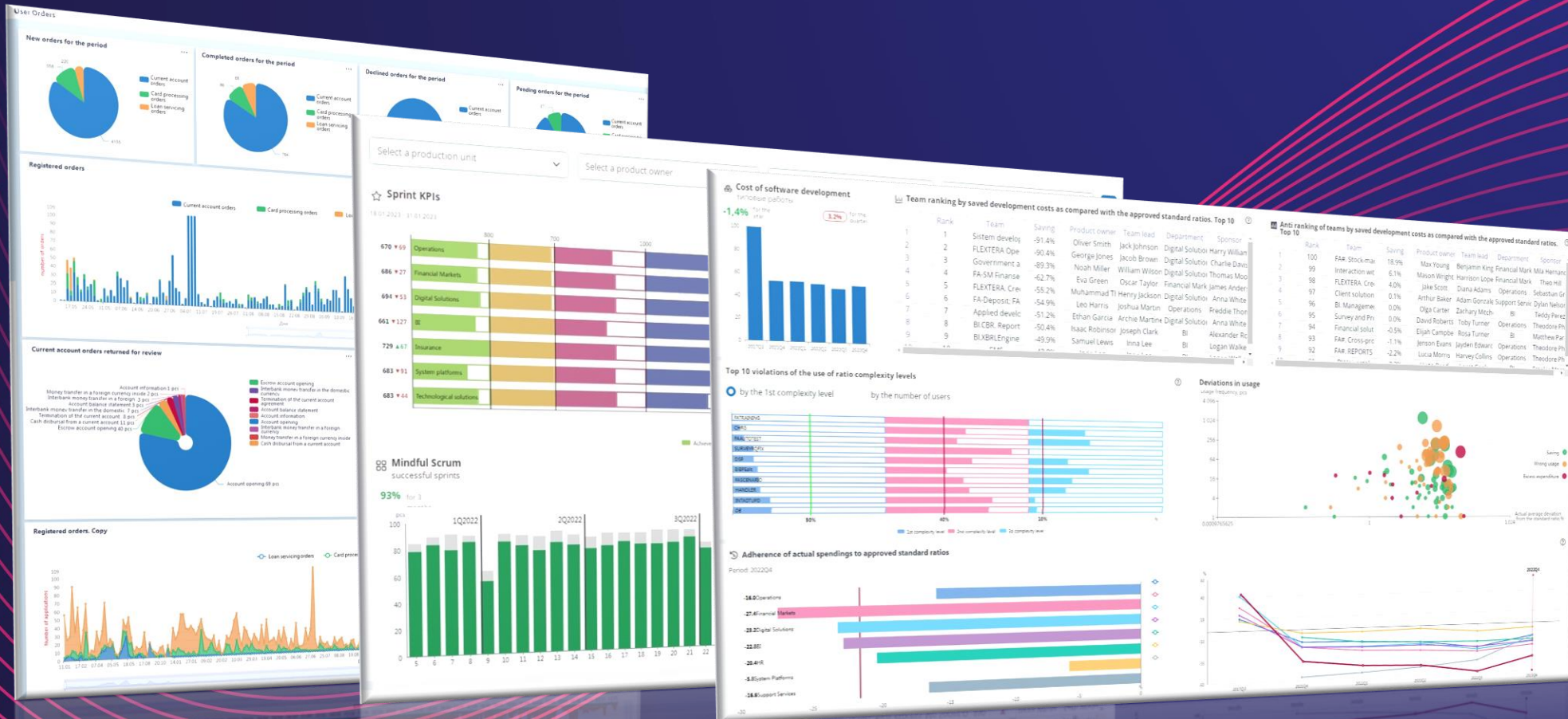
DQ VISUAL BI

# INTERACTIVE DATA VISUALIZATION & BUSINESS ANALYSIS

## MAKE YOUR DATA WORK FOR YOU WITHOUT RESOURCE-INTENSIVE IMPLEMENTATION PROJECTS

- Easily create and edit **custom analytical dashboards** and explore your business data in the most **convenient** way.
- **Interact with information** and implement **timely changes** in business processes based on interactive **real-time** analysis of business data. **Get rid of boring static** diagrams which restrict users and do not allow them to interact with visual representations of data
- Use **convenient** visual analytics to gain valuable **business insights** and take informed **data-driven managerial decisions**.

# EASILY CREATE CUSTOM DASHBOARDS WITH MULTIPLE TYPES OF VISUALIZATIONS



# WHY IS VISUALIZATION SO IMPORTANT?

It is not enough to simply extract, import and deliver information to the user. We need to engage users, excite them, help them to understand the information and make valuable insights. More importantly, the engagement should be emotional, make the user want to play with the information.



## **VISUAL SUPERIORITY EFFECT**

Image perception prevails over perception of figures, texts and audio.



## **INTERACTIVE APPROACH**

Visualization helps to engage the user, keep him/her interested, leverage gamification.



## **PROVEN METHODOLOGY**

Proven ideas and practices are packaged into a methodology and are available for re-use.



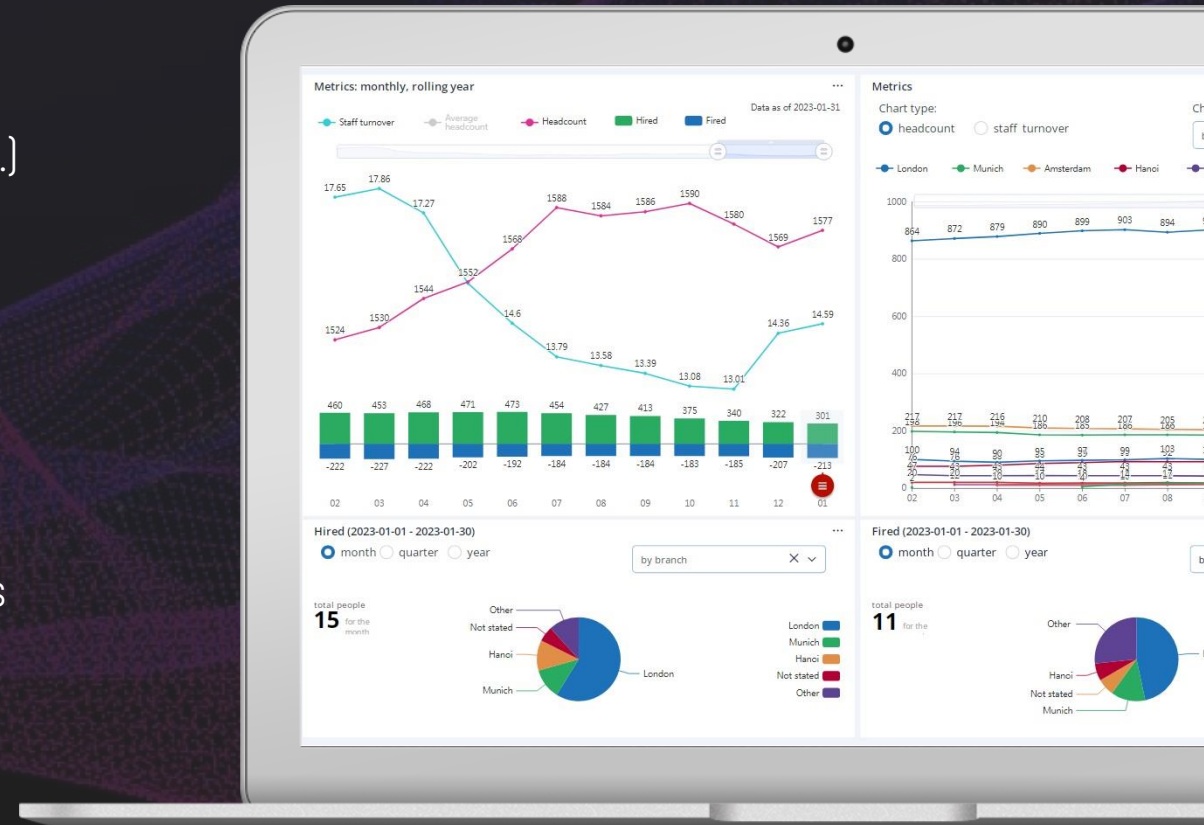
# LEVERAGE EASY LOW-CODE TOOLS FOR VISUALIZATION AND INTERACTIVITY

## VISUALIZATION

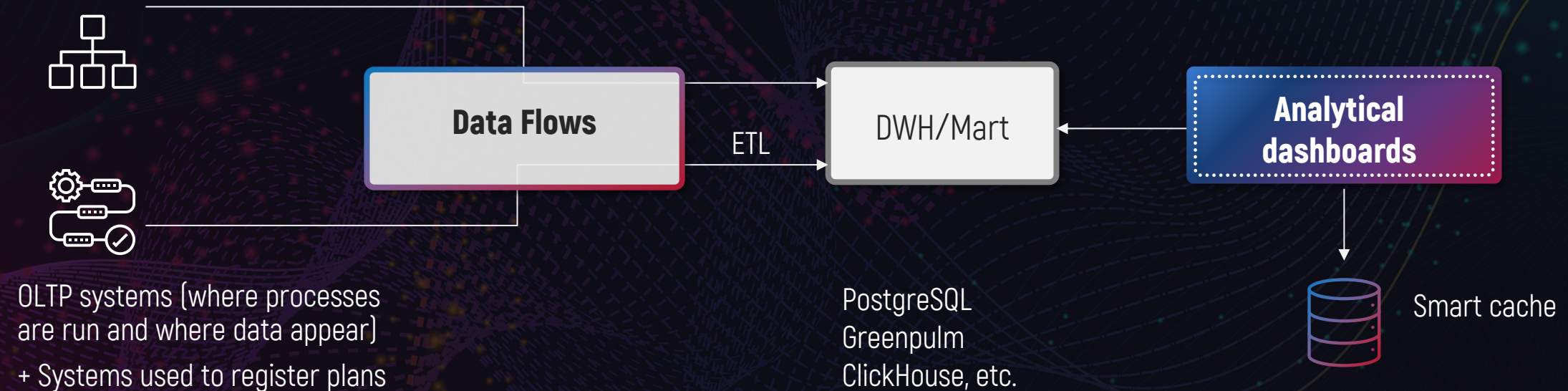
- More than 350 types of visualization (Sankey, Gantt, Geo charts, heatmaps, etc.)
- Multiple pre-set charts with demo data
- Ability to integrate other libraries of visualization elements upon request

## INTERACTIVITY

- Flexible filters (set up filter interdependencies and how they influence charts, use charts as filters)
- Widgets, lookups (external and internal) used as filters or command elements
- Drill-down and zooming without limits
- Markdown in static elements (captions, etc.)
- Tables with conditional formatting and pictograms
- Genuine pivot tables in the browser, with the ability to process up to 1 mln records



# PLACE OF VISUALIZATION IN DATA PROCESSING



WE DEAL WITH THE TASKS THAT ARISE AT THE FINAL STAGE OF DATA PROCESSING:



VISUALIZATION

Clear visual dashboards



INTERACTIVE CHARTS

Live, clickable, dynamic



DELIVERY

Available on any device, in different formats, without delays

# HOW TO START?



## DEFINE THE MOST IMPORTANT METRICS FOR MONITORING

You can get the first valuable results even without preparing data marts – simply by creating a dashboard on top of database replications.

Moreover, you can combine different approaches in the same solution. For example, actual results can be collected from a database replication, and planned numbers – from an EXCEL file (either imported from an external system or generated manually).



## DESIGN THE LAYOUT AND THE UX OF THE TARGET SOLUTION

The user draws his/her vision of the solution, and the administrator copies it in the system by adding charts and other visual elements from the palette.

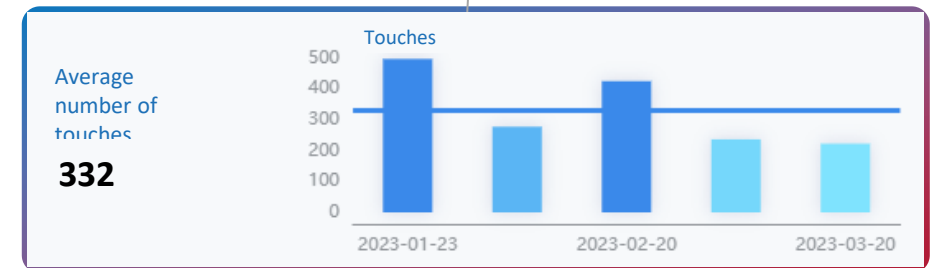
While going deeper into the task and requirements, the administrator creates the most suitable data mart. This task can be done iteratively.



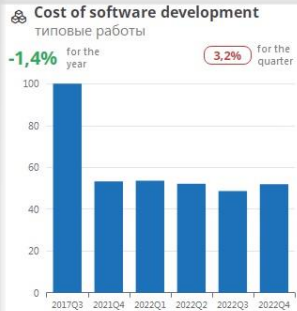
## IMPLEMENT USER METERS

E.g.: monitor the ratio of completed tasks to the daily target; execution of the monthly plan on customer applications.

Such diagrams are easily integrated into CRM systems, front-end systems, digital channels.



# EXAMPLES: PRODUCTION DASHBOARD



### Team ranking by saved development costs as compared with the approved standard ratios. Top 10

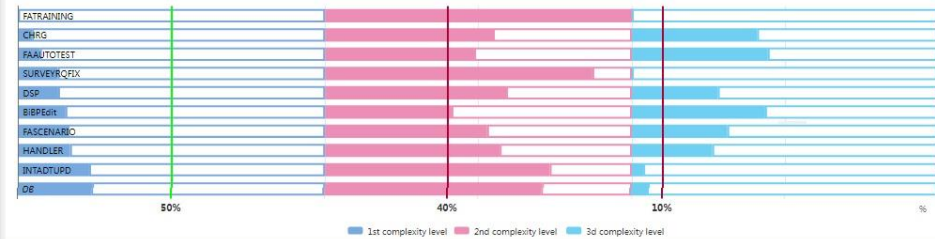
Rank	Team	Saving	Product owner	Team lead	Department	Sponsor
1	Sistem develop	-91.4%	Oliver Smith	Jack Johnson	Digital Solution	Harry William
2	FLEXTERA Ope	-90.4%	George Jones	Jacob Brown	Digital Solution	Charlie Davis
3	Government a	-89.3%	Noah Miller	William Wilson	Digital Solution	Thomas Moo
4	FA-SM Finance	-62.7%	Eva Green	Oscar Taylor	Financial Mark	James Ander
5	FLEXTERA. Cre	-55.2%	Muhammad T	Henry Jackson	Digital Solution	Anna White
6	FA-Deposit; FA	-54.9%	Leo Harris	Joshua Martin	Operations	Freddie Thon
7	Applied develo	-51.2%	Ethan Garcia	Archie Martine	Digital Solution	Anna White
8	BI.CBR. Report	-50.4%	Isaac Robinson	Joseph Clark	BI	Alexander Ro
9	BI.XBRLEngine	-49.9%	Samuel Lewis	Inna Lee	BI	Logan Walke
10	FA#	-43.0%	Isaac Robinson	Joseph Clark	BI	Alexander Ro

### Anti ranking of teams by saved development costs as compared with the approved standard ratios. Top 10

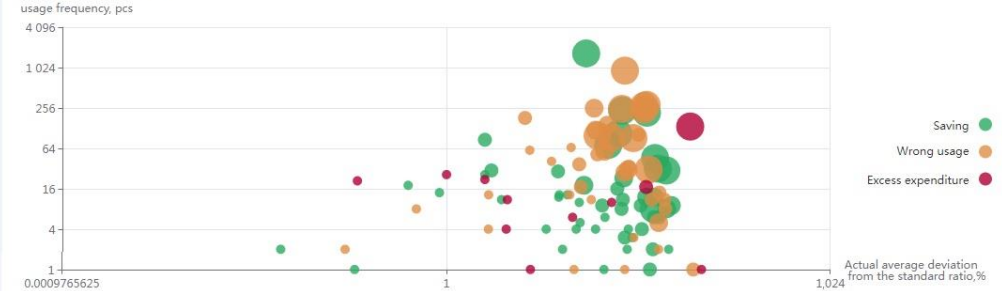
Rank	Team	Saving	Product owner	Team lead	Department	Sponsor
1	FA#. Stock-mar	18.9%	Max Young	Benjamin King	Financial Mark	Mila Hernanc
2	Interaction wit	6.1%	Mason Wright	Harrison Lope	Financial Mark	Theo Hill
3	FLEXTERA. Cre	4.0%	Jake Scott	Diana Adams	Operations	Sebastian Gr
4	Client solution	0.1%	Arthur Baker	Adam Gonzale	Support Servic	Dylan Nelsor
5	BI. Managemen	0.0%	Olga Carter	Zachary Mitch	BI	Teddy Perez
6	Survey and Pro	0.0%	David Roberts	Toby Turner	Operations	Theodore Ph
7	Financial solut	-0.5%	Elijah Campbe	Rosa Turner	BI	Matthew Par
8	FA#. Cross-pro	-1.1%	Jenson Evans	Jayden Edward	Operations	Theodore Ph
9	FA#. REPORTS	-2.2%	Lucia Morris	Harvey Collins	Operations	Theodore Ph
10	BI. Managemen	-2.2%	Max Young	Benjamin King	Financial Mark	Mila Hernanc

### Top 10 violations of the use of ratio complexity levels

by the 1st complexity level  by the number of users

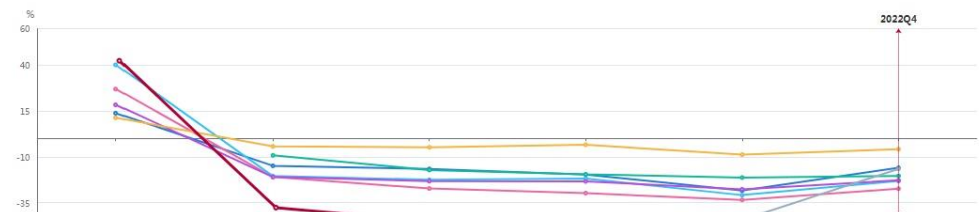


### Deviations in usage



### Adherence of actual spendings to approved standard ratios

Period: 2022Q4



# VISUALIZATION CAPABILITIES FOR DIFFERENT USER CATEGORIES

## READ ONLY

Users who can view dashboards, use their interactive capabilities, export data, documents and images

## SELF SERVICE

Business users who can create their own dashboards using only no-code tools

## TECHNOLOGISTS, ANALYSTS, DEVELOPERS

IT staff: Even complex control centers require junior / middle JS, SQL specialists

# PRINCIPLES OF THE MODERN DATA VISUALIZATION PLATFORM



## **SIMPLE IMPLEMENTATION AND QUICK GO-LIVE**

Containerization + support of popular databases.



## **EASY ONBOARDING**

No proprietary programming languages or technologies.



## **HIGH PERFORMANCE AND LARGE AMOUNT OF DATA**

The load mostly falls on the database. Besides, the Visual Analytics system supports the database by smartly caching popular dashboard use cases. The platform analyzes the quality of dashboards and how effectively they process data, and automatically highlights the charts that need streamlining with special icons.



## **ADAPTIVE DESIGN**

Flexible product customization to specific customer needs.

# SUPPORTING DATA PROCESSING AND HIGH PERFORMANCE



## DATA PROCESSING

- No-code generator of requests to data; viewing results
- Organized chain of requests, including requests to multiple sources
- Compatibility with all popular databases
- REST and SOAP requests used as additional data sources
- Post processing of data with scripts (Groovy, JavaScript, Python)
- EXCEL-like formulae, with the ability to add custom formulae and functions written in JavaScript
- Import from EXCEL files
- Connectors to popular systems – upon request



## PERFORMANCE

- Packaging dashboard groups into a separate out-of-the-box microservice
- Smart caching with support of distributed in-memory object stores
- Self-diagnosis
- Warming up the cache based on ETL events (e.g., Kafka)
- Automatic analysis of chart quality

# DELIVERY TO THE USER



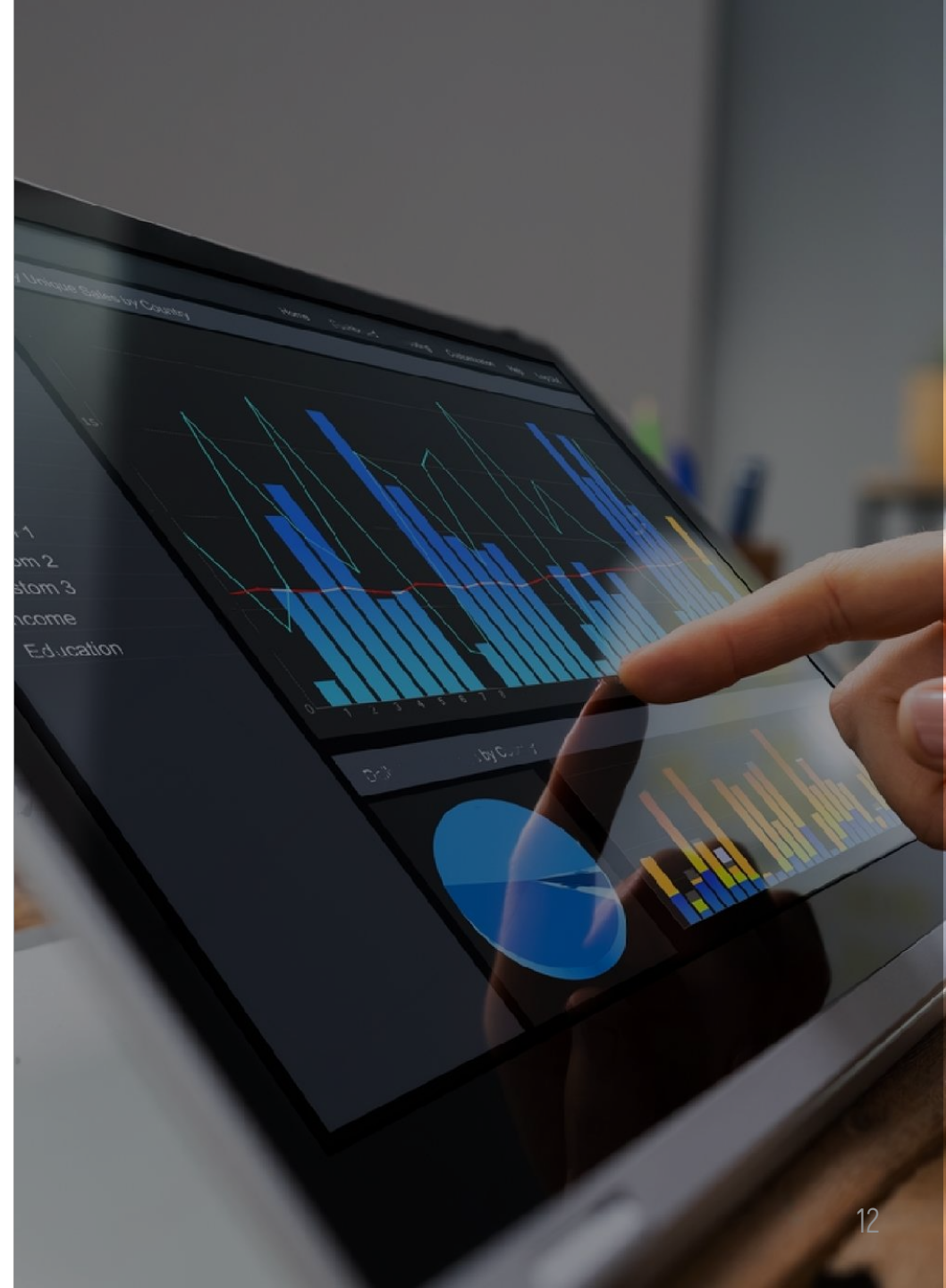
## ACCESS

- By role (RBAC)
- By attribute (ABAC) – with the help of a template engine for requests, with the ability to add system variables for roles, user name, user permissions, etc.
- Use of AD and other access management systems based on Keycloak



## DELIVERY

- Access via a direct link with the transfer of filters in the URL
- Implementation into a form via iframe
- Implementation into a form as a widget
- Export to image files, PDF, EXCEL
- Customization to different screens
- Flexible setup of chart refreshing by schedule or event



# ARCHITECTURE AND TECHNOLOGY



## MICROSERVICE ARCHITECTURE

Event-driven architecture consisting of loosely coupled microservices with a well-defined business capability, which guarantees the ability to quickly implement changes and support adaptive scalability



## TECHNOLOGIES

Application: Java, Spring, Spring Boot, Angular  
Data mart databases: PostgreSQL, MS SQL, Oracle, ClickHouse, etc.

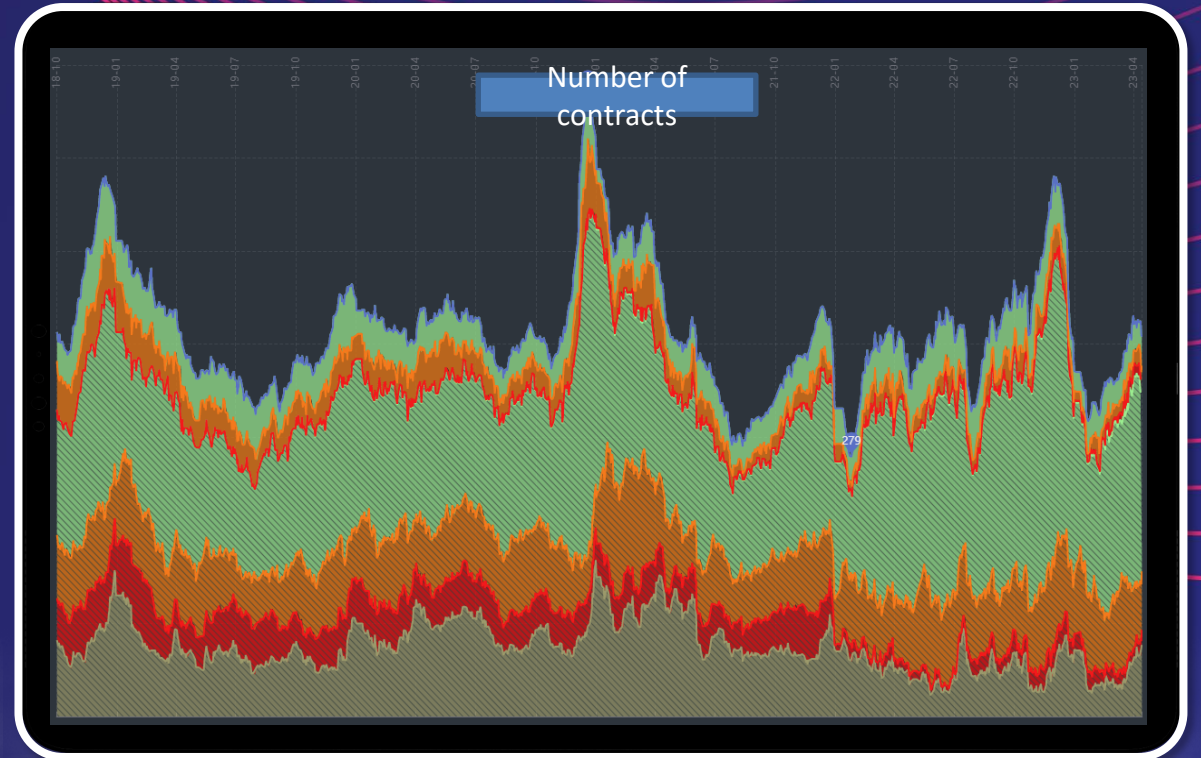
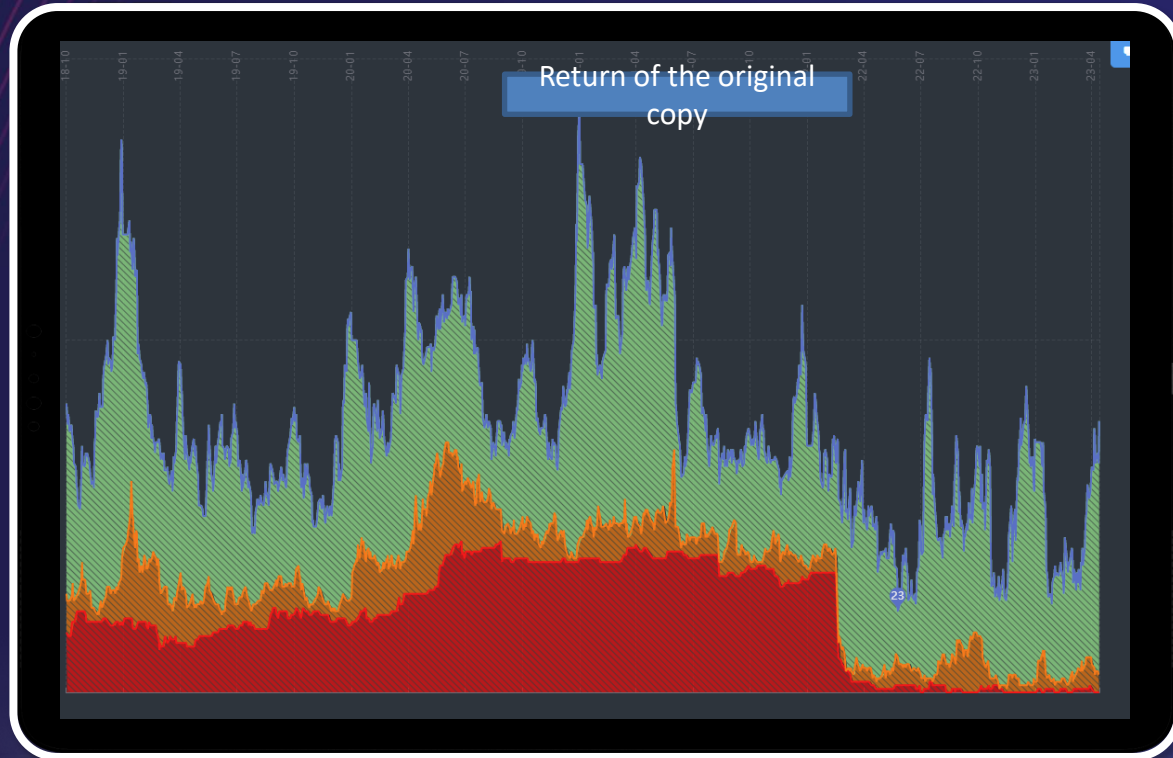


## UNIVERSAL SOLUTION

Cross-industry approach due to the universal architectural solutions, which allows using the product to solve a broad range of tasks

# FIND THE DEVIATION IN THE GRAPH

## DASHBOARD-BASED MONITORING



# YOUR ADVANTAGES

1

## **VIZUALIZE DATA FROM INFORMATION SYSTEMS**

Deliver data to target users in a convenient form, including delivery to smart phones

2

## **YOU DO NOT NEED ANY SUPER TEAM TO START**

due to the use no-code tools, templates and examples among other features

3

## **MOVE ITERATIVELY FROM SIMPLE TO COMPLEX GRAPHS**

Create simple graphs in several hours or days, and complex control centers just within a few weeks

4

## **VISUALIZATION INFLUENCES USERS RESPONSIBLE FOR A TASK AND MAKES JOB ASSESSMENT UNAVOIDABLE**

Implementation of interactive visual reports influences users who perform a task and makes them understand that results of their individual and team work will be assessed

5

## **VISUALIZATION OF REPORTS CHANGES THE MANAGEMENT STYLE**

This includes both operational efficiency and qualitative changes which gradually change the style of company management

6

## **VISUALIZATION SYSTEMS CAN BE INTEGRATED INTO EXISTING SYSTEMS**

including OLTP and their forms, and even provide visual command elements

# OUR EXPERTISE

SYSTEM INTEGRATION & DELIVERY OF THE LEADING GLOBAL SOLUTIONS IN ASIA PACIFIC

GLOBAL BEST PRACTICES, SOLUTIONS & TECHNOLOGY FOR THE FINANCIAL SERVICES INDUSTRY

VAST EXPERIENCE IN RETAIL, CORPORATE AND BUSINESS BANKING

COMPLEX DIGITAL TRANSFORMATION PROJECTS

CUTTING-EDGE FINANCIAL TECHNOLOGY

# THANK YOU

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