



CymbIoT
Making IoT Smarter



**CymbIoT Precision
Agriculture**

CymbIoT

Precision Agriculture

IRRIGATION | PEST CONTROL | SECURITY

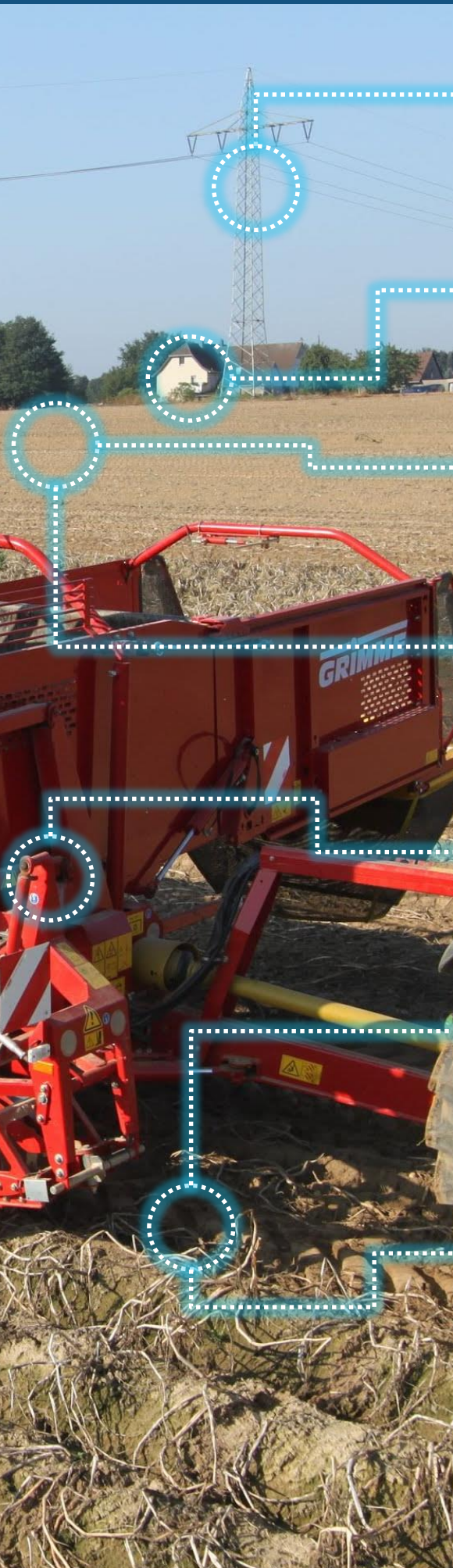
Precision agriculture is based on observing, measuring and responding to real-time and predicted conditions in agricultural environments, in order to optimize production and yield, reduce resource utilization and environmental impact, and increase return on investment across multiple verticals.

The CymbIoT Precision Agriculture solution utilizes multiple data collecting assets – from soil acidity sensors to UV radiation counters – to measure and calculate the precise operational response required to maintain optimal growing conditions.

The data gathered by CymbIoT is integrated and analyzed in order to provide both real-time response capabilities and trend analysis tools that enable farmers and operators to better plan for future growing cycles.

CymbIoT's Precision Agriculture Solution can integrate with additional operational systems – from Security to Asset Management – delivering ROI from Day One by reducing resource consumption, increasing crop yields, and providing asset and property security services.





Day/Night Cameras

Surveillance cameras that provide visual feeds 24/7 in all light conditions.



Smart Resources

Turn lights, power, A/C etc. on or off based on presence, schedule, etc.



Temperature Sensors

Monitoring temp. levels.



Radiation Sensors

Measures solar radiation for evapotranspiration (ET) and Temperature /Humidity/Sun/Wind (THSW) Index.



RFID Tags

RFID tags on equipment to prevent loss and support tracking and location services.



Soil Sensors

Measures acidity, pesticide content, moisture, and density.



Irrigation Switches

Control drip and other irrigation systems – flow & pressure.

CymbIoT Command & Control

Provides data fusion and management of all Precision Agriculture sensors and subsystems.



FINANCIAL & OPERATIONAL RETURN WITH CYMBIOT

Precision Irrigation

CymbloT analyses temperature, humidity, radiation, and soil data, compares it to current crop growth cycle phase, and calculating the precise amount, duration, location, and timing of irrigation - thereby conserving water



Environmental Impact

Soil sensors provide accurate data regarding pesticide levels with visual analytics delivering information regarding presence of pests. This data empowers CymbloT to direct farmers in purchasing and utilizing the minimum required amount of pesticide, thereby reducing environmental impact and qualifying owners for European Union and other Green Grants.



Smart Power

Smart metering and utilization of power for A/C and lights in silos and other facilities according to real-time needs reduces power consumption, prevents power piracy, and protects against brown-and-blackouts by identifying surges and rerouting power.



Asset Management

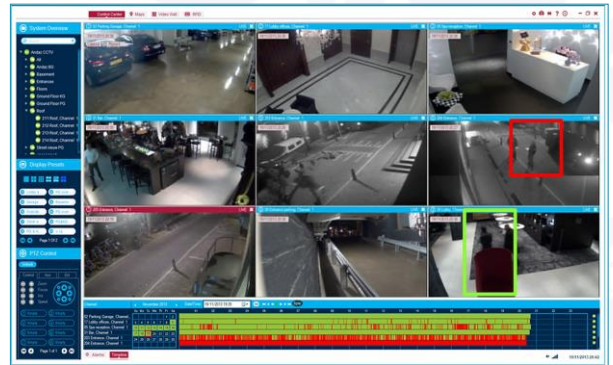
Smart RFID tags on mobile assets – harvesters, combines, tractors, etc. – enables operators to track routes and locations, alert for unauthorized usage, identify and prevent theft. Stop loss delivers ROI and reduces expense over time.



ADDITIONAL INTEGRATIONS

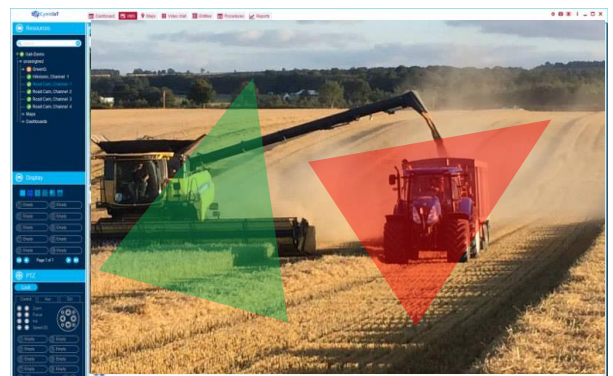
Security & Surveillance

- Access control
- Alerts for unknown persons entering buildings and/or fields
- Alert for unauthorized vehicle access
- Identification & alerts for wild animals
- Smart fences
- ...more

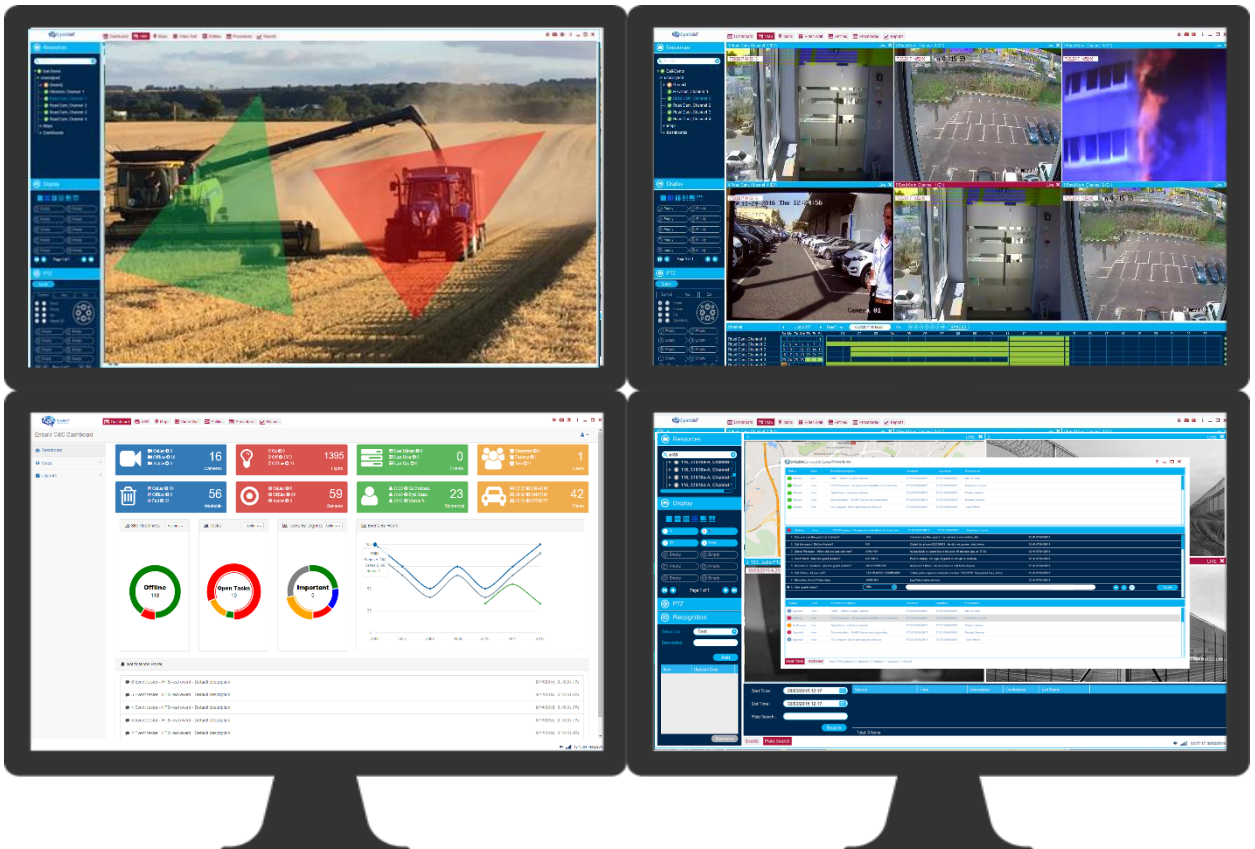


Smart Farm

- Smart waste management
- Smart water management
- Route optimization for pest control & harvesting deployment
- Support for animal husbandry (tagging & tracking, stop loss, etc.)
- ...more



Precision Agriculture integrated with data from other Smart Farm sensors in CymbloT Command & Control::



Irrigation



Event

Unusually high temperature detected.



Detection

Temperature and radiation sensors identify rise.



Response

CymbIoT C&C identifies temperature trend.



Automatically updates irrigation time to later in the day to prevent over-evaporation.



Checks soil sensor data to analyze moisture & acidity and ensure proper conditions are achieved.



Updates irrigation database for trend analysis.

Environment



Event

Pesticide levels exceed permitted levels.



Detection

Soil sensors identify pesticide levels & location.



Response

CymbIoT C&C analyzes data and implements procedures:



Alerts owner by text message.



Switches on irrigation in contaminated location to dilute the HAZMAT.



Updates pest control database to prevent recurrence.

Security



Event

Wild animal approaches livestock paddock.



Detection

Video analytics identify presence & timing.



Response

CymbIoT C&C analyzes data and implements procedures:.



Directs cameras towards identified event.



Notifies owner by text message.



Turns on external lights to alarm animal.



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CymbIoT's mission is to design, implement and deliver advanced Internet of Things (IoT), Video Management Solution (VMS), and Command & Control (C&C) platforms. We empower end users to configure and manage integrated networks of all types and scales - from Smart and Safe Cities, through Transportation Hub security, to Smart Buildings and Enterprise management.

With millions of sensors across numerous verticals using our products to deliver actionable intelligence and real-time response capabilities to customers worldwide - we have the experience, know-how and technology to deliver real world solutions that work.

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