

# OUR COMPANY

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INVESTOR  
PRESENTATION

*MAKE DIGITAL  
SIMPLE*

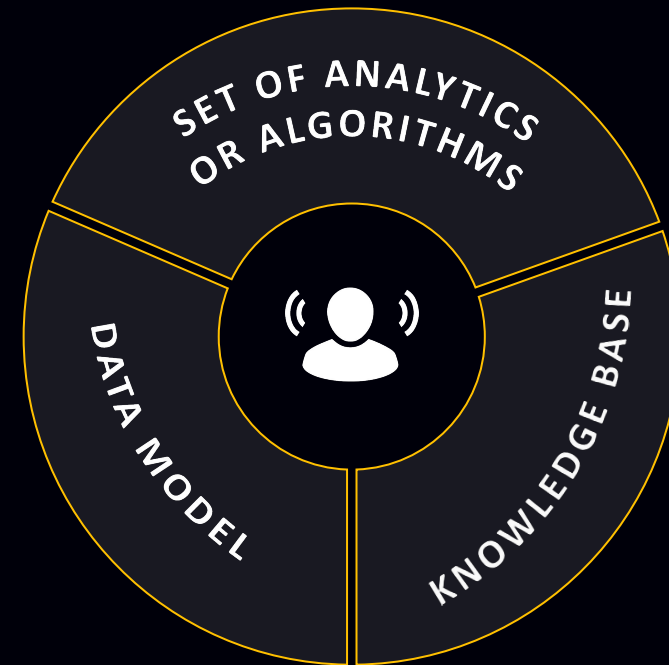
# DIGITAL TWIN

*The massive and rapid digital transformation of companies in the next few years is predicted for all sectors of the economy. This will lead to a change of the business model, increase productivity and the emergence of new roles.*

**DIGITAL TWINS** - digital replicas of the physical assets and processes used to understand, predict and optimize production performance.

Business and technology trends are forcing clients to rethink their view on production efficiency expecting following **benefits from digital twin concept**:

- Managing assets in **real time**
- **Greater business continuity**, equipment **downtime reduction** through advanced maintenance and monitoring
- Cutting maintenance costs
- Improving product and production system efficiency
- **Enhanced productivity** through optimization based on data



Business decisions based on actual view on production state  
**Up to USD ~1 million savings per hour** for large industrial companies

## Next generation DIGITAL TWIN PLATFORM

SMART. SIMPLE. VISIBLE

We provide innovative experiences to make your assets digital, smart and manageable via simple touch

- Ease of use through innovative UI
- Smart services based on AI, LoT and Big data
- All information in a single place in real time



**DIGITAL WORLD PROVIDES HUGE OPPORTUNITIES. BUT ITS ALL COMPLEX, TECHNICIAN AND FRUSTRATING**

Current market is represented with a number of complex technical platforms to use and benefit from digital technologies (Predix, Mindshpere, niche players)



Plant



Mining, oil, construction files



Manufacturing



City infrastructure



Digital technologies



*Good for IT people  
but frustrating  
for users and  
executives*



Shift the paradigm!

New digital era needs intuitive tools to make digital simple and exciting even for conservative industries

*With digital  
your assets  
should be on  
your palm*



Next generation  
**DIGITAL TWIN PLATFORM**



## Next generation DIGITAL TWIN PLATFORM



Digital twins & models



Big data solutions



Computer vision



Artificial intelligence



Imitation modelling and optimization

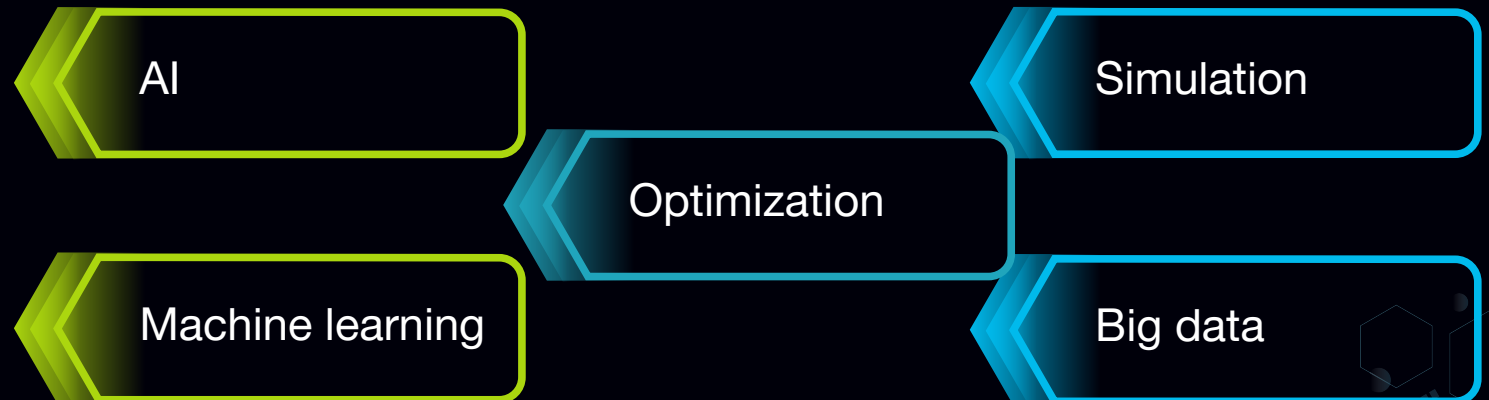


Predictive analytics



### Digital twin core

Smart services to leverage industry 4.0 capabilities



### USE CASES:

Predictive maintenance, Online ML based optimization, Integrated planning

# OVERVIEW



• SIMPLE

## Next generation DIGITAL TWIN PLATFORM



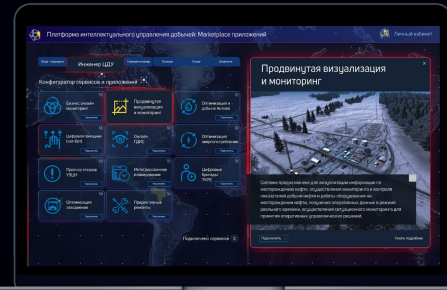
### Innovative and intuitive UX

- You access all the needed information from your device in a single touch



### Single solution paradigm

- We integrate and represent data about all your assets, staff and events in a single solution
- We put the solution on top your legacy technical applications



### USE CASES:

Plant in a tablet, Digital oilfield,  
Smart city

3D visualization

AR \ VR

Object  
repository

Geographic  
information system

BI / Advanced  
dashboards

# OVERVIEW



# VISIBLE

## Next generation DIGITAL TWIN PLATFORM



### Realistic objects

- You manage your assets in virtual world like they are real.
- The «touch effect» engages people to drive all the digital agenda and generate new ideas



### Real time enterprise

- 3D models are enriched with real time data from devices, smart apps and legacy systems

### USE CASES:

HSE (workforce monitoring),  
Plant in a tablet, Digital oilfield)



### Data factory layer

Provisioning,  
Management & Monitoring

Unified  
data access

ETL & Dataflow  
management tools

Data storages (Relational,  
Key-Value, Timeseries, Blobs)

Batch & Streaming  
processing

Security

Machine  
learning

# PRODUCT STRATEGY

We are going to start with enterprise on premise solutions and migrate to SMB and SAAS business model



## Enterprises

- Select early solution adopters, **create required platform foundation** with implementation on selected use cases. Show **feasible and visible results** to the business and market. Use clients as a rocket lab for further development of product core.

2020 – 2021  
2-3 clients

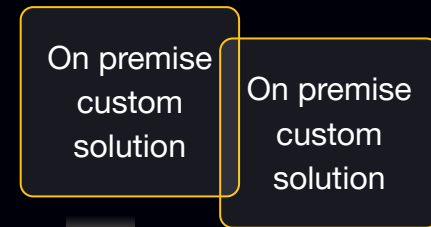
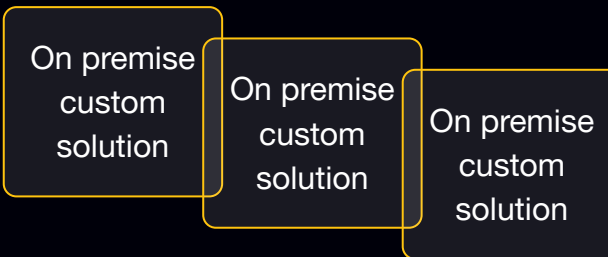
Set up and  
market capture

2022 +



Product core & custom digital services

Enterprise market penetration



Technical core  
Industrial use cases



## Small medium business

- Transform product for SMB segment in production / manufacturing area with **focus on light cloud based solution provided on subscription** with customization option services.

2022 +

Return of  
investments

Product adoption for SMB

Cloud based SaaS  
platform services for SMB.  
Industry specific bundles.



# OUR TEAM AND BUSINESS MODEL

Our team is built from top industry and its experts with proven market background



Management team



Industry experts and product owners



IT architects



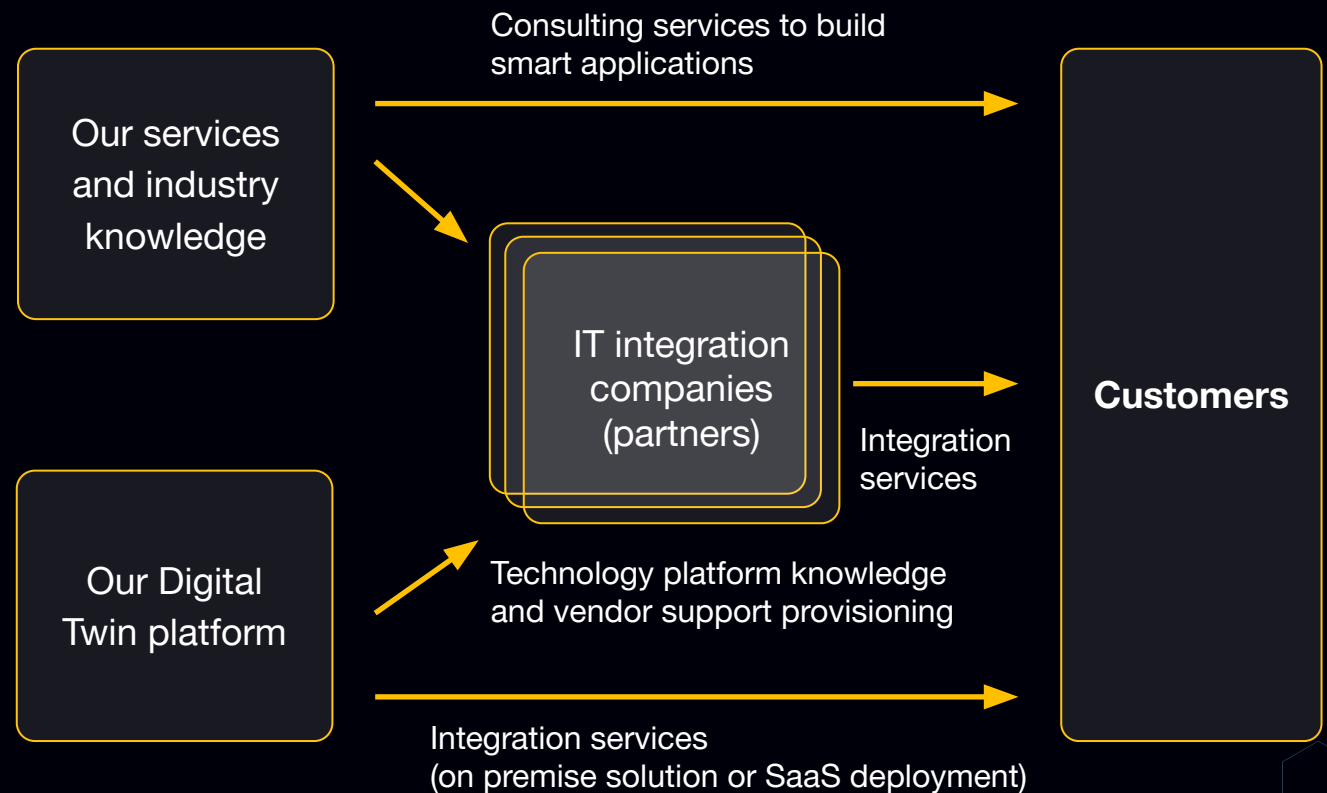
Data scientists



Developers

- Unique IT capabilities and expertise
- Deep oil and gas industry knowledge
- IT and digital innovation executive roles background
- Top IT consulting companies background

Our business model assumes both direct consulting and deployment services as well as working through technology partners



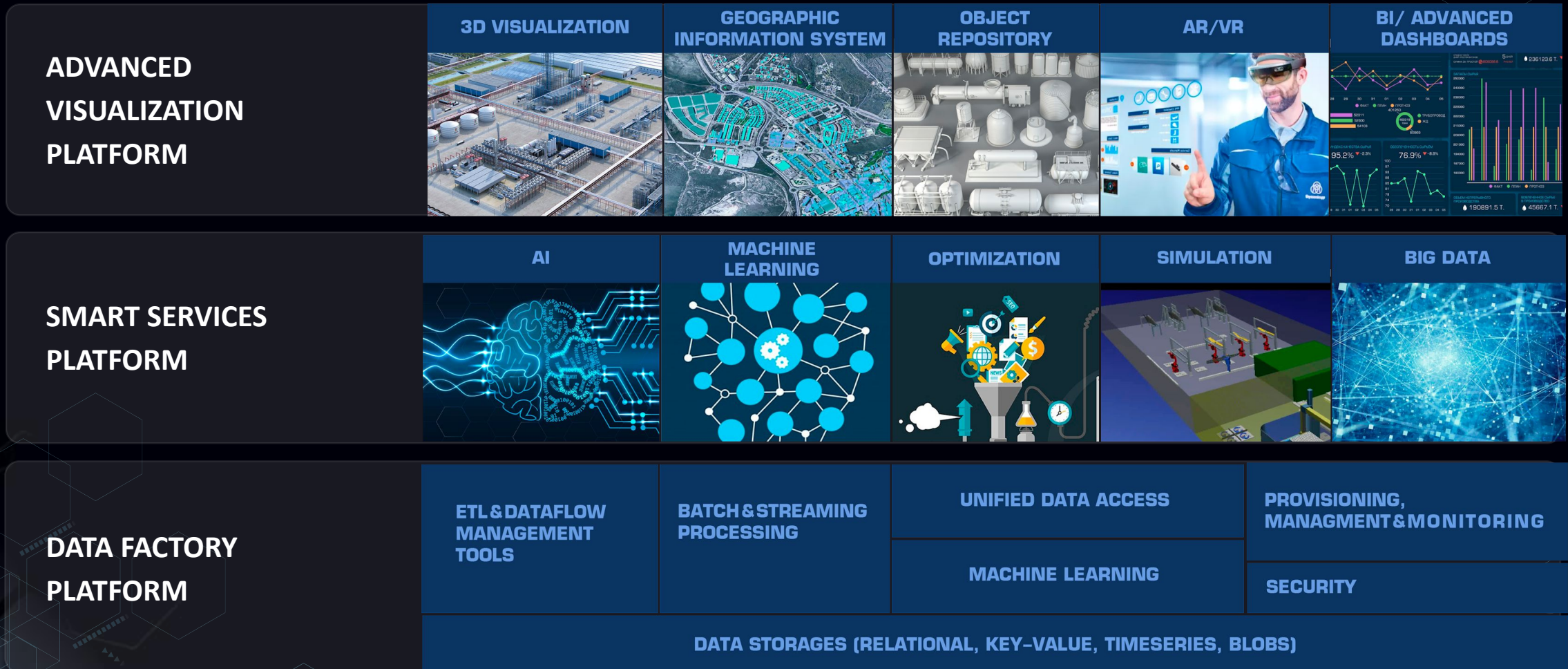
# PRODUCT DETAILS



*MAKE  
DIGITAL  
SIMPLE*

# PRODUCT ARCHITECTURE

Using our experience we have developed a new platform for creating digital twins (MVP version). This platform is comprised of three key components: data acquisition and processing system, data storage and analysis system and advanced visualization system.



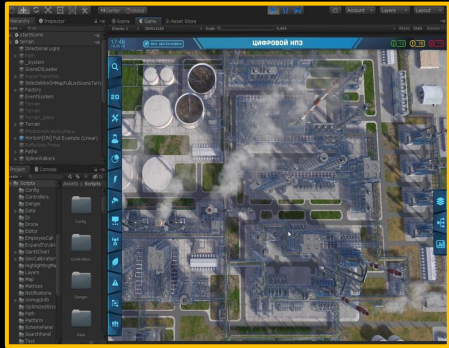
# TECHNOLOGY. PART 1



Based on Unity3D engine

## ADVANCED VISUALIZATION PLATFORM

To remain competitive in the future, businesses of all scales will likely need to incorporate the use of data visualization methods. Based on a powerful game engine our visualization platform is used for advanced real-time 3d graphics rendering of a digital twin. We believe that a game-like design will make a more efficient user experience and interaction.



### Key benefits

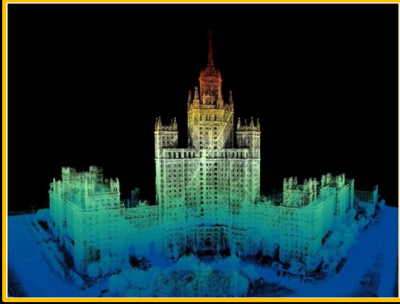
- Speed up the decision making and do faster action
- Optimize productivity with visual access
- Improve product quality
- Understand connections between operation and results
- Interact with data
- Visualization tools show insights that may be missed in traditional reports

### Technical features

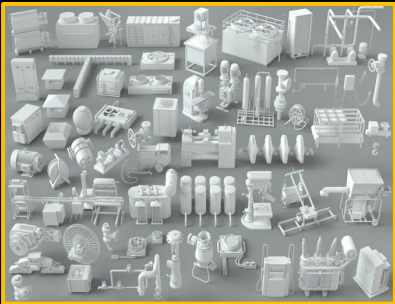
- Data visualization in context
- Team collaboration
- Multiplatform and multiscale
- High-performance real-time rendering
- Large scale and detailed environments support
- Using CAD, 3D laser scanning and photogrammetry technologies to automate the digital twin creation
- Using drag and drop constructor to create digital twin environment and map assets to the data
- Unified 3D-models storage to simplify change management
- BI-widgets and advanced reporting
- VR and AR visualization tools for various business cases

# TECHNOLOGY. PART 2

## TECHNOLOGIES USING TO CREATE ADVANCED VISUALIZATION



Laser scanners and photogrammetry technology to create 3D models of the real assets



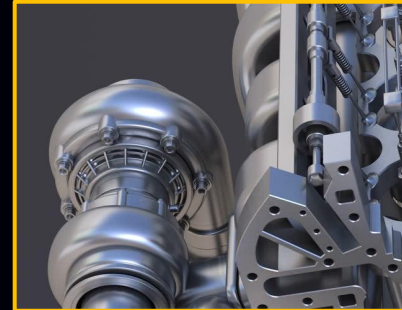
Common 3D models storage to simplify twins data and models update



Business intelligence and dashboards, predictive analytics



A built-in easy to use Digital Twin composer to create a precise copy of the environment with geoid model support



High-performance 3D rendering engine to create like the realistic 3D and superior user experience

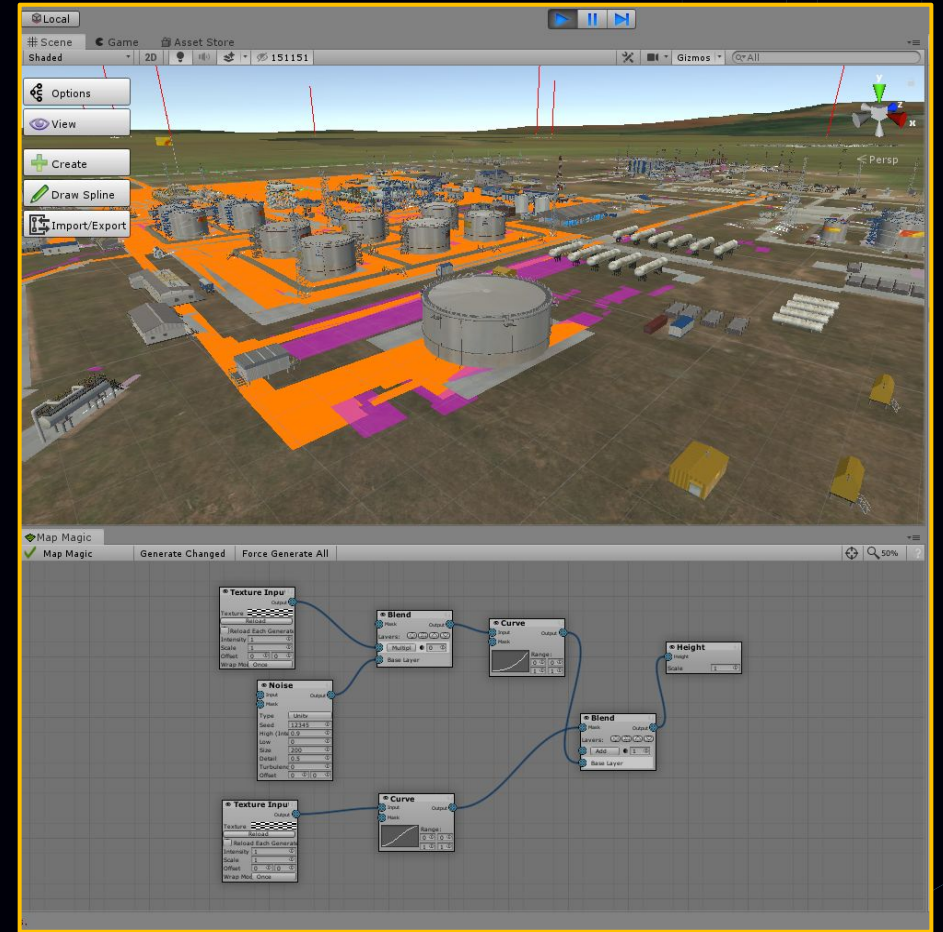
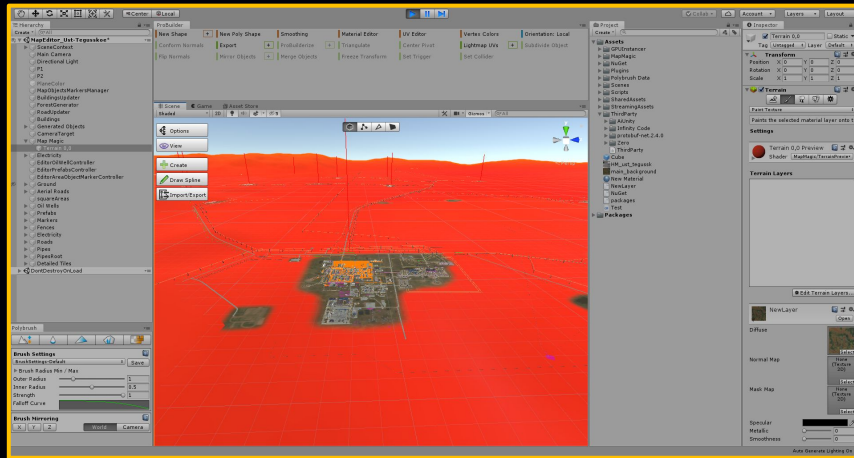
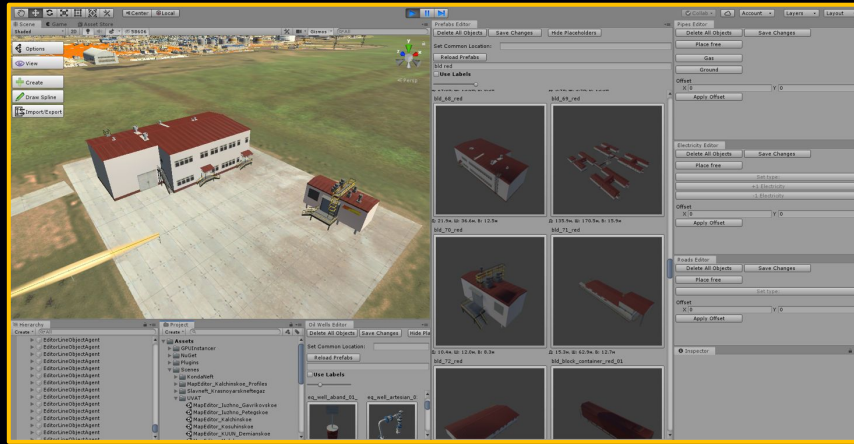


Virtual and augmented reality interfaces beside a common pc and tablets.

# TECHNOLOGY. PART 3

## BUILT-IN EASY TO USE DIGITAL TWIN COMPOSER TOOLS

- 3D asset model library;
- Environment editor;
- Large scale maps;
- GEOID model support;
- Interactable objects mapper;
- Trees and vegetation;
- Roads, pipelines, cable lines;
- Weather conditions;



# TECHNOLOGY. PART 4

## DATA FACTORY

Complete enterprise ready data platform based on big data technologies

Apache Hadoop Ecosystem

- Easy to deploy and integrate;
- Predefined templates for different scenarios;
- Unified data access;
- Heterogeneous data storage;
- Data Quality service;
- Real-time analytics, ML, Predictive;
- Covers lots of enterprise needs;

We plan make Big Data technologies friendly and effective for customers

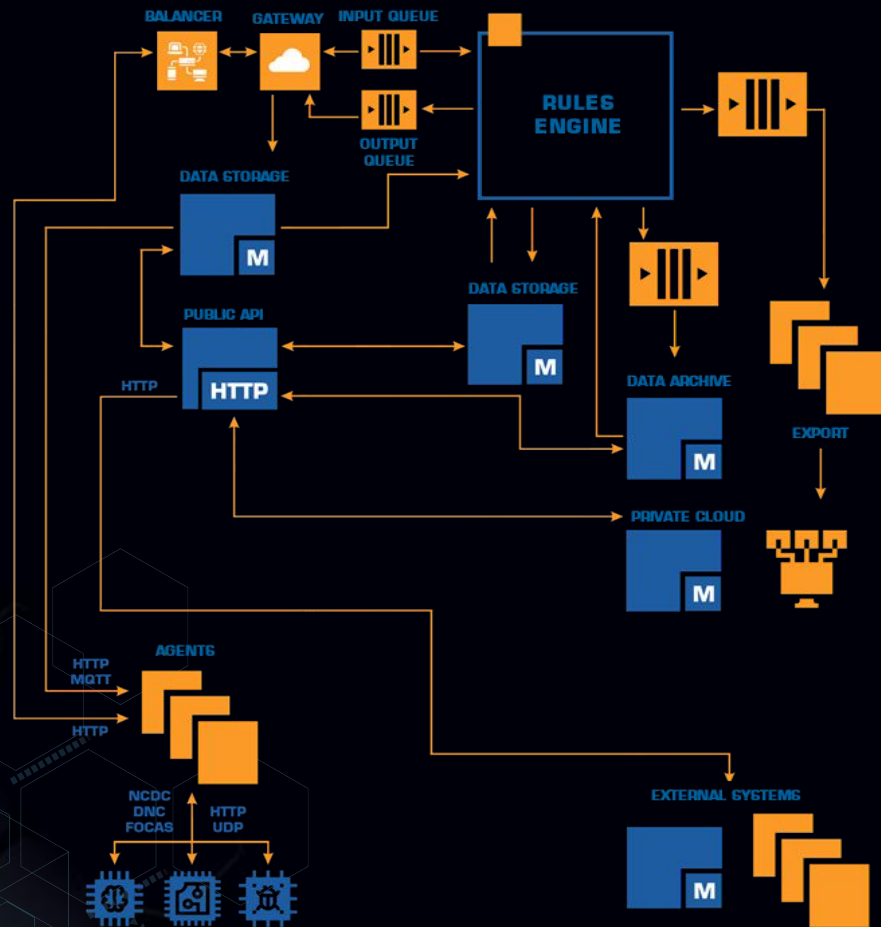


Hybrid data management platform

# TECHNOLOGY. PART 5

## HIGH PERFORMANCE DATA ENGINE

Scalable solution for data acquisition, processing, storage and integration

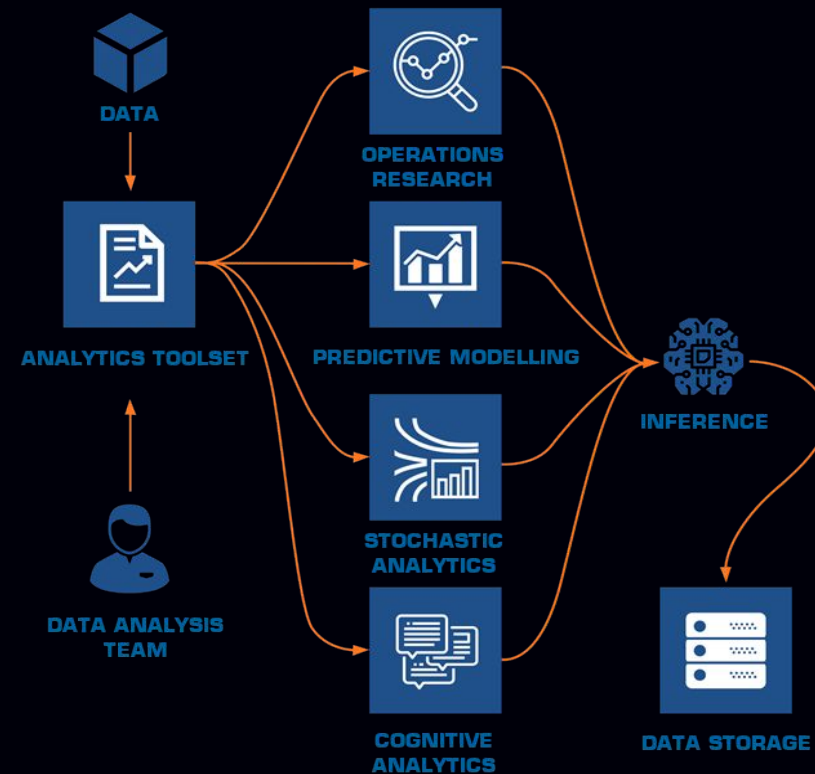


## REAL TIME ANALYTICS AND MACHINE LEARNING

Data analytics tool for identification of patterns and features

Streaming analytics tool for predictive analysis of incoming data set

Advanced open-source technologies: Spark Streaming, Apache Mahout, TensorFlow, Keras, SciLearn

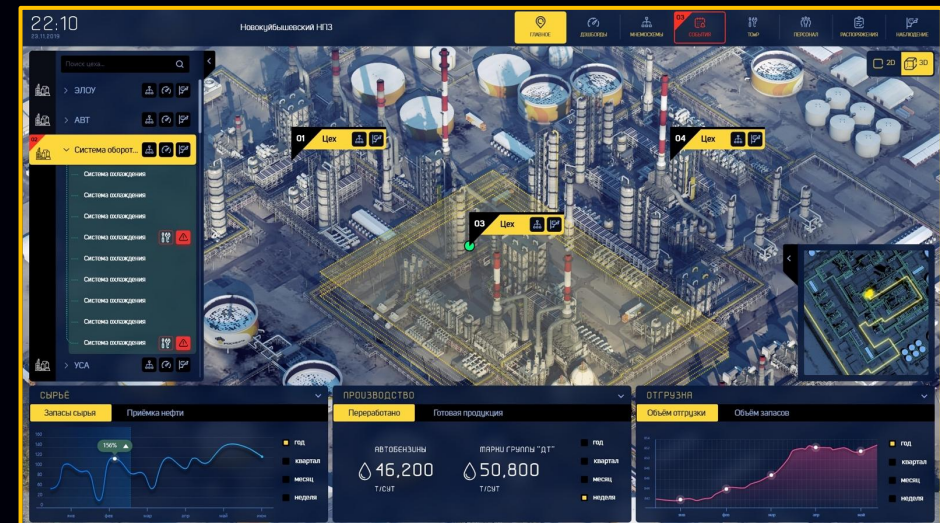




# TECHNOLOGY. PART 6

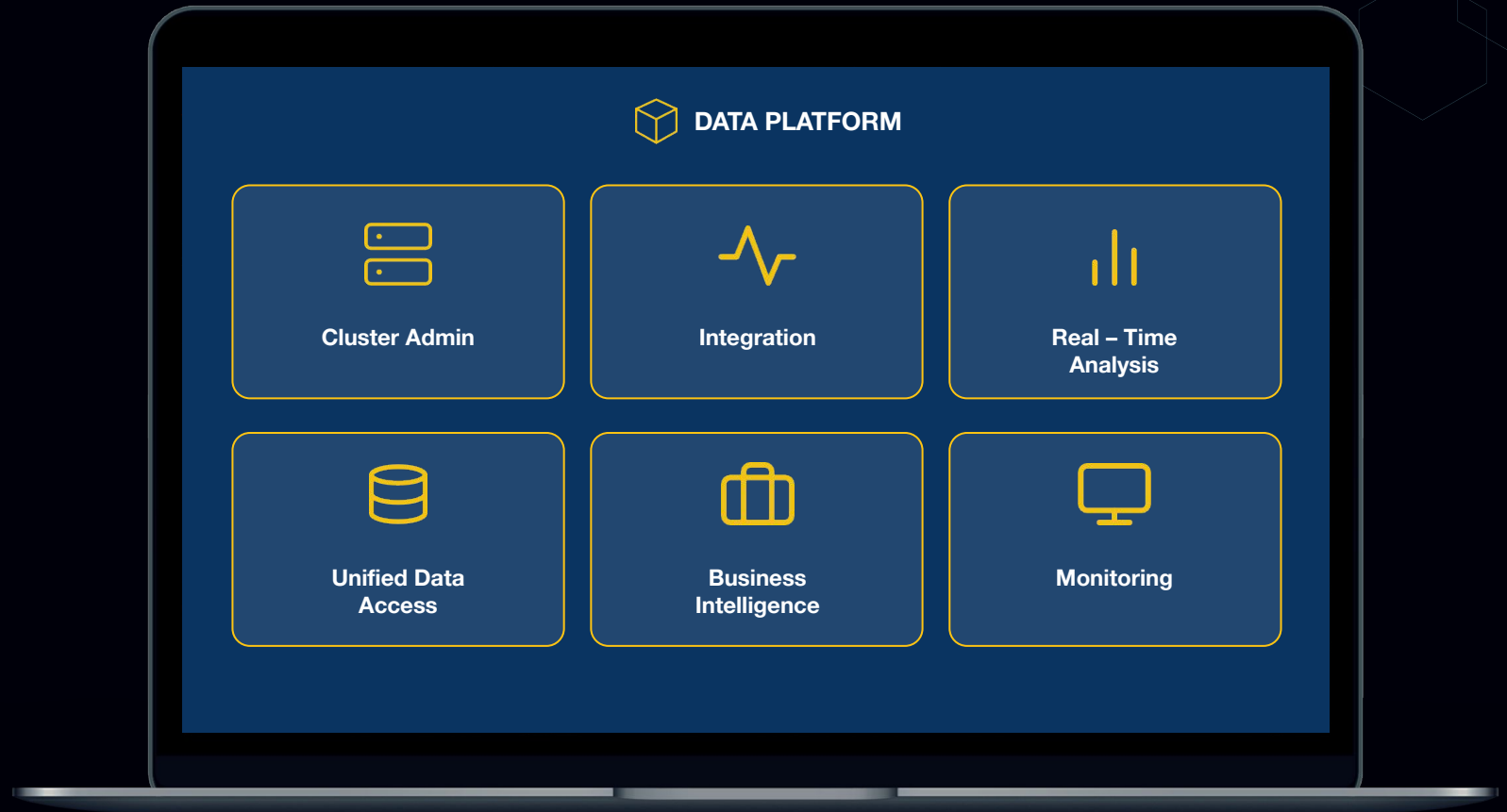
## Platform Digital Twin applications development Studio

- Entity component system
- GUI-controls
- Camera manager
- Widgets
- Data services



# TECHNOLOGY. PART 7

Self-service management  
portal for all platform  
components and ready to  
use applications  
marketplace



# USE CASES & DEMOS

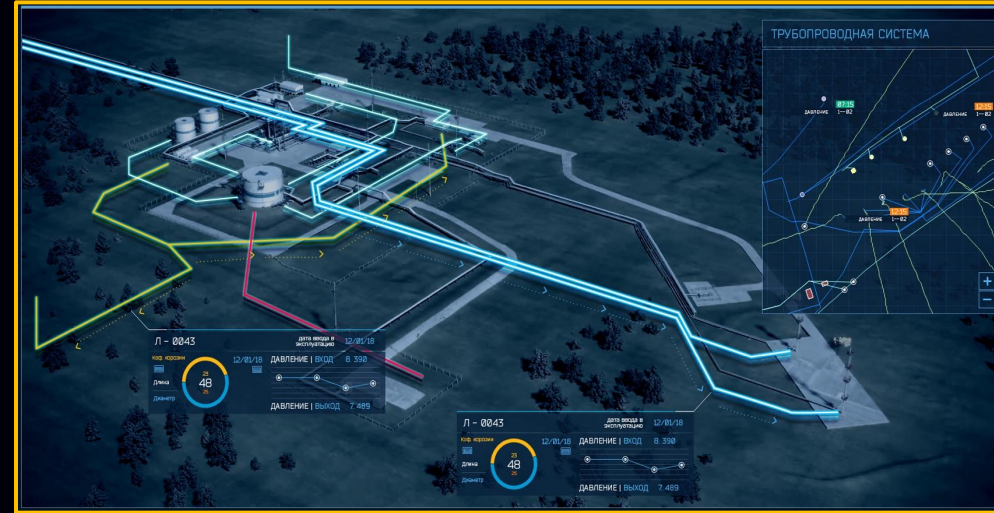


***MAKE  
DIGITAL  
SIMPLE***

# USE CASE: DIGITAL OILFIELD

## Integrated solution for the oilfield online control, planning and analytics

- 3D-visualization of an Asset map of the region where oil and gas;
- 3D visualization of the general scene of the field: bushes, wells, pipelines, roads, power lines, production facilities, dynamic objects: transport, people;
- Production and economic dashboards, analytics and KPI:
  - plan/ actual production,
  - well profitability,
  - number of repairs,
  - the number of employees and etc.
- The mechanism of event notification: accident, equipment, events, transport, personnel, predictive and etc;
- The ability to view attribute/parameter values of any object, personnel, equipment in real time or close to real time;
- Personnel and transport online monitoring;
- Integrated planning and optimization;
- Computer vision;



Predictive alerting

Designation and technological parameters of the equipment in real time, its technical condition

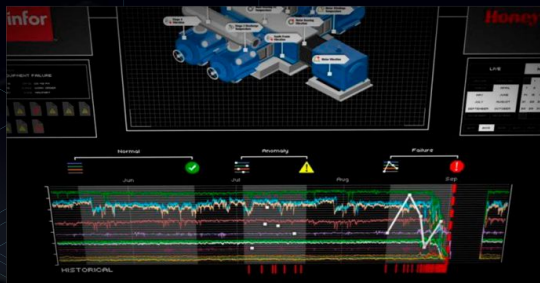
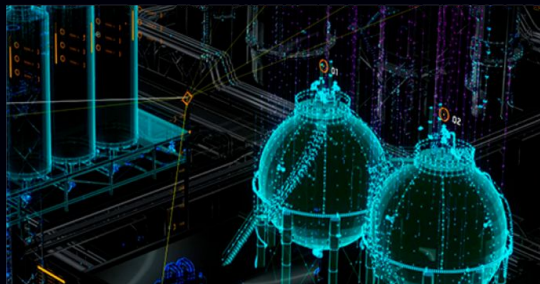
Identification of the registered personnel location. Employee's card (widget)

Identification of the registered vehicle location. Vehicle's card (widget)

A dashboard displaying ecological data. It features a 3D map of the oilfield and a table with columns for 'Станция' (Station), 'Датчик' (Sensor), 'ID измерения' (Measurement ID), 'Таблица' (Table), 'Метри' (Metric), 'Метри' (Metric), 'Метри' (Metric), 'Метри' (Metric), 'Метри' (Metric), and 'Метри' (Metric). The table contains several rows of data.A dashboard displaying repair and maintenance data. It features a 3D map of the oilfield and a table with columns for 'Ремонт' (Repair), 'Идентификатор' (Identifier), 'Состояние' (Status), 'Среднее время' (Average Time), and 'Среднее количество' (Average Quantity). The table contains several rows of data.

# USE CASE: DIGITAL PLANT

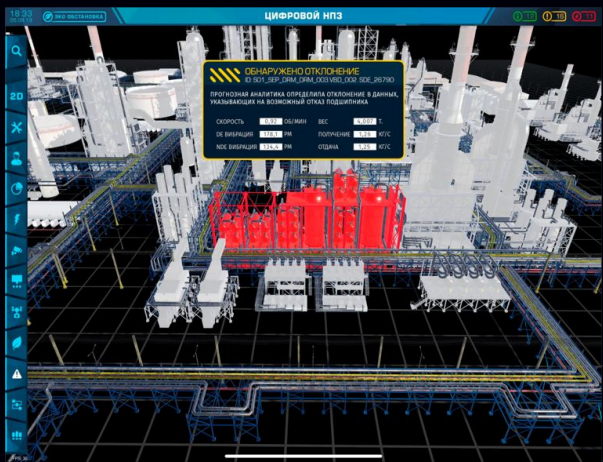
Digital Plant is a software complex managing a real-world factory model as well as all its production processes and technological and business performance indicators.



BUSINESS AND TECHNOLOGICAL SYSTEMS  
MES ERP SCADA HSE REPORTING ECM



 <p>real-time production quality control</p>	 <p>business case parameters simulation</p>	 <p>efficiency improvement</p>	 <p>resources usage efficiency</p>
 <p>profits and losses optimization</p>	 <p>enviroment control and safety</p>	 <p>productive reliability manager</p>	 <p>efficient equipment load</p>



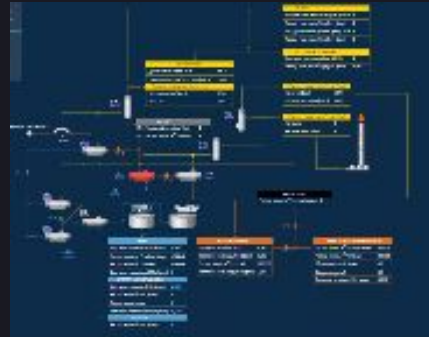
# USE CASE: OIL WELL AI - OPTIMIZATION

## DIGITAL TWIN

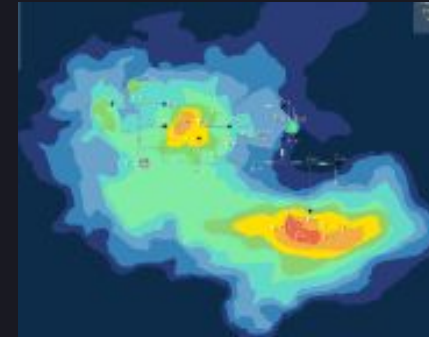
an integrated oil & gas filed model based on ML



Well / Pump / Pipeline



Preparation



Reservoir



Economic model / Integrated solution



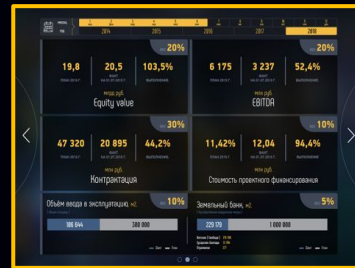
Potential oil production increase based on the technological mode data  
**Around 10% or 63.6 t/day (from 635.2 t/day)**



Real-time calculation accuracy based on the sensors data  
**Deviation less than 3% or 0.3 atm.**

# USE CASE: SMART CITY

Smart City is a software solution visualizing a model of a real city in 3D. This software helps you to make long-term planning and decision making, monitor city traffic, rapidly react on the incidents, monitor housing development, analyze demographic situation and plan city infrastructure, monitor main city KPIs.



# PRODUCT DEVELOPMENT PLAN

At moment we have successfully tested MVP in several production cases.



MVP ready

Digital Twin application studio

3D environment and Digital Twin composer

3D models repository

Data Flow management and Integration tools

Machine Learning Services

Data Lineage

Data quality

Pretrained ML models

Unified API for external application and services

Predefined deployment and integration templates

Self-service BI and ML tools for analytics

Centralized orchestration and monitoring tools

Offline self-contained deployment

Kubernetes autoscaling cluster

Core Platform Services

Pilot projects and global market expansion strategy

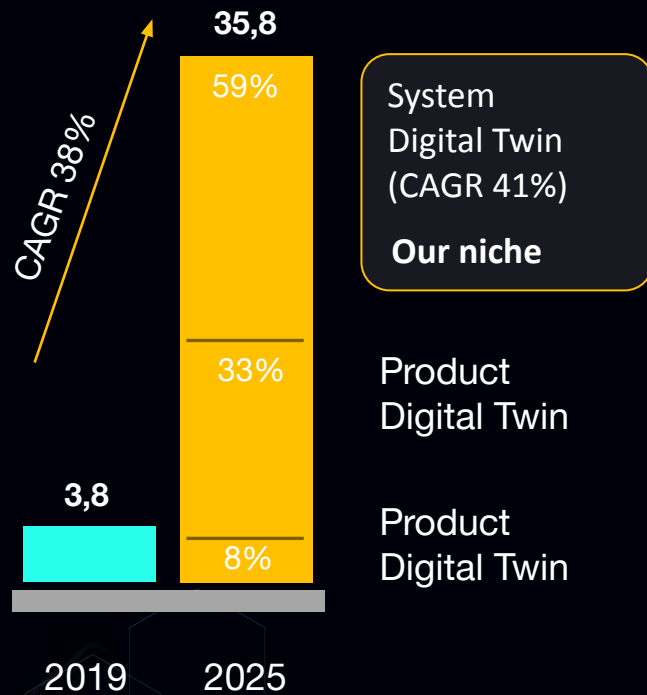
Product ready

\* Roadmap above represents high level development strategy



# DIGITAL TWIN MARKET

## MARKET SIZE (USD BILLION)



## INFLUENCING FACTORS

### Drivers

- Declining time and cost of product development and unplanned downtime with adoption of digital twin
- Increasing adoption of emerging technologies such as IoT and cloud
- Growing use of digital twin for predictive maintenance

### Challenges & Restraints

- Risks associated with data security due to the use of IoT and cloud platforms
- Lack of awareness regarding cost benefits of digital twin adoption
- Lack or expensiveness of skilled workforce and technical knowledge

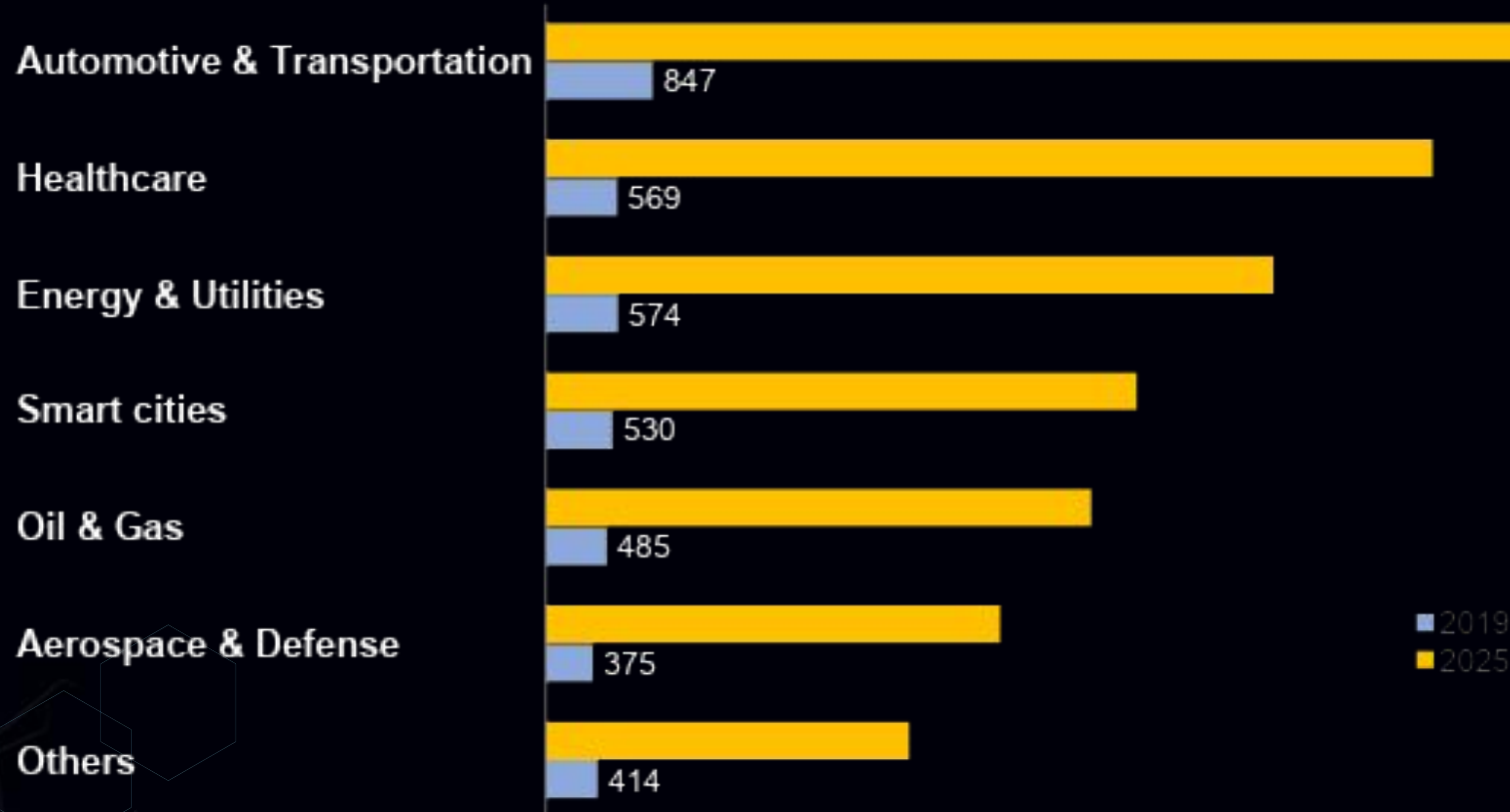
### Opportunities

- Promising growth of digital twin technology in industries such as aerospace and automotive
- Increasing adoption of Industry 4.0 and IIoT

DIGITAL TWINS MARKET HAS ATTRACTIVE GROWTH OPPORTUNITIES

# DIGITAL TWIN MARKET BY INDUSTRY

MARKET SIZE (USD MILLION)



CAGR

37%

35%

39%

31%

46%

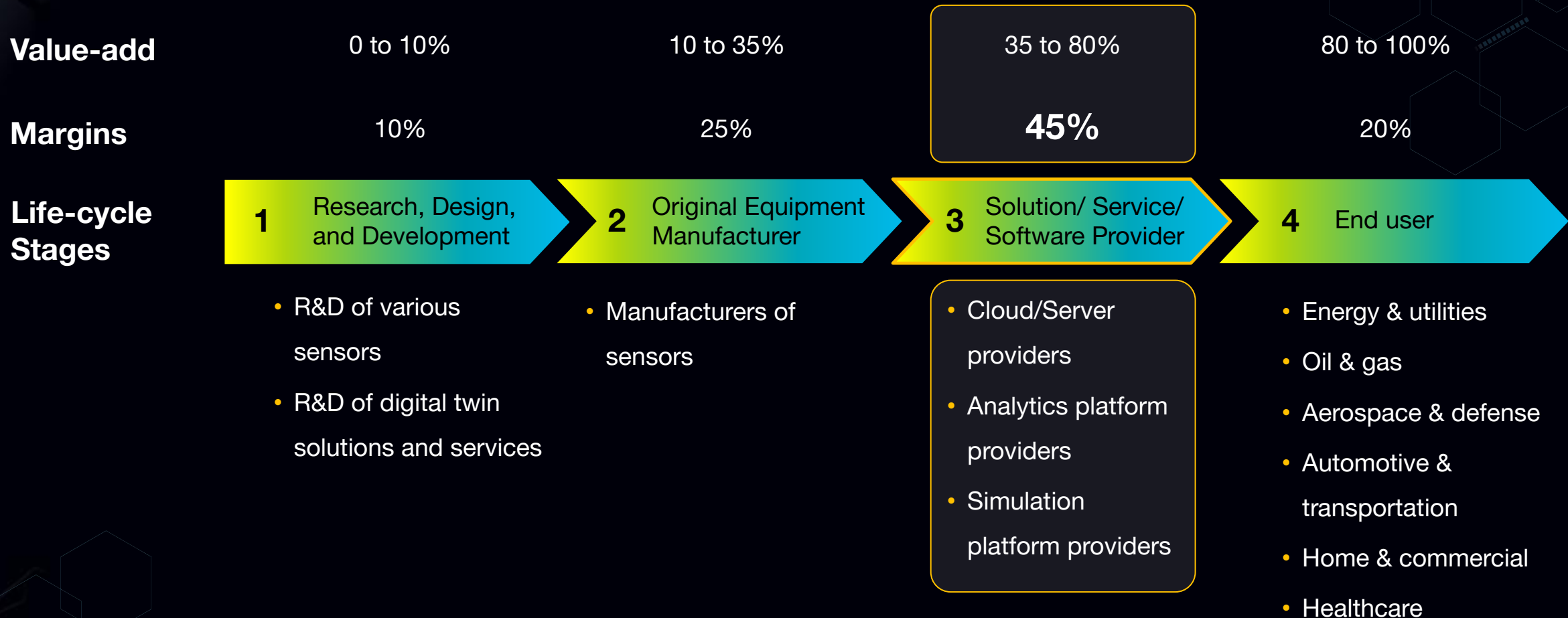
42%

32%

**OUR TARGETS**

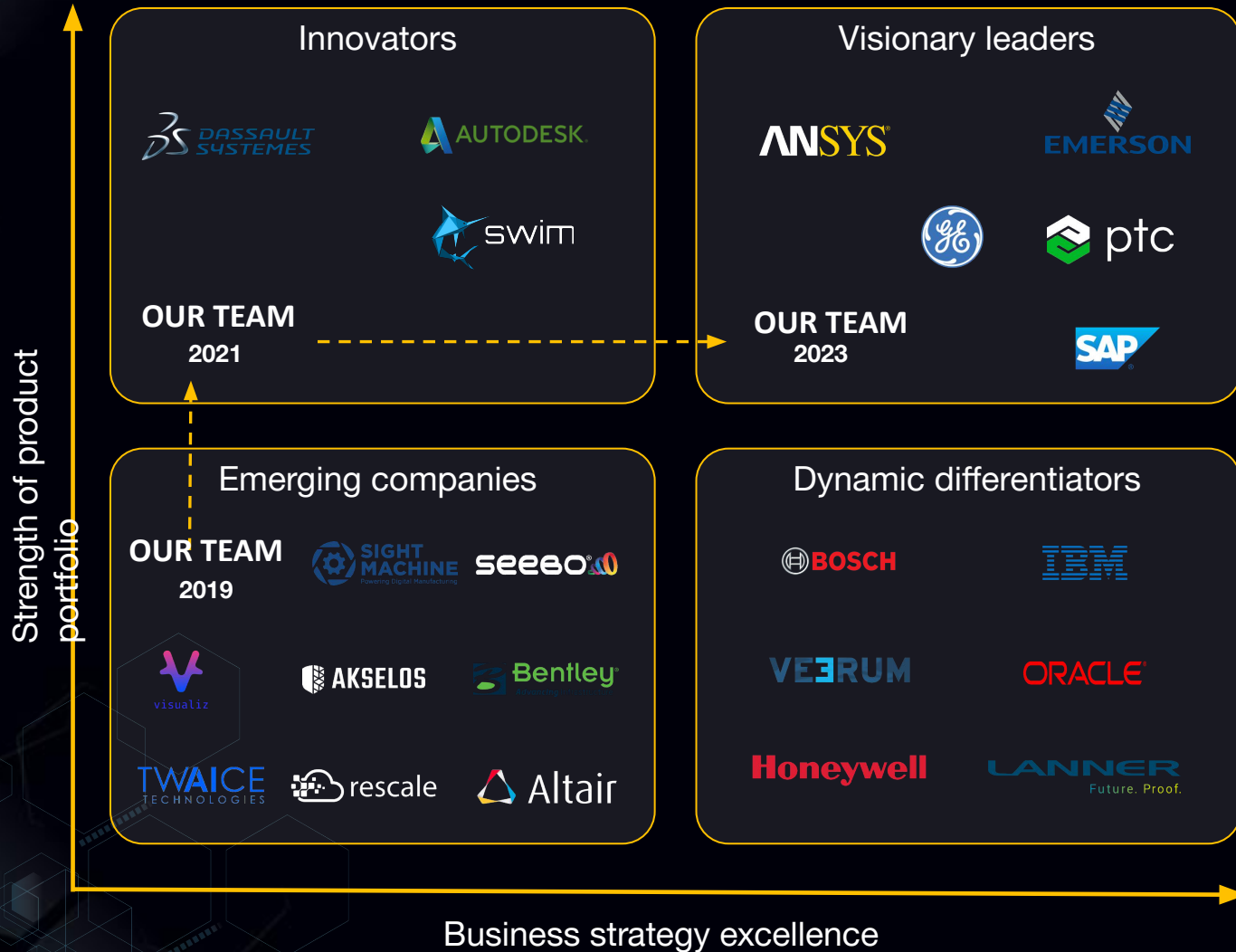
WE PLAN TO FOCUS ON FAST-GROWING SEGMENTS ACCORDINGLY WITH OUR EXPERTISE

# VALUE-CHAIN ANALYSIS



**WE PLAY IN THE MOST PROFITABLE SEGMENT OF THE VALUE-CHAIN**

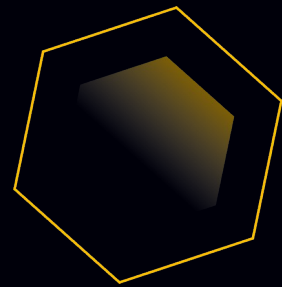
# COMPETITORS



## Our competitive advantages:

- Experienced founders
- Strong R&D team
- Full technology stack (3D, big data, IoT, AI/ML, AR/VR, blockchain)
- Open architecture (“Lego”-model), crossplatform
- Ready MVP and the experience of realization of such products
- An unusual visualization system, unlike other competitors UX, rendering complex scenes
- Powerful data collection and processing system
- Growing project portfolio
- Access to world-class industry experts
- Low costs and tax reliefs

OUR R&D ROADMAP & BUSINESS ACUMEN WILL LEAD US TO NEW CHANGELING GOALS



**THANK YOU**

