

Data Management & Business Intelligence platform



MOSAIC – is a DATA solution

MOSAIC is a HiTech Platform for:

- Data visualization & analysis
- Dashboards
- **Reports construction**
- Master Data Management
- Data collection (ETL)
- **Business glossary**







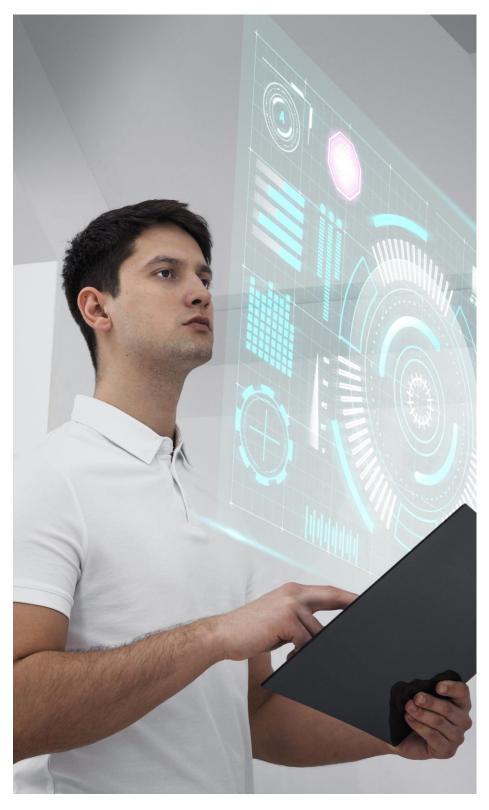
The massive use of data has become widespread not only for reporting and decision support, but also for direct monetization of data by:

- selling data, for example by telecom operators about the distribution of people flows to determine the optimal location of a new shop or office
- building products and services based on data such as recommendation services that boost sales
- optimization business processes like predictive machine maintenance.

In addition, data is the basis for training artificial intelligence models









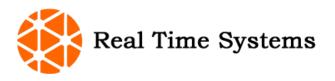
Data becomes a real asset that allows the Company to improve the efficiency of its business and receive additional revenue only when:

- data is reliable, complete and consistent
- data is provided fast and timely
- the cost of owning and working with data does not exceed the benefits of data data is available to all employees of the Company and IT systems all employees use proven algorithms for calculating standard indicators

- it is convenient to work with data
- the results of working with data can be easily published
- when working with data, you comply with legal requirements







MOSAIC mission

MOSAIC Data Management & Business Intelligence Platform is designed to:

- Increase availability of data
- Improve understanding of data
- **Reduce cost** of data ownership
- **Increase profit** of data

MOSAIC helps the clients benefit from data











MOSAIC platform creates a single virtual space of data in a company by collecting data from various sources using a queuing system, presenting them in a user-configurable structure in the form of reports, dashboards or datasets in self-service mode. MOSAIC calculates, checks and analyzes KPIs and provides data to consumers in an automated mode incl. into external databases and IT systems, increasing availability and reliability of data.



We bet on

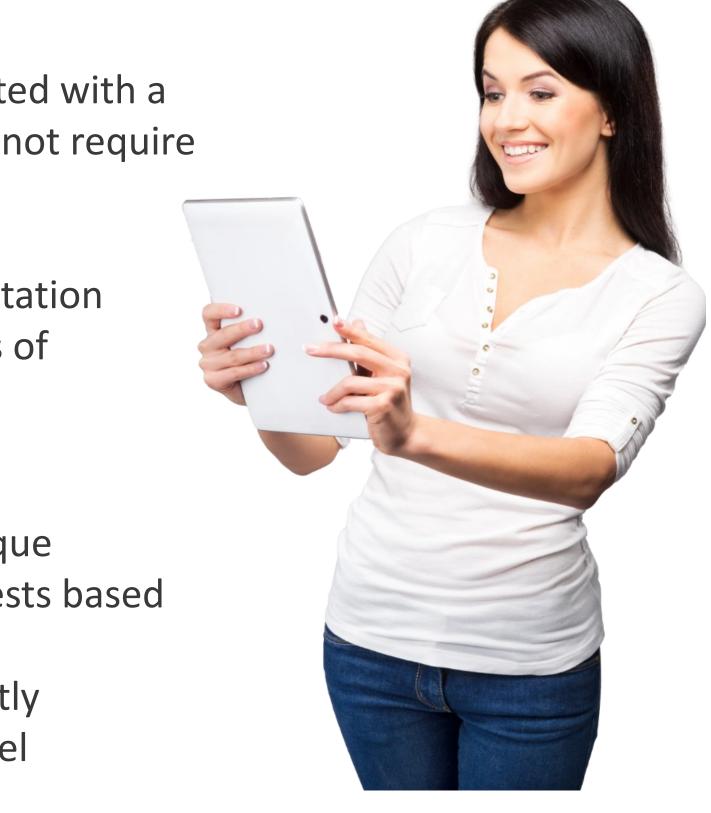
Simplicity with powerful functionality

- Simplicity for **users** the concept of "*Chart by 1 click*"
- Simplicity for analysts data links, drilldown hierarchies are created with a single click, visual data exploration scenarios are intuitive and do not require programming
- Ease and simplicity for **administrators** deployment in minutes
- Simplicity for consumers data animation and image-based annotation allows you to show information to audiences with different levels of experience

Low entry threshold for mass use

- Tremendous decrease requirements for equipment due to a unique approach with filling the virtual data space upon consumer requests based on the theory of queuing
- The system allows less qualified personnel to work more efficiently
- Cost optimization due to self-configuration by customer personnel
- There are no special requirements for the user's workstation







MOSAIC Platform areas of use:

- Business Intelligence, Reporting, visual data analysis
- Data Management (MDM, Data Catalog, Business Glossary)
- ETL Data Loading
- Support for decision making, data products and data-driven business processes

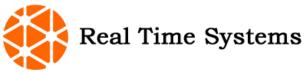
or if IT systems can't support and can't be quickly modified for:

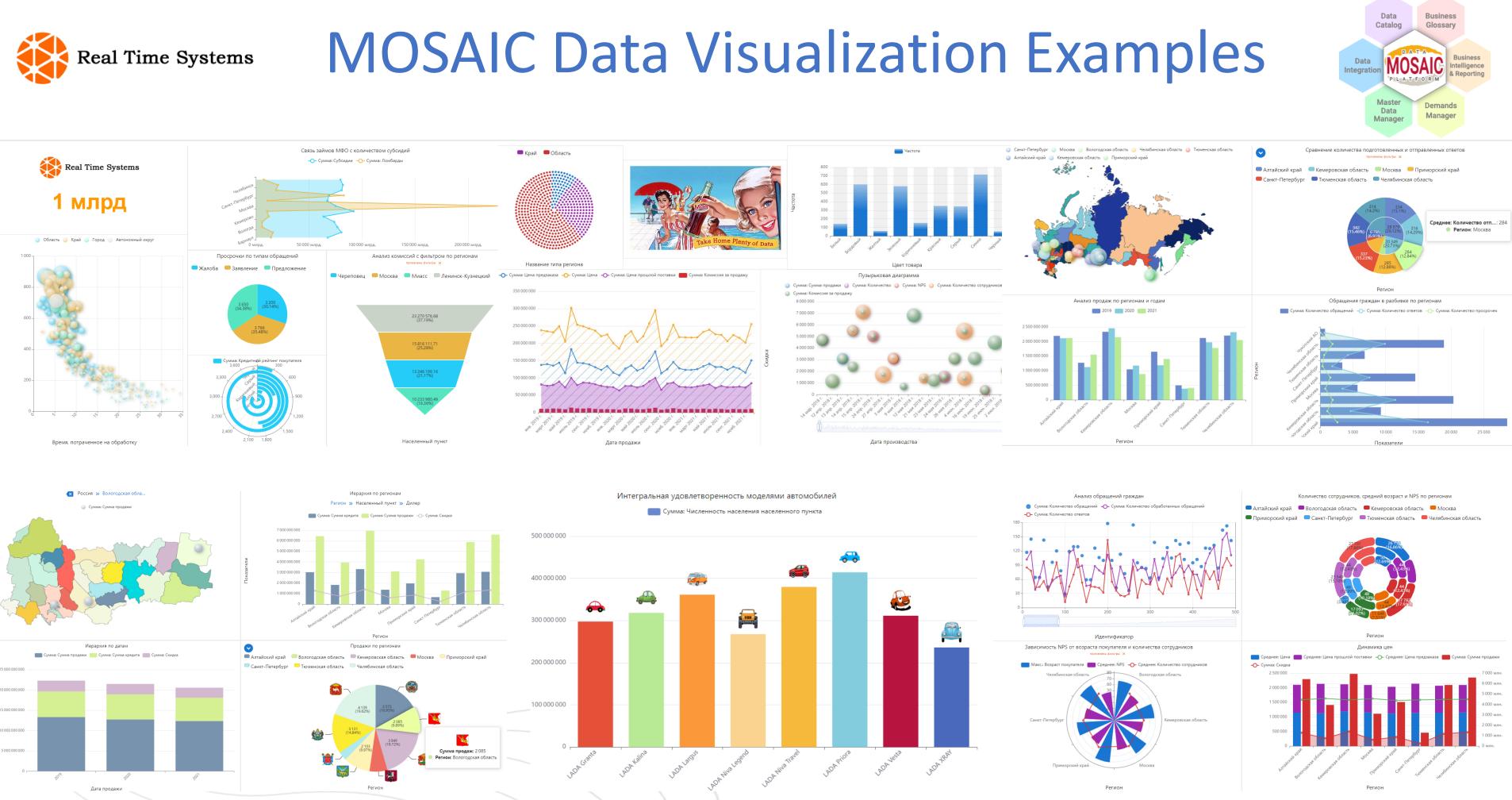
- launching a new product, service or line of business
- information security response to new challenges of cyber fraudsters
- non-standard bonuses for employees, for example, during a Covid-19 lockdown
- new requirements of the regulator
- response to competitors' actions

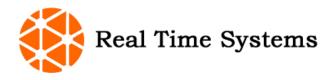
you can use MOSAIC and integrate its services into IT systems via REST API









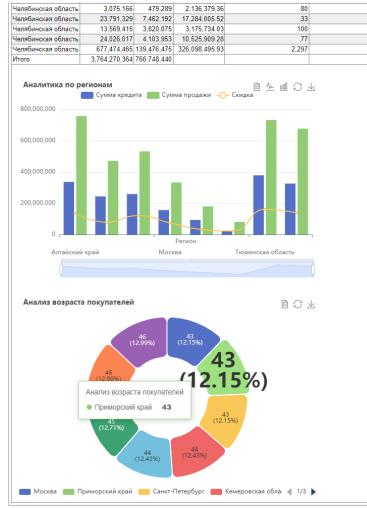


MOSAIC Reports Examples

List report

Код региона	Регион	Информация по региону	Населенный пункт	Дилер	Сумма продажи	Товар
22	Алтайский край	ссылка	Камень-на-Оби	Алтай-Лада (филиал СТО г.Камень-на-Оби)		LADA Kalina
74	Челябинская область	ссылка	Челябинск	Азия Авто	11,169,960	LADA Largus
42	Кемеровская область	ссылка	Новокузнецк	Азия Авто	15,754,336	LADA Vesta
72	Тюменская область	ссылка	Тобольск	Тобольск-Лада	4,262,452	LADA XRAY
42	Кемеровская область	ссылка	Ленинск-Кузнецкий	Азия Авто	8,813,452	LADA Kalina
77	Москва	ссылка	Зеленоград	Лада Зеленоград	14,243,051	LADA Priora
74	Челябинская область	ссылка	Южноуральск	Южноуральск-Лада	9,565,273	LADA XRAY
42	Кемеровская область	ссылка	Кемерово	Автоцентр Дюк и К	796,670	LADA Kalina
74	Челябинская область	ссылка	Магнитогорск	Инкомсервис-Магнитогорск	7,080,372	LADA Niva Legen
72	Тюменская область	ссылка	Тюмень	Азия Авто	4,708,968	LADA Vesta
74	Челябинская область	ссылка	Миасс	АвтоРеал	2,974,312	LADA Vesta
72	Тюменская область	ссылка	Ялуторовск	Ялуторовск-Лада	15,136,948	LADA XRAY
72	Тюменская область	ссылка	Ялуторовск	Ялуторовск-Лада		LADA Niva Legen
25	Приморский край	ссылка	Уссурийск	Спутник		LADA Kalina
35	Вологодская область	ссылка	Великий Устюг	ЛАДА центр Череповец		LADA Niva Legen
25	Приморский край	ссылка	Уссурийск	Спутник		LADA Largus
78	Санкт-Петербург	ссылка	Санкт-Петербург	Автоцентр Интей Лада		LADA XRAY
42	Кемеровская область	ссылка	Кемерово	Автоцентр Дюк и К		LADA Niva Travel
22	Алтайский край		Камень-на-Оби	Алтай-Лада (филиал СТО г.Камень-на-Оби)		LADA Niva Legen
72	Алтаискии краи Тюменская область	ссылка	камень-на-Оби Ишим	АЗИЯ АВТО УСТЬ-КАМЕНОГОРСК		LADA Niva Legen
42	Коменская область Кемеровская область	ссылка				LADA Priora
42		ссылка	Ленинск-Кузнецкий			
	Челябинская область	ссылка	Сатка	Владомир		LADA Kalina
42	Кемеровская область	ссылка	Новокузнецк	Азия Авто		LADA Granta
22	Алтайский край	ссылка	Барнаул	Автоцентр ЮГ		LADA Priora
42	Кемеровская область	ссылка	Ленинск-Кузнецкий			LADA XRAY
42	Кемеровская область	ссылка	Новокузнецк	Азия Авто		LADA Niva Travel
72	Тюменская область	ссылка	Тюмень	Азия Авто		LADA Largus
22	Алтайский край	ссылка	Бийск	Бийск-Авто-Центр		LADA XRAY
25	Приморский край	ссылка	Владивосток	Даль-Лада		LADA Niva Travel
22	Алтайский край	ссылка	Алейск	Алтай-Лада (филиал СТО г.Алейск)		LADA Granta
74	Челябинская область	ссылка	Миасс	АвтоРеал	12,036,093	LADA Granta
77	Москва	ссылка	Зеленоград	Лада Зеленоград	17,507,838	LADA Vesta
42	Кемеровская область	ссылка	Ленинск-Кузнецкий	Азия Авто	15,829,623	LADA Kalina
35	Вологодская область	ссылка	Череповец	ЛАДА центр Череповец	3,740,455	LADA Largus
22	Алтайский край	ссылка	Бийск	Бийск-Авто-Центр	2,432,957	LADA Granta
72	Тюменская область	ссылка	Тюмень	Азия Авто	7,440,028	LADA Vesta
25	Приморский край	ссылка	Владивосток	Даль-Лада		LADA XRAY
74	Челябинская область	ссылка	Сатка	Владомир	23,176,325	LADA XRAY
22	Алтайский край	ссылка	Камень-на-Оби	Алтай-Лада (филиал СТО г.Камень-на-Оби)	3,342,919	LADA Priora
42	Кемеровская область	ссылка	Кемерово	Автоцентр Дюк и К		LADA Niva Travel
42	Кемеровская область	ссылка	Кемерово	Автоцентр Дюк и К		LADA Vesta
77	Москва	ссылка	Зеленоград	Лада Зеленоград		LADA XRAY
35	Вологодская область	ссылка	Великий Устюг	ЛАДА центр Череповец		LADA Niva Travel
74	Челябинская область	ссылка	Магнитогорск	Инкомсервис-Магнитогорск		LADA Largus
42	Кемеровская область	ссылка	Прокопьевск	Автодом		LADA Niva Legen
74	Челябинская область	ссылка	Златоуст	Владомир		LADA Priora
74	Челябинская область		Златоуст Челябинск	Бладомир Азия Авто		LADA Niva Legen
42	Челябинская область Кемеровская область	ссылка		Азия Авто Азия Авто		
		ссылка	Междуреченск			LADA Niva Travel
35	Вологодская область	ссылка	Вологда	Автосалон Мартен		LADA Niva Legen
74	Челябинская область	ссылка	Магнитогорск	Инкомсервис-Магнитогорск		LADA Priora
74	Челябинская область	ссылка	Челябинск	Азия Авто		LADA Niva Legen
42	Кемеровская область	ссылка	Ленинск-Кузнецкий	Даль-Лада		LADA Kalina
22	Алтайский край	ссылка	Бийск	Бийск-Авто-Центр		LADA Granta
35	Вологодская область	ссылка	Великий Устюг	ЛАДА центр Череповец		LADA Granta
22	Алтайский край	ссылка	Барнаул	Автоцентр ЮГ		LADA XRAY
22	Алтайский край	ссылка	Славгород	Алтай-Лада (филиал СТО г. Славгород)		LADA Niva Travel
72	Тюменская область	ссылка	Тюмень	Азия Авто		LADA Largus
72	Тюменская область	ссылка	Заводоуковск	Заводоуковск-Лада	21,886,862	LADA Niva Travel
42	Кемеровская область	ссылка	Кемерово	Автоцентр Дюк и К	12,181,134	LADA Vesta
74	Челябинская область	ссылка	Челябинск	Азия Авто	19,530,414	LADA Kalina
77	Москва	ссылка	Москва	LADA Кунцево		LADA Largus
35	Вологодская область	ссылка	Череповец	ЛАДА центр Череповец		LADA XRAY
72	Тюменская область	ссылка	Ялуторовск	Ялуторовск-Лада		LADA Niva Travel
35	Вологодская область	ссылка	Великий Устюг	ЛАДА центр Череповец		LADA Niva Legen
	Concrugotan conduits	CODUINA	CONTRACT 2 OF NOT	www.werrich.uchennoed		

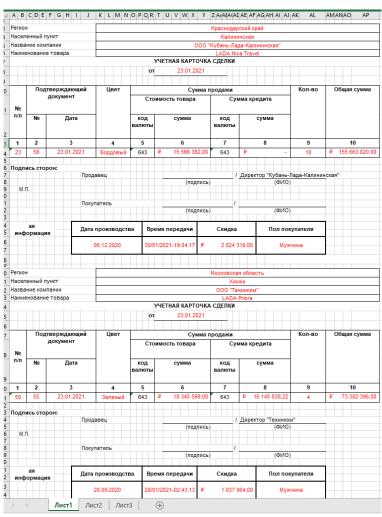
Interactive charts



Aggregated data

A1	▼ : × √ f _x	Подотчет: Прода	жи	
	A	В	С	D
1	Подотчет: Продажи			
		Сумма		
2	Регион	продажи	Количество сотрудников	Сумма кредита
3	Алтайский край	6275367 208	25 701	6 2 06 150
4	Вологодская область	3485321 574	13 884	5 8 72 988
5	Кемеровская область	6195737 980	24 696	6 0 75 171
6	Москва	2932673 369	12 172	6 6 <mark>08 84</mark> 8
7	Приморский край	3679097 411	15 930	6 2 29 051
8	Санкт-Петербург	1072048 122	4 109	5 0 19 021
9	Тюменская область	6690530 466	26 995	6 3 39 617
10	Челябинская область	7620673 232	29 919	6 2 84 946
11	Итого:	37951449 362	153 406	
12				
13				
14				
4	Продажи (стр. 1)	Обращения (стр. 1)	(+)	: 5

Pixel Perfect

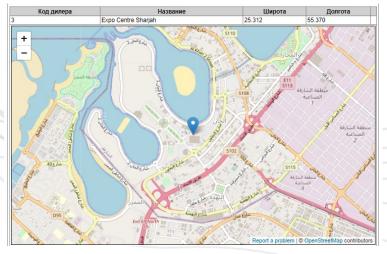


Custom Images

<u>Продажи</u> <u>Макропок</u> Обрашени

подотчет: продам	Подотчет: Продажи					
T	ЦЕНА					
Товар	Цена прошлой поставки	Цена	Цена предзаказ			
LADA Vesta	619,335.00	787,295.08	1,337,223.0			
LADA Niva Travel	574,866.00	921,335.89	719,381.0			
LADA Niva Travel	1,037,135.00	1,243,459.76	1,860,892.0			
LADA XRAY	1,080,001.00	1,545,316.97	1,083,361.0			
LADA Niva Travel	414,424.00	1,228,586.58	2,019,484.0			
LADA XRAY	1,308,590.00	1,420,055.97	1,981,741.0			
LADA Granta	767,508.00	1,786,225.46	2,302,100.0			
LADA Granta	757,120.00	1,493,405.19	1,582,763.0			
LADA Granta	934,757.00	1,412,115.11	1,157,428.0			
LADA Niva Legend	693,451.00	1,428,278.15	939,143.0			
LADA Niva Travel	1,109,089.00	1,715,729.25	930,595.0			
LADA Granta	1,126,653.00	981,851.32	1,000,528.0			
LADA Granta	1,286,093.00	569,704.57	2,309,316.0			
LADA Priora	992,994.00	1,503,463.51	2,285,190.0			

External content





F

Collapsed data

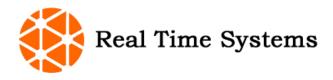
N218 • : × ✓ f_x

2		A	В	С	D	E	F		
	3	Отчет: 10.8.1 - Продажи	и статистика по	населенным пун	ктам РФ				
	4	Параметры отчета:							
	5	Номер заявки: 1242700)						
	6	Фильтр по годам: 2021	,2020,2019						
	7	Фильтр по регионам: 77,78,22,25,35,42,72,74,87							
	8	Количество строк в под	отчете "Продажи	": 300					
	9	Фильтр по дилерам: Минимальная численность населения для подотчета "Макропоказатели": 250000 Макимальная численность населения для подотчета "Макропоказатели":							
	10								
	11								
	12	Количество строк в подотчете "Обращения": 300							
	13	Актуальность данных: 1	15/05/2022-12:15:	39					
	14	Подотчет: Продажи							
			Сумма						
	15	Регион	продажи	Скидка	Сумма кредита	Количество сотрудников	Возраст покупателя		
	67	Алтайский край	588 482 023	108 725 952	256 667 324,44	2 447	4		
	99	Вологодская область	442 884 840	85 921 934	216 078 723,41	1 633	4		
	159	Кемеровская область	765 566 885	152 610 505	361 680 783,67	2 791	4		
	176	Москва	198 050 177	28 876 816	88 709 857,88	946	4		
	206	Приморский край	352 507 322	61 419 986	193 342 359,01	1 497	4		
	207	Санкт-Петербург	12 842 553	2 132 363	12 320 772,51	43	5		
		Санкт-Петербург	4 629 195	636 974	0.00	86	4		
		Санкт-Петербург	6 581 423	1 634 421	4 450 824.10	81	3		
		Санкт-Петербург	4 440 411	0	0.00	61	4		
		Санкт-Петербург	597 134	56 114	144 387,64	70	5		
	212	Санкт-Петербург	16 878 095	899 029	11 114 311,50	78	4		
	213	Санкт-Петербург	16 741 657	0	13 392 691,17	54	3		
	214	Санкт-Петербург	2 811 959	0	2 634 930,47	79	4		
	215	Санкт-Петербург	19 744 942	2 360 720	0,00	95	4		
	216	Санкт-Петербург	16 106 682	6 063 235	13 814 818,13	31	5		
		Санкт-Петербург	17 904 639	4 018 253	5 099 876,66	81	4		
	218	Санкт-Петербург	16 606 581	3 971 459	8 062 512,32	12	4		
	219	Санкт-Петербург	3 428 012	993 633	1 585 179,93	93	5		
		Санкт-Петербург	15 657 281	3 790 350		71	4		
		Санкт-Петербург	154 970 564	26 556 552		935	4		
		Тюменская область	638 034 844	125 799 263		2 959			
		Челябинская область	647 210 992	121 367 344	285 132 794,64	2 568	4		
		Итого	3 787 707 647	711 278 352					

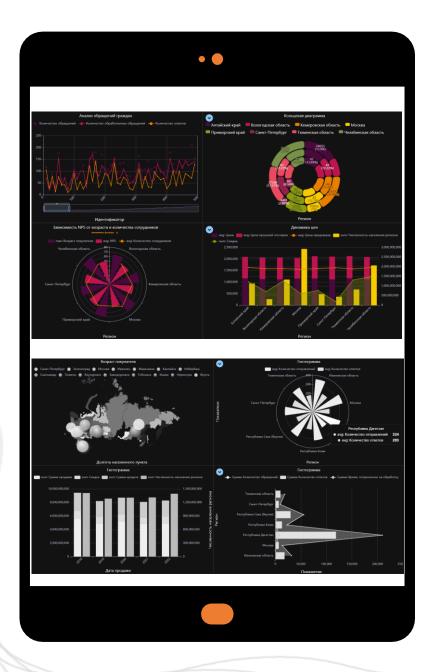


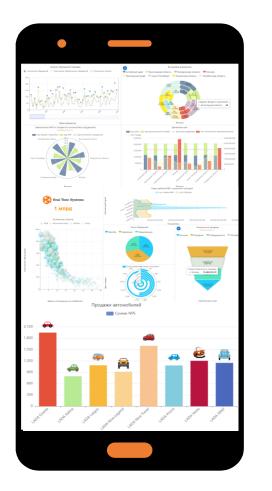
HeatMap and PopUp

	Филиал	Bcero TT	% реш. в срои	<		
Пd	Абакан	4	75			
	Барнаул	22	77.27	1 Ľ		
10	Кемерово	3	66.67			
	Красноярск	37	75.68			
-	Новосибирск	40	87.5			
	Омск	15	80	/2015	W18Y2015	1/1
Б	Томск	2	50	.05	87.78	
-	Bcero	123	79.67	.68	82.22	8
-L	Уральскии		87.07	89.25	79.63	8
	Сибирский	79.67	85.48	88.34	90.55	7
Цал	ьневосточный	83	81.21	71.32	80.93	8
-	Южный	89.43	90.51	92.59	85.89	8
Г	риволжский	84 48	90.06	86.92	82.3	8



MOSAIC Examples











MOSAIC Platform clients

Company	Country	Industry
Beeline Russia		Telecommunications
Rosneft Russia		Oil and gas
Kar-Tel	Kazakhstan	Telecommunications
Unitel	Uzbekistan	Telecommunications
ArmenTel	Armenia	Telecommunications
Mobitel	Georgia	Telecommunications
Takom	Tajikistan	Telecommunications

MOSAIC platform also fits for:

- Banking
- Insurance
- Medicine
- Retail

- Oil and gas industry
- Manufacturing
- Transport and logistic
- Social security



- The total confirmed economic effect from the operation of services the MOSAIC on platform in Beeline is 1 billion RUR (13 mil USD) per month.
- Proof:
- https://events.cnews.ru/articles/2017-12-
- 18 kak izbezhat oshibok pri vnedrenii bi

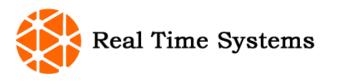


MOSAIC platform allows companies:

- Significantly reduce hardware costs for work with data
- **Reduce the cost of software** supporting enterprise operations by implementing some of the required functions in MOSAIC
- Significantly save time when employees work with data and reports Optimize business processes and increase speed of staff performing standard
- operations
- Generate additional revenue by launching new data-driven products
- **Reduce T2M** time to market for data driven products and services
- **Increase sales** by communicating information to customers in a visualized form that is more understandable to a wide audience
- **Pass audits** easier and **strengthen** your **position** when dealing with tax authorities and counterparties
- **Improve manageability** of the organization



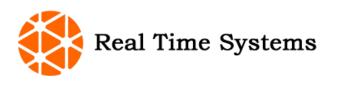




Examples of Using MOSAIC for retail

- Motivation of sellers. An analysis of 300'000 shop/days showed that sales efficiency falls if salesmen do not see their accumulated bonus every morning **Distribution of goods by shops**. When distributing goods according to the data of the previous day, the goods are distributed to the wrong stocks
- MOSAIC is used by one of our clients to support the operation of a retail shops.
- **Daily pricing process**. The daily generation of retail prices brings an additional percentage to revenue
- **Commercial removal of goods** from stores to warehouses for further redistribution
- **Cash collection control** in stores
- **Merchant fraud control** helps prevent unjustified bonus payments
- Creating lists for defective goods compensation. Late creation of claims leads to refusals of suppliers to pay money
- Return of defective non-repairable goods to suppliers.





Examples of using MOSAIC for cost reduction and additional revenue

In MOSAIC it is possible to quickly process and calculate data and give the result as an independent service or embed it into the interfaces of existing IT systems. Here are just a few areas in which the use of MOSAIC allowed our clients to save resources / earn extra money:

- **Dealer motivation**. A specialized "off-the-shelf" solution does not allow supporting all creative ideas for paying extra bonuses to dealers that significantly increase sales
- **Fraud management.** Revenue assurance dept use data in their controls to prevent fraud
- **Account receivable collection.** Timely providing of data improves the quality and timing of collection receivables
- **Tariff plans updating.** Updating tariffs by analyzing information about charges
- Monitoring and elimination of problems in services. Helps prevent subscriber churn and profit loss. **Payments to partners optimization.** Based on the data, fees for content providers is reduced, fines are
- issued on contractors.
- **Reduction of fines and taxes**. Fines for late submission of data to enforcement authorities, challenging the amount of assessed taxes.
- **Customer support.** Online data providing increases customer loyalty and ARPU





MOSAIC helps to pass audits by:

- Storage of all executed data queries and reports with transparent archiving and search system
- Saving versions of data processing algorithms used for each data request Keeping a history of changes in data processing algorithms size (example: a 100 Gb report - all company payments for the year for auditors)

- Saving versions of reference data used for each data request Generation of both aggregated and detailed reports and data sets of unlimited
- A guarantee of the relevance of used algorithms
- Control of the freshness of the source data for each data request Automated procedure for transferring developments from test to production
- environment
- Built-in system for monitoring the correctness of indicators in reports







MOSAIC platform provides not only Business Intelligence, but also Data Management

In Business Intelligence we have following competitors:









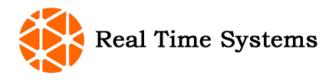
Power Bl



Competitive advantages of MOSAIC

- A single platform contains a complete set of components for working with data successfully
- Works steadily under heavy load on cheap hardware because it is designed based on the principles of Mass Service Theory
- Creates a single virtual space of data and indicators, fills it with real data as requests from users are received, ensuring the minimum cost of system ownership
- Unique concept "Chart by one click" allows unprepared users to get started right away
- Supports visual data exploration scripts and data animations
- Provides the most fresh data because it isn't required the source data to be preloaded into special data structures
- Accesses data directly to IT systems, minimally affecting their performance
 Supports an autonomous data provisioning including through REST APIs, with a unique mechanism for
- Supports an autonomous data provisioning including through F calculating parameters when working on a schedule
- Supports execution of actions in business processes by scenarios depending on the values of calculated indicators
- Stores the results of all executed data queries and reports, versions of reference data and algorithms by which the data was processed, helping pass audits.



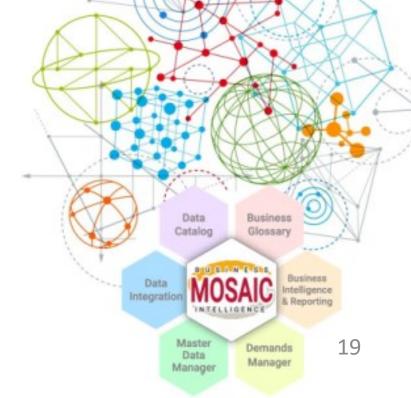


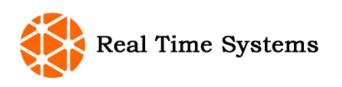
MOSAIC innovation

The innovative approach to development of the MOSAIC platform is in the implementation of a unique type of system for working with data – a high-load quasi-OLAP using a two-stage model for creating a data slice: at the first stage, using a queuing system and managing the load on data sources, a preliminary cutting of the virtual cube consists of data from various data sources is performed based on user requests in order to generate a cube of a smaller dimension, which user can analyze himself at the second stage online.

The following results are achieved: interactivity with the possibility of processing large amounts of data with minimal impact on data sources and reducing the cost of working with data.







Maximum speed of providing up-to-date data

- Registration of a request regardless of the availability of the source IT system and automatic execution of the request when the data source becomes available.
- Prevent waiting for simple queries to execute due to complex resource-intensive queries execution.
- Detection of similar queries or queries similar by data and reuse of their results
- Simultaneous access to various data source with selection of the data sources least loaded at the moment without preloading data into data warehouse.
- Automatic requests re-execution in case of non-fatal failures with dynamic execution • intervals changes.
- Request execution on condition ۲
- Executing requests only when source data is up to date
- Executing requests on a schedule with changing queries parameters using templates \bullet or custom algorithms
- Starting request depending on the execution of another request.





- Delayed start system queuing data requests taking into account the priority of requests and the complexity of algorithms balances the load of data source over time.
- Selecting a source for a request, taking into account its performance, current load, allocated resource quota, which varies depending on the time of day.
- Time load balancing based on time slots in data source allocated for MOSAIC.
- When constructing a report, users use metadata without accessing the real data source.
- The ability to analyze the once obtained data without re-accessing the data (\bullet) source
- Data caching
- Configuring the time of availability of each data source
- Setting the execution time limit for each type of query.





MOSAIC Platform functionality

- Web user interface
- Access rights management
- **Reports Designer**
- Data visualization & animation
- Dashboards
- Visual data analysis
- Master Data Manager
- **Business Glossary**
- Data Catalog
- Search data
- Data masking
- **Deleting data for GDPR**
- **Telegram bot**
- **REST API**

- Connecting to various data sources Manual and batch data entry, incl. from Excel
- •
- Storing the results of data queries and reports
- Managing data requests queues
- Balancing load of data sources
- Forecasts, analyzing trends and events
- Control of data correctness and freshness
- Loading data into consumer databases
- Delivery of data and reports to consumers
- Informing users about data events
- Logging of all actions
- Word and Excel reports templates
- Full self-service support
- Support for teamwork





MOSAIC Platform technologies

- MOSAIC is implemented in the C++ programming language and provides full range of capabilities when being used either with **Oracle** or free open source **PostgreSQL** DBMS at the customer's choice.
- MOSAIC works on inexpensive **X86** servers or on **ARM 64** architecture.
- MOSAIC works under Red Hat Enterprise Linux, Oracle Linux, Astra Linux, RED OS, ALT Linux, CentOS, Ubuntu.
- MOSAIC collects data from **different databases** and various **file sources**, including **MS Excel** of a complex structure, and can load them into **Oracle, MS SQL, PostgreSQL, MySQL**, MariaDB, Hadoop, GreenPlum.
- Data query results and reports are stored in **Oracle, PostgreSQL** or **HBase**. There are no special requirements for user's workplace, only any modern Internet
- browser is required.
- For integration with IT systems, **SOAP** protocol is supported.
- Supports running in **Docker containers**







Reporting capabilities

- Input parameters for reports can be manual input values, reference data, text or MS Excel files with a user-configurable complex structure, path and file masks The design and structure of reports is user-configurable in powerful editor
- Report template description language is supported
- Extensive set of functions for calculating users' own metrics
- Publishing customized design and report structure for mass use
- Reports are generated in various formats: Excel, PDF, HTML, Word, CSV, XML
- Pixel perfect reports are generated based on a template in MS Word or Excel
- The ability to delegate access rights to the reports to your colleagues
- Providing reports or datasets via Web and mobile interface, Email, file folders, ftp, url links to http/https resources, Uploading to user databases, Telegram
- Embedding external content in a report and embedding reps to external systems Execution of reports on a schedule with an intelligent system for updating input
- parameters for organizing an autonomous reporting process

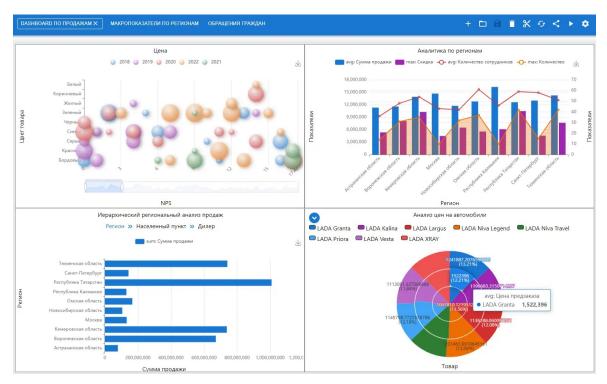


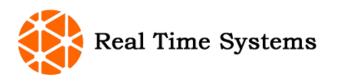


Data visualization

- Creation of dashboards of any complexity by mouse in web-interface by users without programming
- Full self-service in data visualization
- Unique concept "Chart by one click"
- Visual Data Analysis
- Visualization of geodata
- Multilanguage
- Information boards for real-time visualization of changing data
- User customization of multi-level hierarchies of indicators for drilldown
- Customize captioning of indicator values in the form of pictures to simplify data perception
- Ability to embed dashboards on external sites
- Teamwork with dashboards







Control the correctness of indicators

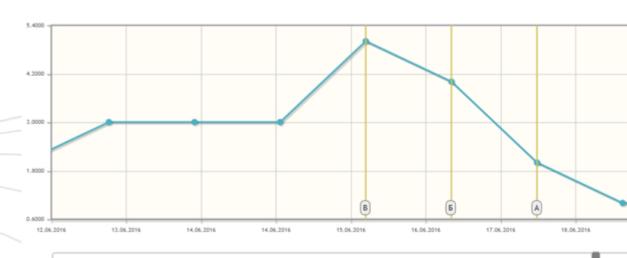
- Building trends using various algorithms (including periodic changes)
- Calculation of the predicted values
- Assessment of the deviation of the obtained value of the indicator from the forecast
- Cross-validation of indicators
- Graphical and tabular display of indicator changes
- Notification of the receipt of "suspicious" values via the web interface or Email, incl. by hierarchical, dynamic notification lists generated depending on the deviation value







Various events are constantly happening around us: new tariffs are launched, the USD exchange rate is changing, new shops are opening etc. Many of these events directly or indirectly affect the indicators that we receive in our reports, for example, an outage in a provider's network can affect a revenue for certain services, the launch of a new tariff can affect the consumption of old products. In MOSAIC, you can search for the relationship between events that have occurred and changes in indicators in reports and see how certain events affected the values of indicators, or vice versa, which events could cause changes in indicators in reports. тчет 1 🔽 Колонка для оси X: Дата 🔽 Колонки для оси Y: 🗹 🖲 cnt 1 неделя 1 месяц 1 год







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Data protection

- Role-based data access
- Customizable destruction of personal data
- Support for work on secure protocols https, ftps, sftp, S/MIME
- Logging of all actions in the system, including viewing data
- Automatic blocking of access by inactivity
- Provide data protection by dynamically masking data in reports











Data masking

- MOSAIC implements flexibly configurable dynamic data masking depending on user access.
- If a user doesn't have access to any data, the values are replaced for example with "******"



Файл	Эфф.дата	Provider ID	DAMPS Provider ID	Пров.	GSM	Код страны
TAP3B	10/04/2018 00:00:00	******	ГЛОНАСС, Россия	RUSGU	N	7
TAP3B	15/07/2011 00:00:00	******	ТТ Mobile, Таджикистан	TJKTT	F	992
TAP3B	01/06/2018 00:00:00	******	Zain, Нигерия	NGAET	F	234
TAP3B	07/11/2008 00:00:00	*****	Билайн - <mark>И</mark> ркутск	RUSLA	Н	7
TAP3B	15/07/2011 00:00:00	*****	HUTCH Gujarat, Индия	INDF1	F	91
TAP3B	15/07/2011 00:00:00	******	Vodafone, Индия	INDE1	F	91
TAP3B	15/07/2011 00:00:00	******	HECL Maharashtra & Goa, Индия	INDBM	F	91
TAP3B	15/07/2011 00:00:00	********	HUTCH Kolkata, Индия	INDCC	F	91
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Business glossary

- Terms in the report can be links to a glossary
- Two-phase adaptive search system
- Terms and definitions are entered by users
- Customizable terms approval schema
- Versioning of terms
- Linking terms to topics and business processes
- Synonym-antonym, generalization-clarification, whole-part ...
- Own and inherited properties of terms
- Term attributes any content
- Logging
- Access rights management

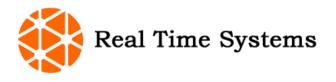
The use of a single glossary by all employees is an important part of the manageability of an organization





Airplane cabin dialogue

Indicators? Pilot: Navigator: Fifty! What is fifty? Pilot: Navigator: And what is indicators?



Data Catalog* *Version 2.0 will be available soon. Stay tuned

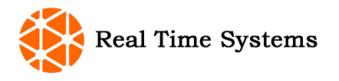
Recently, the amount and variety of data available has become overwhelming. The task of finding suitable data is not very trivial. For many employees, especially beginners, finding the data they need often turns into a real quest. The MOSAIC data catalog helps to solve the problem of collecting information about data, classifying them and describing them for easy search and use.

- Automatic metadata collection and model building
- Manual metadata enrichment
- Metadata Import/export
- Various data checks settings (freshness, quality)
- Data relationships Identity, Master Slave
- Metadata attributes any content
- Customizable metadata approval schema
- Search metadata
- **REST API**









- MOSAIC has a built-in system for Master Data management
- Supports both custom reference data which can be maintained manually and technology directories that are not displayed in the catalog
- Access rights management to reference data is supported
- Access is implemented based on a flexibly customizable role model
- Convenient and simple interface (reference data catalog, search by content, filtering, pagination, manual input, import, export, add, overwrite etc.)
- Supports segmentation of reference data contents
- Supports input data controls setup for each reference data
- All actions are logged, the change log is available to users
- Reference data is independent entity and can be used outside the MOSAIC
- SOAP interface is provided for working with reference data from external systems
- The versions of reference data used for each data query are saved in MOSAIC





- Using connections to data sources, MOSAIC can collect the required data from various sources, cleanse, combine, transform them according to user-specified algorithms, and **load** them into external databases.
- Various types of target databases are supported
- In the ETL configuration are supported: the selection of the dataset or part of the report required for unloading, the configuration of the structure of the unloaded data, the type of unloading: incremental or overwrite, automatically created or user-defined tables in the data receiver, data enrichment with service information about unloading, optional unloading of data query parameters, etc. Combining data loading capabilities with standard functionality such as scheduled execution with intelligent parameter updates, logging, and automatic error handling, MOSAIC provides an ETL tool, for example, for creating data warehouses. 33





Manual data input is used to collect data from branches / departments that are not integrated into the standard processes of the Company or to enter indicators that cannot be automatically calculated for various reasons. System functionality:

- Manual and batch data input; batch input from CSV and MS Excel files with flexible configuration of data structure
- Calculation of values of loaded indicators by calling a configurable SQL queries
- Automatic control of input data
- Search data; Editing data
- Confirmation and cancellation of data input
- Access rights management
- Logging all actions
- Internal reporting









Self-service

- Each MOSAIC user can create their own datasets using predesigned data acquisition algorithms by the developer. Self-creation includes definition of various input parameters, processing the received data, creating your own calculated indicators using complex formulas and a large set of built-in functions, customizing the report design using a large number of different options, determining the type of external databases - recipients data and report format, settings for various data checks and non-trivial data retrieval schedules.
 - **Full self-service** means that the user can create his own algorithms for receiving, combining and processing data from any sources connected to MOSAIC. The user can write his own SQL queries and automatically get the opportunity to use all the services provided by the MOSAIC for the results, such as managing the load on data sources, formatting results, intelligent schedules, data validation, storing results, delivering results to consumers, integration with external recipients data, publication of results, alerts, link to business glossary, etc.





REST API

- For interaction with external systems, the MOSAIC platform supports the SOAP interface.
- Through the API, it is possible to perform a wide range of interactions with MOSAIC from ordering a report to obtaining a result, from working with reference data to uploading data, from setting up scripts for receiving data on a schedule to delegating rights to view data to colleagues.
- For the convenience of users, a regular mechanism for obtaining a wsdl template configured for a specific task based on actions in the web interface is provided.

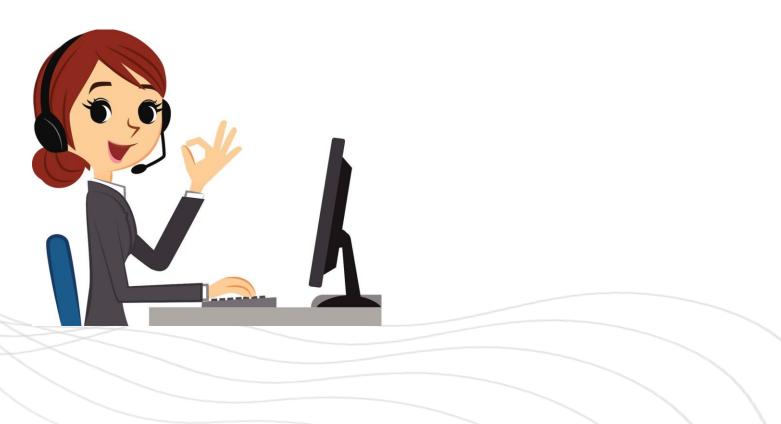






MOSAIC technical support

- Technical support for the MOSAIC platform is provided in Russian and **English**. Other languages are available upon request.
- Technical support is provided using a convenient proprietary demands management system.
- Various service plans are available for technical support from basic to priority with reduced response time and **24x7 operation**.









Thank you!

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