LEMKI

ROBOTIX

PROJECT PRESENTATION

2022

CONSTRUCTION COMPANIES HAVE A NUMBER OF PROBLEMS:

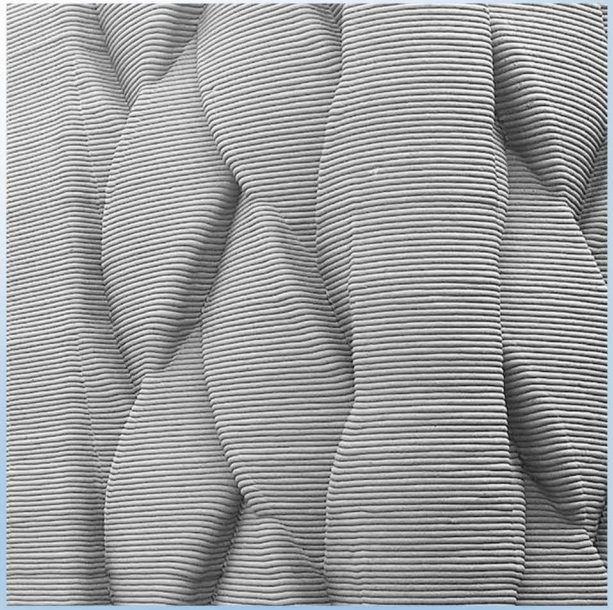
1. Staff shortages and security at construction sites.

2. Low speed and flexibility of construction.

3. Low speed and flexibility of construction.

3D CONCRETE PRINTING IS THE THIRD CONSTRUCTION REVOLUTION!

- Only 3 workers are needed to build a whole house.
- 3D printers do not need to sleep, eat - they work until the end of the project.
- Reduces two-week work to 3-4 days.
- Saving the amount of concrete, and therefore less waste and less impact on the environment.
- No formwork is required, which costs 35-54% of the cost of the structure itself.



OUR SOLUTION:

- the extruder is used for controlled mixing and dosing of concrete
- 3D extruder is 30% cheaper than analogues
- software available on a regular PC
- the mixture, based on research, the optimal combination of concrete with thickeners and stabilizers

TECHNOLOGIES:

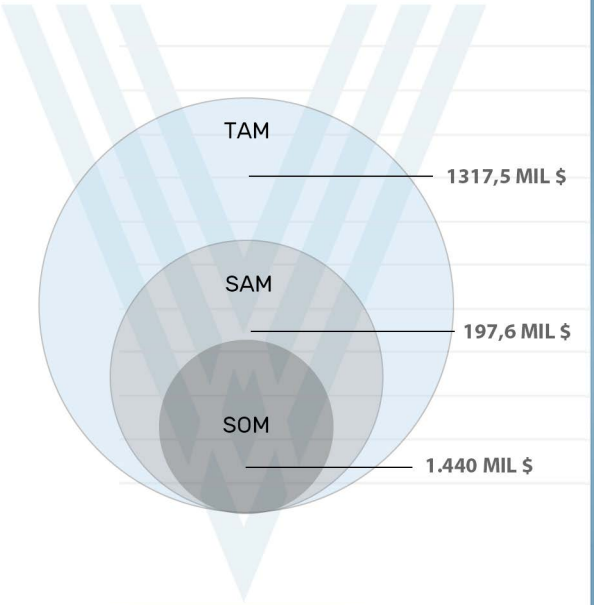
- A prototype of a unique robotic extruder has been developed
- Precision synchronization of software with hardware has been worked out
- An innovative approach to reducing the amount of concrete in the product without changing its physical and mechanical properties
- The technology is implemented and tested in production
- Robotics for production we use the robot workstation to control the extruder
- Additive production technologies
- Modeling and reproduction

COMPETITORS AND ALTERNATIVES

Name	Lemki robotics	Apis Cor	Cobod International A/S	CyBe Construction	D-shape	Sika AG	Skanska	Yingchuang Building Technique
Region	Ukraine	Florida USA	Denmark	Netherlands	New York USA	Switzerland	United Kingdom	China Shanghai USA Florida
Specialization	construction and design	construction	construction	construction	construction	design	construction	construction
Mixture	+	+	-	+	-	+	+	CMS, SRC,GRS
Dimensions / weight	3,5*4 printing area	2900 pounds	2,5 м one module	7*8м	6*6 м	5 м	5-10 м	3*4 module
Cost in euro	180 000	320 000	340 000	295 000		330 000		360 000

MARKET ANALYSIS

MARKET SIZE



Calculation: number of manufacturers * worth $ 180 thousand (our 3D printer + software)
* Base year for evaluation 2020

TRENDS

The global size of the 3D concrete printing market in 2019 was $ 310.9 million and is expected to reach $ 40,652.4 million by 2027, CAGR 106.5% from 2020 to 2027

The Asia-Pacific region will grow the most, currently occupying 50% of the market (especially the Middle East, China), followed by North America 20% and Europe 15%

Source
https://www.alliedmarket-research.com/concrete-market/amp
https://www.alliedmarket-research.com/3d-concrete-printing-market/amp

DEVELOPMENT PLAN WITH BWI

Today we are testing technologies in production at the level of TRL 7, and at the end of the project we plan to have TRL 9

- Completion of algorithms and digitization systems.
- Completion of automation algorithms and equipment engineering.
- Purchase of necessary spare parts and com-

3 MONTH

- Installation of equipment.
- Testing in the production process.
- Analysis and correction of weaknesses

3 MONTH

- Consultations and involvement of experts for verification.
- Adjustment and validation of system integrity.

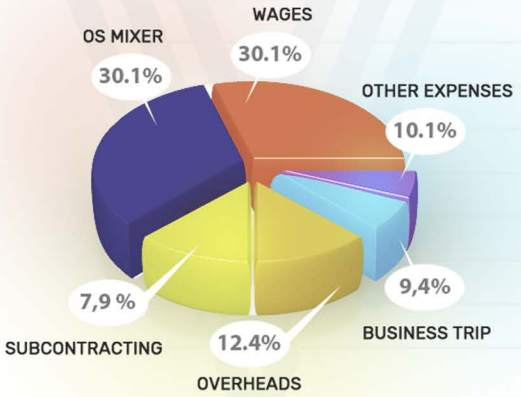
2 MONTH

- Readiness validation.
- Preparing to run.
- Marketing campaign.
- Launch of an intellectual factory for 500 thousand packages per month.

2 MONTH

PROJECT BUDGET

COST FOR 10 MONTHS



COST FOR 10 MONTHS

60,000 euros are financed

Own costs 73,000 euros

The following services have been requested from PIAP:

connections with profile Associations, clusters;

examination and preparation for certification in EU countries.

The BOWI project offers excellent services for

launch at an early stage!

TEAM

HONOR VASIL
FOUNDER

HONOR OLGA
ECONOMIST

SURAVTSOV STANISLAV
CNC ENGINEER

PATSKAN OLEXANDER
3D DESIGNER

ГАЗА ІВАН
SPECIALIST
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THANK YOU