DIGITALIZATION OF AGRICULTURE, EXPERIENCE, PROBLEMS, DATA PROCESSING

DIGITALISATION IN THE BIOECONOMY SESSION #3: SAFEGUARDING PROGRESS: CRITICAL EMPHASIS ON CYBER SECURITY AND DATA PROTECTION IN ADVANCING THE BIOECONOMY

ANETA ŁOBODZIŃSKA, DRONE SPACE VALLEY

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Owner of 2 drone related companies. Coorinator od drone pilot training center offering EU certificates and specialized courses. Author of many unmanned systems market analysis and official opinions. Unmanned Systems Cluster Coordinator. Member and coordinator of many R&D projects. Academic teacher at the Rzeszów University of Technology. EU Drone expert.

GRZEGORZ ŁOBODZIŃSKI

A manufacturer of specialized engineering solutions, including: drones, mobile robots, ground stations. Founder of 5 companies operating in the drone industry, both hardware and software production, services, training, events. Author of revolutionary tools for the analysis of agricultural and forest crops using drones. Manager of many R&D and implementation projects.

FOTOACC
warsztat produktowy

centrum usług dronowych

Drone Space √Valley

e-uprawy

Centrum Naukowo-Technologiczne Systemów Bezzałogowych

Klaster Systemów Bezzałogowych

Drone —container—

https://dronespacevalley.com

Digitization of agriculture potential

- CROP INSPECTION
- DOCUMENTATION OF DAMAGE
- FARM OPTIMIZATION
- ANALYSIS OF PLANT VIABILITY
- SPRAYING FIELDS
- MANAGEMENT DECISIONS
- YIELD PREDICTION
- ESTIMATING HUNTING DAMAGE
- ORTHOPHOTOMAP
- ANALYSIS OF MULTISPECTRAL IMAGES
- MONITORING THE OCCURRENCE OF PARASITES
- MODELING CULTIVATION GROWTH
- INVENTORY OF FOREST ANIMALS
- SEARCHING FOR FIRE SPOTS, DETECTING MICRO-FIRES
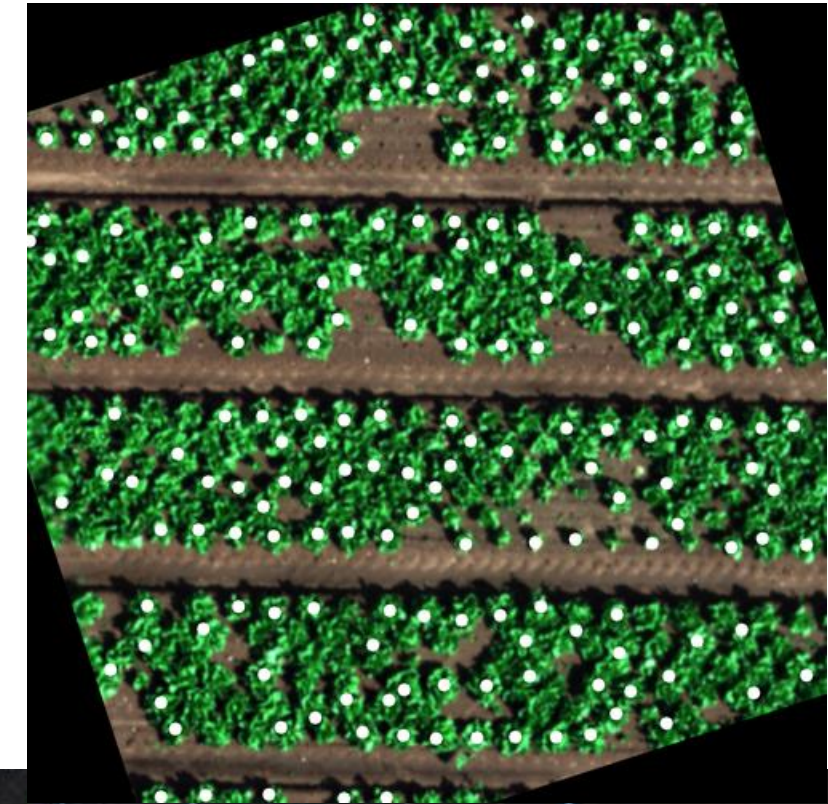- VACCINE DROP ON FOXES
- MANY OTHERS

Drones - new level of agriculture digitalization
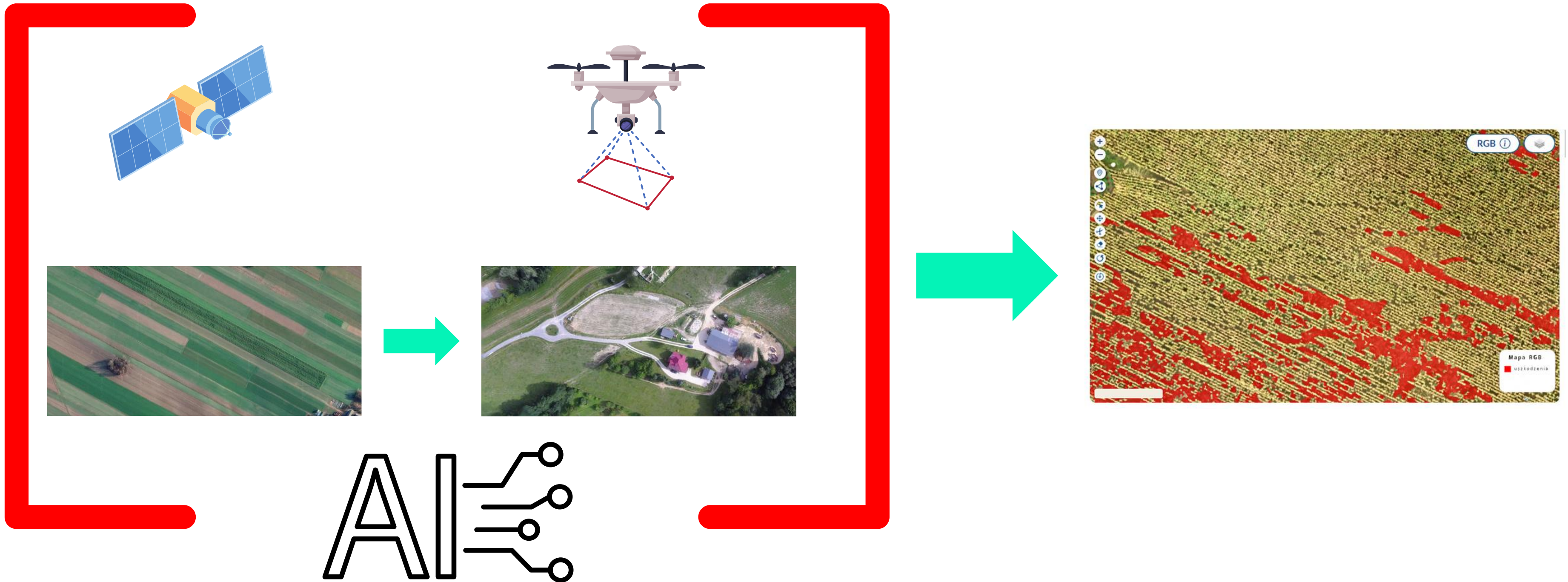
Drones in precision agriculture

The development of robotization in agriculture has recently accelerated strongly. It is thanks to robotics and artificial intelligence that many problems that the agricultural sector is facing today can be solved.

Next level of digitalization?

WHAT ARE THE PROBLEMS?

BIG DATA

**Drone regulations
RODO
Image protection
Geografical zones**

**Storage capacity
Data sharing security
Amount of processed data
Reliability of results**

How can we solve them?

- Using data encryption to protect information from unauthorized access.
- Implementation of user authentication and authorization mechanisms.
- Using data minimization techniques, such as anonymization or pseudonymization.
- Monitoring and auditing the operation of artificial intelligence-based systems.
- Implementation of privacy and data protection policies in accordance with applicable regulations, such as RODO.

discover the possibilities of precision agriculture

THANK YOU!

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