Hecterra

Solution for agribusiness
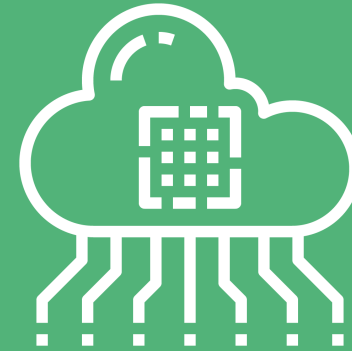
Control. Management. Analytics.

wialon

Scope of application

This is a simple yet effective application for the agro-industry, which allows controlling field works based on telematics data.

Fields and crops

Crop rotation and the detailed operations history for each field.

Special vehicles and drivers

Using drivers, units, and trailers created in Wialon. Calculation and control of multiple parameters for each field cultivation.

Integration

API for data transfer to any accounting systems and the development of solutions tailored to the enterprise needs.

Reports

Easy reports generation by various parameters. Reports export in .csv and .xlsx formats.

Hecterra

Hecterra user profile

Dispatcher

- Controls the performance quality and workload of agricultural machinery on a daily basis
- Processes the performance reports

Agronomist

- Controls crops and operations over them

Accountant

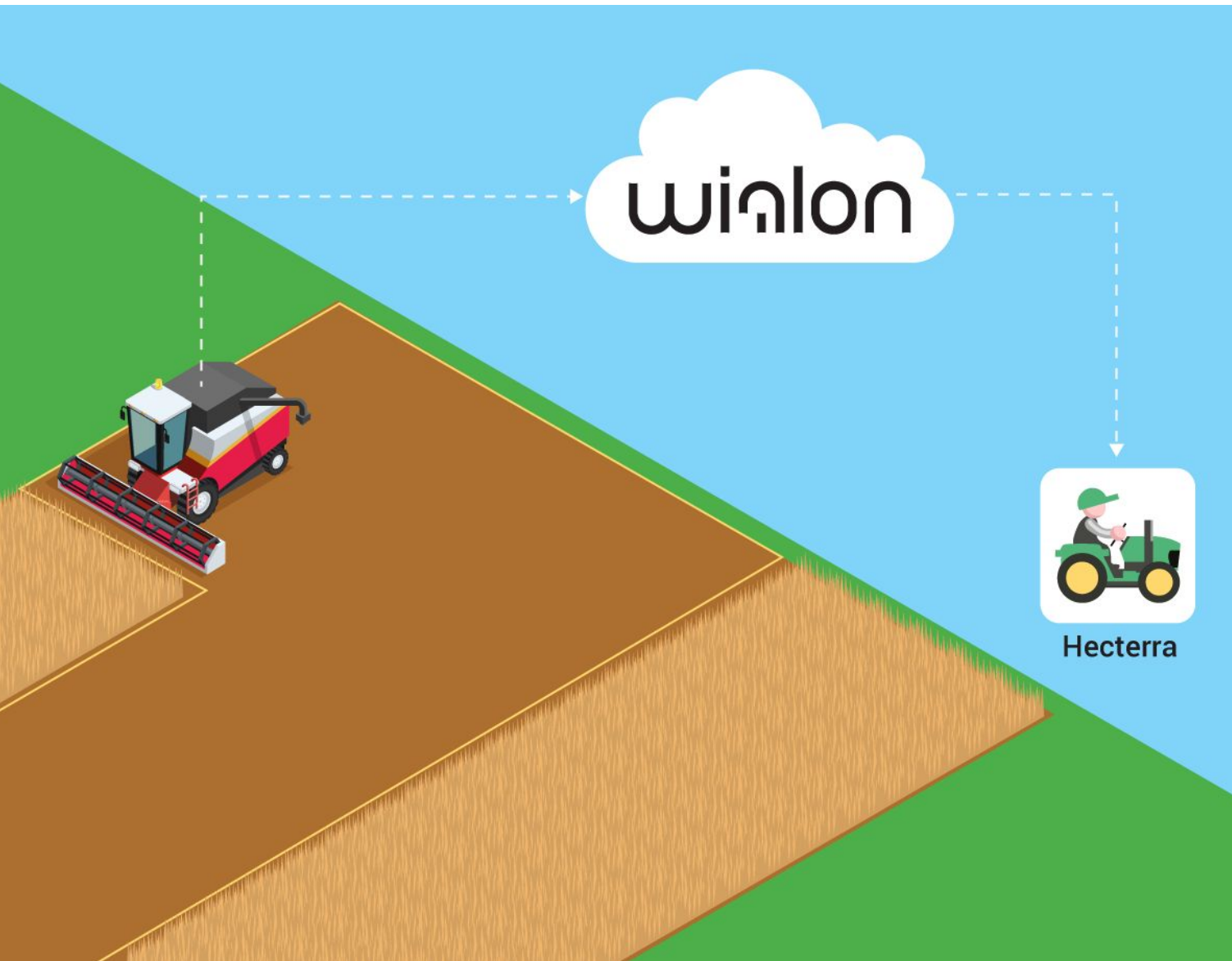- Works with data received through API in accounting systems

Manager

- Makes decisions based on reliable data
- Plans and optimizes the agribusiness processes

Hecterra

How Hecterra changes business?

Reliable data
Hecterra calculates the field cultivations of complex shapes, taking in overlaps, omissions, and uncultivated areas inside the fields. You can control all works regardless of the field shape and monitor the number of cultivations improving the overall results.

Special vehicles control
Get clear data about the quality and volume of the field operations, as well as about the actions of the agricultural vehicles and vehicle operators. Monitor the performance of each employee daily.

Automated calculations
The application calculates the cultivated field areas, overlaps and omissions, fuel consumption, mileage, speed, and other parameters, saving employees' and managers' time. Get the daily detailed information on the completed works and use it in accounting and reporting.
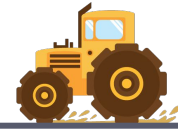
API integration
Transfer data from Hecterra and employ it in any accounting systems using API. Stop practicing the time-consuming manual data transfer.

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Why use Hecterra?

Specialized
Wialon-based solution

Full-featured API for all
sorts of integrations

Simple and
user-friendly interface

Special vehicles and
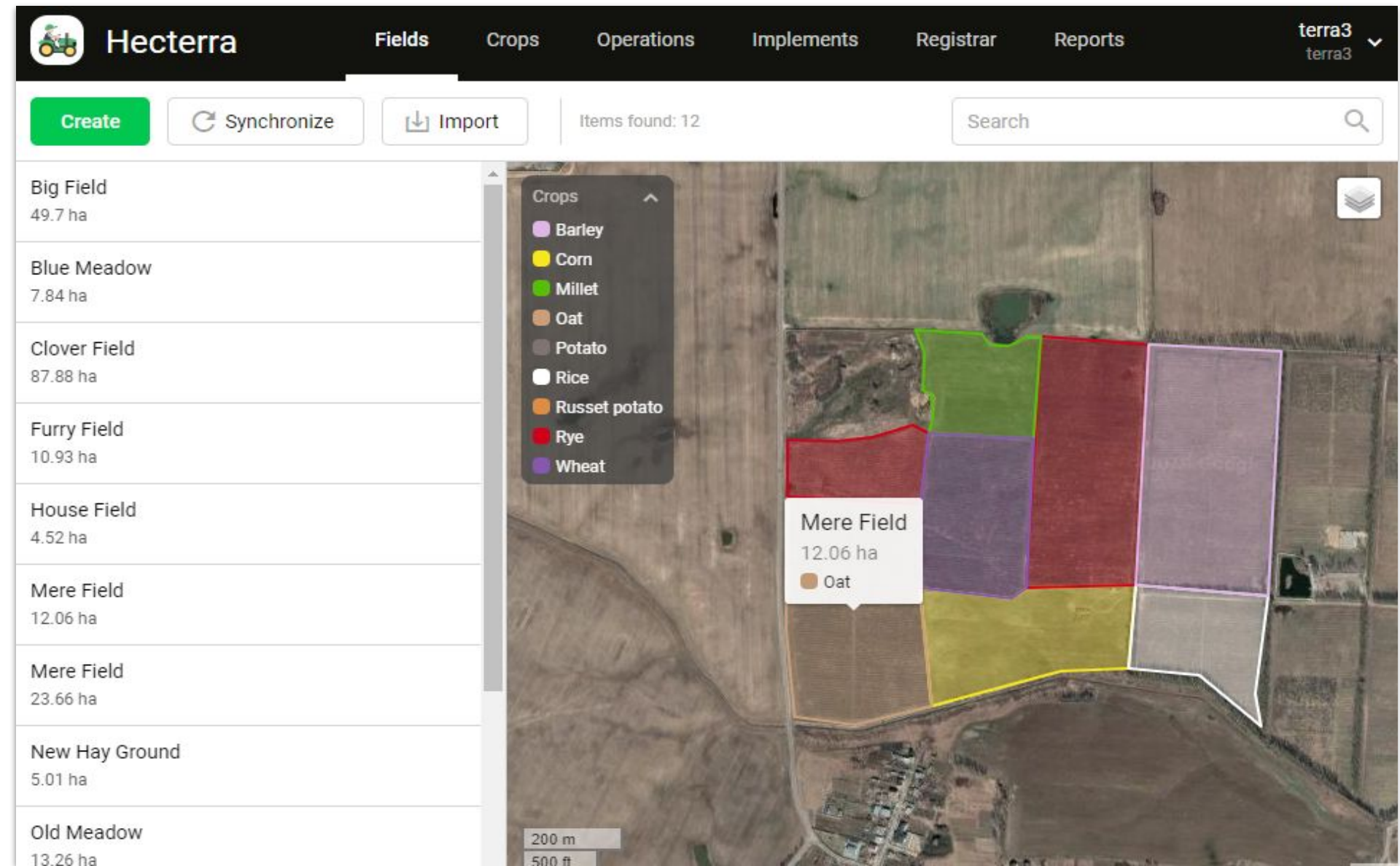drivers control

Detailed reports on
operations performed

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How does it work? Fields and crops

1

• Fill in **crops catalogs**. Each crop has its color. Later, it will be the color of the field where this crop grows. It facilitates working with the fields on the maps.

• **Import** (from Wialon or KML, KMZ, SHP files) or **create fields**. You can export fields into KMZ files.

• Control the fields **crop rotation**. For each field in the system you can:

    – specify the crop that grew in this field before or is growing there now;

    – add the seasons specifying the crops planting and harvesting dates.

• View in reports the each field operations history.

Hecterra   Fields   Crops   Operations   Implements   Registrar   Reports   terra3 / terra3

Create   Synchronize   Import   Items found: 12   Search

Big Field — 49.7 ha
Blue Meadow — 7.84 ha
Clover Field — 87.88 ha
Furry Field — 10.93 ha
House Field — 4.52 ha
Mere Field — 12.06 ha
Mere Field — 23.66 ha
New Hay Ground — 5.01 ha
Old Meadow — 13.26 ha

Crops:
- Barley
- Corn
- Millet
- Oat
- Potato
- Rice
- Russet potato
- Rye
- Wheat

Mere Field — 12.06 ha — Oat

200 m / 500 ft

Hecterra

2

• Finished the working day? Launch the new field cultivations search to know what your employees did today and how. Hecterra will show the list of new cultivations. **Potential cultivation** is the intersection of the unit's track with the field geofence.

• View and edit the found cultivations. **Approve or reject cultivations**; when approved they will get into reports.

We recommend searching and approving cultivations daily. During the process, the dispatcher can take the attached equipment work sensors into account as well. Thus, you will be aware of all the operations performed, and through the reports will get the most recent and accurate data on what was going on in your fields.

Hecterra   Fields   Crops   Operations   Implements   **Registrar**   Reports   terra3 / terra3

← Potential cultivation   ✕ Decline   ✓ Approve

Field	Crop	Area, ha
Big Field	● Potato	49.7

Start time	End time	Duration
26.05.2019 12:36	26.05.2019 23:59	11 h 9 min

Unit	Driver
Tractor 1	Sam ✕

Implement	Operation	Width, m
Potato planter	Potato planting	1.5

Cultivated area   8.35 ha   16.8%
Overlaps   8.86 ha   106.1%

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3

• Use drivers, units, and trailers created in Wialon.

• Trailers from Wialon are called **implements** in Hecterra. You can specify the working width in meters and operation for each implement, for example, harrowing. Hecterra uses the working width to define where the cultivation took place and if there are missed or overlapping areas in it.

• Fill in **the operations catalog**. Operations are specified in implements properties and used in cultivations and reports.

• **Drivers** are defined for each cultivation and are displayed in the reports.

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• **Build reports** by all cultivations, specific drivers, fields, operations, units, and crops.

• Reports contain **all the data on cultivations**: mileage, omissions, duration, fuel consumption, overlaps, maximum and average speed, and other parameters.

• **Export reports in the .csv and .xlsx formats.**

Reports are generated based on the approved cultivations. Data on the approved cultivations is stored for 5 years, its visual elements (polygons, tracks on the map, etc.) are stored for 11 months.

| | Hecterra | Fields | Crops | Operations | Implements | Registrar | **Reports** | terra3 terra3 |

Interval		Report type		Item			
01.05.2019 − 31.05.2019		By unit		Tractor 1		.csv	Execute

| Cultivations 3 | Duration 39 h 58 min | Mileage 407.42 km | Cultivated area 42.43 ha | Fuel spent 0 l |

Field	Area	Crop	Start time	End time	Duration	Operation	Driver
Big Field	49.7 ha		18.05.2019 00:00	18.05.2019 10:31	10 h 17 min	Sowing	Sam
Big Field	49.7 ha		19.05.2019 09:15	19.05.2019 20:46	11 h 15 min	Sowing	Sam
Clover Field	87.88 ha		20.05.2019 00:00	20.05.2019 19:24	18 h 24 min	Sowing	Sam

Field ✓
Area ✓
Crop ✓
Start time ✓
End time ✓
Duration ✓
Operation ✓
Driver ✓
Implement
Width
Mileage
Cultivated area
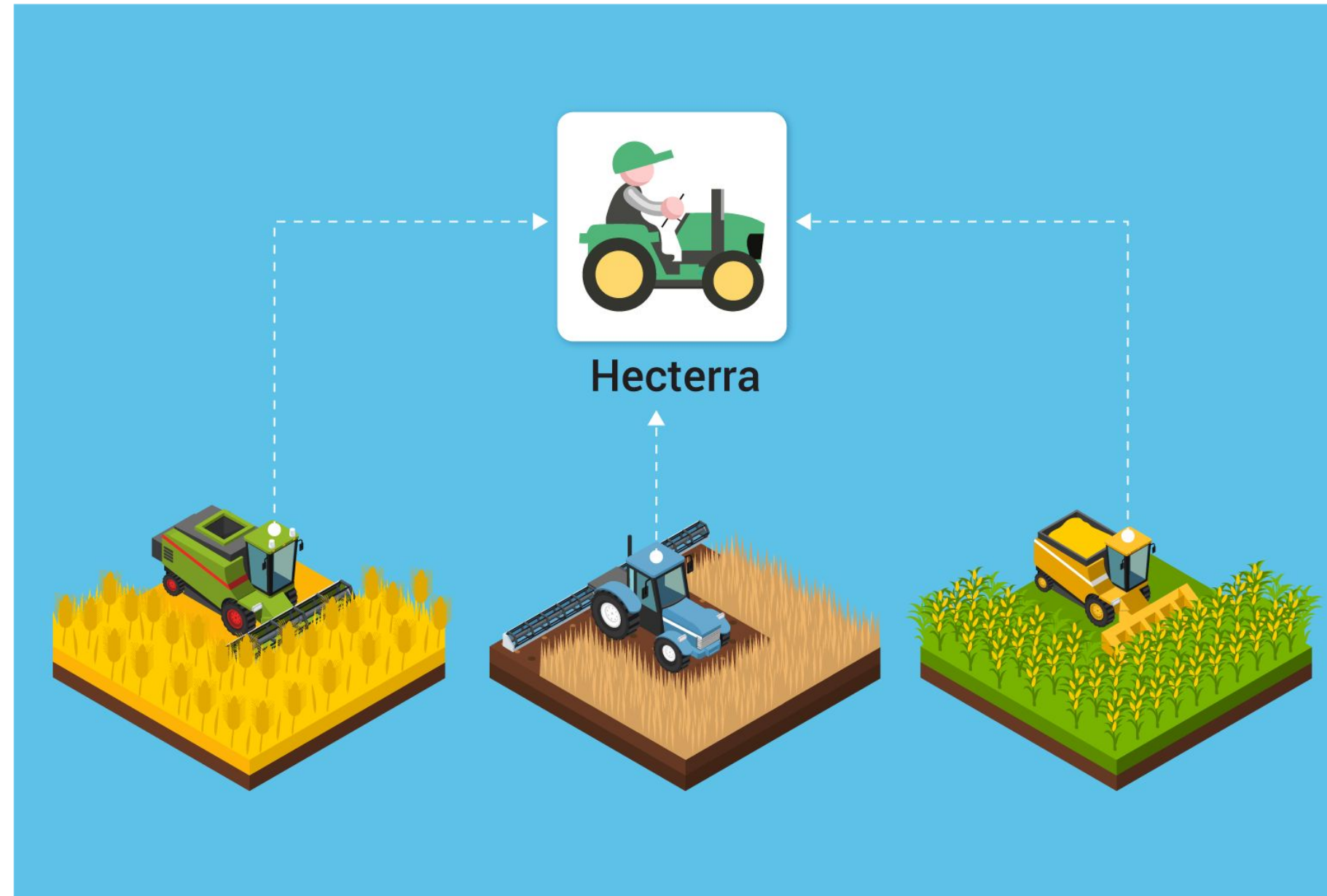% cultivated ✓

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Reports allow you to not only control all types of work but also assess their quality, and improve the agricultural processes of your enterprise.

Example 1
Too many omissions or overlaps during the field cultivation? Give instructions to the driver because part of the field was left unplanted or the other way around, the too dense sowing can affect the quality of seedlings.
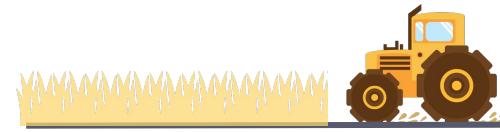
Example 2
Coming up with the financial plan? Check how much fuel your employees spent last season, and consider these numbers upon allocating funds for future costs.

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Hecterra

API for integration with all kinds of software

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Hecterra is a ready-made solution for agribusinesses which can be set up and put into use in one day. But for the solution to be able to function for literally any agricultural enterprise, we created Hecterra API within Wialon API and SDK.

• Transfer fields, cultivations, operations, crops, drivers, and implements data to all sorts of accounting systems. **Use this data when creating financial, personnel, or technical reports.**

• Add, edit, or delete crops, operations, cultivations, and fields through API. Give the client a possibility **to manage agricultural processes using any software** by combining Hecterra API with custom development.

• Develop **the agribusiness management system of any complexity** with data received from Hecterra.

🚜 **Hecterra**

API for integration with all kinds of software

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Results::

• Agribusiness automation and digitalization

• Integration with corporate accounting systems

• Integration with any corporate software

• Ease of use, resources savings, employees and enterprise effectiveness

API Hecterra use cases::

• Trip tickets auto-filling

• Field works billing for salary calculation

• Farming machinery lease calculation

• Maintenance intervals calculation for farming machinery

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