

# Custom Software Development

**Industries and Services**

## Agenda

Overview

Clients

Core competencies

Industries

Technologies

Projects

Contacts

# WaveAccess: Key Facts

**20** yrs

of software  
development  
experience

**16+**

industries use  
our solutions

**> 500**

employees  
in 4 countries

Headquartered in  
**Saint Petersburg,  
Russia**

**10**  
Development centers

Sales offices:  
**Denmark, Germany,  
USA**

**96/100**  
Customer satisfaction index

Microsoft  
Partner



2019 Partner of the Year  
Media & Communications Award  
2018 Partner of the Year  
Artificial Intelligence Award  
2017 Partner of the Year  
Business Analytics Award



**The General Data  
Protection Regulation**  
Compliant

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# WaveAccess: Awards and Prizes



Gold Microsoft Partner since 2007



2019 Partner of the Year  
Media & Communications Award  
2018 Partner of the Year  
Artificial Intelligence Award  
2017 Partner of the Year  
Business Analytics Award

Winner of Microsoft Partner Awards  
in Media and Communications (2019)  
in Artificial Intelligence (2018)  
in Business Analytics (2017)



Microsoft  
Partner Network

WORLDWIDE  
**DYNAMICS CRM PARTNER  
OF THE YEAR**

2009, 2010, 2011, 2016 & 2019

Products developed by WaveAccess were awarded  
Microsoft Dynamics Partner of the Year  
2009, 2010, 2011, 2016 & 2019



Academy Award-winning  
Mocha for  
Imagineer Systems

The product Mocha developed by WaveAccess won  
Academy Award in 2013



ISO 27001:2013 certified — Certificate No. [31101468](#) ISMS13

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# Clients



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# Core competencies



Implementation of highly loaded  
& highly scalable systems



Microsoft Dynamics CRM development,  
customization and implementation



Building ETL & BI Systems



Workflow and business process  
automation



Development of Real Time  
Monitoring Systems



Web & Mobile applications  
development



Building AI and Machine Learning  
based systems



Project recovery



System Integration & optimization



Data import and migration



Blockchain implementation

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# Industries

Our solutions are used in a number of business verticals, some of which include:



Automotive industry



Pharmaceuticals



Food & Beverage



Industrial automation



Science



Transport & Logistics



Finance, Insurance  
& Banking



Education



Oil & Gas



Legal services



Real Estate



Energetics



Telecom



Retail & E-commerce



Motion Picture  
Production



Healthcare

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# Technologies

We use 50+ technologies, here are a few of them:

- Java (Spring Framework, Spring Boot, Spring Data, Spring Cloud, EJB, JSP, Servlets, Hibernate, JDO, JDBC, JPA, JSF, RichFaces, PrimeFaces, SEAM)
- .Net (ASP.NET MVC, Web API, .NET Core, WPF, WWF, WCF)
- HTML5 & JavaScript (AngularJS 1.2- 5.0, React JS, JQuery, DoJo, Ext Js)
- Databases (IBM DB2, Oracle, Microsoft SQL Server, PostgreSQL, MySQL, AWS DynamoDB, Azure Cosmos DB, Azure SQL, MongoDB, Elasticsearch, Cassandra, Hive)
- BI (Cognos BI, Power BI, MicroStrategy, Oracle Reports)
- Big Data (Apache Hadoop family, Apache Spark, Apache Kafka)
- Python (Django, Pyramid)
- PHP (Drupal, Joomla, Yii)
- Microsoft Dynamics CRM 2011/2013/2015/2016/Dynamics 365
- Salesforce Lightning, Classic
- Mobile (Android, iOS, Java, Kotlin, Swift, ReactiveX, React Native, Xamarin, MVVMCross, Android Wear, Apple WatchKit, ARKit, Realm, Firebase)
- Machine Learning
- Blockchain
- Augmented reality, virtual reality



android

iOS



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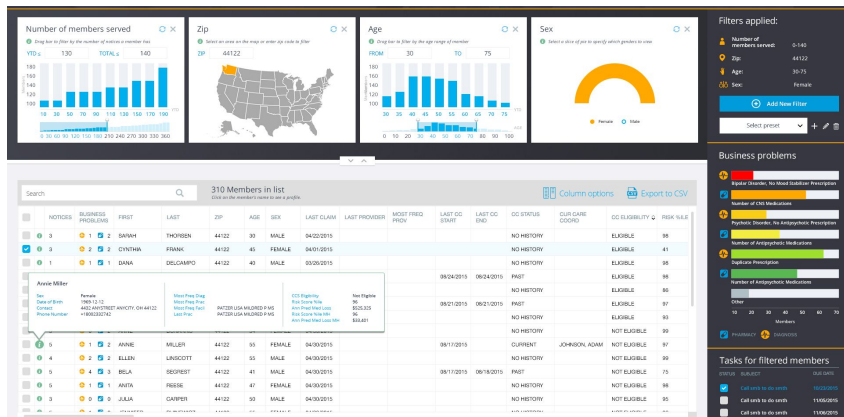
Contacts

# KEY PROJECTS



# Population Health Management Solution and Platform for Behavioral Healthcare

The system allows large US based insurance companies to load, cleanse, process, analyze and display data in multiple ways optimized for care coordinators, supervisors and network provider managers.



## Key Features:

- Ability to load millions of patients and patient related data into the system
- Perform parallel calculations of industry standard and custom proprietary mathematical algorithms on Spark cluster
- Ability to load 1,5 millions of patients into user's web browser and to perform slice and dice operations in milliseconds
- Ability to present critical decision information in sophisticated graphical and tabular way
- Ability to deploy the entire system including all servers automatically

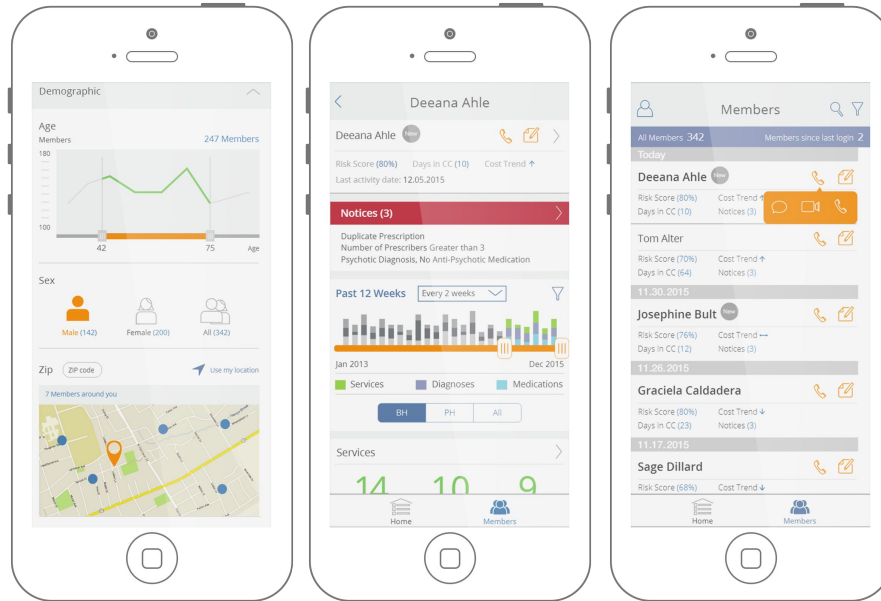
## Technologies and Tools:

- IBM Data Stage
- IBM DB2, IBM Cognos Report Studio
- IBM WebSphere
- Java Spring Framework, Spring XD, Apache Spark, JDBC
- JavaScript, Angular JS, D3, HTML 5
- Mesos, Marathon, Ansible, Docker

# M-mobile - a healthcare app

## to keep care coordinators updated about their patients

Client: a large US based insurance company (NDA). Experts in behavioral health, medical, clinical, pharmaceutical and technological fields. The application provides care coordinators with full data about their patients' state



### Key Features:

- Access to a patient's personal information, diagnoses, new events, urgent states, etc.
- Contact with a patient via phone, text or video message.
- Making personal notes (including audio) for each member.
- Filtering members' list by various parameters (alphabetical, demographic, cost&care, etc).
- Creating, editing and using of smart rt-lists with pre-saved sets.
- Viewing the most recent events and business problems of all members.
- Receiving notifications about new events and assigned members.

# Wholesale-flights.com air ticket sales portal (USA) with a CRM system

A large portal for searching business and first class flights and hotel deals. The portal has a robust sales support system that aggregates all information from website sales (calls, quote requests, contacts, etc.)

The screenshot displays the homepage of Wholesale-flights.com. At the top, there is a navigation bar with links: Flights, Destinations, Reviews, Corporate, Meet Our Team, About us, and Blog. A 'Request a Callback' button is also present. The main heading reads 'Save a **REAL 30-70% OFF** Business Class Flights'. Below this, a three-step process is outlined: 1. REQUEST A QUOTE BELOW, 2. WE'LL FIND THE CHEAPEST FLIGHTS, and 3. REVIEW, BOOK, & SAVE BIG. The search form is titled 'ROUND-TRIP' and includes a dropdown for '1 Traveler, Business Class'. The form fields are: 'Saint Petersburg (LED)' for the origin, 'Flying to?' for the destination, 'Depart' and 'Return' dates, 'Name', 'Email', and 'Phone'. A 'Send Me a Free Quote Now' button is at the bottom.

## Technologies:

- JavaSE
- Swing
- Concurrent
- JavaEE
- GlassFish
- Enterprise Application Server
- EJB
- CORBA
- JPA + Hibernate (MySQL)
- Metro
- Asterisk Manager Java API

[www.wholesale-flights.com](http://www.wholesale-flights.com)

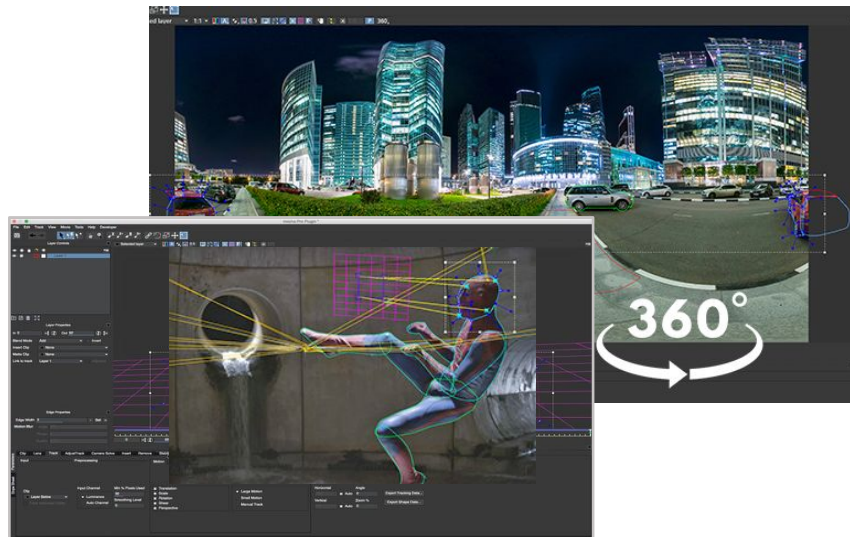
# Planar tracking technology for Imagineer Systems



The Academy Award winning "Planar Tracking" technology is designed to save time and solve difficult post-production problems. It automates post production and VFX routine tasks.

## Key features:

- Product line includes standalone desktop applications and multiple-host plug-ins for Adobe, Avid, OFX, etc.
- Optimized for 360° video tasks: tracking, stabilization, roto-scoping, object insertion and removal.
- Follows "pixel patterns" through the most difficult conditions including objects that go off-screen.
- Recognizes professional media formats DPX, RED, etc.
- Has a proven record on countless high profile film & television projects including: The Hobbit, the Harry Potter film series, The Walking Dead, Game of Thrones.



**10 years of partnership:** we were developing products for Imagineer Systems from the very beginning.

# Online treasury management solution

A web-solution that helps investment managers visualize and evaluate their data (project recovery).

## Goal:

To engage new customers and to satisfy real users by providing them with more convenient UI and the modern features that would fit the business processes of today.

## Solution:

We gradually integrated WaveAccess team with USA development team, researched the application's legacy code, and improved the application.

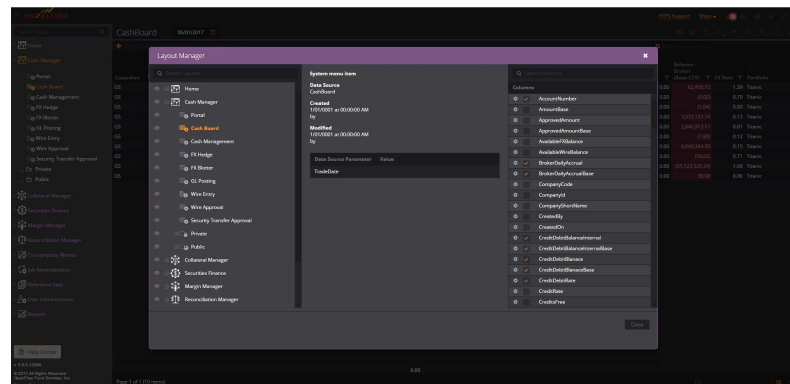
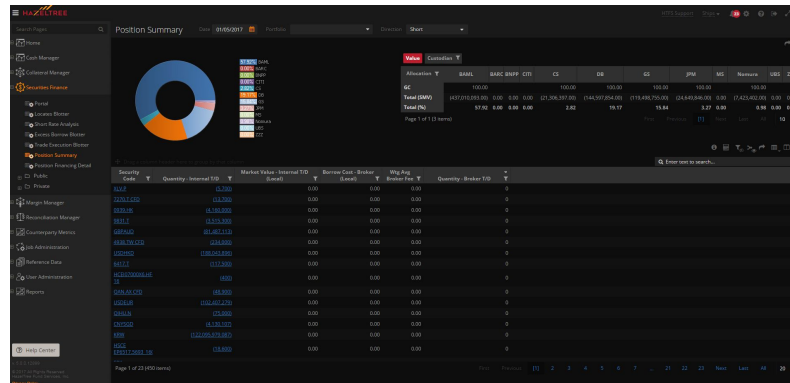
## Features:

**Visual editor.** Drag-and-drop feature allows for adding custom columns, graphs, datasheets, widgets and tables in a few minutes.

**Formulas.** Formulas are calculated and visualised on the go, without refreshing a page.

**ETL.** Integration with financial data providers (via our SynchIT module) allows for getting the data in real time and use within the application.

**UI modernization.** We created the Identity Guidelines, along with three UI types (light, dark, and the traditional for financial markets contrast version)



# An automated workplace for scanning patient's cervical arteries

Developed for the leading US-based distributor of AEDs including Philips, HeartSine, Defibtech. The task was to integrate UI and other customer's systems with the portable scanning device. The result is a cost-effective fully automated workplace.

## Key features:

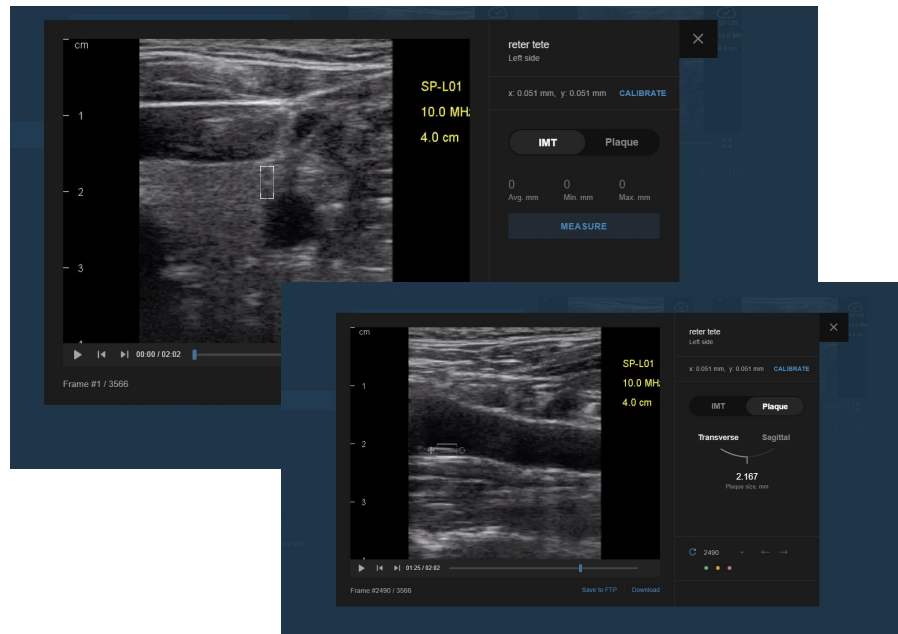
**Turnkey solution:** a fully automated doctor's workstation (scanner + laptop).

**UI.** Allows streaming, saving and opening saved videos. Designed in

**Video streaming.** Integration with scanner was implemented.

**Scans storage.** Patient's scanned images are saved into the special service via FTP.

**Hipaa Compliant hosting.** The cost-effective and secure hosting was configured, in accordance to US laws about data protection.



# Eucon Parts Pricing – the Aftermarket Pricing Solution

Complete solution for automation and monitoring aftermarket parts pricing with the intelligent price management solution based on current data and powerful rules.

Pricing Group:  + APPLY

SEGMENT GROUP A SEGMENT GROUP B SEGMENT GROUP C

**PRICING GROUP**

☐ ALLE ☐ FILTER

PRICING CONFIGURATION        ANALYSIS  APPROVAL

GENERAL CONFIGURATIONS

NAVIGATE TO:

| PROPERTIES              |         |                       |         |                                  |                  | PRICING GROUP                          |               |             |             |
|-------------------------|---------|-----------------------|---------|----------------------------------|------------------|--|---------------|-------------|-------------|
| SEGMENT                 | # Parts | PRICING CONFIGURATION | Privacy | Pricing Configuration Blocked by | Pricing Category | Number of Simulations in Configuration | PRICING GROUP | PRICING     |             |
| Segment                 | # Parts | Pricing Configuration | Privacy | Pricing Configuration Blocked by | Pricing Category | Number of Simulations in Configuration | Pricing Group | Executed by | Executed at |
| 1 Germany_66 Bremen     | 700     | Logik_Komponenten     | Public  |                                  | Market Oriented  | 3                                      | Neuteile      | A_Habermann | 2015-11-13  |
|                         |         |                       |         |                                  |                  |  | Bestandteile  | A_Habermann | 2016-12-24  |
|                         |         |                       |         |                                  |                  |  | Garantieteile | A_Habermann | 2017-01-01  |
| 3 Germany_69 Stollendam | 321     | Logik_Komponenten     | Public  |                                  |                  | 3                                      | Neuteile      | A_Habermann | 2015-11-13  |
|                         |         |                       |         |                                  |                  |  | Bestandteile  | A_Habermann | 2016-12-24  |
|                         |         |                       |         |                                  |                  |  | Garantieteile | A_Habermann | 2017-01-01  |

Page 1/3 Rows per Page 10

## Key features:

- Price management improvements based on rules analysis.
- Obtain full transparency concerning central and local pricing activities.
- Automatic price lists calculations.
- Simulate the financial impact of pricing on sales.

## Technologies:

Java Spring, Gradle, Hibernate, Gulp, AngularJs, Liquebase.

# Track Predictor

Sea Vessel Traffic Management System component (VTS)

## BUSINESS GOAL

Decrease the number of accidents, maintain the company's resources, protect the environment:

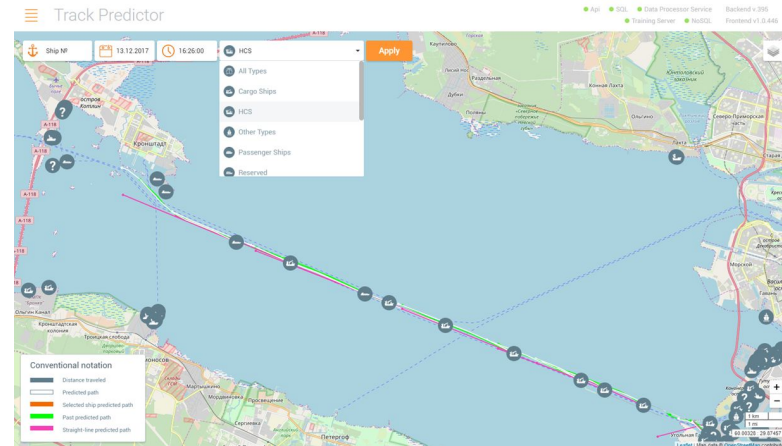
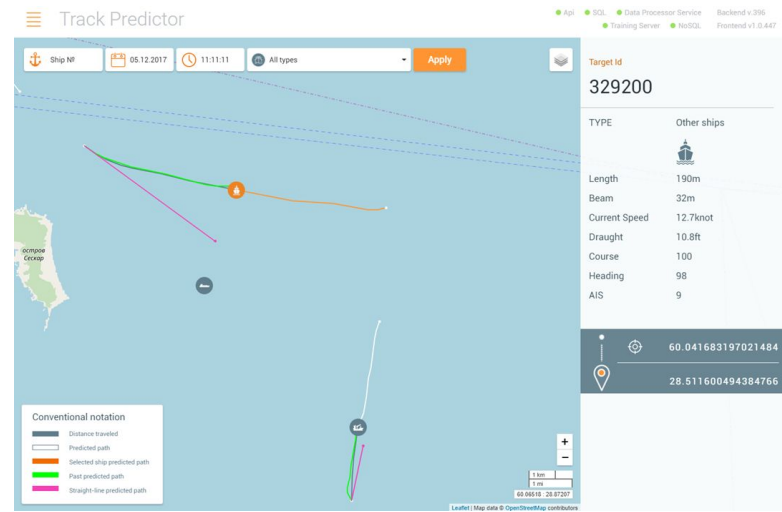
- Improve logistics based on machine learning technology
- Increase the time available for decision making

## SOLUTION

A machine learning based subsystem that displays both real and predicted ships' courses.

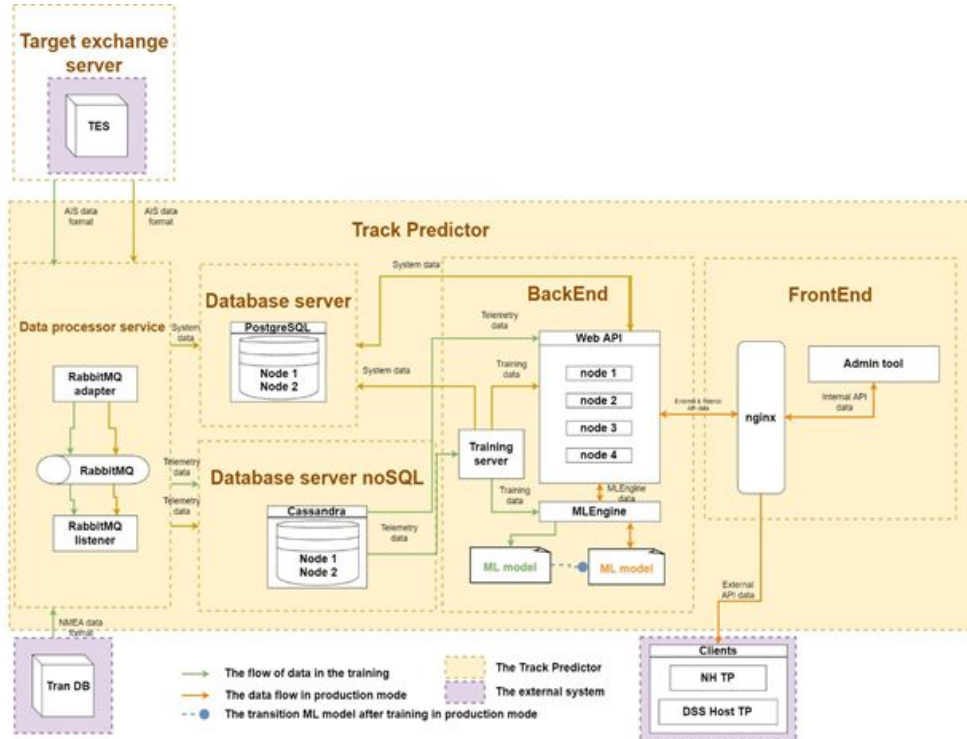
## FEATURES

- Prediction of courses: the system shows predicted ships' courses, in a range of a few minutes.
- Comparison: in order to confirm the accuracy of the prediction, both real and predicted courses are shown on the same map.
- Tracking in time: both real and predicted courses can be shown for the decided period of time.
- Heatmap: the heatmap shows areas that are most and least visited (by color, from green to red).
- Logging: access to events log.





# Track Predictor



## Techologies:

- OpenStreetMap cartography module
- Python programming language
- React UI
- Django server
- Apache Cassandra
- RabbitMQ
- Machine Learning

## Methods used for machine learning:

- Knn;
- classifier: XGBClassifier, regressor: XGBRegressor

# A digital experience platform for offline retail

Microsoft  
Partner

2017 Partner of the Year Winner  
Business Analytics Award



**A platform that makes retail stores more convenient for customers — and more transparent for retailers.**

## The platform consists of:

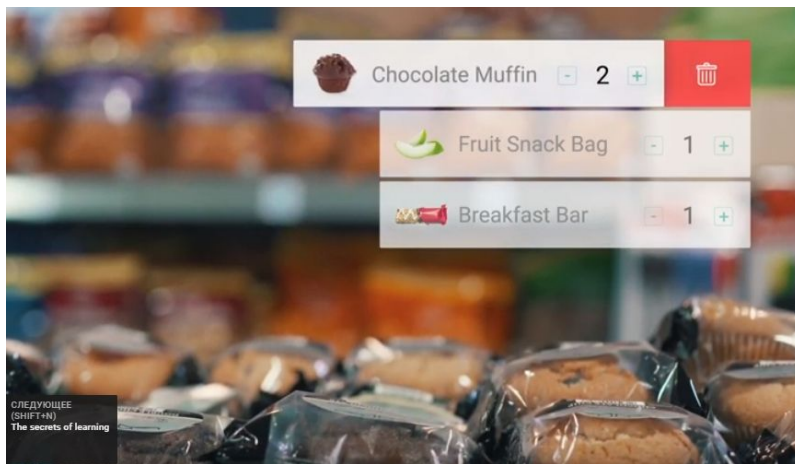
- Internet of Things: NFC stickers integration and iBeacons integration for easy purchase;
- Own jispPay payment system which supports “Pay now” / “Buy in store”, “Click and Collect” and “Pre-order” payment models;
- jisp Passport analytics enables brands and retailers to measure, manage and improve the compliance of instore Free-Standing Display Units.

## Marketing opportunities for retail:

- The platform collects and saves search histories
- The app captures customers’ behavior within stores, delivering valuable insights to store owners
- The app suggests items that might be of interest to the user
- Staff sales dashboard provides upsale and bundle options
- In-store hot paths tracking
- Decide on which products go better with others — merchandising made easier.

## Business value:

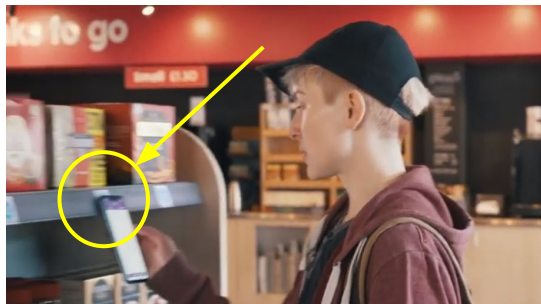
- Faster checkout with no queues — more customer turnover for busy locations
- All item data is available to the customer at hand (manufacturer, contents, ingredients, etc.)
- Provides truly online experience in offline stores — know your customer and their habits!
- Powerful sales analytics: demographic segmentation / interests tracking etc.



# A digital experience platform for offline retail

Microsoft  
Partner

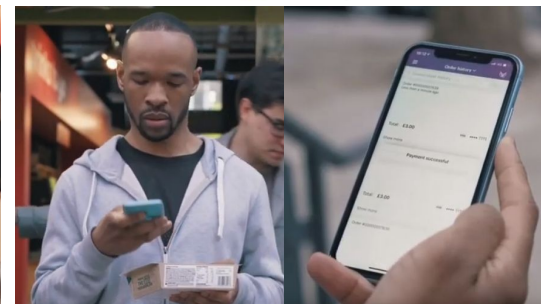
2017 Partner of the Year Winner  
Business Analytics Award



Tap your phone against the sticker



Take an item from the shelf



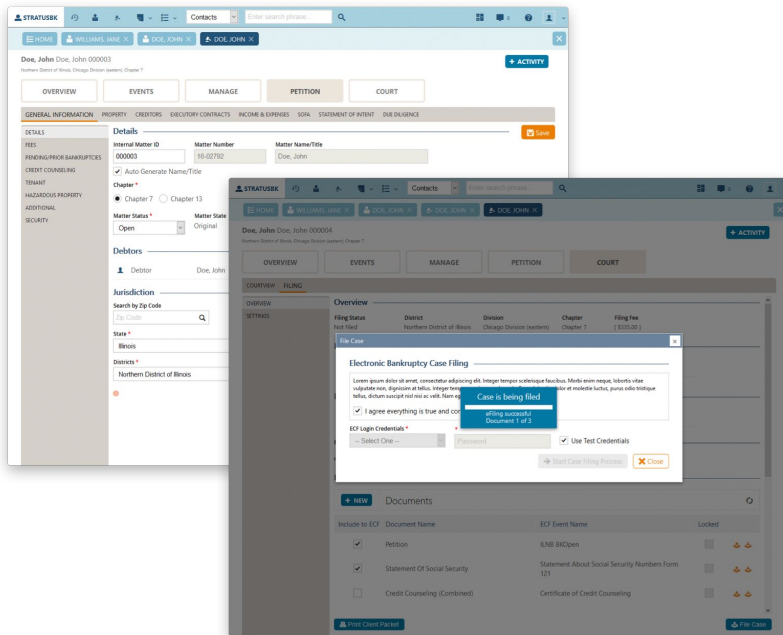
As you leave the store, you will be  
billed automatically

## How it works:

- The store equips their price tags with NFC stickers / ESLs and iBeacon devices, Lidars
- Customer taps their phone against the “tap here” NFC sticker and then grabs an item, also putting it into their “cart” in the app
- If a customer decides not to buy a certain item that is already in the cart, they can put it back on the shelf and remove it from the cart
- Checkout payment will either happen automatically or can be originated by the customer / validated by the store staff in edge cases for “Pay now” type of stores
- For “Buy in store” scenario, a store staff member can take the sale, pass it to another member, make an upsale, etc.
- iBeacons track customer journey through the store along with the Lidar devices collecting and recognising customer’s actions in store

# Web app to automate bankruptcy attorney company

StratusBK is a web application to automate the workflow in a bankruptcy attorney law firm. Delivered for Semrad Law Firm, a major US-based bankruptcy attorney. The solution can be offered to other firms on a subscription basis.



## Key features:

- Process management modules, CRM, document flow
- Integrated with Supreme Court of the United States website
- Convenient user interface for time-efficient work
- One solution replaces a number of other apps
- Subscription sale covers development expenses
- 100% cloud-based

## Technologies:

- WebApps
- MS SQL Server
- WebJobs
- DocumentDb
- Azure Storage Queues, Blob storage and Redis

# Drug Prioritization Tool

Drug efficiency predictor based on genetic information for Thomson Reuters.

THOMSON REUTERS  
DRUG PRIORITIZATION TOOL

Make new request Data lists Requests history **Stratification results** Logout User management

Drug prioritization report Protein report/sample stratification **Protein report/sample stratification (pathway view)**

Distance metrics ☒ Euclidean ☐ Manhattan ☐ Pearson correlation  
Clustering algorithm ☒ Hierarchical ☐ Km Hierarchical ☐ Normalized Km Hierarchical  
Cluster ☐ Sample ☐ Protein ☒ Both

Cluster selected pathways/samples

Check pathways with targets Check pathways with mutations Export to Excel

☒ Key pathway (677 rows)

|  | # of targets | # of mutation | sample 21-12a | sample 21-12b | sample 21-12c | sample 21-12d | sample 21-12e | Mean Score |
|--|--------------|---------------|---------------|---------------|---------------|---------------|---------------|------------|
| <input checked="" type="checkbox"/> Regulation of CFTR activity (norm and CF)                                    | 0            | 0             | 69            | 69            | 44            | 53            | 47            | 69         |
| <input checked="" type="checkbox"/> Oxidative phosphorylation  | 0            | 0             | 68            | 68            | 14            | 46            | 0             | 68         |
| <input checked="" type="checkbox"/> Cell adhesion, Integrin inside-out signaling                                 | 0            | 0             | 68            | 68            | 62            | 52            | 51            | 68         |
| <input checked="" type="checkbox"/> Cardiac Hypertrophy, Ca(2+)-dependent NF-AT signaling in Cardiac Hypertrophy | 0            | 0             | 68            | 68            | 55            | 51            | 46            | 68         |
| <input checked="" type="checkbox"/> Development, Angiotensin signaling via STATs                                 | 0            | 0             | 67            | 67            | 55            | 56            | 46            | 67         |

sample 21-12a-17  
Upload date: Sat Jan 21 17:09:12 GMT-08:00 2012  
Method: Transcriptional activation paths: all nodes to proteins in user's list

Send Feedback

## System contains several parts:

- Backend server is a part of Thomson Reuter's information system and integrated with genetic and drug information storage.
- Computing server (many instances support) is used to process heavy statistical based algorithm on external server.
- To boost computing part CUDA based solution was implemented that allows data processing on NVIDIA GPU 20 times faster than on CPU.

## Technologies:

- Java EE 6 Servlet 3.0
- Java Server Pages
- Apache Tomcat 7
- Oracle
- JQuery
- REST-based XML
- Apache CXF impl
- Spring
- Hibernate
- Apache Jetty
- NVidia CUDA
- JCUDA

## SCIENCE

cell line Human endometrial epithelial carcinoma cell line RL95-2 was purchased from the American Type Culture Collection (ATCC; Rockville, MD, U.S.A; CRL 1671; Way et al., 1983).

Cells were maintained at 5% CO<sub>2</sub> and 37°C in DMEM-F12 with 15 mMHEPES (Biowest t, Nuaille', France), supplemented with 5% (v/v) charcoal-stripped fetal calf serum (FCS) (or Tet-free fetal bovine serum) (FBS) (Gibco, Grand Island, N Y, USA) starting with Tet-induction), 1 penicillin/streptomycin, 1 sodium pyruvate, 2 mM L-glutamine (all Biowest), 20 mg/ml insulin and 5 mg/ml hydrocortisone (both Sigma-Aldrich, Steele, Germany), **Anti-EGFR** antibody produced in rabbit (**EGFR**, Steele, Germany, SAA-4508717 (**EGFR**, Steele, Germany), EGFR-specific mouse esiRNA, EGFR, 7-Hydroxy-3-phenyl-4 $\alpha$ -chromen-4-one, rabbit anti-phospho-EGFR (pSer1071) (**EGFR**, Steele, Germany, HKW81 antibody, rabbit anti-human EGFR,

Immunohistochemistry was performed as previously described (36) with the following antibodies: rabbit antibody to phospho-histone H3 (pHH3; 1:500; Upstate), rabbit antibody to cleaved caspase-3 (CC3; 1:400; rabbit **Signaling Technology**; 9664), rabbit antibody to PTK7 (1:1,000; **Signaling**; SAA3500340). PTK7 staining was performed using pepsin antigen retrieval.

The following antibodies from **Signaling Technology** were used (1:1,000 dilution unless otherwise noted): rabbit anti- Cleaved PARP (#5625), mouse anti-i-PERK (# 9106), rabbit anti- ERK (#4695), (rabbit antiPAKT T308; #9275; 1:50 0), rabbit anti-AKT (#9272), rabbit anti-pMKW7 ( S271/ T275; #4171; 1:50 0), rabbit anti-PRK7 (#4172), rabbit anti-pJNK (T183/Y185; #9251), rabbit anti-JNK (# 925 1), rabbit anti-pJUN (S73; # 9164), rabbit anti-pP38 (T180/Y182; #9211), and rabbit anti-P38 (#9212).

Mouse anti actin (**Sigma-Aldrich**, clone 144; 1:10,000) was used as a loading control.

All surface staining was carried out in PBS supplemented with 1% human sera and 0.05% sodium azide using anti-CD3 PC5 (**Beckman Coulter**) or anti-CD3 FITC, anti-CD4 FITC or anti-CD4 PC5 or anti-CD4 APCcy7, CD45RO PC5 or anti-CD28 P E (all BD Biosciences, San Jose, CA, USA) antibody conjugates.

Cells were cultured for 6 h in complete media (RPMI, HEPES, L-glutamine, penicillin streptomycin) containing 5% human serum and stimulated with plate-bound d-CD3 monoclonal antibody (plate-coated with 2.5  $\mu$ g/ml, clone OKT-3) and incubated at 37  $^{\circ}$ C, 5% CO<sub>2</sub>.

Extracellular and intracellular cytokine staining was performed using Cytofix/Cytoperm Kit (BD), according to the manufacturer's instructions, and also using following antibodies: anti-CD28 PE or antiCD28 APC, anti-CD14 APC Cy7, a nti-CD4 PCcy7 or anti-CD4 PerCP, anti-TNF- $\alpha$  FITC (all BD), anti-CD3 PB (BD or Biorlegend, San Diego, CA, USA), anti-TNF PerCPy5.5 (**Biorlegend**), anti-IL-17 Alexa 647 (**Biorlegend**) or anti-IL17A PE (**Biorlegend**, San Diego, CA, USA). Cells were stained with the following antibody conjugates: Anti-CD14 FITC or anti-CD14 APC, anti-CD19 FITC or anti-CD19 APC, anti-CD197 PE or anti-CD197 Alexa Fluor700, anti-CD196 PerCPy5.5, anti-CD4 V500, anti-CD28 APC or anti-CD28 PE Cy7 anti-CD28 V450, anti-CD45RO APC Cy7 or anti-CD45RO eFluor650MC anti-CD193 PCy5 (all BD) and anti-CD193 BV421 or anti-CD193 Pacific Blue.

- Search for products of various types (chemical, genetic, brands, etc.) using different strategies (by exact matching, using sets of rules);
- The ability to use both a set of default words for searching, and a set of documents specific for this type
- Specification of products using rules and context;
- Search for relationships between companies and products (using grammatical and other rules);
- Definition of the subject matter of the article;
- Determining the significance of the terms found;
- Assessment of the quality of recognition using annotated texts;
- Data is divided into clusters; The ability to search both for individual clusters and for the entire volume of data.



# BuzzRay media platform

A system for managing media content (video, audio, pictures, articles and animations). It provides the ability for content creators to monetize their blogs and provide advertisers a convenient platform for advertising. Developed in Java using Spring Framework.

## Amazon services used:

- Simple Storage Service (S3) – data storage
- Simple Notification Service (SNS) – communication between system modules
- Simple Queue Service (SQS) – Communication between system modules
- Elastic Transcoder – video / audio processing
- CloudFront – Content delivery to customers

## Special attention was paid to improving the quality of media content through the use of third-party services and libraries:

- ImgIX – add-on for CDN (Amazon CloudFront) that enables you to process images in real time before adding them to cache.
- Amazon Elastic Transcoder – the user can select several output formats with plenty of options
- Java Advanced Imaging – Java image processing library

[www.buzzray.com](http://www.buzzray.com)



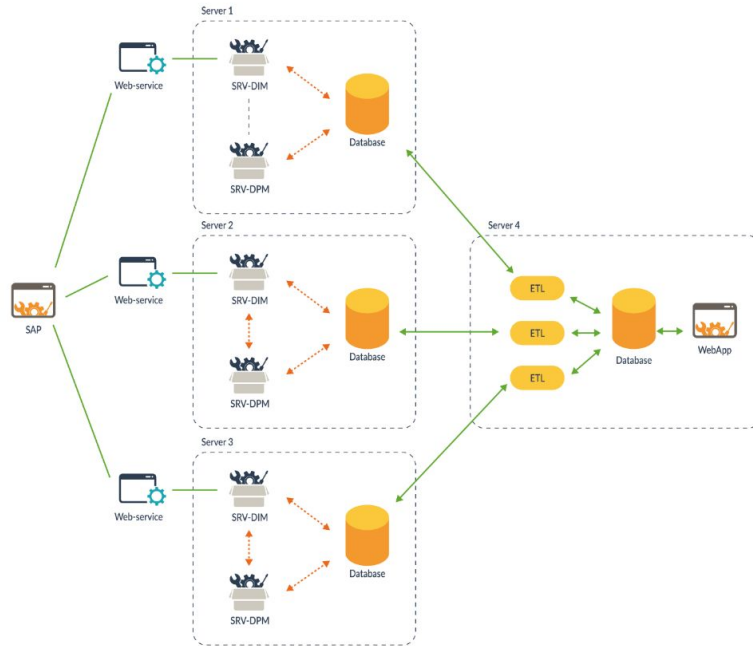
THE ULTIMATE PRESENCE





# SAP & Windows Forms App Integration

The "Windows Form Application and SAP Integration" project was developed to integrate the guide for an oil and gas company's products (on the SAP platform) and the laboratory information-management system of the company's branches.



## Key features:

- Any change (creation, editing, deletion) in the WinForms App product guide that affects SAP components are only performed following a query from the SAP.
- All user interfaces of the Windows Forms Application and web application that make it possible to edit values in the product guide's WinForms App components have the built-in capability to switch into "read-only" mode.
- Additional fields for storing codes and displaying product names from the SAP guide have been introduced to the database and the user interface of the Windows Forms Application guide.

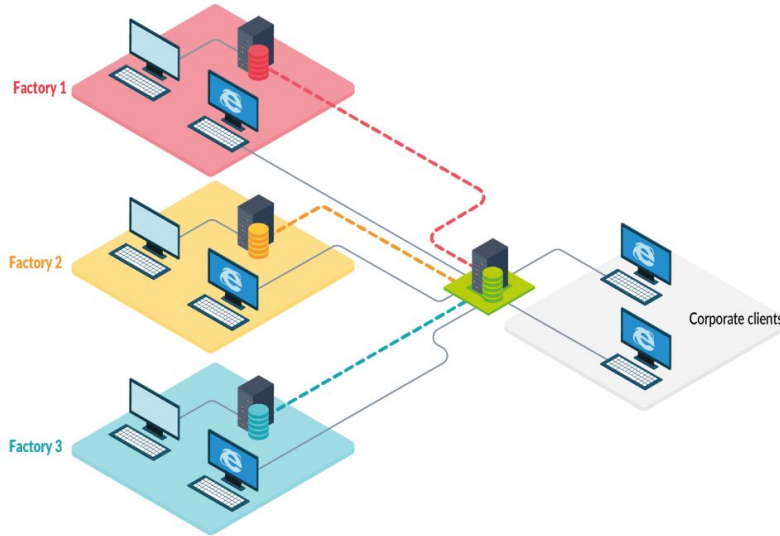
## Bidirectional data exchange has been provided:

- SAP - Winform App: when the guide is first filled out and when data is changed on the SAP side
- Winform App - SAP: only when confirming the processing of a query from the Winform App side.

All information-exchange operations are recorded on the Winform App side.

# Data analysis solution for a petroleum company

The system is intended to improve speed and efficiency of decision-making process and ensure high quality of manufactured products.



## Key Features:

- Integration with manufacturing facilities' information systems.
- Quick generation of managerial reports according to user-defined parameters.
- Possibility to manipulate data from production information systems (mapping, removal of duplicates, etc.).
- Obtaining the results of lab research for evaluating the quality of manufactured products.



Browser:  
analytics system client



APM I-LDS



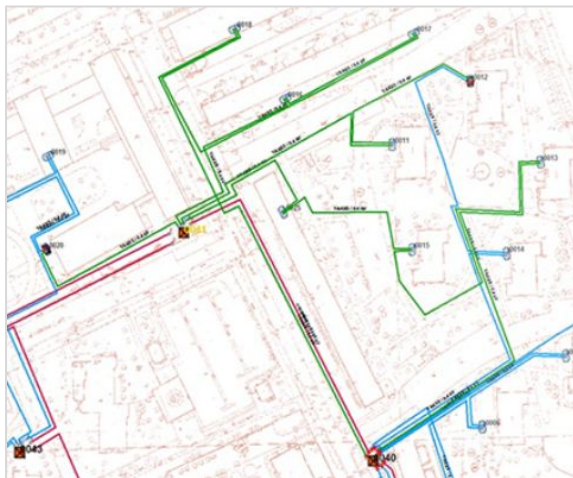
Analytics system  
Data Warehouse



I-LDS Server  
SAP corporate directory

# Unified API for telecom network application (Grid Optimizer)

The solution was developed for Breakoutimage A/S, a Danish distributor of General Electric Energy solutions in Denmark and Sweden. Geospatial asset management of telecommunication networks is based on GE Smallworld platform. Grid Optimizer application helps run queries on locations, composition or equipment much faster.



## Key features:

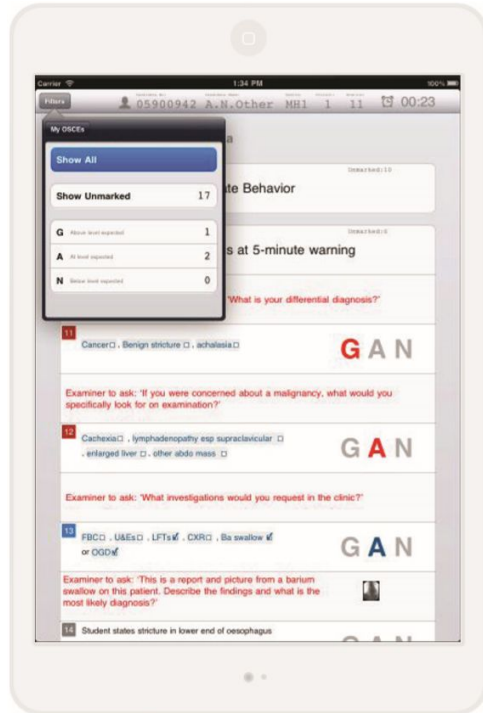
- Integrated with Smallworld API, Grid Optimizer efficiently arranges and stores data about telecom physical network: cables, pipes, equipment, etc.
- Development of unified API helped improve productivity by 120 times. Time to generate a report reduced from 2 hours to 1 minute on average.
- Vast reporting possibilities are supported:
  - Trace-out reports (trace links and conduit paths);
  - Objects by location (e.g. conduits in an area);
  - By type of object (conduits, conduit nodes, fibers, optical cables, etc.) or type of equipment, and more.
- Pilot version was introduced in 4 months from the project start.

## Technologies:

- NodeJS: typescript, loopback, express,
- PostgreSQL
- PostGis
- ArangoDB
- ElasticSearch

# iPad Exam App

iPad Exam App is a secure platform for administering medical students' tests and assessments. It accurately grades and manages multiple choice quizzes, tests, and exams from iPad.



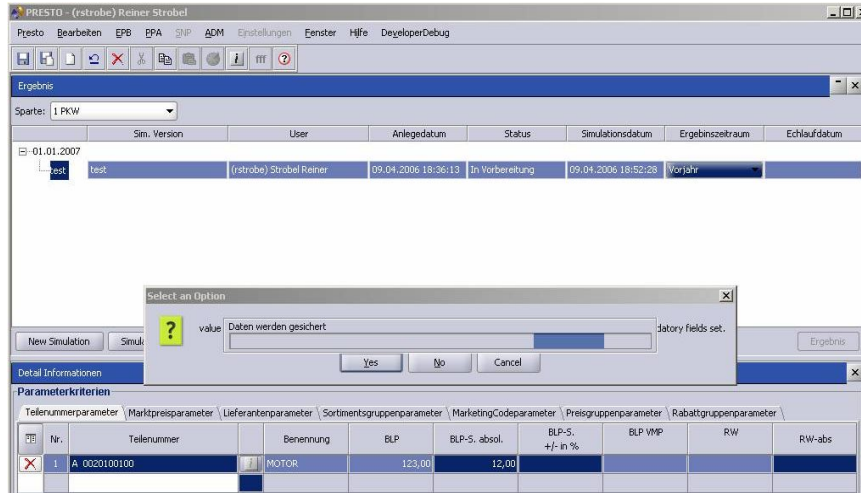
Teachers can instantly grade tests and provide feedback to students. Tests can be scored and entered before students walk out the door.

## Key features:

- Support complex graphics and text information;
- Personalized test version for up to 200 students;
- Responses management system;
- Academic performance system;
- Automatic score reporting.

# Daimler Chrysler: Pricing software system for vehicle spare parts

The developed system was used by the team of marketing people and engineers to establish pricing model for vehicle spare parts. The system was integrated with several third-party systems.

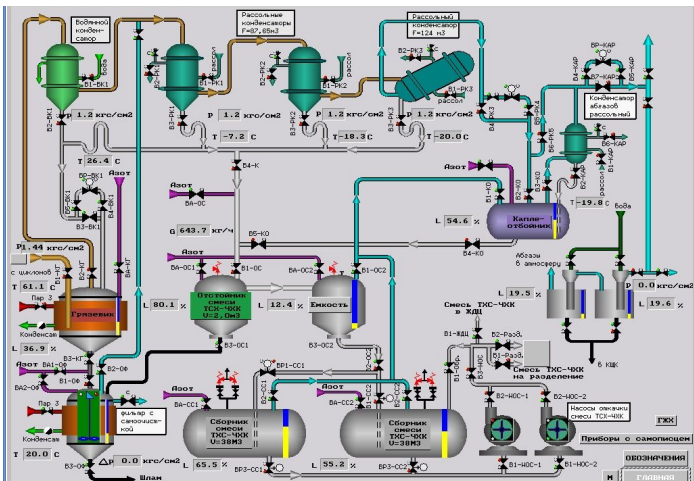


## Key features:

- The application was implemented as a client-server Java application under Websphere application server 5.0.
- Communication and synchronization with third-party applications worked via MQ tool (Websphere MQ).
- The EJB were used for business logic and persistence, while the client application leveraged Swing to render the GUI.
- DB2 8.1.11 was used as the database.

# Factory automation and performance control

The developed system serves as the process controllers environment for automation of the technological processes in mining, light and heavy industries. For this project, **Siemens Simatic S7 Controllers** were used.



## GOALS:

- Failure-free continuous functioning of industrial equipment.
- Control automation, alerts in real time.

## Features:

- Monitoring of parameters;
- Performance control;
- Load distributing and optimization;
- Real time diagnostics;
- Alerts and report generation.

## The core of aggregate automation:

### Controllers:

- Siemens Simatic S7.

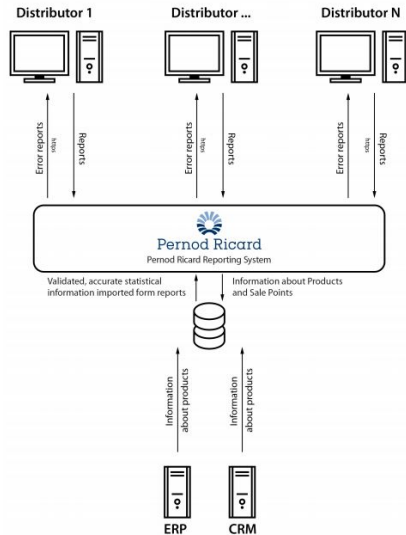
### Technologies :

- Simatic Step 7: Used as a tool for configuring of Controllers.
- S7-SCL and STL: Used for all the objects being automated.
- FBD: Used for developing of regulation algorithms.
- WinCC: Used as SCADA.
- OPC: Used for data exchange based on COM / DCOM or HTTP.



# Development of regulatory report system for Pernod Ricard

Pernod Ricard is a French company that produces distilled beverages.  
[www.pernod-ricard.com](http://www.pernod-ricard.com)



## Goal: Report system reengineering

- Report form customization
- Introduction of three new report forms

## Project: Development of a new report system

- A new regulatory report system was developed
- New report forms that include all data on reseller product flow and sales revenue were introduced
- The company's own report system was integrated with state alcoholic beverages control system



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# Let's get started!

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