



TAKING TO THE SKIES WE INNOVATE TO
NEW HEIGHTS

OUR VIDEO

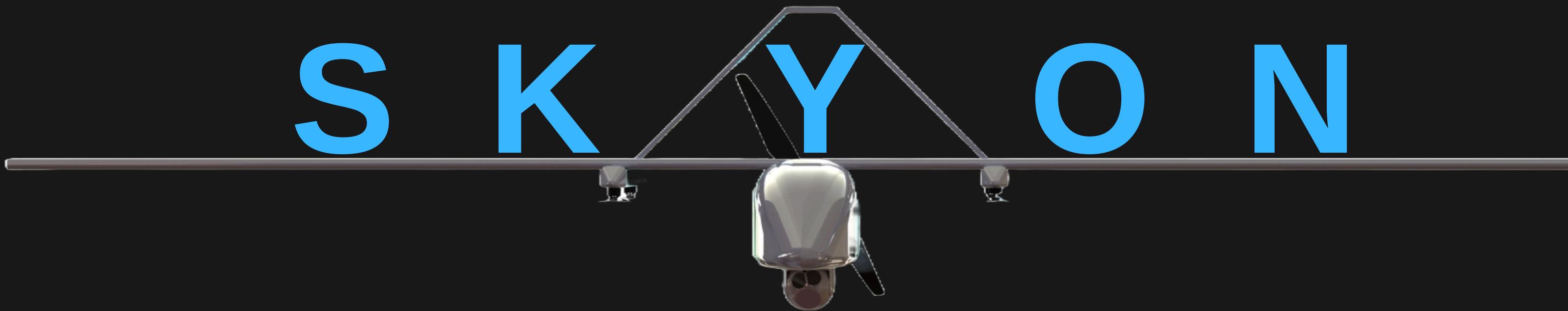
[HTTPS://WWW.YOUTUBE.COM/CHANNEL/UCFI2NWFK3T6A2WGI1YKYOWA](https://www.youtube.com/channel/UCFI2NWFK3T6A2WGI1YKYOWA)

Attention! All the 3D models and illustrations presented in this presentation were created manually by our team. We appreciate your recognition of our work. Thank you for your attention and

ΔRA



PROJECT SKYON



Agrotech autonomous drone for GIS research

The main problems of the Kazakh agricultural sector

FLUDS



DESERTATION



- CROP DESTRUCTION AND REDUCED YIELDS
- THE INCREASED SPREAD OF PESTS AND DISEASES
- IS TAKING AWAY PEOPLE'S LIVES

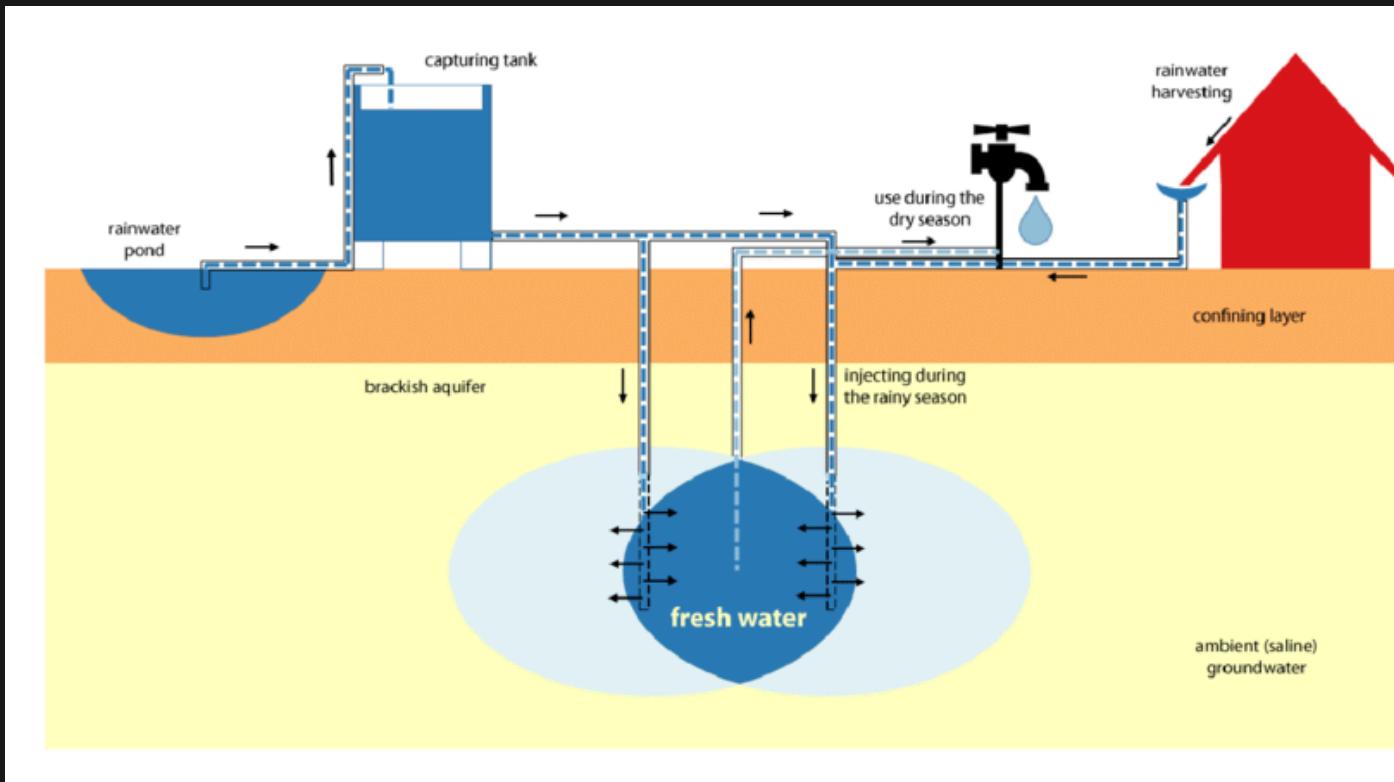
- REDUCTION OF YIELDS OR COMPLETE LOSS OF CROPS.
- INCREASED STRESS AND DEATHS AMONG ANIMALS

The problem of flooding only this year has led to:

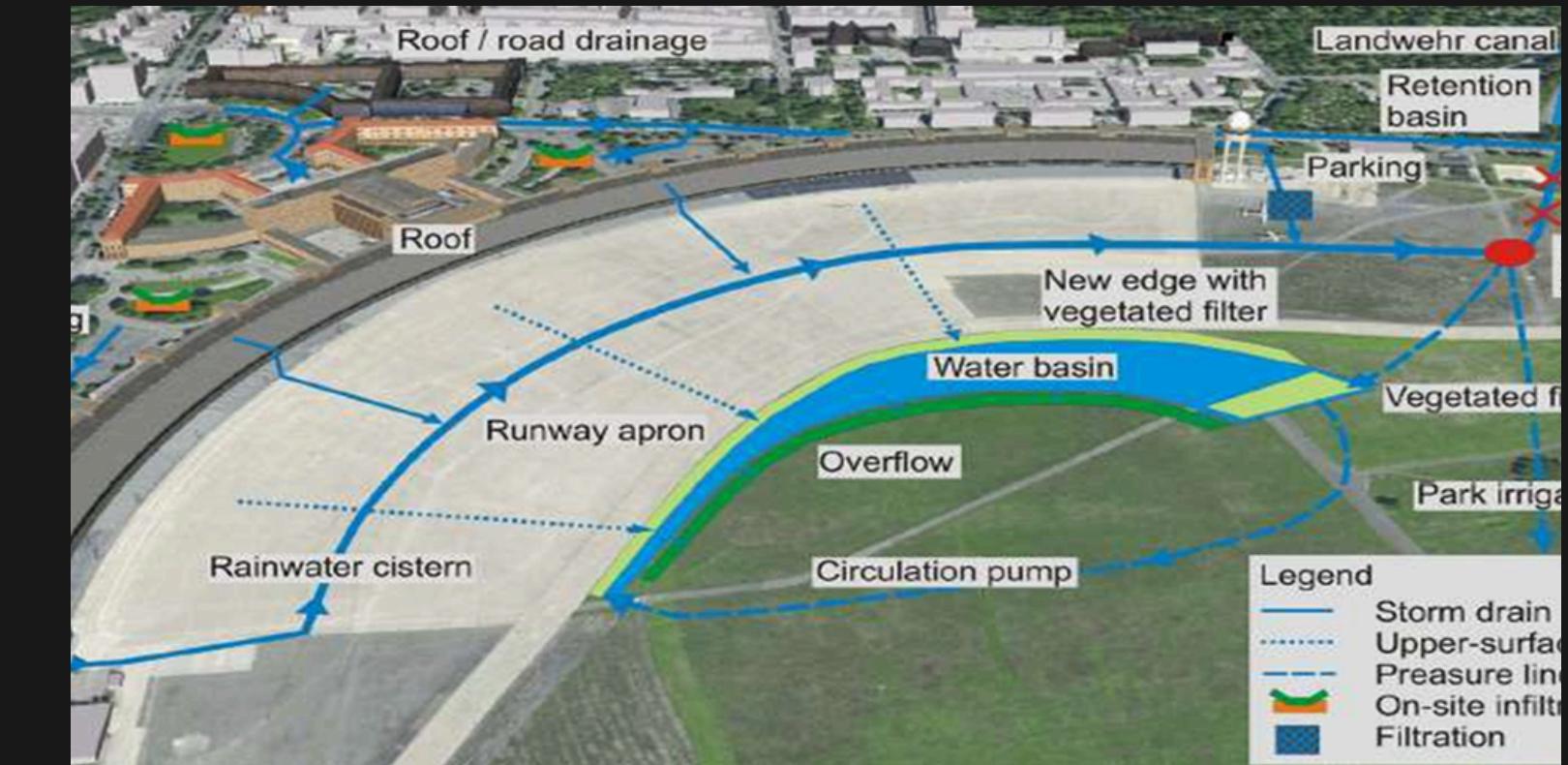
- DISPLACEMENT OF MORE THAN 119,000 PEOPLE, INCLUDING 44,000 CHILDREN
 - FLOODING OF 26,000 HECTARES OF AGRICULTURAL LAND
 - DAMAGE AMOUNTING TO MORE THAN 300 BILLION TENGE
- 

Experience of dealing with this problem abroad:

“MANAGED AQUIFER REPLENISHMENT”



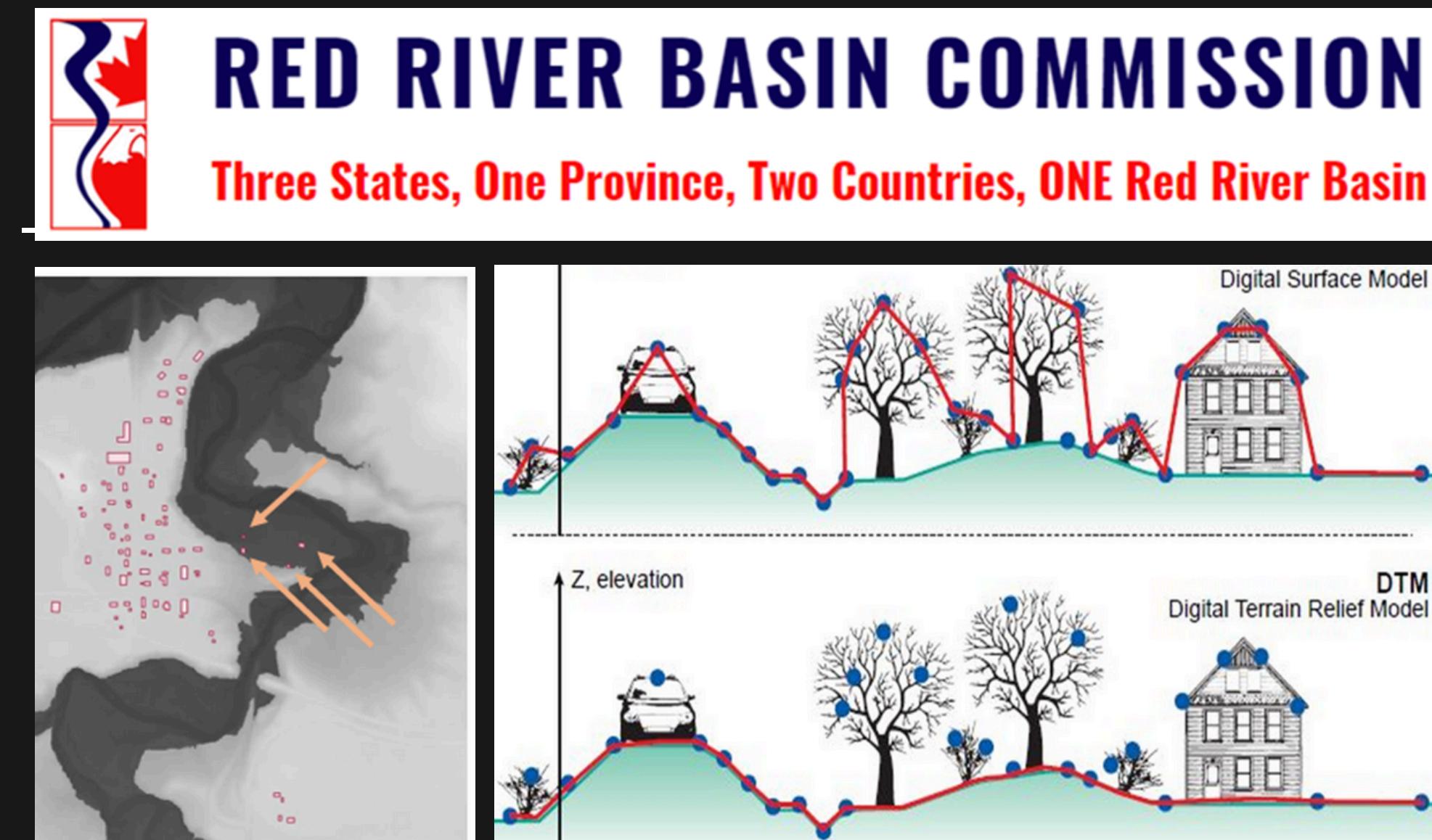
“SNOW RETENTION IN LOWLANDS”



SINCE THE WEST HAS SOLVED THIS PROBLEM, WHY IS IT NOT BEING IMPLEMENTED IN KAZAKHSTAN?

PEOPLE CANNOT MASTER THESE METHODS FOR SEVERAL REASONS:

1. THEY ARE DIFFICULT TO LEARN
YOU NEED TO RETRAIN ON GIS
2. LACK OF HIGH-QUALITY
DTM MAPS
3. IT IS DIFFICULT FOR RURAL
RESIDENTS TO MASTER DIGITAL
TECHNOLOGIES.



OUR SOLUTION: SKYON

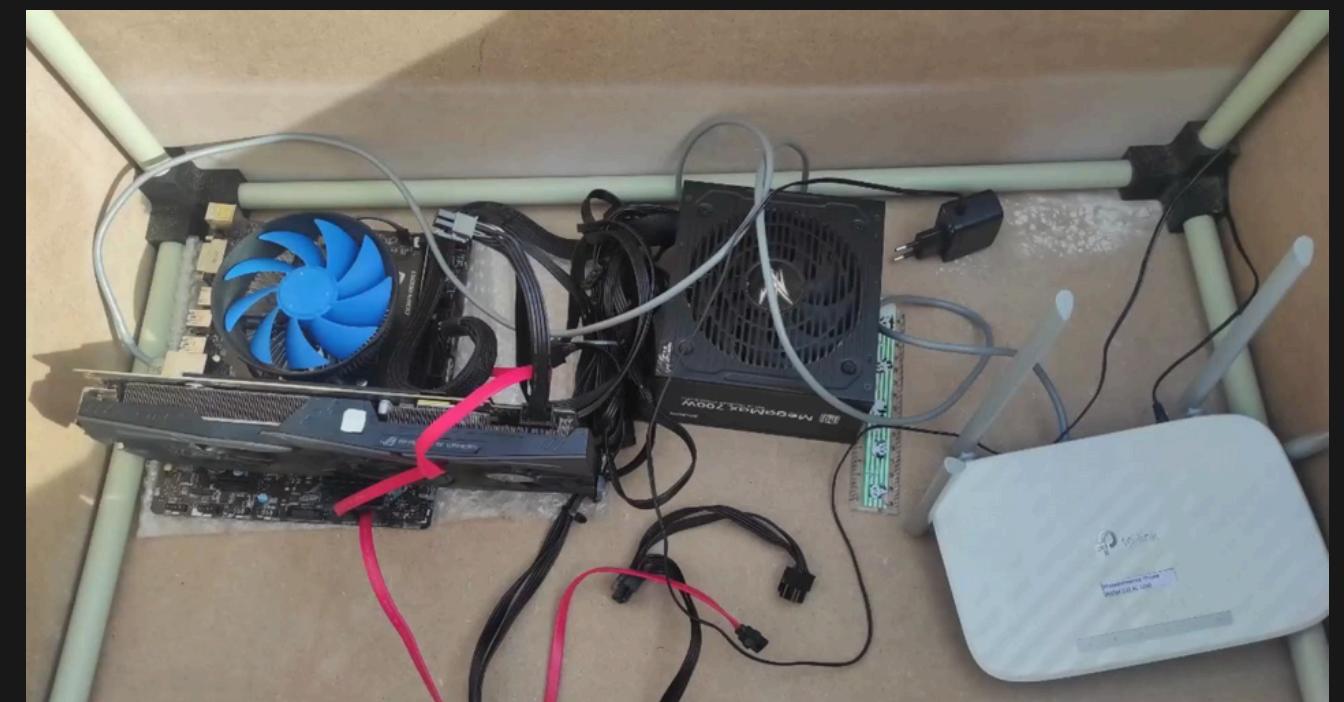
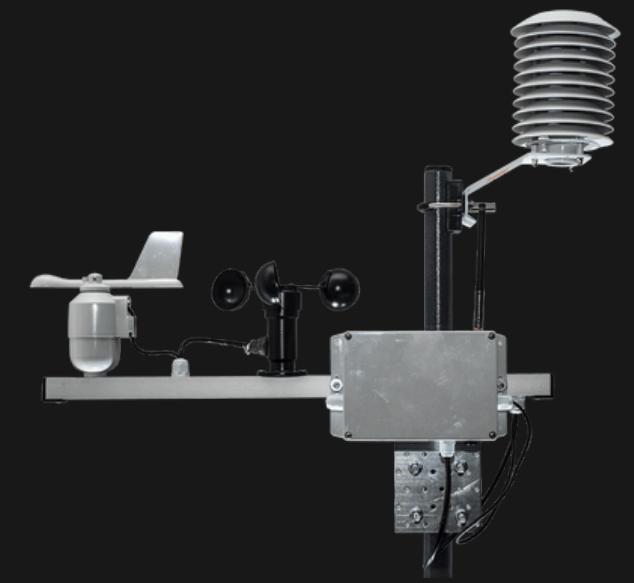
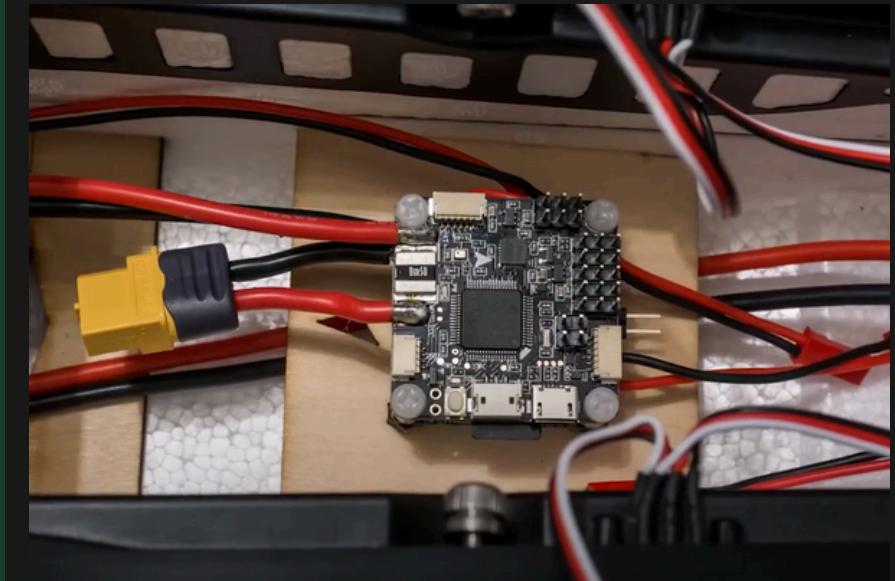
- WE OFFER AN INNOVATIVE SYSTEM CONSISTING OF BASE STATIONS, DRONES AND SENSORS. THE AIM OF WHICH IS TO MAKE GIS RESEARCH ACCESSIBLE USING ARTIFICIAL INTELLIGENCE. SKYON IS DESIGNED IN SUCH A WAY THAT USERS DO NOT NEED TO HAVE IN-DEPTH KNOWLEDGE OF GIS AND UNMANNED TECHNOLOGIES. OUR INTELLIGENT SYSTEM PROCESSES DRONE DATA ITSELF AND GENERATES UNDERSTANDABLE REPORTS AND MAPS.





SKYON CONFIGURATION:

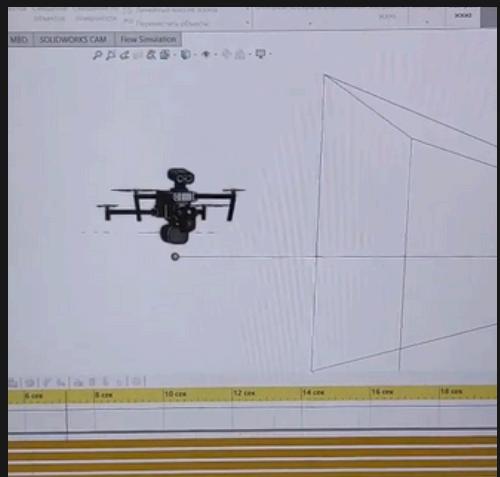
- QUADCOPTER DRONE; WE ARE DEVELOPING AN AIRPLANE-TYPE VTOL
- CAD MODEL - SOLIDWORKS
- MODULAR EXTENSION SYSTEM
- A BASE STATION FOR AUTOMATIC CHARGING AND DATA TRANSFER FROM THE THRONE SENSORS
- A CLOUD THAT AUTOMATICALLY PROCESSES ALL RECEIVED INFORMATION
- AN AI THAT WILL RUN IN THE CLOUD USING MACHINE LEARNING ALGORITHMS



OPERATING PRINCIPLE

1

GETS THE FLIGHT PLAN
AND THE TYPE OF STUDY



4

RESULTS AND RECOMMENDATIONS
ARE PROVIDED.

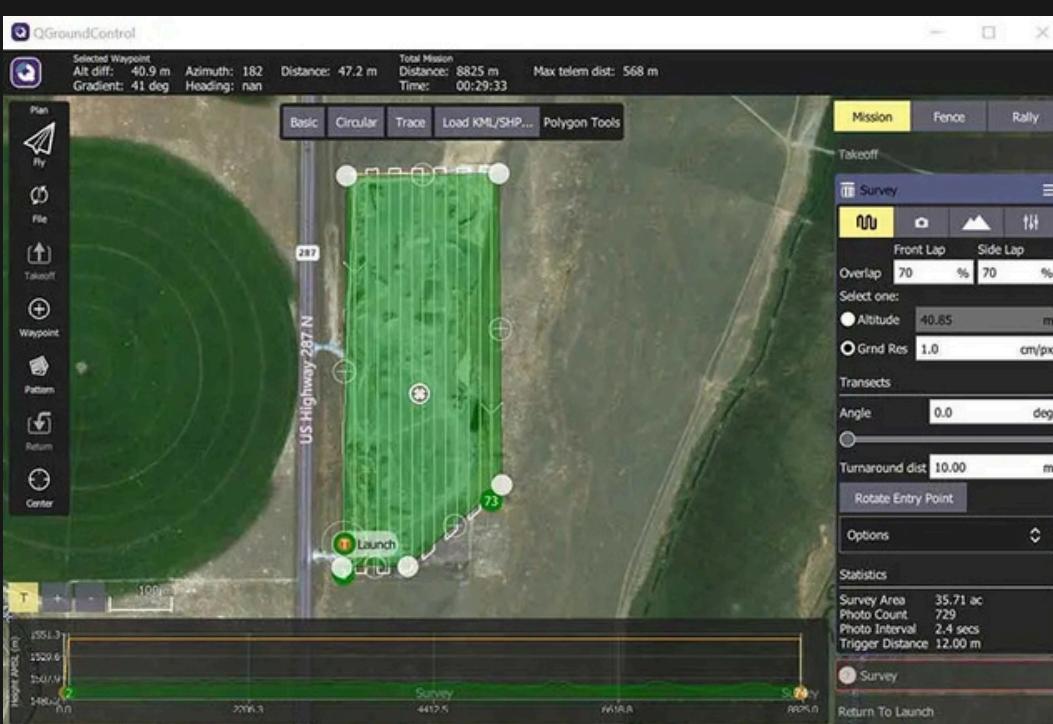
2

EXECUTES THE FLIGHT
PLAN



3

SENSOR DATA IS BEING
PROCESSED BY AI

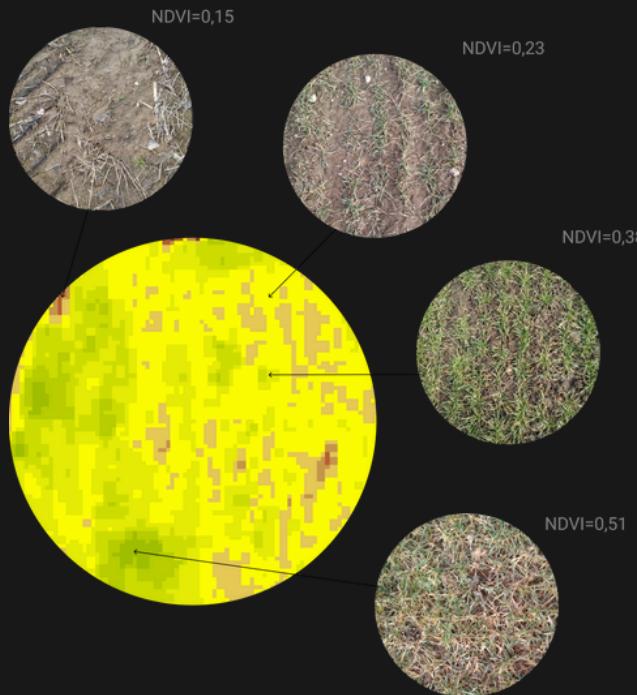


APPLICATION SCENARIO

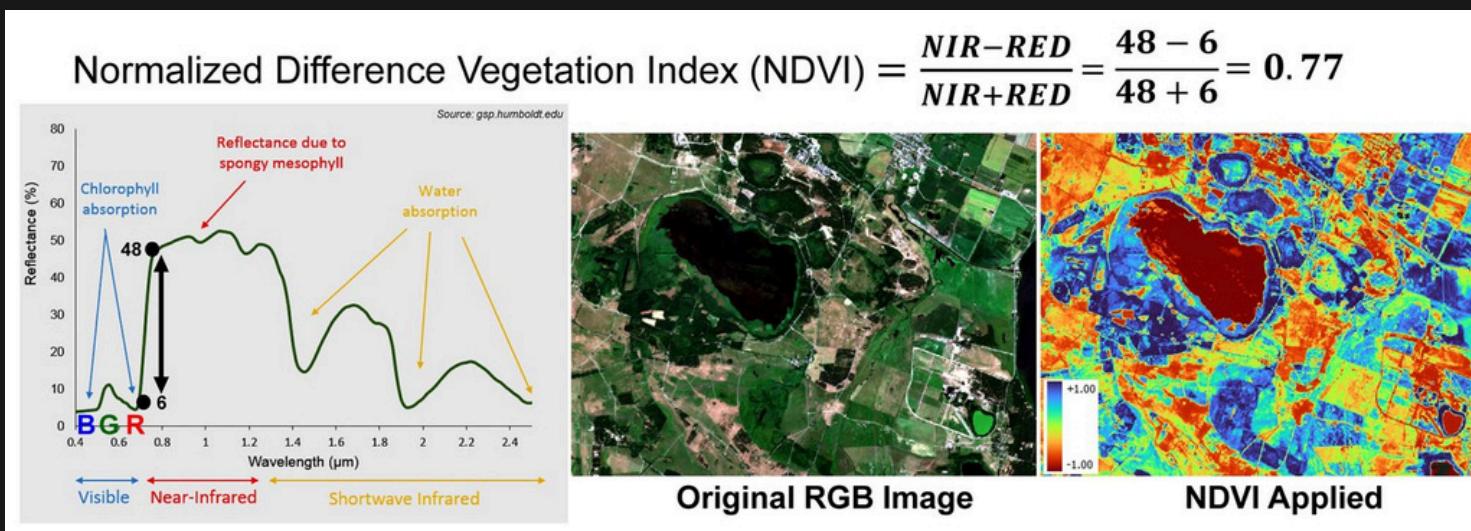
HOW IT WILL BE USED:



FLOOD MODELING

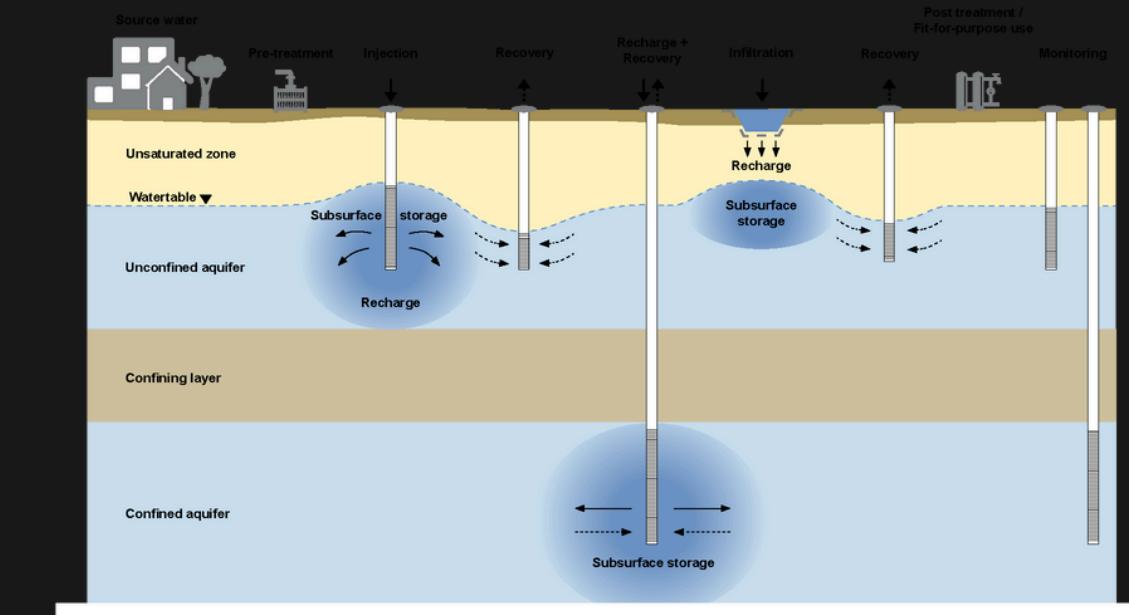


NDVI MAPS



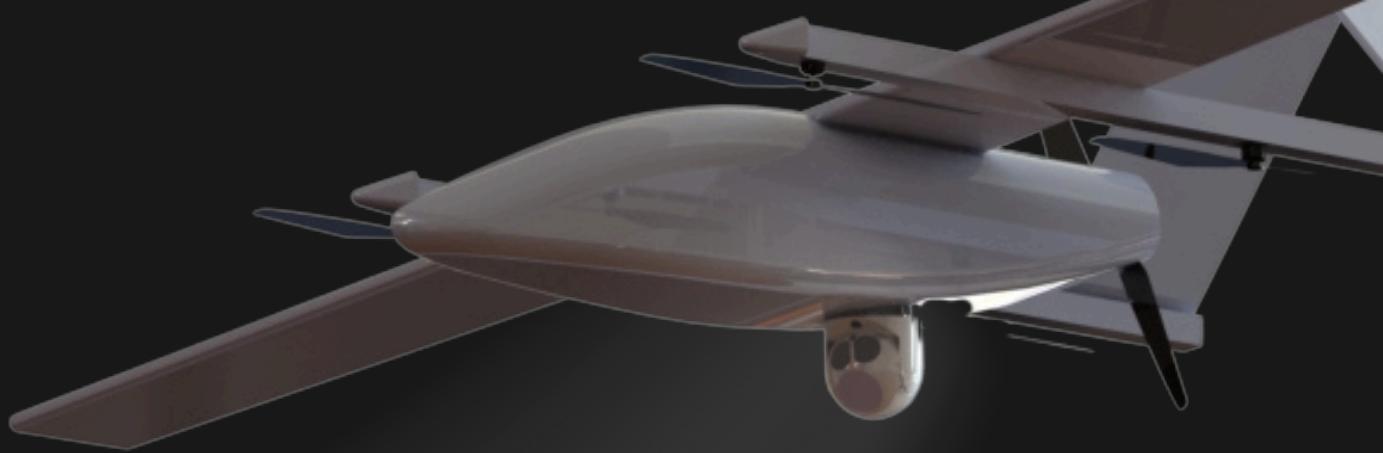
PRECISION FARMING

Schematic examples of Managed Aquifer Recharge



MANAGED AQUIFER RECHARGE

APPLICATION EXAMPLE



PRECISION FARMING USING TRACTORS WITH GPS WILL ALLOW YOU TO INCREASE THE EFFICIENCY OF YOUR FIELDS AND WASTE LESS FERTILIZERS AND PESTICIDES.

IT WILL ALLOW YOU TO SAVE WATER FOR THE SUMMER, WHICH CAN SAVE YOU FROM LOSING THE ENTIRE CROP, AS IN THE DROUGHT OF 2023, WHEN 170 THOUSAND HECTARES OF FIELDS WERE DESTROYED.

THUS, IF A FARMER RECEIVES NDVI CARDS REGULARLY (ONCE A WEEK OR AT LEAST ONCE A MONTH) AND MAKES DECISIONS ON FERTILIZERS, HERBICIDES, INSECTICIDES AND IRRIGATION BASED ON THEM, HE WILL BE ABLE TO SIGNIFICANTLY REDUCE COSTS AND AT THE SAME TIME INCREASE YIELDS.

BUSINESS MODEL

Expected annual revenue:

\$49.000.000

Cost price : 2,500,000 tenge

**Price : from 4,000,000 tenge
subscribed(month) : 50,000
tenge**

Maintenance: from 80,000 tenge

Partners: not yet

**Benefit to us : Investments and
cooperation**

Benefit to the partner (users):

- Saves finances on herbicides and fertilizers by 6x (in one bypass of the entire field)**
 - Does not lose your harvest during disasters**
 - Find pests in advance**
 - Saves resources on watering**

economy up to 51%

BUSINESS MODEL

B 2 B

Medium-sized small businesses in: agriculture, cattle breeding, businesses with a risk of flooding, and so on

B 2 C

Private farmers and owners of farms with large fields

B 2 G

Government organizations responsible for agricultural development and land management.

Ministry of Agriculture and Ecology



COMPARISON WITH ANALOGUES



- **Availability.** 8000\$ and 100\$ per month
- **Made in Kazakhstan**
- **Versatility**
- **Easy to use**
- **Autonomy**
- **It does not require a high level of knowledge in GIS**
- **It does not require a high level of knowledge in drones**
- **Fast interaction**
- **The ability to integrate with other technologies**

Research services



- **It's cheap**
- **Pay for every square kilometer scanned**

- **The disadvantages are that the market for such services is not developed in Kazakhstan.**
- **It requires a lot of knowledge in GIS to analyze the material**

Remote sensing of the Earth



- **Large volumes of filming**
- **Access to hard-to-reach areas**

- **Depends on the weather**
- **It is impossible to spend often**
- **Poor accuracy**
- **Huge cost**

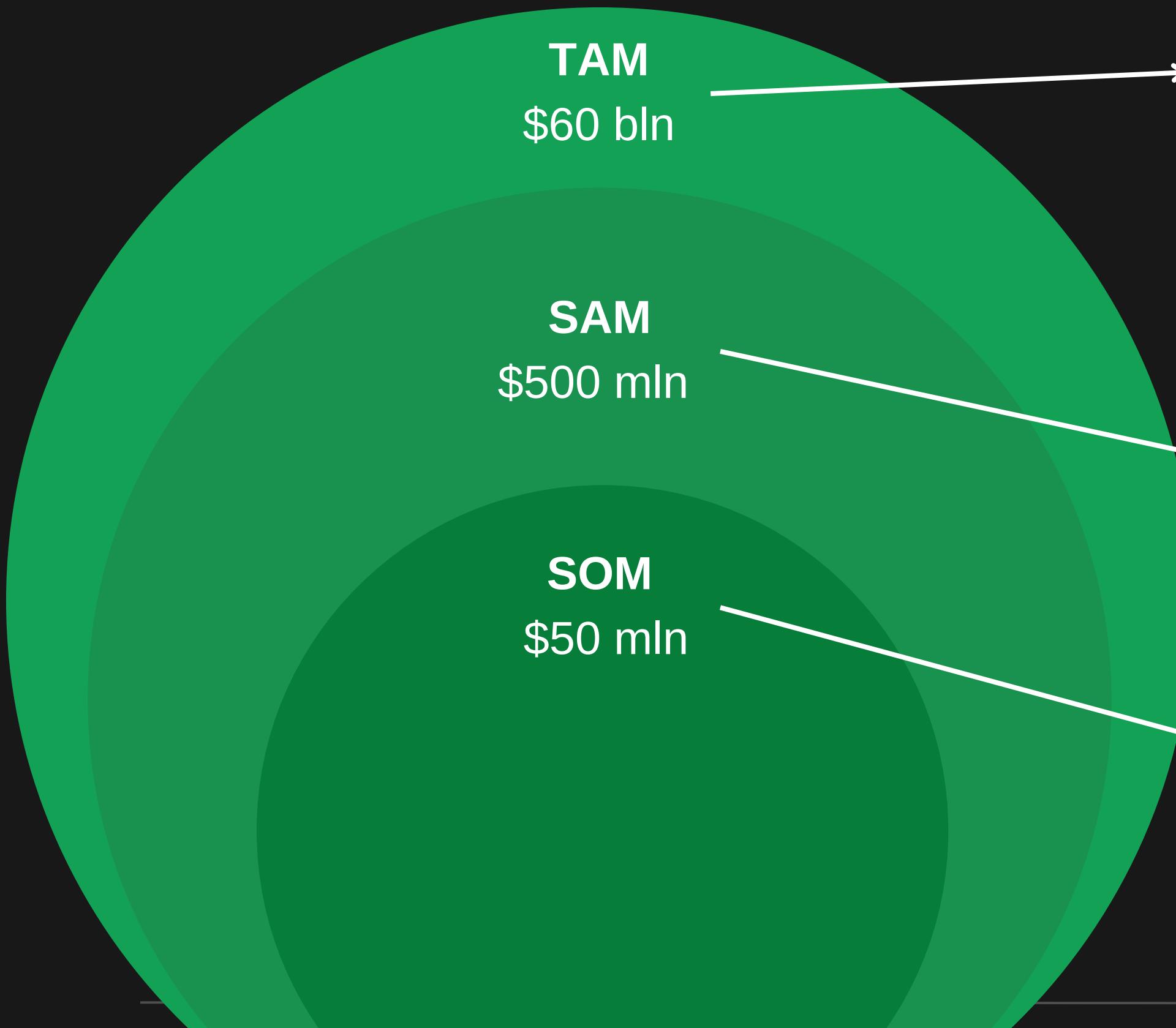
Do the research yourself



- **Universal**
- **The cost is about the same as that of our drones**
- **Always at hand**

- **It requires much knowledge in GIS to analyze the material**
- **Small area coverage**
- **Requires knowledge of the use of quadrocopters**

MARKET ANALYSIS



THE TOTAL ADDRESSABLE MARKET (TAM) IS ESTIMATED AT \$60 BILLION PER YEAR, DRIVEN BY ADVANCES IN DRONES AND SPATIAL ANALYSIS IN AGRICULTURE, EMERGENCY RESPONSE, AND ECOTOURISM.

THE SERVICEABLE ADDRESSABLE MARKET (SAM) IS VALUED AT \$500 MILLION PER YEAR, AND FOCUSES ON PRECISION FARMING, FLOOD RESPONSE, AND NATIONAL PARK CONSERVATION, WHERE DRONE ADOPTION IS STEADILY INCREASING.

SERVICEABLE AFFORDABLE MARKET (COM) - 50 MILLION CREATES A SOLID FOUNDATION FOR WIDER ADOPTION IN OTHER SECTORS.



UNIQUENESS

YOU CAN SHARE SKYON DATA.

DECISION-MAKING IN GOVERNMENT

GOVERNMENTS CAN USE GIS MAPS FROM DRONES TO MAKE INFORMED DECISIONS ABOUT SUBSIDIES, CROP INSURANCE, AND RESOURCE ALLOCATION.

INNOVATIVE OPPORTUNITIES

DEVELOPERS CAN USE OPEN GIS DRONE DATA TO CREATE MOBILE APPLICATIONS AND TOOLS FOR FARMERS.

SUPPORT FOR AGRICULTURAL RESEARCH

SOIL HEALTH RESEARCH. RESEARCHERS CAN ANALYZE SOIL TYPES, MOISTURE LEVELS, AND PATTERNS OF EROSION USING GENERAL GIS MAPS.

TRACTION

- CREATING TECHNOLOGIES BASED ON OUR EXISTING KORSO PROJECT
- WE WORKED OUT THE ENTIRE PROCESS OF SHOOTING ON DJI DRONES AND LANDING ON THE DOCK. STATION
- FOR GREATER EFFICIENCY, WE ARE CURRENTLY DEVELOPING AN AERIAL-TYPE DRONE WITH VERTICAL TAKEOFF AND LANDING.
- IN ORDER TO GAIN SUPPORT IN GIS, WE PARTICIPATE IN THE IMPLEMENTATION OF THE SCIENTIFIC WORK KUZ_MIN_SC_PCF_#_BR27197639 TOGETHER WITH REPRESENTATIVES OF KBTU AND WEST MICHIGAN UNIVERSITY

PROJECT KORSO



OUR TEAM



Aliyar
Geographic
information system

CIO



Aimer
Machine learning engineer
CEO, founder



Yerassyl
Mechanical engineer
CTO



Shyngys
Electrical engineer
CDO

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Email: aimerkoshmambetov@gmail.com

ЭКОНОМИЯ ДЕНЕГ

ПРЕДОТВРАЩЕНИЕ
СМЕРТЕЙ

ПОВЫШЕНИЕ
ЭКОНОМИКИ

ЗАБОТА ОБ
ЭКОЛОГИИ

ИННОВАЦИЯ

РАЗВИТИЕ АПК

АВТОНОМНОСТЬ



SKYON