



iMETOS WorkTrack & iMETOS Beacon

Keeping your machinery and farm under full remote control



An aerial photograph of a red tractor pulling a sprayer through a lush green field. The tractor is moving away from the viewer, leaving a wide, bright white spray trail behind it. The field is divided into neat rows, and the overall scene is bathed in the warm, golden light of late afternoon or early morning.

Introduction - iMETOS WorkTrack & iMETOS Beacon

From tractors and harvesters to sprayers and mowers, there is a wide range of equipment used in farming. Agricultural machinery is complex by itself bringing a number of matters to consider for its managers like:

- productivity levels,
- traceability,
- safety of operation,
- efficient daily use of the machine
- and fuel expenditure.

Knowing that spraying was done with the right speed, timely vehicle maintenance is one of them too and, luckily, **iMETOS WorkTrack** does it automatically to facilitate all these tasks.



CHALLENGE

Keeping agricultural equipment in good condition is vital.

Losing machines due to unexpected breakdowns can cause considerable losses and complications in scheduled operations. Moreover, using paper to keep records of the fleet's scheduled maintenance is cumbersome and time-consuming.

The chance of making mistakes cannot be ruled out either what can lead to overdue maintenance, disruptions in business and unforeseen expenses. In the worst-case scenarios, the safety of drivers can also be put at risk.

Knowing the weather conditions in the field and knowing when you can again enter it or how long the working window will be is another important challenge.



SOLUTION

To avoid maintenance-related headache and making your life easier, **iMETOS WorkTrack** can offer a solution to the previously-mentioned problems. The process of fleet maintenance can be automated with the help of the iMETOS WorkTrack GPS tracking devices and automatically displayed and stored on the Fieldclimate platform.

Tracking maintenance schedules becomes trouble-free by setting reminders when the vehicles need service based on:

- **mileage,**
- **harvesting time or**
- **other parameters.**

Together with the iMETOS Beacon, which is permanently mounted on the implements and automatically paired with the closest iMETOS WorkTrack when attached for the work.

Fieldclimate will automatically know which tractor was used with which implement hence fully automatic tracking and tracing is done. Whenever the tractor is starting the data will be sent instantly to FieldClimate and information about:

- **position,**
- **working speed,**
- **which machine is on the tractor,**
- **unexpected faults**

will be sent to the manager, so they could be solved fast.

When combining the **iMETOS WorkTrack** in FieldClimate with local weather forecast data and even soil characteristics the solution becomes even stronger as you can plan when to enter the field with your machinery. METOS® weather stations deliver the local soil and weather data.

How do they work together?

The fast connection between the two:

- maximises the efficiency of your workforce
- provides completely transparent fleet tracking

You can connect up to 20 **iMETOS Beacons** to one **iMETOS WorkTrack** without worrying about running out of data storage in FieldClimate.

You simply mount the **iMETOS WorkTrack** on your tractor and each **iMETOS Beacon** to the device, vehicle or any other machine you want tracking.



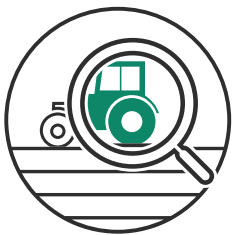
iMETOS Beacon - small yet efficient

1 iMETOS WorkTrack = up to 20 Beacons





Key Benefits



MONITOR:

- machinery usage
- work quality
- machinery location



SAVE MONEY:

- on services
- on equipment
- on supplies



TAKE ADVANTAGE:

- Plan your work
- ROI in hours not days
- Rent with confidence



REAL TIME SMS ALERTS:

- Crash, roll, harsh braking, harsh cornering
- Enter or leave designated geo zone
- Overspeeding

Use Cases

1. MISSED ROW

- You can see from the data if any rows were missed out
- You can connect the data from the tracker with the actual results on the field and can check the possible reason for lower yield

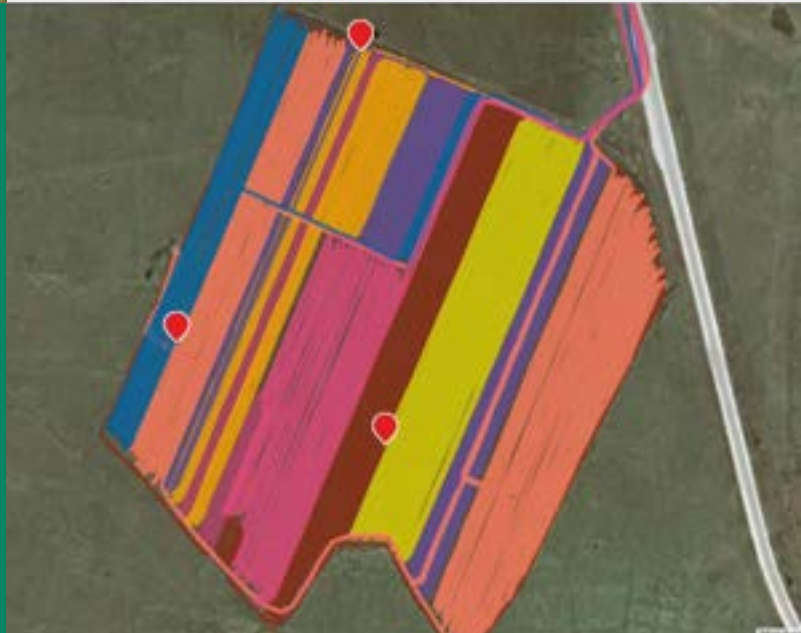


2. RENTING MACHINES

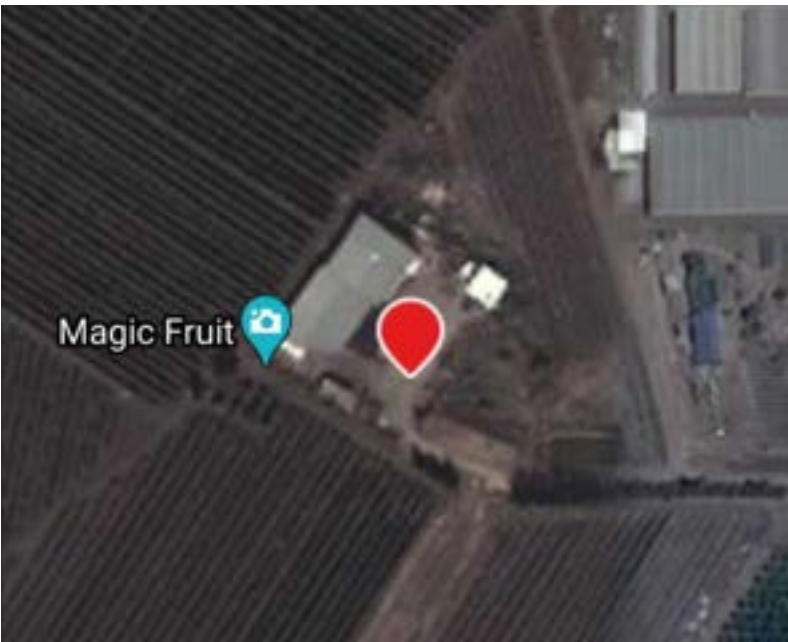
- You want to know where your machine is, how it is used and if it is abused
- You get the report on how many hours the machinery was operating
- You can get a sms warning if a crash was detected

3. WORK PLANNING

- You can plan which part of the field you want to cultivate based on the workforce availability and data from the weather station
- With precision localized weather forecast you can plan when is the best time to work on the field based on the upcoming weather conditions



Use Cases



4. KNOW WHERE YOUR EQUIPMENT IS

- With an overview on the FieldClimate map, you can easily see where each machine reported the last GPS position and in what state it is (moving, not moving...)
- It's possible to see if the work is carried out on the agreed field or if the operator is using the machinery elsewhere

5. WORK EXECUTION

- Make sure the agreed work was carried out in the best possible way. No more questions if the complete field was cultivated, if the driver only did 1/3 of agreed job and overslept the other 2/3
- Applying any kind of chemical to the field takes time. Make sure that the driver did not drive too fast over the field - to fast => chemical not applied correctly => loss of money (for the material, for the workforce, for the machinery usage)



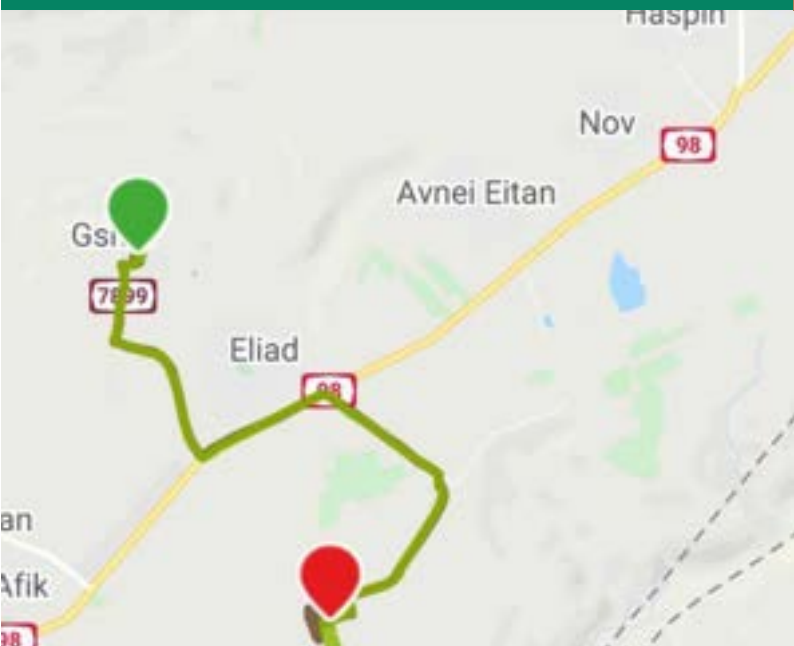
6. MACHINERY MAINTENANCE

- Detailed data reported from the tracker give you an overview of how much a specific machinery was used (operation hours, driven distance, speed...) and you can plan predictive maintenance in order to avoid future breakdowns

Use Cases

7. MACHINERY AVAILABILITY

- You can see where your machineries are, if they are in usage or if they are stationary and available to be used



8. MACHINERY USAGE

- iMETOS WorkTrack allows you to use additional features such as alerts for overspeeding, harsh acceleration, harsh cornering, roll... from this data, you can identify how the machinery was operated with

9. ALL INFORMATION IN REAL TIME, ON DEMAND, VIA SMS REQUEST

- Get an sms alert when the machinery exits specific geolocation
- Send a simple SMS to the tracker to get the current position



Why Pessl Instruments iMETOS WorkTrack?

- Can be fitted to any machinery with **12V power source**
- **Integrated into FieldClimate** and to other most used platforms (MyJohnDeere)
- Turn your “non smart” machinery to “smart” machinery and **take advantage of the delivered information**
- Very **quick ROI** (can be measured in hours not days or weeks)
- **Connected with other Pessl Instrument services** (don't go to the field if there is 90% chance of rain in next hours - don't get stuck in the mud, every equipment which is stuck and not used for work is a loss)
- Get **support from our local dealers**
- **Easy to install**
- **Small and versatile**
- Costs nothing compared to what you get from it

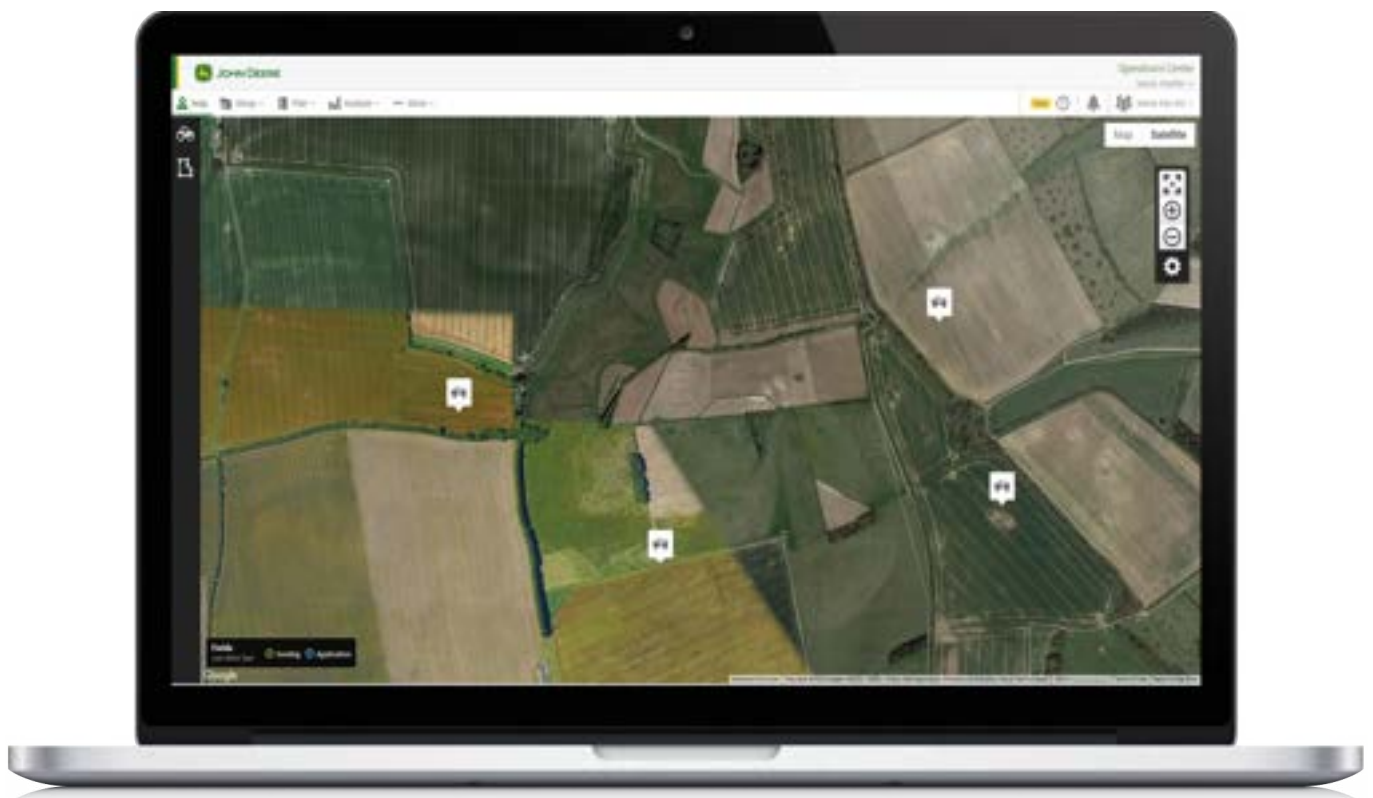


Additional Pessl Instruments iMETOS WorkTrack Services:

The integration among FieldClimate, weather stations & data loggers, those of Pessl Instruments or any other vendor, with various smart-Agri solutions is easy and directly provides farmers with actionable tools, helping them ease the farm management processes, save resources, avoid costly errors and earn the most out of their hard work.

John Deere Operations Center portal can display your **iMETOS WorkTrack** and **iMETOS Beacon** information seamlessly. Simply grant your John Deere account to receive data updates from selected devices. The latest sensor data can then be visualized by members of the selected John Deere organization at any time. The access grant can be revoked and synced devices can be activated and deactivated at any time.

- Automatically retrieve your tracker data through our API system
- FieldClimate, iMETOS WorkTrack and iMETOS Beacons are connected with other John Deere Operations Center seamlessly (no vendor lock in)



Technical specifications

iMETOS WorkTrack

Connectivity	LTE & 2G module for multi-regional use; Cat M1/NB1 deployed bands: 2, 3, 4, 5, 8, 12, 13, 20, 26*, 28*; EGPRS quad-band, 850/900/1800/1900 MHz (* roaming bands) with internal high gain antenna
GNSS	GPS, GLONASS, GALILEO, BEIDOU, accuracy < 3m, internal high gain GNSS antenna
Housing	UV resistant polycarbonate plastic (Protection class IP67)
Power	(+6...+30) V DC via car power plug or with internal capacitor with solar panel
Communication	It uses UDP protocol for data delivery to FieldClimate platform
Dimensions	72,5 x 73 x 27 mm

- All trackers data integrated with Field functionality of the FieldClimate platform
- In combination with **iMETOS Beacon** easily identify how the add-ons (plows, trailers...) are used, when and where
- Keep history log of each field, know the conditions of that time, plan and compare results between similar situations



Overview

iMETOS WorkTrack and iMETOS Beacon:

- Be always **informed about your machinery** in real time in FieldClimate
- **Timely maintenance and service** – fleet owners can be sure that vehicles are being kept in a good shape
- **Efficient management of fleet** – tracking vehicle maintenance becomes an automated process with irregularities reduced to a minimum
- **Fully automatic tracing** and input into the bookkeeping software for workforces tracking and traceability
- **Avoiding unnecessary costs** – be it unexpected repair expenses, time-consuming schedules on paper or productivity levels beyond expectations
- **Keeping drivers safe** – protecting staff from accidents caused by poor and belated maintenance
- Data interfaces to **John Deere Operations center** and other platforms via API



Contact us

Pessl Instruments GmbH, Werksweg 107, 8160 Weiz, Austria

Tel: +43 (0) 3172 5521 • Email: office@metos.at

WWW.METOS.AT