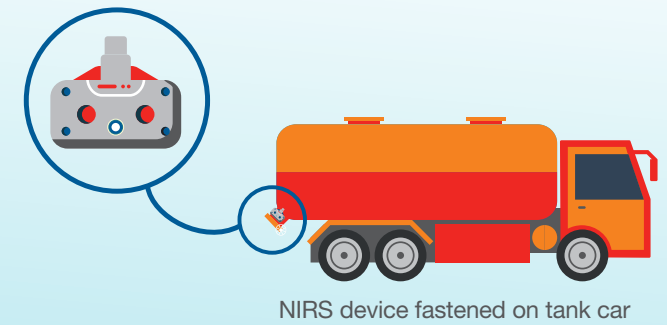


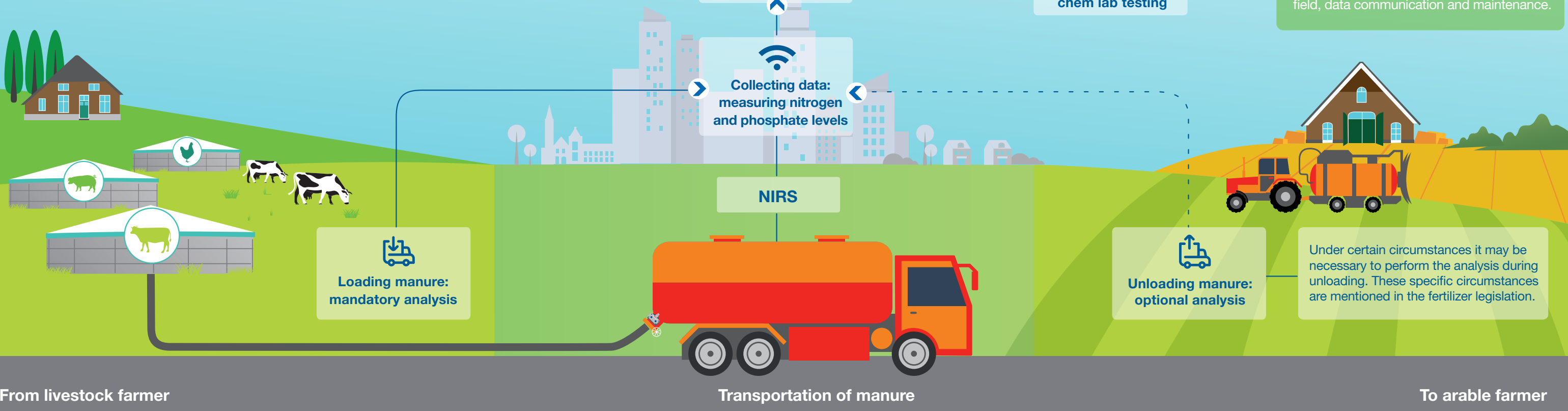
Smart transport

Nutrient transparency with NIRS

This infographic shows to which system the NIRS consortium is working. It reflects the end of phase 1 as mentioned in the research done by the Committee of Experts on Fertilizers Act. At the end of phase 1, a certified NIRS system is installed on the tank car. Measurements to determine the nutrient values are done by NIRS during the complete loading process. An automatic check will be done by the NIRS system in the initial phase of loading if the manure composition is recognized by the measured spectra of the NIRS sensor. This data on the nutrient values is sent real time to RVO who are monitoring and checking manure transport. If the measured manure cannot be recognized by the calibration model for accurate nitrogen (N) and phosphate (P) determination, automatic sampling for laboratory analysis will be initiated, preferably when loading the manure and before the transport starts. RVO receives the manure data after the laboratory analysis.



In 2021, phase 1 will include trial exemptions for the implementation of a limited number of NIRS systems in the market. The implementation of NIRS requires specific procedures for quality assurance. The procedures will be described in a new NEN-standard, which provides a description for the admission of new systems, the validation in the field, data communication and maintenance.



Stakeholders



RVO

RVO receives and registers data of transported manure. RVO calculates whether the individual farmer has removed enough N and P to comply to the fertilizer legislation.

NWVA

Monitors and physically checks manure transport. Inspectors check if the correct protocols for loading and sampling are applied. If necessary, contra-sampling can be done.

