

# FACTORY BUILDER AI

AI-powered Platform for Smart Factories Design:  
Production Layout Visual Design and  
Scenario-based Efficiency Analysis

**Oman A. Abyshev, M.CS, M.Eng**

Founder & CEO at Oscar & Sons Group

Senior Researcher at Institute of Fundamental Sciences  
at Kyrgyz National University of J. Balasagyn



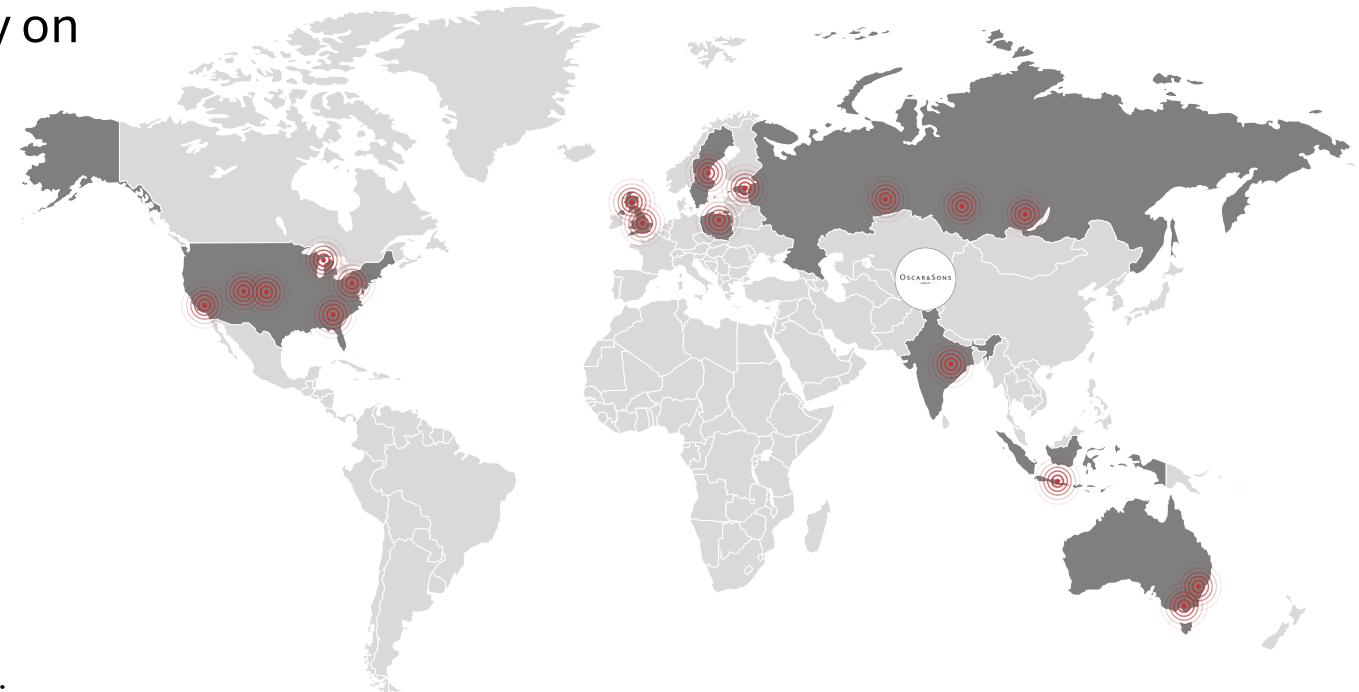
# The Problem: **New Factory CAPEX**

Many companies spend enormous money on  
**building, launching, and reconfiguring**  
factories and facilities that  
**will never pay for themselves.**

Key factors:

1. Changes in the cost of purchased materials, availability of personnel and equipment.
2. Changes in the dynamics of production flows.
3. Outdated standards like ISA-95
4. Fragmented “Island” automation
5. Inefficient CAPEX investments and rising production costs

**The result is Low Flexibility and  
declining competitiveness**



**Map of Failed Factory Projects  
in last 10 years**

# The Solution: **FACTORY BUILDER AI**



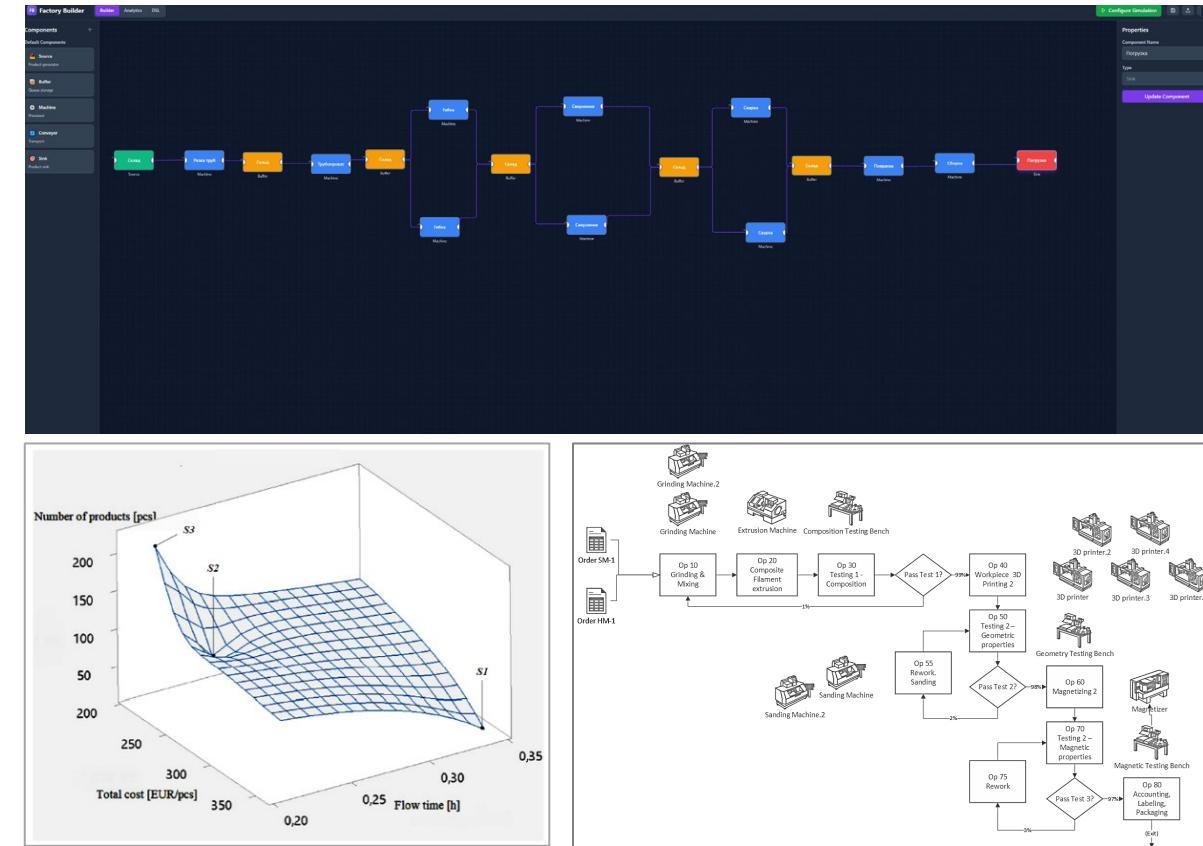
1. Visual Drag-and-drop Factory Design Platform
2. Flexible Change Scenario Simulation Tool
3. Flow simulation with ML models predicting bottlenecks
4. AI assistant that suggests the best configuration
5. Strong Scientific Background in Industrial CPS

This bridges **Industrial needs and Science**

# Advantages: **FACTORY BUILDER AI**



- **AI-first approach**  
automatic design and optimization of factories,
- Strong scientific foundation:  
**PhD research, patents, software certificates**
- Local adaptation for  
**Central Asia**, where global competitors are absent



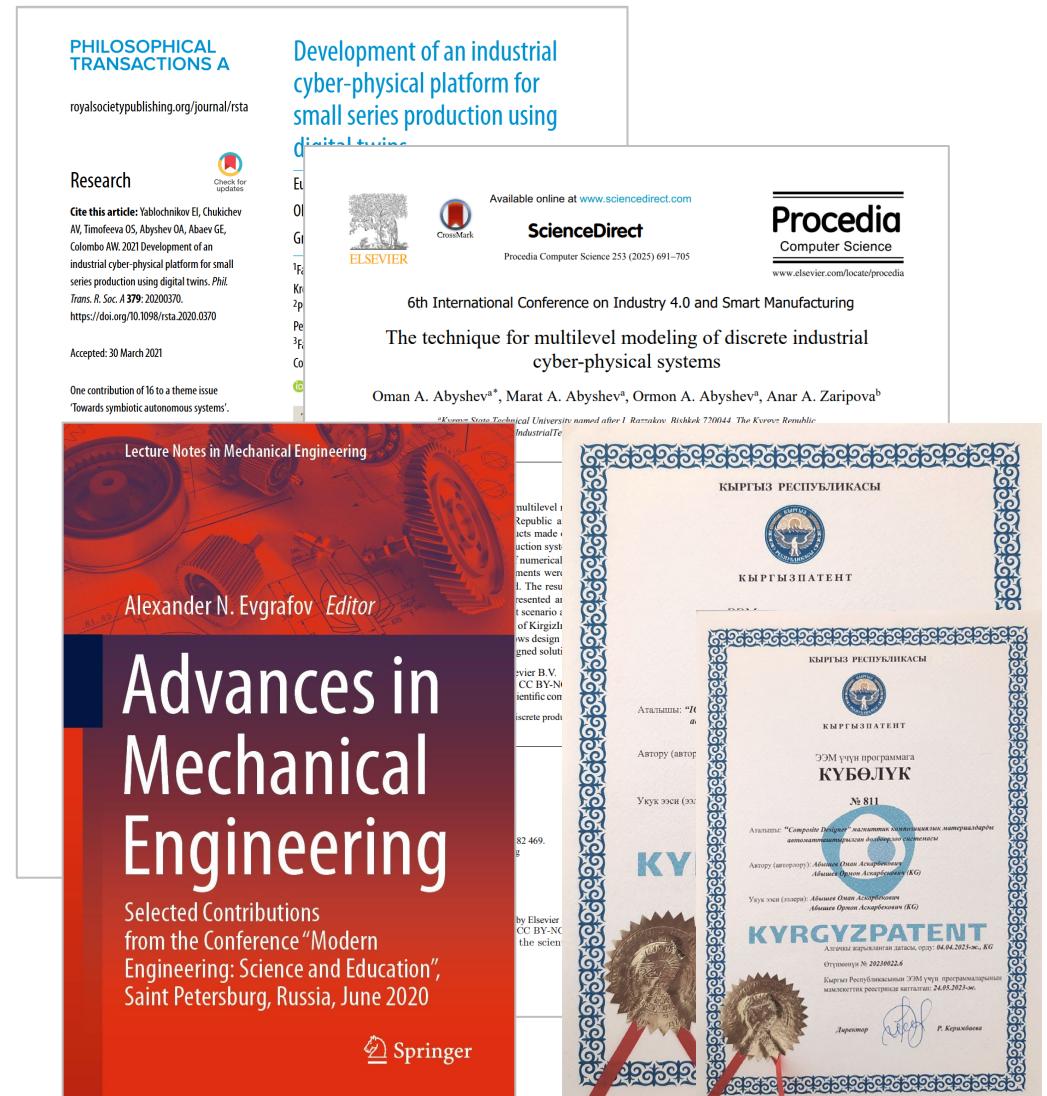
# PhD Background

We developed:

- **Multi-level simulation:** from product → cell → full factory,
- **Industrial agents** integrates heterogeneous legacy equipment,
- **Digital platforms** for Smart Factory design and development

Now, we add **AI**:

- AI algorithms automatically **configure and optimize** factory layouts,
- AI Predictive analytics for machine failures,
- Dynamic optimization of production flows



# Competitors



Criteria	Process Simulator	AnyLogic	FACTORY BUILDER AI
Visual Drag-and-drop Design	✓	✓	✓
Change Scenario Simulation	✓	✓	✓
Flow simulation	✓	✓	✓
Integration with CAD tools	✓	✗	✗
Advanced Analytics	✗	✓	✓
ML predicting bottlenecks	✗	✗	✓
AI assistant	✗	✗	✓
Industrial Cyber-Physical Foundations	✗	✗	✓
Price	\$2,462 – \$3,693	\$12,390 – \$18,990	\$1000 – \$5000

# Business Model



## SaaS-Model

starts from **\$1,000 per month**

Distribution: Direct Sales, Agents

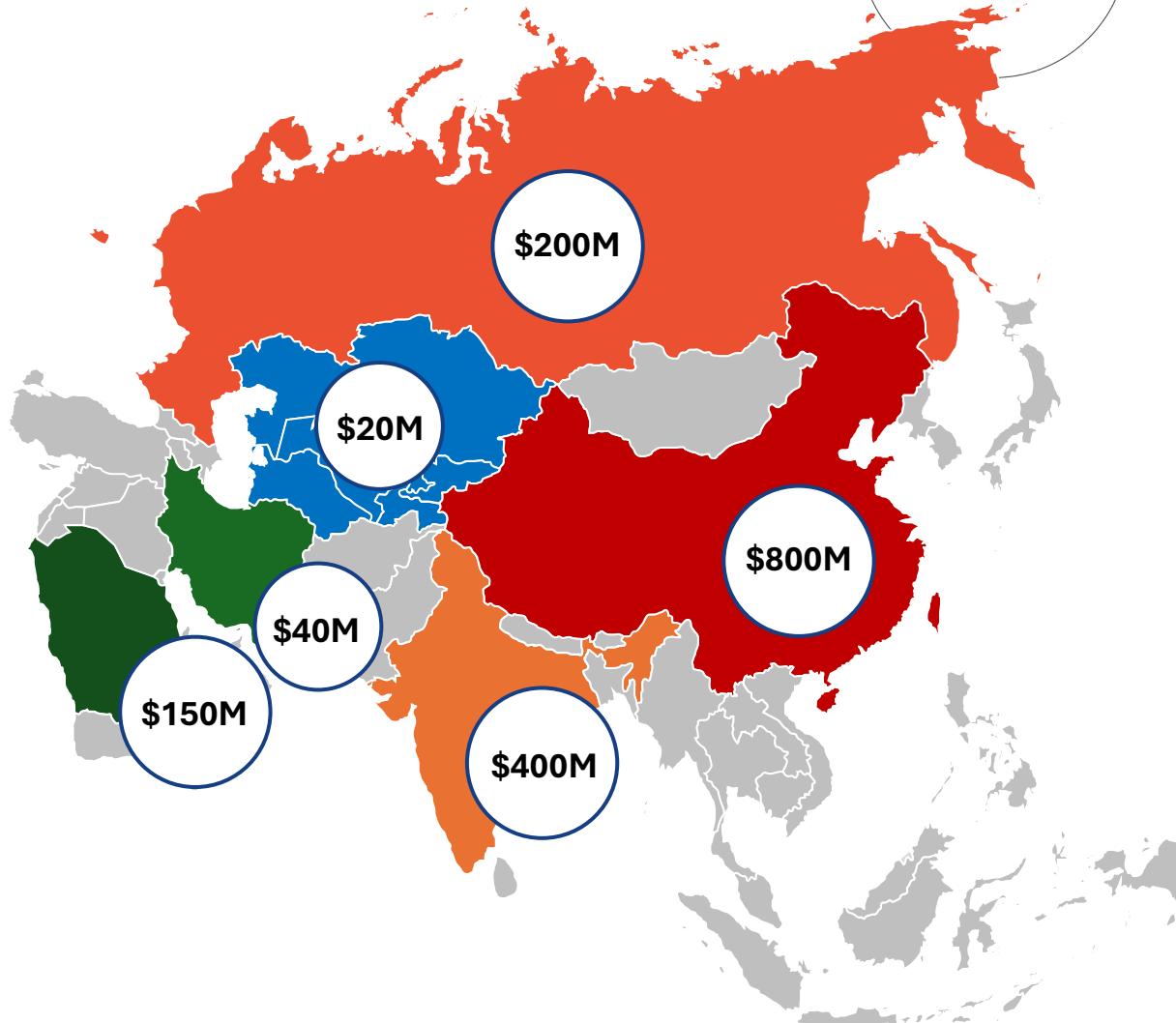
## Enterprise Customization

starts from **\$5,000 per month**

Distribution: Agents, Acceleration

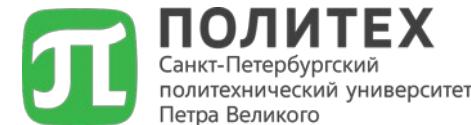
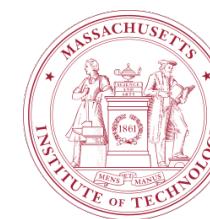
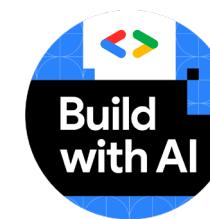
Target customers:

**oil & gas, mining, and manufacturing**  
companies in Central Asia and the CIS.



# Traction & Results

- **MVP Validated on 7+ Pilots**
- **HTP x MIT DeepTech Finalist**
- **Best Research Work HTP 2025**
- **Best Research Work KSTU 2023**
- **Best Research Work ITMO 2023**
- **International collaboration:**  
Germany, Korea, United States
- **Research Papers Published (10+)**
- **Software Copyright Secured (2+)**



# The Team & Our Competencies



**Oman Abyshev**

Project Manager  
**PhD ICPS, MBA**  
Sales & Management



**Anar Zaripova**

Scientific Supervisor  
**Dr.Chem.Sc, Professor**  
KNU n.a. J. Balasagyn



**Marat Abyshev**

Software Engineer  
**M.Sc Artificial Intelligence & Machine Learning**



**Anar Zaripova**

Scientific Supervisor  
**Dr.Chem.Sc, Professor**  
KNU n.a. J. Balasagyn



**Ormon Abyshev**

Hardware Engineer  
**B.Eng BioEngineering**  
CAD | CAE | CAM



**Anar Zaripova**

Scientific Supervisor  
**Dr.Chem.Sc, Professor**  
KNU n.a. J. Balasagyn

**Useen Omuraliev**

Scientific Supervisor  
PhD, Professor  
KSTU n.a. I.Razzakov

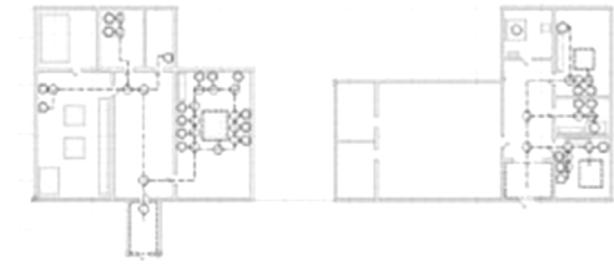
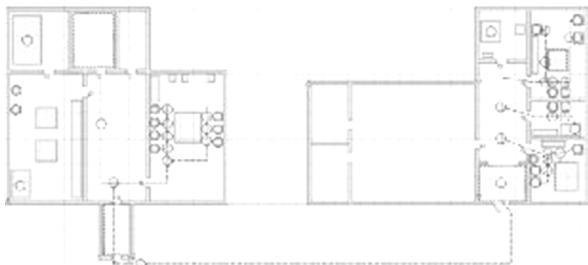
**Vyacheslav Potekhin**

Scientific Supervisor  
PhD, Associate professor  
Peter the Great St.Petersburg  
Polytechnic University

# Real Impact



**Task:** Select the best design alternative for the discrete factory.  
There are 3 design alternative and 3 Production scenarios

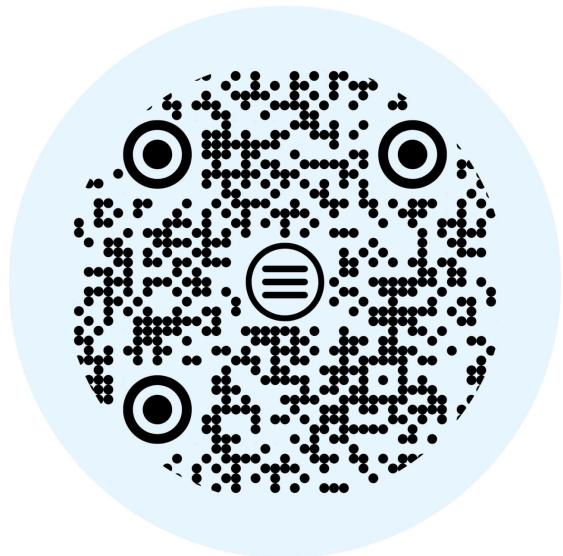


## Results:

With **Factory Builder AI**, FabLab Bishkek gained:

- up to **+40% productivity increase** 
- up to **25% faster decision-making & time-to-market** 
- **Scenario Flexibility & Failure Forecasting** 

We help enterprises  
move from **legacy automation**  
**to AI-driven Industry 4.0 world!**



**Oman Abyshev**  
[oman.abyshev@gmail.com](mailto:oman.abyshev@gmail.com)

