



Tele Expert

Repair of machine malfunctions via
manufacturer-independent remote diagnosis

Supported by:



Federal Ministry
for Economic Affairs
and Energy



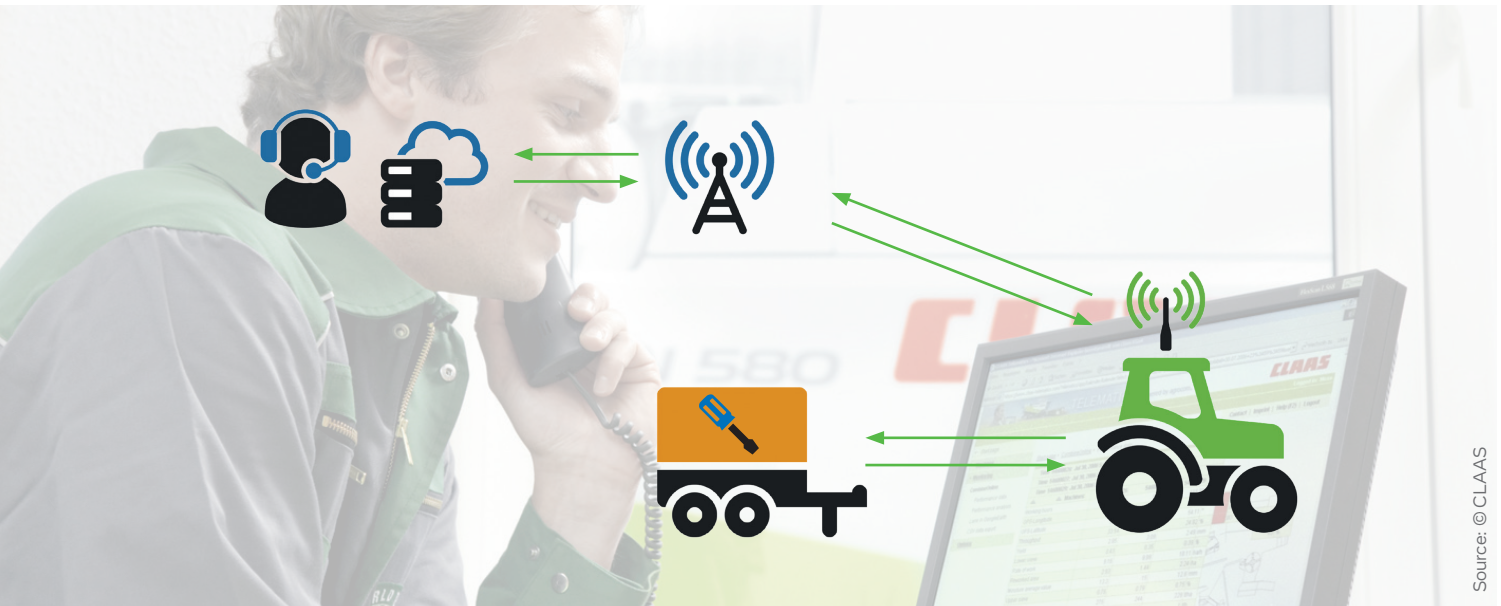
DLR Project Management Agency

on the basis of a decision
by the German Bundestag



Tele Expert

Repair of machine malfunctions via manufacturer-independent remote diagnosis



Description of the use case

In the event of a service request, trouble-shooting is currently carried out on site by a trained service technician who works for the machinery manufacturer. The service technician orders the required spare parts and installs them after yet another travel to the location and back. A manufacturer-independent platform enables service technicians to diagnose machine faults remotely. Depending on the defect, the problem can be solved remotely or at least analyzed in more detail to save costly travel costs.

Stakeholders

Cooperation between the various players is crucial for an efficient process: The farmer must have equipped machines to a required level and he must be prepared to use a digital service platform of his choice. The operators of the machines must also be taught how to carry out remote diagnoses. In addition to this, the manufacturer must adapt its service structure accordingly. The necessary IT resources must be available in order to make remote diagnoses.



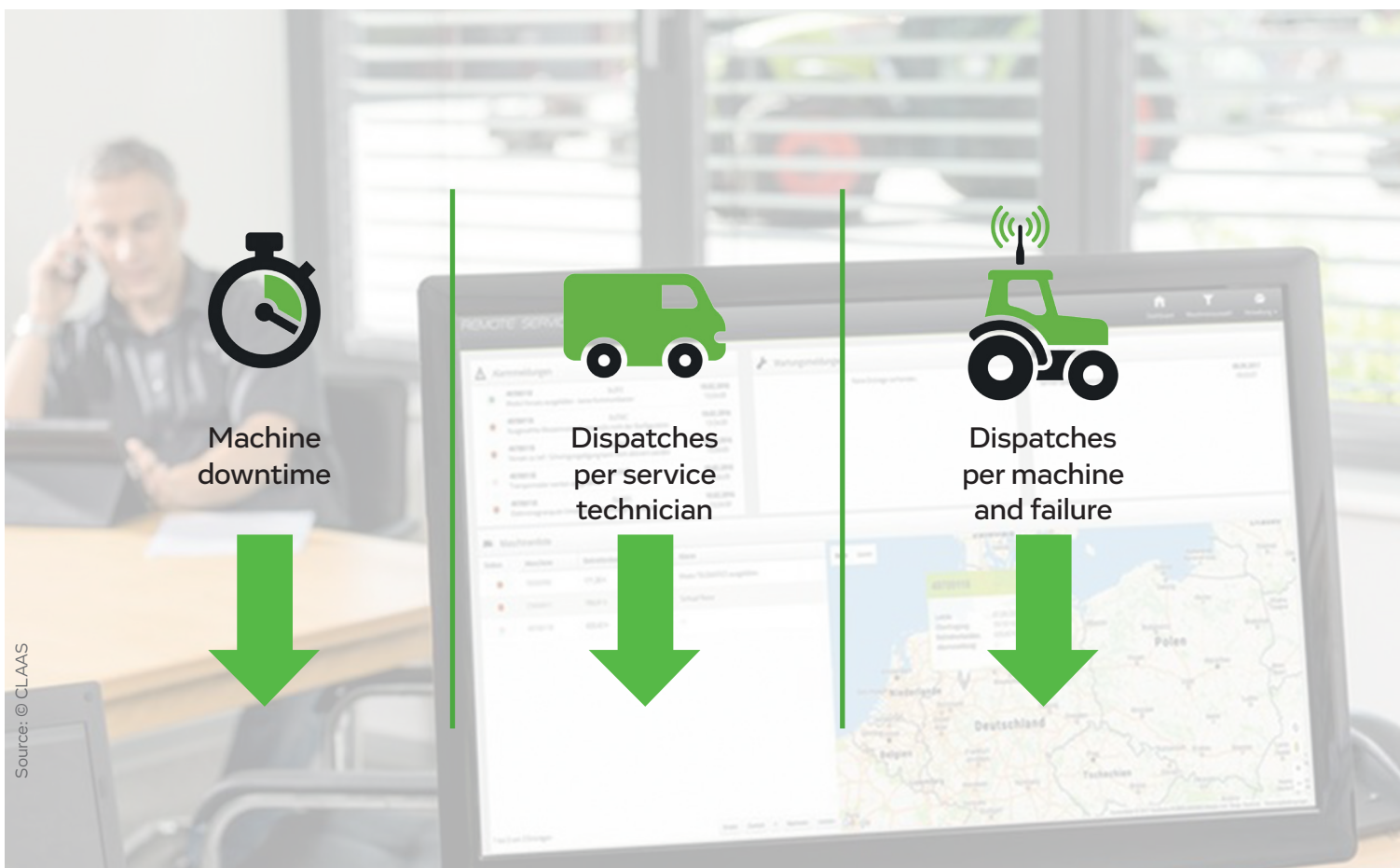


Requirements

In addition to the fact that the parties involved must be willing to cooperate, technical and legal requirements must also be fulfilled to enable remote diagnoses: It is necessary to communicate with all manufacturers in the field as well as with the service platform. This requires a comprehensive wireless network. In addition to this, legal framework conditions must be defined on the basis of which the generated data can be exchanged.

Added value

A crucial cost factor for the machinery manufacturer and the farmer, in general, is the servicing and maintenance of agricultural machinery. The manufacturer must have service personnel available and the farmer loses valuable time during harvesting if issues occur. With the help of remote diagnosis, occurring problems can be analyzed remotely and certain defects can be solved directly. As a result, service costs can be reduced significantly and the farmer can reduce machine downtime.



Project target

The aim of the research project is to create a multidirectional interconnection of farming fields and machines and the integration of external data sources (such as weather forecasts) on a shared platform.

The agricultural machinery is included in a network and linked to the platform via a digital infrastructure. Collected data is exchanged, bundled and analyzed to provide data-driven services for end users.



Use cases

During the project, several use cases will be developed to demonstrate the benefits of the platform. These include among others:

Tele Expert:

Repair of machine malfunctions via manufacturer-independent remote diagnosis

Connected Update:

Updating the machine software via manufacturer remote access

nPotato:

Optimization of harvests due to the use of Smart Services

Fleet Set Connect:

Optimization of the grain harvest due to superordinate fleet control.

Integration of third party developers

The platform enables application developers to make their solutions available to a broad base of users. Do you have an idea for further applications? Please feel free to contact us!



Contact details

Partners who work in the area of agricultural engineering or communications technology and those belonging to leading research institutions are working on the development of a manufacturer-independent service platform for a digitalized agriculture.



Contact persons

Benedikt Moser, M.Sc.

FIR at RWTH Aachen University
smart-farming-welt@fir.rwth-aachen.de

Dipl.-Ing. Arndt Kritzner

Project lead, Logic Way GmbH
www.smart-farming-welt.de

Project partners

