



NEXT GENERATION DATA INCUBATOR

# Unlocking Small and Medium Farms Financing at Scale: AI for Automatic Loan Approvals

Reach Incubator Track 3

Data Provider: OTP Bank



# Agricultural production faces rapidly increasing pressure

## Feed Growing Population

The population is increasing.  
The arable land is decreasing.

## Cost & Regulatory Pressure

**Operational:** chemical use, climate, inefficient equipment.

**Financial:** crop prices and profits, increase in debt,  
**access to working capital and investments.**

## Changing Consumer Demand



Reducing food waste



Standardizing / Optimizing farming



Traceability and environmental

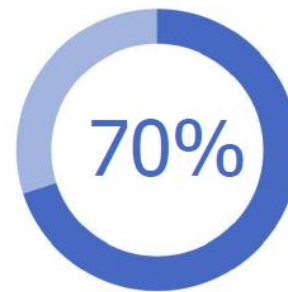


**Gap to finance the shift to sustainable agriculture!**

# Problem: small and medium farms lack access to finance

Key challenges for financial providers:

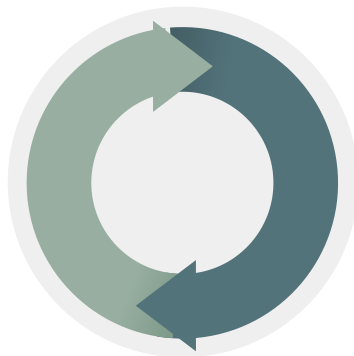
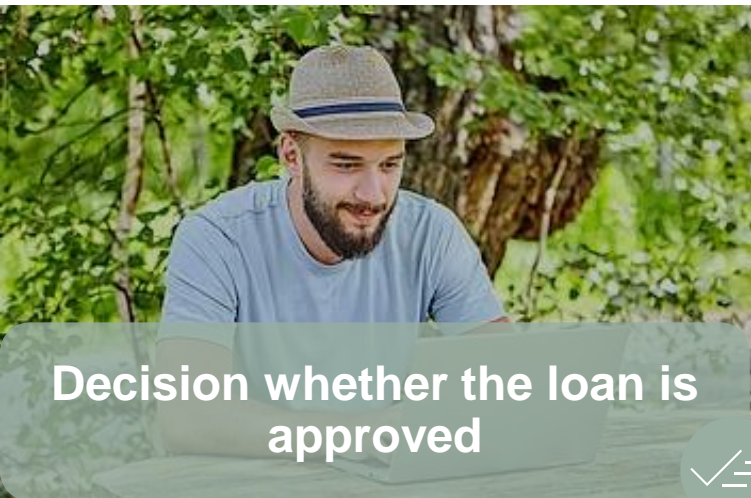
- **The cost** to manually process requests,
- **Lack of expertise** in agricultural loans,
- **Analyzing the risk** with limited data.



of global demand  
for smallholder  
farmer household  
**finance is unmet**

Source: The World Bank

# AI Automating Loan Approvals



List of credit products that clients are eligible for



## Benefits for farmers:

- Making loans accessible
- Finance to improve their productivity

## Benefits for banks:

- Unlocking loan approvals at scale
- Decreasing the risk in loan repayments

# Solution Highlights



## EXPANSION OF INPUT DATA

With geographical and satellite data



## AI & ML models

Random Forests, XGBoost, Deep NN, SVM, SHAPs ...



## SCALABILITY

For a very large number of requests.



## FLEXIBILITY

Adaptability to evolving business and regulatory needs.



Loan application data



Field performance data



Geo-agricultural data



# Business Model

**B2B SaaS** model.

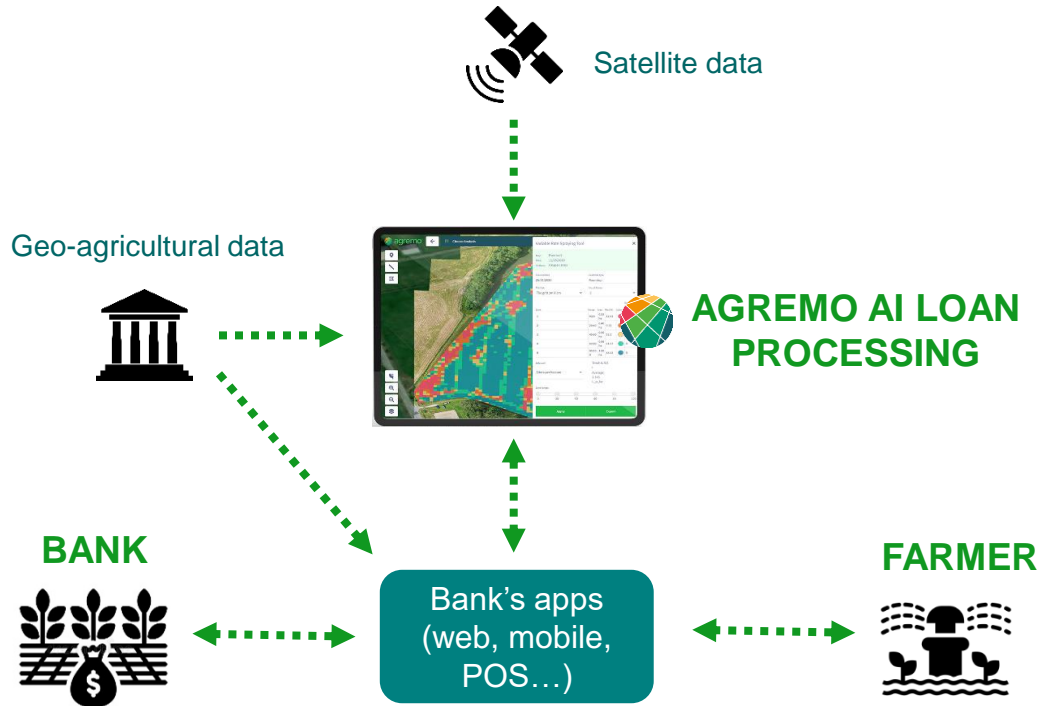
**Customers:** financial institutions.

**Pricing model:** TBD (subscription / per request / risk & revenue share, etc.)

**Sales channels:**

- Direct
- Indirect: consultancies working with financial institutions.

Start with the regional markets (Serbia and SEE) then expand.



# Market Size

## €410B demand for smallholder financing:

- **€12B:** approval fees (up to 3%) due to inefficiencies.

## €200B financing gap for smallholders:

- **€10B:** of lost profit (avg. margin of 5%).

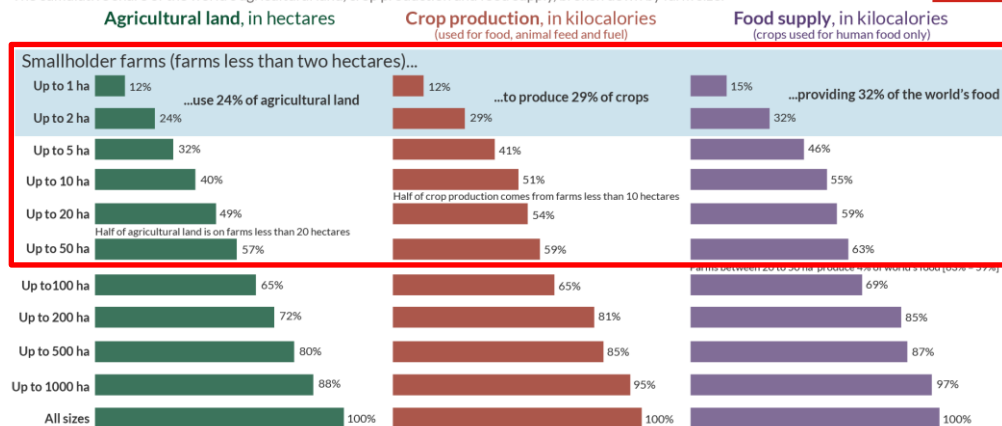
## €8B market size for the technology

- **€6B** cost cutting in approval fees (1.5pp)
- **€2B** licensing from new sales (1%)

## Smallholder farms produce one-third of the world's food

The cumulative share of the world's agricultural land, crop production and food supply, broken down by farm size.

Our World  
in Data



Source: Vincent Ricciardi et al. (2018). How much of the world's food do smallholders produce? Global Food Security. OurWorldinData.org – Research and data to make progress against the world's largest problems.

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## 1.1B ha: world crop area

Source: FAO-UN

## 560M farms, 57% of cropland: farms up to 50 ha

Source: FAO-UN, Our World in Data

# About Agremo

Agremo is a world's leading AI-based software for crop monitoring and auditing.

- **6 years** in business
- **35 employees**
- **€1M revenue** reached in 2023 (**2x growth YoY**)
  - Europe 43%, USA 34%, Australia 19%, Other 4%
- **65 enterprise customers**





# Core project team

## Entrepreneurship



**Dr. Milan Dobrota, CEO**  
22 years in software industry including 15 years in executive management and **12 years as entrepreneur**; Ph.D. in Data Science for Remote Sensing



**Jan Kobler, Strategy Adviser \***  
Managing Partner, SC Ventures; Lead strategy adviser and board member.

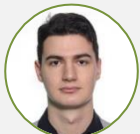
## Business Domain



**Rastko Carapic, Head of Services & BizDev**  
16 years in managing teams; 10 years in product placement, precision agriculture, remote sensing, and software projects



**Dejan Mirc, Head of Agro Business, OTP**  
20 years in banking industry, managing retail and corporate sale departments; 5 years in leading bank's agro business.



**Nemanja Oparnica, Prec. Ag Services Lead**  
6 years in implementing and managing precision agriculture practices, teams and services in complex environments.



**Jelena Senicic, Agro Business Specialist, OTP Bank**  
21 years in supporting and managing customer-related process in large scale banking institutions.

## Technology



**Nebojsa Pavicic, CTO**  
16 years in complex software engineering on large-scale international projects; 10 years in managing teams and technology processes



**Dr. Marina Ignjatovic, Data Scientist**  
15 years in researching and lecturing data science at the university; Numerous scientific publications and commercial projects.



**Luan Casagrande, CV & ML Lead Engineer**  
10 years in researching and engineering CV & ML technologies for precision agriculture.



**Dr. Nemanja Petrovic, Technology Adviser \***  
20 years in starting up and scaling teams and complex systems of high practical value. Technical Director of ML at Roblox; led YouTube's engineering. Ph.D. in Machine Learning

## Marketing & Sales

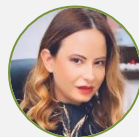


**Nevena Vracar, Head of Marketing**  
12 years in managing large-scale marketing, strategy and biz dev in agro-services.

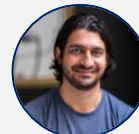


**Luka Zivkovic, Head of Sales**  
6 years in developing sales in Agremo, setting sales process, managing team and accounts.

## Finance



**Bojana Subotic, CFO**  
10 years in executive finance management and leadership, finance planning, analysis and controlling.



**Amer Fatayer, International Growth \***  
18 years lean-six-sigma, commercial acceleration, M&A and VC. Managed or supported transactions exceeding USD 2bn

Other team members from Agremo include Agronomy specialists, Data Scientists, Software Engineers, Marketing, Sales, Customer Service, and Operations.

\* Advisor (external)



# Thank you!

Dr. Milan Dobrota | CEO  
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