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Decision Support Tool Empowering Rural Communities

The Generative AI-Powered Agronomy Consultant Transforming Agriculture in Remote Areas

The Problem and the Opportunity: Digital. Interactive. Personal.

Climate change, workforce shortages, regulatory changes, and evolving market demands are putting farmers under immense pressure to adapt.

Agronomy consultants are a valuable but often scarce resource.

Digital farming solutions providing support are emerging but are often cumbersome to use and lack the personal touch that farmers value, hindering their adoption.

Farmers seek accessible, user-friendly tools that foster personalized and natural interaction akin to the personalized guidance they receive from agronomy consultants.





Done so far...



agroNET

a cloud-based platform that serves as an interoperability hub for farm operations, allowing comprehensive management and monitoring of farm assets and activities.



poultryNET

a farm management and decision support solution combining IoT and ML/AI technologies to enhance production efficiency and animal welfare, supports traceable and transparent food supply chains by leveraging edge and cloud computing with embedded agricultural expertise.



dRural

a digital platform designed to connect rural communities with essential services, resources, and markets, making it easier to access the information and support needed for sustainable development.



digitalfarming.eu a central platform that connects farmers, experts, and companies to share knowledge, resources, and innovative digital tools for advancing agriculture.



COMMECT DST

decision support tool that utilizes generative AI to provide advice to rural communities based on a curated knowledge base.



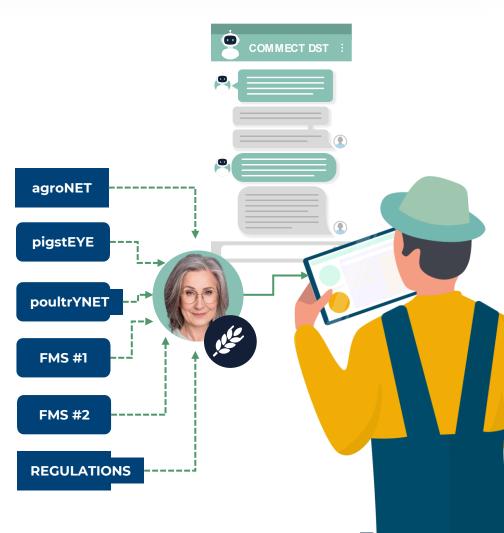
DST Vision: Multimodal, personalizable, digital farming advisor

Generative Al at the Core: used to enable conversation with farmers about the problems they are facing. Text, speech, image, video. Understand varied agricultural scenarios, provide highly personalized recommendations.

Seamless Integration with existing digital farming systems to collect necessary data for providing reliable recommendations tailored to each farmer's unique conditions.

Natural Conversation: call digital advisors by name, recognize their faces, have them in your address book on Viber and WhatsApp. Have engaging conversations with them. Ask questions, receive advices, ask for clarifications. Discuss the last night football match. Build trusted relationship.

Adaptive and Future-Ready: continuously learns and updates to keep pace with advancements in both AI and agriculture.



*FMS – farm management system



DST: Digital agronomy advisors. Expertise. Faces. Personalities.

Q: Please provide an update on the current condition of my vineyard based on the latest measurements from the devices installed?

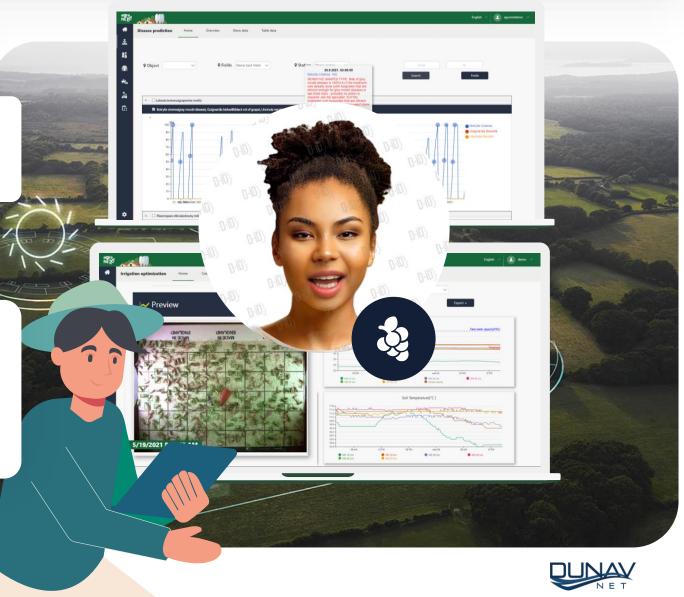


A: Hi Marko, how are you today? It's been very hot lately. This morning, it's already 30°C with 60% humidity and no breeze. I've noticed that the grape moth traps have caught 5 new moths. The soil moisture is good, so no need to irrigate.

Q: I noticed that leaves have developed red-brownish spots. What should I do?



A. I see you're concerned about the red-brownish spots on the leaves. It looks like your vines might be dealing with gray mold. I'd recommend applying a mix of preventive and locally systemic fungicides designed to tackle gray mold. Don't worry, This treatment should help save your grapes. Looking forward to catching up in a few days. Give my best to your family!





The Opportunity: Closing the Digital Gap in Agriculture

Market Opportunity:

The Digital Agriculture Market size is estimated at USD 20.01 billion in 2024, and is expected to reach USD 32.96 billion by 2029, growing at a CAGR of 10.5% during the forecast period (2024-2029) **Digital Agriculture Market - Size, Share & Growth** (mordorintelligence.com)

A significant gap exists for a solution that seamlessly integrates generative AI with digital farming systems to offer customized support.

As farmers seek more personalized and data-driven insights, the demand for AI-powered tools like DST is expected to grow substantially.



Next steps

- In COMMECT project: finalize implementation of DST MVP (text and audio-based interactions, avatars), curation of the initial knowledge base (agronomy, environment, digital communications), validation with selected stakeholders.
- **Beyond the project:** expand agricultural knowledge base to support various crops and agricultural operations, integrate with selected farm management systems, implement support for image and video-based interactions, ensure compliance with the AI Act, establish collaboration with relevant agriculture experts, create a robust business model, streamline and automate updates of the knowledge base, create robust, secure and reliable cloud infrastructure to provide the service.
- Position DST as the premier solution for AI-powered decision support in agriculture, setting a new industry standard







Join us in revolutionizing agriculture with AI

Invest in the Future of Farming:

Empower farmers with AI-driven, personalized recommendations that drive success and sustainability.

- Transform the agricultural landscape.
- Foster prosperity of rural communities.

We are looking to raise 1 mil. EUR to drive evolution of COMMECT DST towards a world-leading multimodal, personalizable digital advisor for agronomy and rural communities.

COMMECT DST

More info:

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The Impact: Driving Profitability and Sustainability through AI

AI-Enhanced Decisions:

Empower farmers to optimize their operations, boost yields, and improve profitability with data-driven, AI-generated insights.

Meeting Market Needs:

Address a critical gap in the market by providing a personalized, Alintegrated decision support tool that aligns with modern farming practices.

Sustainability through Innovation:

Support sustainable farming practices, helping farmers meet environmental regulations while enhancing their economic outcomes.

Leading the Digital Farming Revolution:

Position DST as the premier solution for AI-powered decision support in agriculture, setting a new industry standard.





