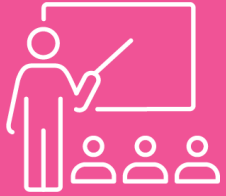


## Test and validation

Demo of 3D scanning technologies  
Status: Complete



Demonstratie op locaties  
3D-scantechnologieën

**Problem Owner:**  
Agro-innovatiecentrum de Marke

**Involved:**  
Trioliet, RIWO, Sieplo

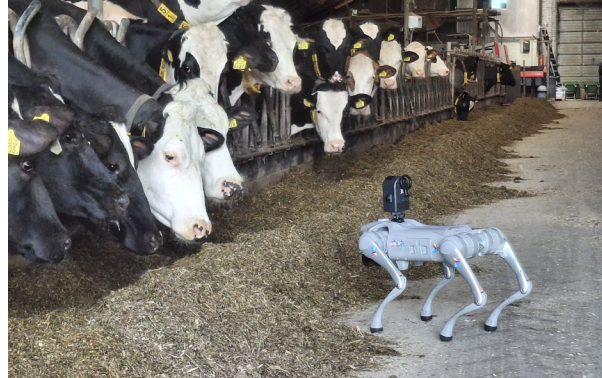
**More information?**  
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# Demo of 3D scanning technologies

During a demonstration at the Agro Innovation Centre De Marke, new LiDAR and 3D scanning technologies were showcased. The demo attracted participants from a range of sectors. The speed and accuracy of the scanning, along with the quality of the visualisations using Gaussian Splatting, were considered highly valuable.



## Brede kennisvraag

How can we rapidly, accurately and efficiently digitise physical agricultural environments so they can be directly used for applications such as digital twins, simulations and analysis?

## Approach

An on-site demonstration was carried out by Geocentrum using LiDAR and 3D scanning technologies, including the XGRIDS L2Pro, PortalCam and a mobile robotic dog, Splat. By scanning the yard and buildings on foot and complementing this with drone imagery, a complete point cloud was created. In addition, Gaussian Splatting was used to generate realistic 3D visualisations.

## Objective

To gain insight into the practical applicability, speed and quality of these technologies for digitising agricultural operations and supporting data-driven applications.

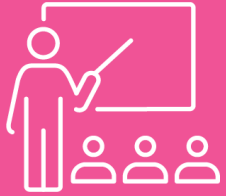
## Result and reflection

Within approximately 30 minutes, a detailed point cloud of the yard and barn was created, with an accuracy of around 2 cm. Combined with Gaussian Splatting, this enables the rapid generation of high-quality 3D models that can be used directly for a wide range of applications.

The demonstration shows that the threshold for creating digital representations has been significantly lowered. With relatively limited time investment, a valuable model can already be built. The technology offers clear opportunities and strong potential for practical use. The initial results are currently being further developed and will soon provide more insight into concrete application possibilities.

## Test and validation

Demo of 3D scanning technologies  
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**Problem Owner:**  
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**More information?**  
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## Leading Partners involved

**DE MARKE**  
AGRO-INNOVATIECENTRUM

[De marke](https://www.demarke.nl)

**SIEPLO**<sup>®</sup>

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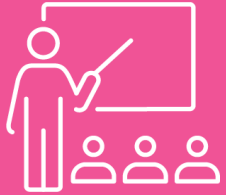
[Troliet.nl](https://www.trioliet.nl)

**RIWO**

[Riwo.eu](https://www.riwo.eu)

## Test and validation

Demo of 3D scanning technologies  
Status: Complete



**Demonstratie op locaties**  
3D-scantechnologieën

**Problem Owner:**  
Agro-innovatiecentrum de Marke

**Involved:**  
Trioliet, RIWO, Sieplo

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## Document information

Document title	Demo of 3D scanning technologies
Project title	NXTGEN Agrifood
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Document URL	<a href="https://doi.org/10.18174/712283">https://doi.org/10.18174/712283</a>
Project coordinator	Hennie van der Veen – Rusticus (WUR)
Work package	IP1 Open Field Cultivation
Work package lead	Natalie Hotrum
Funding organisation	Stichting Wageningen Research
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Keywords	demo, 3D scan, digitalisation

## Colophon

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