

SmartGrass

Digital twin based ecologically optimized
grassland harvesting

Duration: August 2022 – January 2025

Peter Riegler-Nurscher

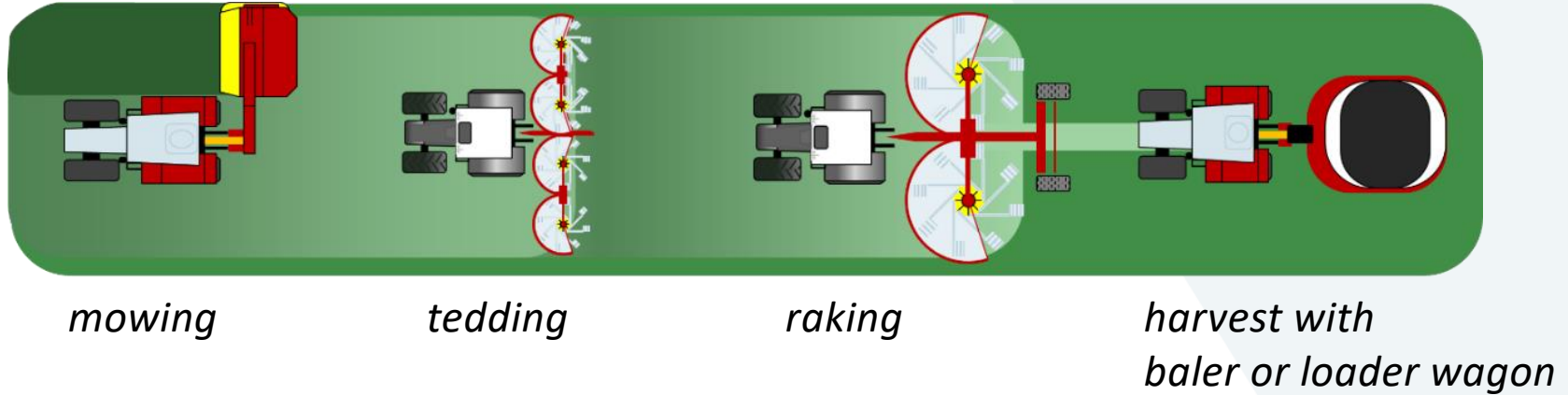
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Consortium:



FARMDOK

Grassland Harvesting

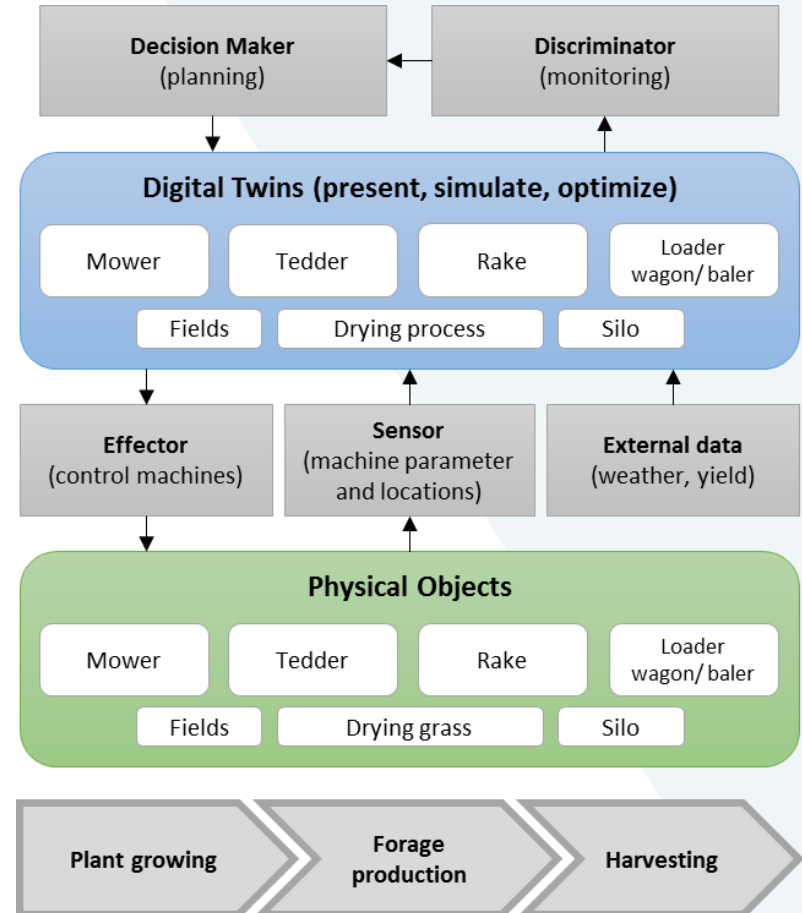


- Optimize the use of machinery to **reduce travelling distances** (→CO₂ reduction) and to **improve forage quality** (→CH₄ reduction and improved animal health)

Digital Twin of the harvesting process

- Grassland biomass estimation from satellite and weather data
- Forage drying model and influence of control variables
- Modelling the digital twin of the harvesting process and deriving control parameter

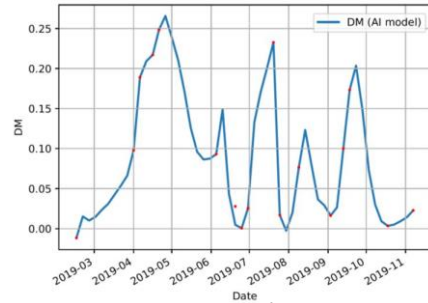
Eine Einrichtung mit eigener Rechtspersönlichkeit
an der HBLFA Francisco Josephinum



Current Status

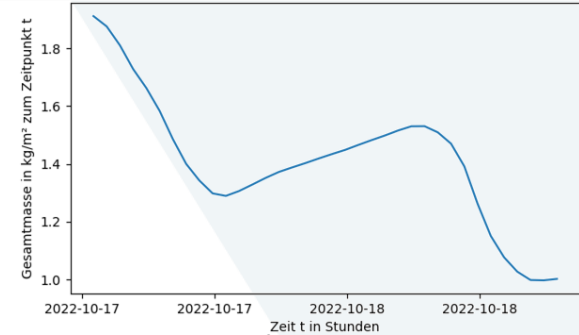
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Yield Modelling



DM interpolation (with AI model)

Drying Modelling



Model of the drying process



SmartGrass

Biomass dry matter [kg/m²]



Drying process field trials