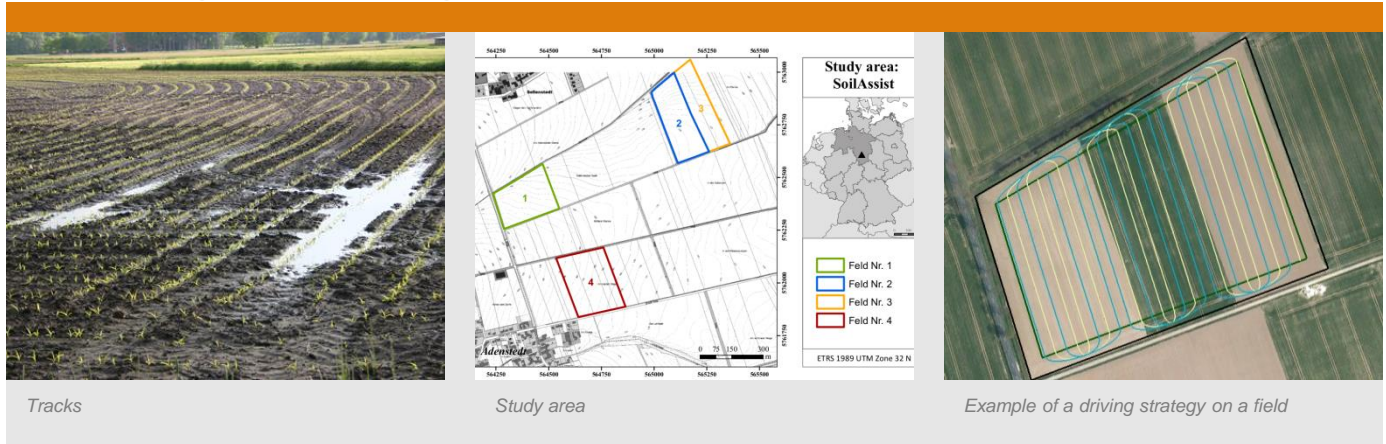


SOILAssist2

Sustainable protection and improvement of soil functions with intelligent land management strategies



Development of practically usable methods and tools for optimal field management strategies with a focus on soil protection

In the last years automation and optimisation have become increasingly important in agricultural processes. In addition to improvements in efficiency, soil protection is gaining attention in modern agricultural engineering. The project SOILAssist2 addresses both topics. It aims at the development of practically usable methods and tools for optimal field management strategies with a focus on soil protection.

Integration of an adaptive real-time assistance system for agriculture machines

In the project SOILAssist2, the DFKI laboratory Niedersachsen develops and extends an adaptive real-time assistance system for agriculture machines based on results from its predecessor project. The assistance system facilitates spatial and temporal process planning and coordination of several cooperative machines. Input for the planning system are sensor information about soil pressure and soil deformation as well as a soil model. The soil model takes soil characteristics and the driving parameters into account. A semantic environment representation fuses the multimodal data.

The planning system will coordinate the harvester and additional machines by providing the drivers with plans that ensure soil protection. These plans will be adapted online based on in-situ information.

The effects on the soil structure during processing of fields will be analysed by the Christian-Albrechts-University of Kiel. The Thünen-Institute will record and evaluate sensor information and develop the soil model in cooperation with the Christian-Albrechts-University of Kiel. Osnabrück University will explore the potential of a semantic-based representation and interpretation of three-dimensional environment data.

The project's results will be made publicly available in a modular, framework-independent open source library.

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Partner:



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