



TEF
agrifood

agrifoodTEF - Service List

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BE_0001 Hyperspectral measurements and analysis - test design

Description:test design for a test/ measurements to perform hyperspectral measurements and machine-learning based analysis on agrofood products

service type:

test design

sector:

food processing

delivered to TEF:

other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0002 Hyperspectral measurements and analysis - test setup

Description:test setup for a test/ measurements to perform hyperspectral measurements and machine-learning based analysis on agrofood products

service type:

test setup

sector:

food processing

delivered to TEF:

other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0003 Hyperspectral measurements and analysis - test execution

Description:test execution of a test/ measurements to perform hyperspectral measurements and machine-learning based analysis on agrofood products

service type:

test execution

sector:

food processing

delivered to TEF:

other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0004 Hyperspectral measurements and analysis - data collection

Description:collection of hyperspectral test data (Perform hyperspectral measurements)

service type:

collection of test data

sector:

food processing

delivered to TEF:

other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0005 Hyperspectral measurements and analysis - performance evaluation

Description:performance evaluation of hyperspectral data (Preprocess the hyperspectral data)

service type:

performance evaluation

sector:

food processing

delivered to TEF:

data

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0006 provision of datasets: data from hyperspectral measurements

Description:making hyperspectral datasets available for use

service type:

provision of datasets

sector:

food processing

delivered to TEF:

other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0007 Hyperspectral measurements and analysis - test design

Description:test design for a test/ measurements to perform hyperspectral measurements and machine-learning based analysis on agrofood products

service type:

test design

sector:

arable farming

delivered to TEF:

other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0008 Hyperspectral measurements and analysis - test setup

Description:test setup for a test/ measurements to perform hyperspectral measurements and machine-learning based analysis on agrofood products

service type:

test setup

sector:

arable farming

delivered to TEF:

other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0009 Hyperspectral measurements and analysis - test execution

Description:test execution of a test/ measurements to perform hyperspectral measurements and machine-learning based analysis on agrofood products

service type:

test execution

sector:

arable farming

delivered to TEF:

other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0010 Hyperspectral measurements and analysis - data collection

Description:collection of hyperspectral test data (Perform hyperspectral measurements)

service type:

collection of test data

sector:

arable farming

delivered to TEF:

other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0011 Hyperspectral measurements and analysis - performance evaluation

Description:performance evaluation of hyperspectral data (Preprocess the hyperspectral data)

service type:

performance evaluation

sector:

arable farming

delivered to TEF:

data

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0012 provision of datasets: data from hyperspectral measurements

Description:making hyperspectral datasets available for use

service type:

provision of datasets

sector:

arable farming

delivered to TEF:

other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0013 Hyperspectral measurements and analysis - test design

Description:test design for a test/ measurements to perform hyperspectral measurements and machine-learning based analysis on agrofood products

service type:

test design

sector:

horticulture

delivered to TEF:

other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0014 Hyperspectral measurements and analysis - test setup

Description:test setup for a test/ measurements to perform hyperspectral measurements and machine-learning based analysis on agrofood products

service type:

test setup

sector:

horticulture

delivered to TEF:

other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0015 Hyperspectral measurements and analysis - test execution

Description:test execution of a test/ measurements to perform hyperspectral measurements and machine-learning based analysis on agrofood products

service type:

test execution

sector:

horticulture

delivered to TEF:

other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0016 Hyperspectral measurements and analysis - data collection

Description:collection of hyperspectral test data (Perform hyperspectral measurements)

service type:

collection of test data

sector:

horticulture

delivered to TEF:

other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0017 Hyperspectral measurements and analysis - performance evaluation

Description:performance evaluation of hyperspectral data (Preprocess the hyperspectral data)

service type:

performance evaluation

sector:

horticulture

delivered to TEF:

data

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0018 provision of datasets: data from hyperspectral measurements

Description:making hyperspectral datasets available for use

service type:

provision of datasets

sector:

horticulture

delivered to TEF:

other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0019 Fertilizer spreader for arable farming: calibration based on vision and AI-methods - test design

Description:test design to perform fertilizer spreader calibration based on camera detection/vision and AI-methods using a mobile set-up, for spreader manufacturers

service type:

test design

sector:

arable farming

delivered to TEF:

physical system (possibly including software)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0020 Fertilizer spreader for arable farming: calibration based on vision and AI-methods - test setup

Description:test setup to perform fertilizer spreader calibration based on camera detection/vision and AI-methods using a mobile set-up, for spreader manufacturers

service type:

test setup

sector:

arable farming

delivered to TEF:

physical system (possibly including software)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0021 Fertilizer spreader for arable farming: calibration based on vision and AI-methods -test execution

Description:Perform fertilizer spreader calibration based on camera detection/vision and AI-methods using a mobile set-up, for spreader manufacturers

service type:

test execution

sector:

arable farming

delivered to TEF:

physical system (possibly including software)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0022 Fertilizer spreader for arable farming: calibration based on vision and AI-methods - data collection

Description:data collection during test execution of fertilizer spreader calibration based on camera detection/vision and AI-methods using a mobile set-up, for spreader manufacturers

service type:

collection of test data

sector:

arable farming

delivered to TEF:

physical system (possibly including software)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0023 Fertilizer spreader for arable farming: calibration based on vision and AI-methods - test design

Description:test design to perform fertilizer spreader calibration based on camera detection/vision and AI-methods using a mobile set-up, for spreader manufacturers

service type:

test design

sector:

horticulture

delivered to TEF:

physical system (possibly including software)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0024 Fertilizer spreader for arable farming: calibration based on vision and AI-methods - test setup

Description:test setup to perform fertilizer spreader calibration based on camera detection/vision and AI-methods using a mobile set-up, for spreader manufacturers

service type:

test setup

sector:

horticulture

delivered to TEF:

physical system (possibly including software)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0025 Fertilizer spreader for arable farming: calibration based on vision and AI-methods -test execution

Description:Perform fertilizer spreader calibration based on camera detection/vision and AI-methods using a mobile set-up, for spreader manufacturers

service type:

test execution

sector:

horticulture

delivered to TEF:

physical system (possibly including software)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0026 Fertilizer spreader for arable farming: calibration based on vision and AI-methods - data collection

Description:data collection during test execution of fertilizer spreader calibration based on camera detection/vision and AI-methods using a mobile set-up, for spreader manufacturers

service type:

collection of test data

sector:

horticulture

delivered to TEF:

physical system (possibly including software)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0027 AI-driven LCA-analysis during food processing

Description: Perform automated AI-driven LCA-analysis during food processing to provide information on process energy consumption

service type:

LCA assessment

sector:

food processing

delivered to TEF:

other (including: nothing), data

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0028 Robotic Software Framework for arable farming - test design

Description: test design for application and deployment of agricultural robotic software framework

service type:

test design

sector:

arable farming

delivered to TEF:

physical system (possibly including software)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0029 Robotic Software Framework for arable farming - test setup

Description: test setup for application and deployment of agricultural robotic software framework

service type:

test setup

sector:

arable farming

delivered to TEF:

physical system (possibly including software)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0030 Robotic Software Framework for arable farming - test execution

Description: test execution of application and deployment of agricultural robotic software framework

service type:

test execution

sector:

arable farming

delivered to TEF:

physical system (possibly including software)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0031 Robotic Software Framework for arable farming performance evaluation

Description:performance evaluation of application and deployment of agricultural robotic software framework

service type:

performance evaluation

sector:

arable farming

delivered to TEF:

physical system (possibly including software)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0032 Robotic Software Framework for tree crops - test design

Description:test design for application and deployment of agricultural robotic software framework

service type:

test design

sector:

tree crops

delivered to TEF:

physical system (possibly including software)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0033 Robotic Software Framework for tree crops - test setup

Description:test setup for application and deployment of agricultural robotic software framework

service type:

test setup

sector:

tree crops

delivered to TEF:

physical system (possibly including software)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0034 Robotic Software Framework for tree crops - test execution

Description:test execution of application and deployment of agricultural robotic software framework

service type:

test execution

sector:

tree crops

delivered to TEF:

physical system (possibly including software)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0035 Robotic Software Framework for tree crops - performance evaluation

Description:performance evaluation of application and deployment of agricultural robotic software framework

service type:

performance evaluation

sector:

tree crops

delivered to TEF:

physical system (possibly including software)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0036 Robotic Software Framework for horticulture - test design

Description:test design for application and deployment of agricultural robotic software framework

service type:

test design

sector:

horticulture

delivered to TEF:

physical system (possibly including software)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0037 Robotic Software Framework for horticulture - test setup

Description:test setup for application and deployment of agricultural robotic software framework

service type:

test setup

sector:

horticulture

delivered to TEF:

physical system (possibly including software)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0038 Robotic Software Framework for horticulture - test execution

Description:test execution of application and deployment of agricultural robotic software framework

service type:

test execution

sector:

horticulture

delivered to TEF:

physical system (possibly including software)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0039 Robotic Software Framework for horticulture - performance evaluation

Description:performance evaluation of application and deployment of agricultural robotic software framework

service type:

performance evaluation

sector:

horticulture

delivered to TEF:

physical system (possibly including software)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0040 Food consumption analysis - test design

Description:Food waste detection, food consumption analyses for nutritional defects analysis

service type:

test design

sector:

food processing

delivered to TEF:

data, other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0041 Food consumption analysis - test setup

Description:Food waste detection, food consumption analyses for nutritional defects analysis

service type:

test setup

sector:

food processing

delivered to TEF:

data, other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0042 Food consumption analysis - test execution

Description:Food waste detection, food consumption analyses for nutritional defects analysis

service type:

test execution

sector:

food processing

delivered to TEF:

data, other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0043 data collection during food consumption analysis

Description:Food waste detection, food consumption analyses for nutritional defects analysis

service type:

collection of test data

sector:

food processing

delivered to TEF:

data, other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0044 data augmentation of data collected during food consumption analysis

Description:Food waste detection, food consumption analyses for nutritional defects analysis

service type:

data augmentation

sector:

food processing

delivered to TEF:

data, other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0045 Agri Dataset generation for arable farming - data augmentation

Description:Automated agricultural generated datasets and model validation datasets

service type:

data augmentation

sector:

arable farming

delivered to TEF:

data, other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0046 Agri Dataset generation for arable farming - provision of datasets

Description:Automated agricultural generated datasets and model validation datasets

service type:

provision of datasets

sector:

arable farming

delivered to TEF:

other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0047 Agri Dataset generation for arable farming - data augmentation

Description:Automated agricultural generated datasets and model validation datasets

service type:

data augmentation

sector:

horticulture

delivered to TEF:

data, other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

BE_0048 Agri Dataset generation for arable farming - provision of datasets

Description:Automated agricultural generated datasets and model validation datasets

service type:

provision of datasets

sector:

horticulture

delivered to TEF:

other (including: nothing)

location:

in Belgium

provider:

ILVO

Jordy.Windels@ilvo.vlaanderen.be

SE_0001 Conformity roadmap for an innovation

Description:Assessment of necessary steps for an innovation under product development to conform. What standards are eligible, what laws and directives apply for this specific product? How can the innovation be adapted to fit the demands or is new laws and regulations needed?

The service will also list other possible services that the TEF can help the company with and to what extent.

service type:

desk assessment

sector:

arable farming, horticulture, tree crops, livestock Farming,
food processing

delivered to TEF:

design/documentation

location:

in Sweden, at user's premises

provider:

RISE

jonas.engstrom@ri.se

SE_0002 Development roadmap for an innovation

Description:Identify development steps that are needed for the product to reach TRL 9.

The service will also list other possible services that the TEF can help the company with and to what extent.

service type:

desk assessment

sector:

arable farming, horticulture, tree crops, livestock Farming,
food processing

delivered to TEF:

design/documentation

location:

at user's premises, in Sweden

provider:

RISE

jonas.engstrom@ri.se

SE_0003 Compliance for robotic machine

Description:Help company to conform to existing regulations, machinery standards and directives.

service type:

desk assessment, ELSA assessment, conformity
assessment

sector:

arable farming, horticulture, tree crops, livestock Farming,
food processing

delivered to TEF:

physical system (possibly including software)

location:

in Sweden

provider:

RISE

jonas.engstrom@ri.se

SE_0004 Compliance for AI innovation

Description:Help company to conform to existing regulations, machinery standards and directives. This service is applicable when an innovations scope is within current laws and regulations.

service type:

desk assessment, ELSA assessment, conformity
assessment

sector:

arable farming, horticulture, tree crops, livestock Farming,
food processing

delivered to TEF:

software

location:

in Sweden

provider:

RISE

jonas.engstrom@ri.se

SE_0005 Safety tests

Description: Tests are developed and performed based on conformity

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

arable farming, tree crops, horticulture, livestock Farming, food processing, viticulture

delivered to TEF:

physical system (possibly including software)

location:

in Sweden

provider:

RISE

jonas.engstrom@ri.se

SE_0006 Test of error handling and failiure monitoring

Description: How does the AI-based system or robotic machine handle unexpected events, errors or malfunction?

service type:

test design, test setup, test execution, collection of test data, performance evaluation, data analysis

sector:

arable farming, horticulture, tree crops, viticulture, livestock Farming, food processing

delivered to TEF:

software

location:

in Sweden

provider:

RISE

jonas.engstrom@ri.se

SE_0007 Co-development AI Crop production

Description: Co-develop robotic and AI solutions for agriculture. Dependent on the specific needs a company has, the service is adjusted to fullfil the needs.

service type:

desk assessment

sector:

arable farming

delivered to TEF:

physical system (possibly including software), software, design/documentation

location:

in Sweden

provider:

RISE

jonas.engstrom@ri.se

SE_0008 Co-development AI Livestock production

Description:Co-develop robotic and AI solutions for agriculture. Dependent on the specific needs a company has, the service is adjusted to fullfil the needs.

service type:

desk assessment

sector:

livestock Farming

delivered to TEF:

physical system (possibly including software), software,
design/documentation

location:

in Sweden

provider:

RISE

jonas.engstrom@ri.se

SE_0009 Co-development Robotics Crop production

Description:Co-develop robotic and AI solutions for agriculture. Dependent on the specific needs a company has, the service is adjusted to fullfil the needs.

service type:

desk assessment

sector:

arable farming

delivered to TEF:

physical system (possibly including software), software,
design/documentation

location:

in Sweden

provider:

RISE

jonas.engstrom@ri.se

SE_0010 Co-development Robotics Livestock production

Description:Co-develop robotic and AI solutions for agriculture. Dependent on the specific needs a company has, the service is adjusted to fullfil the needs.

service type:

desk assessment

sector:

livestock Farming

delivered to TEF:

physical system (possibly including software), software,
design/documentation

location:

in Sweden

provider:

RISE

jonas.engstrom@ri.se

SE_0011 Co-development UAV Crop production

Description:Co-develop robotic and AI solutions for agriculture. Dependent on the specific needs a company has, the service is adjusted to fullfil the needs.

service type:

desk assessment

sector:

arable farming

delivered to TEF:

physical system (possibly including software), software

location:

in Sweden

provider:

RISE

jonas.engstrom@ri.se

SE_0012 Co-development UAV Livestock production

Description:Co-develop robotic and AI solutions for agriculture. Dependent on the specific needs a company has, the service is adjusted to fullfil the needs.

service type:

desk assessment

sector:

livestock Farming

delivered to TEF:

physical system (possibly including software), software

location:

in Sweden

provider:

RISE

jonas.engstrom@ri.se

SE_0013 Policy Lab

Description:Investigate identified gaps between current regulations and a companys innovation that needs to be filled and propose changes.

Policy lab (as a regulatory innovation process) aims to i) analyse the challenges that arise in connection between technology/market development and regulation, ii) develop possible solutions, iii) collaborate with relevant stakeholders to determine the next step.

If beneficial use available robotic machinery to test and demonstrate technology with relevant authorities etc.

Case one: The innovation is affected by completely new legislation (no practice).

Case two: Work on the innovation in sandbox (legislation is missing - which one is needed?)

service type:

desk assessment, ELSA assessment, conformity assessment

sector:

arable farming, horticulture, tree crops, viticulture, livestock

Farming, food processing

delivered to TEF:

design/documentation, software, physical system (possibly including software)

location:

in Sweden

provider:

RISE

jonas.engstrom@ri.se

SE_0014 Validation and development of AI-powered Agricultural Chemistry sensors and systems

Description: Together with agricultural knowledge at RISE the modern chemistry lab at RISE can be used for verification of AI powered chemical sensing using cost-effective sensors. Examples of such tests includes:

- Chemical analyses within inorganic chemistry – e.g., PFAS in meat (new coming legislation), soil and water.
 - Chemical analyses within inorganic chemistry e.g. heavy metals and other elements.
 - C-14 Biogenic content analysis
 - VOC Emission testing
 - Gas analysis e.g., methane, carbon dioxide, hydrogen.
 - Problem solving within analytical chemistry and custom-made analysis
- Calibration – conductivity and gas measurement units.

service type:

location:

sector:

provider:

RISE

delivered to TEF:

jonas.engstrom@ri.se

SE_0015 Validation and development of AI-powered food production sensors and systems

Description: Companies with Robotic or AI products for example for food customisation can use RISE labs for verification of their products using test facilities such as:

- Gas chromatography (identification of components in gases/smells)
- Consumer acceptance and perception
- Food properties at micro-scale (microscopy)
- Rheological food properties
- Macro-scale evaluation of food, e.g. phot and dielectric properties
- Microbial safety analysis
- Test facility for evaluation of systematic cleaning
- Hygienic evaluation of robotized and automated production solutions.

service type:

test design, test execution, test setup, collection of test

data, performance evaluation

sector:

food processing

delivered to TEF:

physical system (possibly including software), software

location:

in Sweden

provider:

RISE

jonas.engstrom@ri.se

SE_0016 Virtual training or validation of crop and weed detection

Description:RISE openWeeds database is under development and can be used for training and validation of weed detection machine learning algorithms. The annotated images are captured in RISE agrifood testbed and contain some of the weeds growing in the nordic environment.

service type:

provision of datasets

sector:

arable farming

delivered to TEF:

other (including: nothing)

location:

in Sweden

provider:

RISE

jonas.engstrom@ri.se

SE_0017 Validation of work result under real conditions crop production robotics

Description:The innovation is tested in real work or real work-like conditions in the nordics and the work result is evaluated from a potential customers point of view. The service is adapted to the actual innovation to be tested.

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

arable farming

delivered to TEF:

physical system (possibly including software), software

location:

in Sweden

provider:

RISE

jonas.engstrom@ri.se

SE_0018 Validation of work result under real conditions crop production sensors and decision support systems

Description:The innovation is tested in real work or real work-like conditions in the nordics and the work result is evaluated from a potential customers point of view. The service is adapted to the actual innovation to be tested.

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

arable farming

delivered to TEF:

physical system (possibly including software), software

location:

in Sweden

provider:

RISE

jonas.engstrom@ri.se

SE_0019 Validation of work result under real conditions crop production UAV

Description:The innovation is tested in real work or real work-like conditions in the nordics and the work result is evaluated from a potential customers point of view. The service is adapted to the actual innovation to be tested.

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

arable farming

delivered to TEF:

physical system (possibly including software), software

location:

in Sweden

provider:

RISE

jonas.engstrom@ri.se

SE_0020 Validation of work result under real conditions livestock robotics

Description:The innovation is tested in real work or real work-like conditions in the nordics and the work result is evaluated from a potential customers point of view. The service is adapted to the actual innovation to be tested.

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

livestock Farming

delivered to TEF:

physical system (possibly including software), software

location:

in Sweden

provider:

RISE

jonas.engstrom@ri.se

SE_0021 Validation of work result under real conditions livestock sensors and decision support systems

Description:The innovation is tested in real work or real work-like conditions in the nordics and the work result is evaluated from a potential customers point of view. The service is adapted to the actual innovation to be tested.

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

livestock Farming

delivered to TEF:

physical system (possibly including software), software

location:

in Sweden

provider:

RISE

jonas.engstrom@ri.se

SE_0022 Validation of work result under real conditions livestock UAV

Description:The innovation is tested in real work or real work-like conditions in the nordics and the work result is evaluated from a potential customers point of view. The service is adapted to the actual innovation to be tested.

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

livestock Farming

delivered to TEF:

physical system (possibly including software), software

location:

in Sweden

provider:

RISE

jonas.engstrom@ri.se

SE_0023 Expand weed identify functionality to new crops and weeds

Description:Help för a company with weed identification or weed removal capabilities to expand the capabilities to new combinations of crop and weeds.

service type:

provision of datasets

sector:

arable farming

delivered to TEF:

physical system (possibly including software), software, design/documentation, other (including: nothing)

location:

in Sweden

provider:

RISE

jonas.engstrom@ri.se

SE_0024 Expand training datasets by using synthetic data based on existing datasets

Description:Together with company develop methodology for exanding training dataset with synthetic data.

service type:

provision of datasets, data augmentation

sector:

horticulture, arable farming, tree crops, livestock Farming,

food processing

delivered to TEF:

data, other (including: nothing)

location:

in Sweden

provider:

RISE

jonas.engstrom@ri.se

AT_0001 Testing of reticulo-ruminal motility measuring systems

Description: Testing the ability of a rumen bolus sensor to measure reticular motility

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

livestock Farming

delivered to TEF:

physical system (possibly including software), software

location:

in Austria

provider:

RGRD

Magdalena.Waldauer@raumberg-gumpenstein.at

AT_0002 Testing of activity measurement of an animal health monitoring system

Description: Testing the ability of an animal health monitoring system to detect activity levels of cows and distinguish between feed intake, water intake, ruminating and resting time

service type:

test design, test execution, test setup, collection of test data, performance evaluation

sector:

livestock Farming

delivered to TEF:

physical system (possibly including software), software

location:

in Austria

provider:

RGRD

Magdalena.Waldauer@raumberg-gumpenstein.at

AT_0003 Testing of the heat detection function of an animal health monitoring system

Description: Testing the ability of a health monitoring system to detect heat in dairy cows and deliver notifications in case of heat

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

livestock Farming

delivered to TEF:

physical system (possibly including software), software

location:

in Austria

provider:

RGRD

Magdalena.Waldauer@raumberg-gumpenstein.at

AT_0004 Assessment of environmental impacts when applying digital technologies in agriculture

Description:Based on the main agronomic impact of the use of the technology, environmental impacts are recorded using criteria or indicators in an environmental assessment matrix

service type:

desk assessment

sector:

arable farming, livestock farming

delivered to TEF:

physical system (possibly including software), software, design/documentation

location:

at user's premises

provider:

RGRD

Magdalena.Waldauer@raumberg-gumpenstein.at

AT_0005 Mediation and networking

Description:Establishing co-operation between enterprises for their benefit and creation of usecases with two or multiple partners and supervise projects between two or multiple partners

service type:

desk assessment

sector:

arable farming, livestock Farming

delivered to TEF:

design/documentation, physical system (possibly including software), software, other (including: nothing)

location:

in Austria, at user's premises

provider:

RGRD

Magdalena.Waldauer@raumberg-gumpenstein.at

AT_0006 Datasets

Description:provision of datasets

service type:

provision of datasets

sector:

arable farming, livestock Farming

delivered to TEF:

physical system (possibly including software), software, design/documentation, other (including: nothing)

location:

in Austria, at user's premises

provider:

RGRD

Magdalena.Waldauer@raumberg-gumpenstein.at

AT_0007 Testing of weeding performance

Description:Testing the performance of autonomous weeding, i.e. of a weeding robot.

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

arable farming, horticulture, tree crops, viticulture

delivered to TEF:

physical system (possibly including software), software

location:

in Austria, at user's premises

provider:

JR

agrifoodtef@josephinum.at

AT_0008 Testing of spot spraying performance

Description:Testing the performance of a spot spraying system

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

arable farming, horticulture

delivered to TEF:

physical system (possibly including software)

location:

in Austria, at user's premises

provider:

JR

agrifoodtef@josephinum.at

AT_0009 Testing of crop detection

Description:testing the ability of a solution to distinguish between several plant species (crops)

service type:

test design, test setup, test execution, collection of test data, collection of test data, performance evaluation

sector:

arable farming, horticulture, tree crops, viticulture

delivered to TEF:

physical system (possibly including software), software

location:

at user's premises, in Austria

provider:

JR

agrifoodtef@josephinum.at

AT_0010 Testing of weed detection

Description:testing the ability of a solution to detect weed cover

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

arable farming, horticulture, tree crops, viticulture

delivered to TEF:

physical system (possibly including software), software

location:

in Austria, at user's premises

provider:

JR

agrifoodtef@josephinum.at

AT_0011 providing dataset for training purpose

Description:provide specific datasets for training ML (images, sensor data, ...)

service type:

data augmentation, provision of datasets

sector:

arable farming, horticulture, tree crops, viticulture

delivered to TEF:

other (including: nothing)

location:

at user's premises, in Austria

provider:

JR

agrifoodtef@josephinum.at

AT_0012 providing benchmark dataset

Description:provide specific datasets for benchmarking ML (images, sensor data, ...)

service type:

provision of datasets, data augmentation

sector:

arable farming, horticulture, tree crops, viticulture

delivered to TEF:

other (including: nothing)

location:

at user's premises, in Austria

provider:

JR

agrifoodtef@josephinum.at

AT_0013 Usability & UX testing

Description:testing the user-friendliness & user experience of user interface and system

service type:

test design, test execution, test setup, collection of test data

sector:

arable farming, horticulture, tree crops, viticulture

delivered to TEF:

other (including: nothing), physical system (possibly including software), software

location:

in Austria

provider:

JR

agrifoodtef@josephinum.at

AT_0014 testing of biomass estimation

Description:testing the accuracy of a system to estimate biomass

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

arable farming

delivered to TEF:

physical system (possibly including software)

location:

in Austria

provider:

JR

agrifoodtef@josephinum.at

AT_0015 testing of Follow-me function of a robot

Description:Testing of robustness and accuracy of the ability of a device to follow a person (or other moving object).

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

arable farming, horticulture, tree crops, viticulture

delivered to TEF:

physical system (possibly including software)

location:

in Austria

provider:

JR

agrifoodtef@josephinum.at

AT_0016 testing of person detection function of a robot

Description:Testing of robustness and accuracy of the ability of a device to detect a person (or other moving object).

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

arable farming, horticulture, tree crops, viticulture

delivered to TEF:

physical system (possibly including software)

location:

in Austria

provider:

JR

agrifoodtef@josephinum.at

AT_0017 testing of field navigation

Description:Testing the navigation accuracy and performance of a robot

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

arable farming, horticulture, tree crops, viticulture

delivered to TEF:

physical system (possibly including software)

location:

in Austria

provider:

JR

agrifoodtef@josephinum.at

AT_0018 testing of sensor performance

Description:Testing the precision and accuracy of sensor systems

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

arable farming, horticulture, tree crops, viticulture

delivered to TEF:

physical system (possibly including software)

location:

in Austria

provider:

JR

agrifoodtef@josephinum.at

PL_0001 AI Integration - Data Storage

Description:Provide data storage infrastructure for AI, simulations and data processing results.

service type:

provision of datasets, collection of the datasets

sector:

arable farming, horticulture, tree crops, viticulture, livestock

Farming, food processing

delivered to TEF:

software, other (including: nothing)

location:

in Poland

provider:

PSNC

marcinp@man.poznan.pl

PL_0002 AI Integration - V-Server / PaaS/ AI platform

Description:Provide virtual infrastructure Cloud Virtual Servers/PaaS/ AI Platform to support deployment of the models/tools/software stack

service type:

data processing, simulations, performance evaluation

sector:

arable farming, horticulture, tree crops, viticulture, livestock

Farming, food processing

delivered to TEF:

software, other (including: nothing)

location:

in Poland

provider:

PSNC

marcinp@man.poznan.pl

PL_0003 AI Integration - Computation Power

Description:Provide HPC and Grid-Computing infrastructure for AI, simulations and data processing.

service type:

data processing, simulations, performance evaluation

sector:

arable farming, horticulture, tree crops, viticulture, livestock

Farming, food processing

delivered to TEF:

software, data, other (including: nothing)

location:

in Poland

provider:

PSNC

marcinp@man.poznan.pl

PL_0004 AI-Testfield – Co-design Robots

Description:Provide support for co-designing robots for high-value crops

service type:

test design, test setup, test execution

sector:

arable farming, horticulture, tree crops, viticulture, livestock

Farming, food processing

delivered to TEF:

physical system (possibly including software), software

location:

in Poland

provider:

L-PIT

lukasz.lowinski@pit.lukasiewicz.gov.pl

PL_0005 Datasets - Real-World Training

Description:Provide, i.e., capture real-world training data sets incl. labels and metadata for training AI algorithms.

service type:

provision of datasets, data augmentation

sector:

arable farming, horticulture, tree crops, viticulture, livestock

Farming, food processing

delivered to TEF:

other (including: nothing)

location:

in Poland

provider:

L-PIT

lukasz.lowinski@pit.lukasiewicz.gov.pl

PL_0006 Expand training datasets by using synthetic data based on existing datasets

Description: Together with company develop methodology for expanding training dataset with synthetic data.

service type:

provision of datasets, data augmentation

sector:

arable farming, horticulture, food processing

delivered to TEF:

data, other (including: nothing)

location:

in Poland

provider:

L-PIT

lukasz.lowinski@pit.lukasiewicz.gov.pl

PL_0007 Usability & UX testing

Description: testing the user-friendliness & user experience of user interface and system

service type:

test design, test execution, test setup, collection of test

data

sector:

arable farming, horticulture, viticulture

delivered to TEF:

physical system, software

location:

in Poland

provider:

L-PIT

lukasz.lowinski@pit.lukasiewicz.gov.pl

PL_0008 Test design: definition of the test environment

Description: Items to be defined include: crops; weeds; growth stage for each; allowed extraneous plants, their quantity, their location wrt the chosen plants; type of cultivation (e.g., open field, greenhouse); type and conditions of soil; preferred environmental features (climate; lighting conditions; wind; rain; presence of water on the ground; ...).

service type:

test design

sector:

arable farming, horticulture, viticulture

delivered to TEF:

design/documentation, other (including: nothing)

location:

at user's premises, in Poland

provider:

L-PIT

lukasz.lowinski@pit.lukasiewicz.gov.pl

PL_0009 Test design: definition of the test protocol

Description: Items to be defined include: phases composing the testing protocol; operations to be executed for each phase; number and qualification of personnel involved in each phase; duration of each phase; distribution of testing operations over time (times of the day); distribution of testing operations over time (times of the year); acceptable and desired variation range for each item of the environment; acceptable and desired variation range for each item of the timing; number of test repetitions required and their distribution over the variation ranges.

service type:

test design

sector:

arable farming, horticulture, viticulture

delivered to TEF:

design/documentation, other (including: nothing)

location:

at user's premises, in Poland

provider:

L-PIT

lukasz.lowinski@pit.lukasiewicz.gov.pl

PL_0010 Test design: definition of the test evaluation

Description: Items to be defined are the quantitative and/or qualitative performance metrics (which in turn pose requirements on input data and ground truth) to be applied to test results.

service type:

test design

sector:

arable farming, horticulture, viticulture

delivered to TEF:

design/documentation, other (including: nothing)

location:

at user's premises, in Poland

provider:

L-PIT

lukasz.lowinski@pit.lukasiewicz.gov.pl

PL_0011 Desk assessment activities

Description: Matching between designed experimental requirements and features of the system under test

service type:

desk assessment

sector:

arable farming, horticulture, viticulture

delivered to TEF:

design/documentation

location:

at user's premises, in Poland

provider:

L-PIT

lukasz.lowinski@pit.lukasiewicz.gov.pl

PL_0012 Testbed preparation

Description: soil preparation; seed/plant procurement; seeding/planting; plant growth management + Preparation of technical infrastructure supporting the tests

service type:

test setup

sector:

arable farming, horticulture, viticulture

delivered to TEF:

design/documentation, other (including: nothing)

location:

in Poland

provider:

L-PIT

lukasz.lowinski@pit.lukasiewicz.gov.pl

PL_0013 Support for interconnection of the system under test to agrifoodTEF's technical infrastructure

Description:Base integration for conducting tests through the main infrastructure + additional components (e.g., developing a data collection node in ROS)

service type:

test setup

sector:

arable farming, horticulture, viticulture

delivered to TEF:

physical system (possibly including software), software

location:

in Poland

provider:

L-PIT

lukasz.lowinski@pit.lukasiewicz.gov.pl

PL_0014 Test execution services

Description:General support during execution of tests by the system under test (e.g., monitoring activities to ensure compliance to protocol)

Technical support during execution of tests by the system under test (e.g., ensuring that the necessary processes on the system under test are correctly configured and running)

Management of technical infrastructure during execution of the tests by the system under test, including verification of data exchange between system under test and infrastructure

Employment of external agricultural machinery (e.g., tractor) and personnel (e.g., tractor driver) in order to allow the system under test to execute the tests

service type:

test execution

sector:

arable farming, horticulture, viticulture

delivered to TEF:

physical system (possibly including software), software

location:

in Poland

provider:

L-PIT

lukasz.lowinski@pit.lukasiewicz.gov.pl

PL_0015 Data collection services

Description:Collection of data generated by the system under test

Collection of data generated by agrifoodTEF's technical infrastructure (e.g., IoT sensors deployed in the field)

Collection of ground truth data

Curation of the documentation accompanying the collected data (e.g., description of logged features, information for test reproducibility)

service type:

collection of test data, provision of datasets

sector:

arable farming, horticulture, viticulture

delivered to TEF:

physical system (possibly including software), software

location:

in Poland

provider:

L-PIT

lukasz.lowinski@pit.lukasiewicz.gov.pl

PL_0016 Performance evaluation services

Description:Application of performance metrics (previously defined) to test data and ground truth data (previously collected)

service type:

performance evaluation

sector:

arable farming, horticulture, viticulture

delivered to TEF:

data

location:

at user's premises, in Poland

provider:

L-PIT

lukasz.lowinski@pit.lukasiewicz.gov.pl

PL_0017 Data validation and processing services

Description:Validation of collected datasets (e.g., check for presence of all datastreams, check for drop-outs, check for focus or exposure of camera images)

Preparation for performance evaluation (e.g., formatting; identification of the images containing selected visual markers; association between images from the system under test and the ground truth)

service type:

data augmentation, data analysis

sector:

arable farming, horticulture, viticulture

delivered to TEF:

data

location:

at user's premises, in Poland

provider:

L-PIT

lukasz.lowinski@pit.lukasiewicz.gov.pl

PL_0018 LCA assessment

Description:Life Cycle Assessment of system under test

service type:

LCA assessment

sector:

arable farming, horticulture, viticulture

delivered to TEF:

physical system (possibly including software),
design/documentation

location:

in Poland

provider:

L-PIT

lukasz.lowinski@pit.lukasiewicz.gov.pl

FR_0001 Evaluation of Smart Perception Systems for Precision Farming

Description:Provision of real-time sensor data to enable the evaluation of AI systems in real operating vineyard conditions

service type:

desk assessment, provision of datasets

sector:

viticulture

delivered to TEF:

physical system (possibly including software), software,
design/documentation, other (including: nothing)

location:

in France

provider:

FR_0002 ARPA1 TEST about Safety & agricultural robots (Agricultural Robotic Performance Assessment)

Description:ARPA 1 : Performance Test of Safety Devices in Openfield with ISO reference obstacles

service type:

certification, conformity assessment

sector:

arable farming, livestock Farming

delivered to TEF:

physical system (possibly including software)

location:

in France

provider:

INRAE-TSCF-AgroTechnoPôle-with

SHERPA-Enginnering Partner under the status of
AgroTechnoPôle OPERATOR test

FR_0003 ARPA2 TEST about Safety & agricultural robots (Agricultural Robotic Performance Assessment)

Description:ARPA 2 : Performance Test of perception systems in harsh environmental working conditions (fog, rain, night conditions)

service type:

certification, conformity assessment

sector:

arable farming, livestock Farming

delivered to TEF:

physical system (possibly including software)

location:

in France

provider:

INRAE-TSCF-AgroTechnoPôle-with its CEREMA Partner
under the status of AgroTechnoPôle OPERATOR test

FR_0004 ARP3 TEST about Safety & agricultural robots (Agricultural Robotic Performance Assessment)

Description:ARPA 3 : Performance Test of Safety Devices about (physical or virtual) geocencing devices

service type:

certification, conformity assessment

sector:

arable farming

delivered to TEF:

physical system (possibly including software)

location:

in France

provider:

INRAE-TSCF-AgroTechnoPôle-with

SHERPA-Enginnering Partner under the status of
AgroTechnoPôle OPERATOR test

FR_0005 ARPA4 TEST about Safety & agricultural robots (Agricultural Robotic Performance Assessment)

Description:ARPA 4 : Performance Test of Safety Devices in agricultural environments (structured environment with artificial rows and (child or adults) dummy in diffined positions)

service type:

certification, conformity assessment

sector:

arable farming

delivered to TEF:

physical system (possibly including software)

location:

in France

provider:

INRAE-TSCF-AgroTechnoPôle-with

SHERPA-Enginnering Partner under the status of

AgroTechnoPôle OPERATOR test

FR_0006 Virtual ARPA test - Level 1 : Exploitation of news tools for generation of Synthetic realistic data sets to test AI systems based on camera sensors - Application to ARPA4

Description:Generation of huge simulated realistic scenes representative of various working conditions from one original images (2D OR 3D, static OR Dynamic).

Exploitation :

(i/ for leraning phase of IA Systems)

ii/ for testing effeiciency of AI Systems

service type:

certification, conformity assessment

sector:

arable farming

delivered to TEF:

software, physical system (possibly including software)

location:

in France

provider:

INRAE-TSCF-AgroTechnoPôle-with

SHERPA-Enginnering Partner

FR_0007 Vitula ARPA test - Level 2 : Exploitation of Digital twins for virtual test activities about safety and other robotic performances assessments

Description:Development in progress of a complementary digital twin for safety tests of agricultural robots

service type:

certification, conformity assessment

sector:

arable farming

delivered to TEF:

physical system (possibly including software), software

location:

in France

provider:

INRAE-TSCF-AgroTechnoPôle-with

SHERPA-Enginnering Partner

FR_0008 Characterization of Smart systems for weed destruction

Description:Development in progress of a bench able to evaluate :

i/ All Perception/Decision modules

ii/ all Perception/Decision/Action Modules

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

arable farming

delivered to TEF:

physical system (possibly including software), software

location:

in France

provider:

INRAE-TSCF-AgroTechnoPôle

FR_0009 Virtual weeding solution test - Level 1 : Exploitation of news tools for generation of Synthetic realistic data sets to test AI systems based on camera sensors - Application to weed destruction systems evaluation

Description:Generation of huge simulated realistic scenes representative of various working conditions from one original images (2D OR 3D, static OR Dynamic).

Exploitation :

(i/ for learning phase of IA Systems)

ii/ for testing efficiency of AI Systems

service type:

test design, test execution, test setup, collection of test data, performance evaluation, provision of datasets, data augmentation

sector:

arable farming

delivered to TEF:

software, other (including: nothing)

location:

in France

provider:

INRAE-TSCF-AgroTechnoPôle-with
SHERPA-Engineering Partner

its

FR_0010 Evaluation of Automatic Machines and Agricultural robots

Description:Physical tests (ARPA1, ARPA2, ARPA 3, ARPA4) of IA (or classical) safety devices embedded on robots in accordance with ISO 18487 standard and International OECD in progress

service type:

test design, test setup, test execution, collection of test data, performance evaluation, conformity assessment

sector:

arable farming

delivered to TEF:

physical system (possibly including software)

location:

in France

provider:

INRAE-TSCF-

FR_0011 Evaluation of Automatic Machines and Agricultural robots

Description:Physical tests for performance qualification of IA (or classical) Perception/Control/Command systems in flat and slope areas controlled conditions and with high dynamic localisation reference measurement system

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

arable farming

delivered to TEF:

physical system (possibly including software)

location:

in France

provider:

INRAE-TSCF-

FR_0012 Evaluation of Automatic Machines and Agricultural robots

Description:Physical tests of small and medium robotic machines working in platooning / cooperating modes under IA (or classical) control system

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

arable farming

delivered to TEF:

physical system (possibly including software)

location:

in France

provider:

INRAE-TSCF-

FR_0013 Evaluation of Automatic Machines and Agricultural robots

Description:Physical tests of smart tyre / caterpillar with soil interactions (moisture, % clay, etc) integrating IA (or classical) management systems

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

arable farming

delivered to TEF:

physical system (possibly including software)

location:

in France

provider:

INRAE-TSCF-

FR_0014 AI performance evaluation based on physical testing environments

Description: Testing of devices that embed AI module(s) in their command system - focus on performance (and performance for safety). Test performed in laboratory conditions for optimal reproducibility and repeatability.

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

arable farming, horticulture, tree crops, viticulture, livestock Farming, food processing

delivered to TEF:

physical system (possibly including software)

location:

in France

provider:

LNE

agnes.delaborde@lne.fr

FR_0015 Evaluation of the efficiency of the hardware associated with the AI functionality

Description: Testing of devices that embed AI module(s) in their command system - focus on energy consumption efficiency. Test performed in laboratory conditions for optimal reproducibility and repeatability. Tests may concern the energy efficiency of SLAM, various types of end effectors, etc.

service type:

test design, test setup, test execution, collection of test data, performance evaluation

sector:

arable farming, horticulture, tree crops, viticulture, livestock Farming, food processing

delivered to TEF:

physical system (possibly including software)

location:

in France

provider:

LNE

agnes.delaborde@lne.fr

FR_0016 Dataset provision for weed detection

Description: Provision of data set of plant/weed pictures for weed detection

service type:

provision of datasets

sector:

arable farming

delivered to TEF:

other (including: nothing)

location:

in France

provider:

LNE

agnes.delaborde@lne.fr

FR_0017 Automatic machines and Agricultural robots

Description:virtual testing: New Safety function tests (ARPA 1 anti-collision and ARPA 3 geofencing)

service type:

conformity assessment

sector:

arable farming

delivered to TEF:

software, physical system (possibly including software)

location:

in France

provider:

LNE

agnes.delaborde@lne.fr

FR_0018 Automatic machines and Agricultural robots

Description:virtual testing: Performance qualification (mobility, energy, etc.)

service type:

performance evaluation

sector:

arable farming

delivered to TEF:

physical system (possibly including software), software

location:

in France

provider:

LNE

agnes.delaborde@lne.fr

FR_0019 Automatic machines and Agricultural robots

Description:virtual testing: High-level supervision tasks (homogeneous and heterogeneous robots cooperation, communication links, etc.)

service type:

performance evaluation

sector:

arable farming

delivered to TEF:

physical system (possibly including software), software

location:

in France

provider:

LNE

agnes.delaborde@lne.fr

FR_0020 Automatic machines and Agricultural robots

Description:virtual testing: Advanced tools (remote monitoring, database creation for deep learning phase of AI systems, preventive maintenance)

service type:

performance evaluation

sector:

arable farming

delivered to TEF:

physical system (possibly including software), software

location:

in France

provider:

LNE

agnes.delaborde@lne.fr

FR_0021 Dataset provision - general

Description:Provision of data set for testing or training (various media and content)

service type:

provision of datasets

sector:

arable farming, horticulture, tree crops, viticulture, livestock

Farming, food processing

delivered to TEF:

other (including: nothing)

location:

in France

provider:

LNE

agnes.delaborde@lne.fr

FR_0022 Dataset quality assessment

Description:Assessment of the quality of a given dataset (to be used for training or testing of an AI system)

service type:

data analysis

sector:

arable farming, horticulture, tree crops, viticulture, livestock

Farming, food processing

delivered to TEF:

data

location:

in France

provider:

LNE

agnes.delaborde@lne.fr

FR_0023 AI performance evaluation based on testing datasets

Description:Tests of AI software module based on a datasets. The test consists in comparing the outputs of the system with a dataset of reference values.

service type:

performance evaluation

sector:

arable farming, horticulture, tree crops, viticulture, livestock

Farming, food processing

delivered to TEF:

software

location:

in France

provider:

LNE

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FR_0024 Automatic machines and Agricultural robots

Description:Provision of learning and testing datasets for experimentation and evaluation of AI technologies in viticulture: Image datasets for the autonomous detection of disease (mildew) and health/vigor/water status of vines

service type:

provision of datasets

sector:

viticulture

delivered to TEF:

other (including: nothing)

location:

in France

provider:

LNE

agnes.delaborde@lne.fr

FR_0025 Automatic machines and Agricultural robots

Description:Provision of learning and testing datasets for experimentation and evaluation of AI technologies in viticulture: Image datasets for the autonomous detection of weeds

service type:

provision of datasets

sector:

viticulture

delivered to TEF:

other (including: nothing)

location:

in France

provider:

LNE

agnes.delaborde@lne.fr

FR_0026 Automatic machines and Agricultural robots

Description:Provision of learning and testing datasets for experimentation and evaluation of AI technologies in viticulture: Meteorological sensors datasets

service type:

provision of datasets

sector:

viticulture

delivered to TEF:

other (including: nothing)

location:

in France

provider:

LNE

agnes.delaborde@lne.fr

FR_0027 AI performance evaluation based on mixed testing environments

Description:Evaluation of AI embedded in physical devices (e.g. robot with smart camera) in a semi-simulated environment.

service type:

performance evaluation

sector:

arable farming, horticulture, tree crops, viticulture, livestock

Farming, food processing

delivered to TEF:

software

location:

in France

provider:

LNE

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FR_0028 AI robustness evaluation based on testing datasets

Description:Evaluation of the robustness of the AI software module, i.e. its capacity to present the right outputs in all foreseeable normal conditions of operation

service type:

performance evaluation

sector:

arable farming, horticulture, tree crops, viticulture, livestock

Farming, food processing

delivered to TEF:

software

location:

in France

provider:

LNE

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FR_0029 AI resilience evaluation

Description:Evaluation of the resilience of the AI software module, i.e. its capacity to present adapted outputs in all foreseeable anomalous conditions of operation

service type:

performance evaluation

sector:

arable farming, horticulture, tree crops, viticulture, livestock

Farming, food processing

delivered to TEF:

software

location:

in France

provider:

LNE

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FR_0030 AI explainability evaluation

Description:Evaluation of the explainability of AI solutions.

service type:

performance evaluation

sector:

arable farming, horticulture, tree crops, viticulture, livestock

Farming, food processing

delivered to TEF:

software

location:

in France

provider:

LNE

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FR_0031 AI processes certification

Description:Voluntary certification of AI processes (design, development, evaluation, maintenance in operational condition)

service type:

certification, certification

sector:

arable farming, horticulture, tree crops, viticulture, livestock

Farming, food processing

delivered to TEF:

software

location:

in France

provider:

LNE

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FR_0032 Provision of datasets for AI training

Description:Provision of structured and well described datasets.

service type:

provision of datasets

sector:

livestock Farming

delivered to TEF:

other (including: nothing)

location:

in France

provider:

Idele, CA PDL

FR_0033 Livestock expertise

Description:give support on key elements to consider for good data collection on livestock for AI purposes

service type:

desk assessment

sector:

livestock Farming

delivered to TEF:

other (including: nothing)

location:

in France

provider:

Idele, CA PDL

FR_0034 data labeling

Description:give support on data labeling

service type:

data augmentation

sector:

livestock Farming

delivered to TEF:

other (including: nothing)

location:

in France

provider:

Idele, CA PDL

FR_0035 Data analysis

Description:give support on data analysis

service type:

data analysis

sector:

livestock Farming

delivered to TEF:

data

location:

in France

provider:

Idele

FR_0036 Provision of datasets for AI training

Description:On demand, collection of relevant RGB images depending on the object to detect (mildew spots on different vine varieties, at different stages, with different light conditions, specific weeds)

service type:

provision of datasets

sector:

viticulture

delivered to TEF:

other (including: nothing)

location:

in France

provider:

IFV

FR_0037 Viticulture expertise

Description:give support on key elements to consider for good data collection in viticulture for AI puposes

service type:

desk assessment

sector:

viticulture

delivered to TEF:

other (including: nothing)

location:

in France

provider:

IFV

FR_0038 data labeling

Description:give support on data labeling

service type:

data augmentation

sector:

viticulture

delivered to TEF:

data

location:

in France

provider:

IFV

FR_0039 Data analysis

Description:helps to validate the outcomes of an AI solution

service type:

data analysis

sector:

viticulture

delivered to TEF:

data

location:

in France

provider:

IFV

IT_0001 Test design: definition of the test environment

Description:Items to be defined include: crops; weeds; growth stage for each; allowed extraneous plants, their quantity, their location wrt the chosen plants; type of cultivation (e.g., open field, greenhouse); type and conditions of soil; preferred environmental features (climate; lighting conditions; wind; rain; presence of water on the ground; ...).

service type:

test design

sector:

arable farming, horticulture, viticulture

delivered to TEF:

design/documentation, other (including: nothing)

location:

at user's premises, in Italy

provider:

POLIMI, UNIMI

giulio.fontana@polimi.it,

agnese.chiatti@polimi.it,

davide.facchinetti@unimi.it

IT_0002 Test design: definition of the test protocol

Description: Items to be defined include: phases composing the testing protocol; operations to be executed for each phase; number and qualification of personnel involved in each phase; duration of each phase; distribution of testing operations over time (times of the day); distribution of testing operations over time (times of the year); acceptable and desired variation range for each item of the environment; acceptable and desired variation range for each item of the timing; number of test repetitions required and their distribution over the variation ranges.

service type:

test design

sector:

arable farming, horticulture, viticulture

delivered to TEF:

design/documentation, other (including: nothing)

location:

at user's premises, in Italy

provider:

POLIMI, UNIMI

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agnese.chiatti@polimi.it,

davide.facchinetti@unimi.it

IT_0003 Test design: definition of the test evaluation

Description: Items to be defined are the quantitative and/or qualitative performance metrics (which in turn pose requirements on input data and ground truth) to be applied to test results.

service type:

test design

sector:

arable farming, horticulture, viticulture

delivered to TEF:

design/documentation, other (including: nothing)

location:

at user's premises, in Italy

provider:

POLIMI, UNIMI

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agnese.chiatti@polimi.it,

davide.facchinetti@unimi.it

IT_0004 Desk assessment activities

Description: Matching between designed experimental requirements and features of the system under test

service type:

desk assessment

sector:

arable farming, horticulture, viticulture

delivered to TEF:

design/documentation

location:

at user's premises, in Italy

provider:

POLIMI, UNIMI

giulio.fontana@polimi.it,

agnese.chiatti@polimi.it,

davide.facchinetti@unimi.it

IT_0005 Testbed preparation

Description:soil preparation; seed/plant procurement; seeding/planting; plant growth management + Preparation of technical infrastructure supporting the tests

service type:

test setup

sector:

arable farming, horticulture, viticulture

delivered to TEF:

design/documentation, other (including: nothing)

location:

in Italy

provider:

POLIMI, UNIMI

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agnese.chiatti@polimi.it,

davide.facchinetti@unimi.it

IT_0006 Support for interconnection of the system under test to agrifoodTEF's technical infrastructure

Description:Base integration for conducting tests through the main infrastructure + additional components (e.g., developing a data collection node in ROS)

service type:

test setup

sector:

arable farming, horticulture, viticulture

delivered to TEF:

physical system (possibly including software), software

location:

in Italy

provider:

POLIMI, UNIMI

giulio.fontana@polimi.it,

agnese.chiatti@polimi.it,

davide.facchinetti@unimi.it

IT_0007 Test execution services

Description:General support during execution of tests by the system under test (e.g., monitoring activities to ensure compliance to protocol)

Technical support during execution of tests by the system under test (e.g., ensuring that the necessary processes on the system under test are correctly configured and running)

Management of technical infrastructure during execution of the tests by the system under test, including verification of data exchange between system under test and infrastructure

Employment of external agricultural machinery (e.g., tractor) and personnel (e.g., tractor driver) in order to allow the system under test to execute the tests

service type:

test execution

sector:

arable farming, horticulture, viticulture

delivered to TEF:

physical system (possibly including software), software

location:

in Italy

provider:

POLIMI, UNIMI

giulio.fontana@polimi.it,

agnese.chiatti@polimi.it,

davide.facchinetti@unimi.it

IT_0008 Data collection services

Description: Collection of data generated by the system under test
 Collection of data generated by agrifoodTEF's technical infrastructure (e.g., IoT sensors deployed in the field)
 Collection of ground truth data
 Curation of the documentation accompanying the collected data (e.g., description of logged features, information for test reproducibility)

service type:

collection of test data, provision of datasets

sector:

arable farming, horticulture, viticulture

delivered to TEF:

physical system (possibly including software), software

location:

in Italy

provider:

POLIMI, UNIMI

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davide.facchinetti@unimi.it

IT_0009 Performance evaluation services

Description: Application of performance metrics (previously defined) to test data and ground truth data (previously collected)

service type:

performance evaluation

sector:

arable farming, horticulture, viticulture

delivered to TEF:

data

location:

at user's premises, in Italy

provider:

POLIMI, UNIMI

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davide.facchinetti@unimi.it

IT_0010 Data validation and processing services

Description: Validation of collected datasets (e.g., check for presence of all datastreams, check for drop-outs, check for focus or exposure of camera images)
 Preparation for performance evaluation (e.g., formatting; identification of the images containing selected visual markers; association between images from the system under test and the ground truth)

service type:

data augmentation, data analysis

sector:

arable farming, horticulture, viticulture

delivered to TEF:

data

location:

at user's premises, in Italy

provider:

POLIMI, UNIMI

giulio.fontana@polimi.it,

agnese.chiatti@polimi.it,

davide.facchinetti@unimi.it

IT_0011 LCA assessment

Description:Life Cycle Assessment of system under test

service type:

LCA assessment

sector:

arable farming, horticulture, viticulture

delivered to TEF:

physical system (possibly including software),
design/documentation

location:

in Italy

provider:

POLIMI, UNIMI

giulio.fontana@polimi.it,

agnese.chiatti@polimi.it,

davide.facchinetti@unimi.it

IT_0012 Training services

Description:Training in preparation to the use of other AgrifoodTEF services provided by the Node

service type:

training

sector:

arable farming, horticulture, viticulture

delivered to TEF:

design/documentation, other (including: nothing)

location:

at user's premises, in Italy

provider:

POLIMI, UNIMI

giulio.fontana@polimi.it,

agnese.chiatti@polimi.it,

davide.facchinetti@unimi.it

IT_0013 Co-designing tools, e.g., image analysis tool for quantitative field phenotyping (phenology, crop production)

Description:Field testing of IoT prototypes to monitor both fruit and crop development

service type:

Image analysis, ground-truth data (i.e. fruit counting, dimensions, et.)

sector:

tree crops

delivered to TEF:

physical system (possibly including software)

location:

in Italy

provider:

FEM

IT_0014 Testing of sensor technology (irrigation scheduling)

Description:Field testing of IoT prototypes to monitor soil features and comparison to research-grade sensors

service type:

collection of test data, desk assessment, conformity assessment

sector:

tree crops

delivered to TEF:

physical system (possibly including software)

location:

in Italy

provider:

FEM

IT_0015 Testing of proximal sensing technology (spectral indices)

Description:Field testing of proximal sensing technologies onboard of mobile systems (i.e. UAV, robots) for the assessment of plant physiology traits

service type:

collection of test data, desk assessment, conformity assessment

sector:

tree crops

delivered to TEF:

physical system (possibly including software)

location:

in Italy

provider:

FEM

IT_0016 Testing of remote sensing technology (spectral indices)

Description:Field testing of remote sensing technologies (i.e. MODIS, Sentinel data) for the assessment of plant physiology traits (canopy temperature, vigour)

service type:

collection of test data, desk assessment, conformity assessment

sector:

tree crops

delivered to TEF:

physical system (possibly including software)

location:

in Italy

provider:

FEM

IT_0017 Test design and ad-hoc mobile monitoring services

Description:Design and implementation of ad-hoc mobile monitoring services, test environment characterisation and measurements

service type:

test design

sector:

tree crops, livestock farming

delivered to TEF:

physical system (possibly including software)

location:

at user's premises, in Italy

provider:

FBK

rgiaffreda@fbk.eu

IT_0018 Hardware suitability assessment

Description: Testing and field validation of hardware used for running AI algorithms, energy efficiency for battery powered hardware, realtime processing assessment

service type:

test execution

sector:

tree crops

delivered to TEF:

design/documentation

location:

in Italy

provider:

FBK

rgiaffreda@fbk.eu

IT_0019 AI algorithms analysis and benchmarking

Description: Memory and computing power footprint assessment, efficiency and selection of most performing solutions

service type:

performance evaluation

sector:

tree crops, livestock farming

delivered to TEF:

software

location:

digital service

provider:

FBK

rgiaffreda@fbk.eu

IT_0020 Data interoperability assessment

Description: Analysis of collected data and opportunities for valorisation assessment, valorisation of experimentation data assets

service type:

data analysis

sector:

arable farming, tree crops

delivered to TEF:

design/documentation, other (including: nothing)

location:

digital service

provider:

FBK

rgiaffreda@fbk.eu

NL_0001 Co-design of Robotic and AI systems and components for arable farming solutions

Description: Field testing of sensors, decision support and robotics on arable farms that meet agro-ecological F2F criteria. Locations are Lelystad, Valthermond, Westmaas and Vredepeel.

service type:

test setup, collection of test data, test execution, provision of datasets, performance evaluation

sector:

arable farming

delivered to TEF:

physical system (possibly including software), data, design/documentation, software

location:

in the Netherlands

provider:

WUR (Farm of The Future)

ard.nieuwenhuizen@wur.nl, koen.vanboheemen@wur.nl, bram.veldhuisen@wur.nl

NL_0002 Test, validation and data collection of Robotic and AI systems and components for arable farming solutions

Description:Test, validation and data collection of Robotic and AI systems and components for arable farming solutions on the Farms of the Future, including collecting ground truth data sets

service type:

test setup, collection of test data, test execution, provision of datasets, performance evaluation

sector:

arable farming

delivered to TEF:

physical system (possibly including software), data, design/documentation, software

location:

in the Netherlands

provider:

WUR (Farm of The Future)

johan.booiij@wur.nl, pieter.dewolf@wur.nl

NL_0003 Business Model and Market development support for Robotic and AI solutions in arable farming

Description:Advice on business and marketing aspects of high tech solutions in agrifood chains

service type:

business modeling

sector:

arable farming

delivered to TEF:

other (including: nothing)

location:

in the Netherlands

provider:

WUR (WEcR)

george.beers@wur.nl

NL_0004 Co-design of Robotic and AI systems and components for livestock farming solutions

Description:Field testing of sensors, decision support and robotics on dairy farms that meet agro-ecological F2F criteria. Locations are Hengelo and Leeuwarden.

service type:

test setup, collection of test data, test execution, provision of datasets, performance evaluation

sector:

livestock Farming

delivered to TEF:

physical system (possibly including software), data, software

location:

in the Netherlands

provider:

WUR (De Marke)

elles.tewinkel@wur.nl

NL_0005 Test, validation and data collection of Robotic and AI systems and components for livestock farming solutions on Farm of the Future

Description: Test, validation and data collection of Robotic and AI systems and components for livestock farming solutions on the Farms of the Future (De Marke), including collecting ground truth data sets

service type:

test setup, collection of test data, test execution, provision of datasets, performance evaluation

sector:

livestock Farming, livestock Farming

delivered to TEF:

physical system (possibly including software), data, design/documentation, software

location:

in the Netherlands

provider:

WUR (De Marke)

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NL_0006 Business Model and Market development support for Robotic and AI solutions in arable farming

Description: Advice on business and marketing aspects of high tech solutions in agrifood chains

service type:

business modeling

sector:

arable farming

delivered to TEF:

other (including: nothing)

location:

in the Netherlands

provider:

WUR (Farm of The Future)

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NL_0007 Provision of specific and long term data sets for arable and livestock farming data from the Farm of the Future experimental farms

Description: Data sets are available for development or validation of AI algorithms.

service type:

provision of datasets, collection of test data, performance evaluation

sector:

arable farming, livestock Farming

delivered to TEF:

data

location:

in the Netherlands

provider:

WUR (Farm of The Future)

andries.vandermeer@wur.nl elles.tewinkel@wur.nl

NL_0008 Data analysys support for specific and long term data sets for arable and livestock farming data sets

Description:Advice is available for analysis of large and multiple sources data sets.

service type:

data analysis

sector:

arable farming, livestock Farming

delivered to TEF:

other (including: nothing)

location:

in the Netherlands, at user's premises

provider:

WUR (Farm of The Future)

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NL_0009 Fenotyping support for AI and robotic based plant and livestock data handling and modelling (outdoor + indoor)

Description:Data collection on growth of plants under controlled conditions to assess specific plant properties. Location Wageningen, NL

service type:

performance evaluation, provision of datasets, data

analysis

sector:

arable farming, livestock Farming

delivered to TEF:

data, software, other (including: nothing)

location:

in the Netherlands

provider:

WUR

rick.vandezedde@wur.nl

NL_0010 R&D support AI development and robotics crops, livestock and post harvest

Description:Advice and hands on support for development of algorithms for detection of plant properties and precision actuation. AgroFoodRobotics of WUR.

service type:

desk assessment, performance evaluation

sector:

arable farming, livestock Farming

delivered to TEF:

design/documentation, data, other (including: nothing)

location:

in the Netherlands

provider:

WUR

rick.vandezedde@wur.nl

NL_0011 Provision of Farmmaps platform to support Precision farming and KPI accounting data services

Description: Access to farm data within code of conduct farm data use via global WUR platform www.farmmaps.eu, with access to open data and farming data.

service type:

test execution, performance evaluation

sector:

arable farming, livestock Farming

delivered to TEF:

data, design/documentation, software, other (including: nothing)

location:

in the Netherlands

provider:

WUR

fedde.sijbrandij@wur.nl, info@farmmaps.eu

NL_0012 Support in using explainable AI Models (simulation, early warning, DSS) and Digital Twins for crop and livestock management

Description: Building blocks for decision support on crop management are available and accessible via API. This includes decision support on planting, fertilizer use, crop protection and irrigation.

service type:

desk assessment, test execution, performance evaluation, training

sector:

arable farming, livestock Farming

delivered to TEF:

software, data, physical system (possibly including software), other (including: nothing)

location:

in the Netherlands

provider:

WUR

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NL_0013 ELSA scan and support for AI and Robotic applications -- Ethical, Legal and Social Aspects

Description: The ELSA lab develops, tests and applies a methodology for (re)designing AI for Sustainable Food Systems (SFS). The methodology involves (a) the systematic identification and exploration of ethical, legal, and social aspects of AI in specific domains in the food sector, and (b) the co-creation with quadruple helix stakeholders of responsible and human-centred AI for SFS. This R&D ecosystem for the Dutch food system where ELSA aspects become an integral part of AI (re)design in the knowledge chain of fundamental, applied and practice-oriented R&D involving representatives from all members of society: public authorities, industry, academia, and citizens.

service type:

desk assessment, test execution, ELSA assessment, conformity assessment

sector:

arable farming, livestock Farming

delivered to TEF:

other (including: nothing)

location:

in the Netherlands

provider:

WUR (ELSA lab)

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NL_0014 Value Sensitive Design support in AI-and Robotic developments

Description:We explore ethical and societal values of potential end-users of new technology during its development. Based on this, we explore possibilities to attend to these values in the further development or design of the technology, or in the development of an implementation trajectory.

service type:

test design, desk assessment

sector:

arable farming, livestock Farming

delivered to TEF:

design/documentation, other (including: nothing)

location:

in the Netherlands, at user's premises

provider:

Wageningen Economic Research (ELSA lab)

kelly.rijswijk@wur.nl

NL_0015 Business Innovation support using the 5D model of business innovation (modelling)

Description:Wageningen Economic Research has developed a toolkit of concepts, methods and trainings to support companies in their business innovation process. One general rule is that business (model) innovation cannot be done by copying someone-else's recipe. For each company we therefore design and execute a customized approach inspired on our WUR 5D model of business innovation.

service type:

test design, ELSA assessment, training, conformity assessment

sector:

arable farming, livestock Farming

delivered to TEF:

design/documentation, other (including: nothing)

location:

in the Netherlands

provider:

WUR, Wageningen Economic Research

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NL_0016 User Acceptance Testing (UAT) of AI and robotic solutions

Description:User acceptance is reached when an end user actually uses the product and is pleased with the solution at the same time, depending on their experience with the technology. User Acceptance Testing (UAT) collects user Feedback (quantitative and/or qualitative) to assess to which extend end users accept digital technology in agri-food.

service type:

test design, ELSA assessment, desk assessment

sector:

arable farming, livestock Farming

delivered to TEF:

other (including: nothing)

location:

in the Netherlands

provider:

WUR, Wageningen Economic Research

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NL_0017 Support use of data Reference model for arable farming (standards, interoperability)

Description: To optimize information systems inside an organisation and across the food value chain, reference architectures such as RMagro, Raage and IoF2020 and Blockchain reference architectures are needed for efficient data flows. Data modelling in combination with reference models are applied in several projects at WEcR.

service type:

test setup

sector:

arable farming

delivered to TEF:

design/documentation

location:

in the Netherlands

provider:

WUR, Wageningen Economic Research

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NL_0018 Provision of Agro Data Cube platform for data handling

Description: AgroDataCube provides a large collection of both open data and derived data for use in agri-food applications and aims to become a common reference point for data rich applications in agriculture, where it has been set up with a focus on agricultural production and its environmental performance.

service type:

collection of test data, provision of datasets

sector:

arable farming, livestock Farming

delivered to TEF:

data, other (including: nothing)

location:

in the Netherlands

provider:

WUR, Wageningen Environmental Research (WEnR) &

WDCC

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NL_0019 Training for AI- and Robotic Skills and Education, MOOCs

Description: A variety of educational materials related to Data Science are offered by different organizations. In addition to online courses such as MOOCs, it is also possible to register for courses from Wageningen University & Research and (partner) institutions.

service type:

desk assessment, performance evaluation, training

sector:

arable farming, livestock Farming

delivered to TEF:

design/documentation, other (including: nothing)

location:

in the Netherlands

provider:

WUR, Wageningen Environmental Research (WEnR) &

WDCC

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