

Pest Control

Capability Statement

FTP provide unambiguous, real-time visibility to clients' operations enabling data-driven decisions based on increased operational intelligence.

Our Company

FTP is a global technology company headquartered in Perth, with regional offices in Canada and New Zealand.

As industries increase productivity, they increase in complexity. Employees and managers are forced to keep track of more and more variables in order to remain competitive. At FTP, we keep track of those variables for you.

Using our proprietary technology, we take the large streams of data modern companies generate, and present it through an easily understandable interface. This includes – but is not limited to – asset tracking, personnel tracking, network performance monitoring and RF planning. We also provide a round-the-clock support service to help our customers through any technical difficulties they may have.

We work with a wide range of different industries, including mining, marine and agriculture, providing our customers with real-time data 24x7, as well as historical data. We will even analyse the information we collect and offer our advice on what can be improved. Our goal is to enable our customers to use the power of data by giving them ultimate vantage point on their business, so that they can make more informed and strategic decisions.

Our Values



Safety

Commitment to safety and wellbeing above all



People

Our people are the foundation of our success



Enduring Value

We target solutions to deliver value for all stakeholders

Our History

Founded in 2012, FTP was originally known as Forces Transitioning Personnel. Originally, the company's purpose was to help former military personnel transition to jobs in the mining industry. Very quickly, we became an important source of skilled labour for large and prestigious mining companies. Today the company is simply known as FTP.

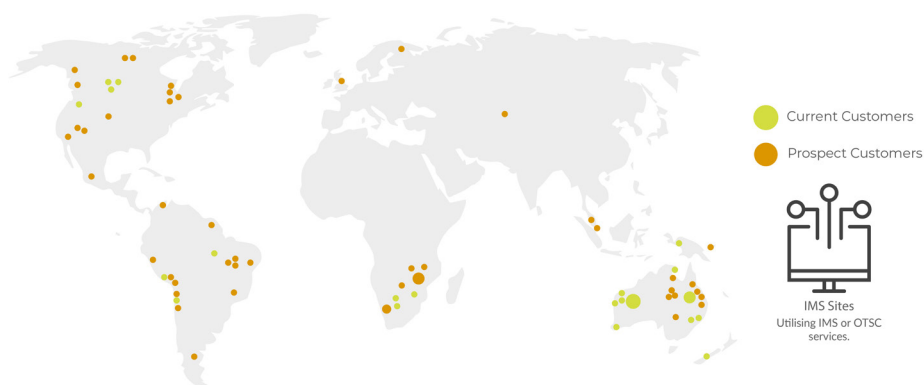
FTP soon noticed a gap in the market. We saw that mining companies rely on large amounts of collected data to operate safely and efficiently as do companies in many other industries. Most of these companies use cumbersome and often inefficient programs to represent and analyse that data, often failing to fully utilise the potential this data can deliver. Through the knowledge and experiences of the founders, this market gap was able to be addressed. At this point, key personnel were brought into the business and significant investment was made to create IMS (Integrated Management System) platform to bridge this gap. IMS is positioned to provide companies with better operational intelligence, providing them with a highly intuitive user interface and gives them the tools to maximise their productivity and make better business intelligence decisions.

IMS is a vendor agnostic digital platform. It collates data from a variety of third-party systems and presents them in an easy-to-understand, single window interface. Shortly after its development, OTSC (Operational Technology Support Centre) was created; a team of experienced engineers and support workers who are trained in our software. They are tasked with making sure that you get the most out of our platform.

In the years since we first developed IMS, FTP has expanded into several more industries including marine, agriculture and environment. We aim to use our ground-breaking technology in as wide of a context as possible, so that businesses everywhere can stop working blind.

Global FTP Customers

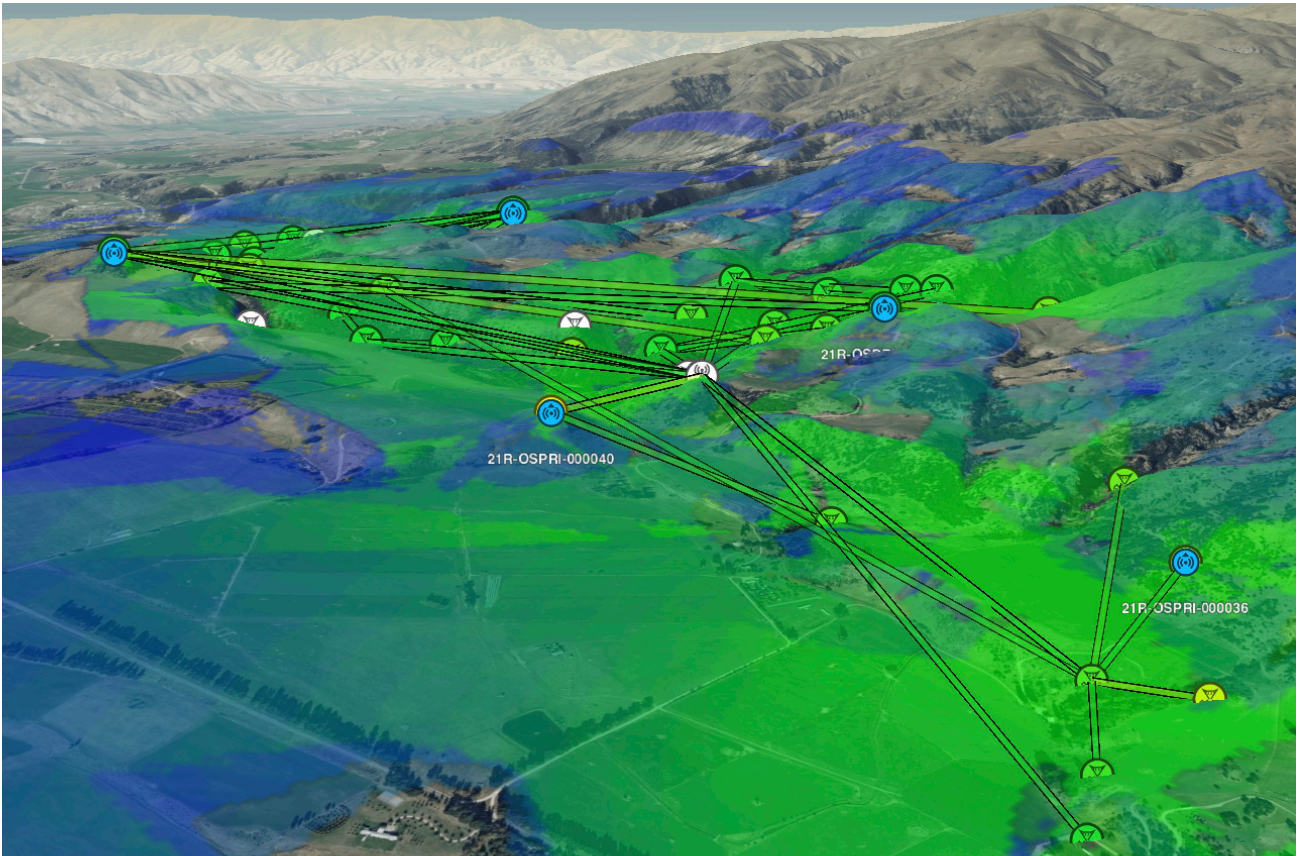
FTP operates across the globe, with offices in Australia, Canada and New Zealand



Connect Everything, Anywhere

FTP's Yarn Mesh is a next-generation, low power 802.15.4 sensor connected mesh, optimised for inter-connecting devices and users over wide areas and difficult terrain, designed and delivered by the Team at FTP. Yarn has been specifically designed and developed for the purposes of connecting large landscape-scale areas that require efficient and effective predator control, environmental management and monitoring including farms, conservation and wilderness areas.

Yarn uses publicly available 2.4GHz ISM spectrum, with a planning radius of roughly 1-3km in sub-optimal conditions. If required, 6km+ links are possible in good conditions with good line-of-site; all with a compact omni-directional antenna.



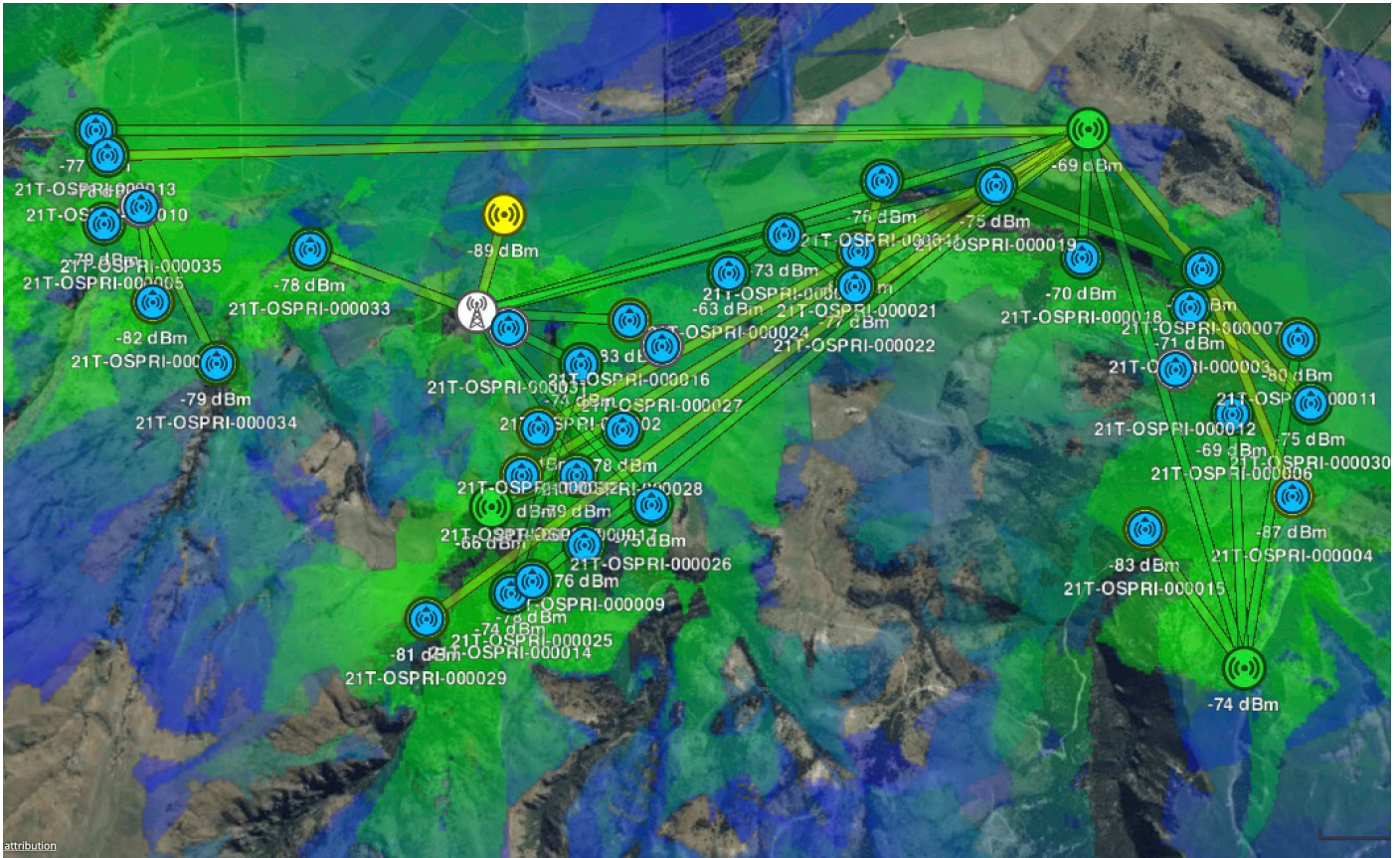
Yarn Mesh's primary features include:

- **Simplicity** — Simple installation, start up, and operation
- **Security** — All devices in a Yarn network are authenticated and all communications are encrypted
- **Reliability** — Self-healing mesh networking, with no single point of failure, and spread-spectrum techniques to provide immunity to interference
- **Efficiency** — Low-power Yarn devices can sleep and operate on battery power for years
- **Scalability** — Yarn Mesh networks can scale up to hundreds of devices in a single chain and consist of multiple chains.

Connect Everything, Anywhere

With the Yarn Mesh OS installed, the device automatically forms an ad-hoc radio mesh network with other Yarn Mesh devices that are in range. Each node can both send and receive messages, and can relay messages between nodes, thereby providing connectivity between nodes that may be out of the original sender's range. Each device added to the Yarn Mesh network increases the network's physical reach and reliability.

Yarn Mesh enables solar and battery powered devices to stream real-time telemetry from the field, farm or areas that span both. Yarn's IMS integration provides users with access and insight into their data from those in-field sensors, with IMS' immersive user interface, able to manipulate time, location, state, and telemetry-based information, for total command and control of devices, sensors, networks and operations.



Yarn Mesh nodes are accelerated by AI/ML through machine vision which can recognise and categorise events and then take action. This is done without needing cloud/server backed processing, leaving the network free from unnecessary file transfers, saving power and lowering capacity requirements, resulting in smaller and cheaper batteries, solar panels and installation costs.

The AI/ML algorithms can be updated over the air too, along with sensor/radio/camera/device firmware; that means less frequent trips into the field for maintenance, giving people more time to focus their energy on extracting the most from their operations.

Yarn Mesh & IMS Case Study

An example of the power of Yarn Mesh for connecting remote assets, infrastructure and sensors is shown the following real-world deployment using Yarn enabled hardware. This case study example shows how the Yarn technology has been utilised in southern corner of New Zealand's Queenstown Lakes District to connect automated predator traps that leverage the FTP Yarn TrapNode for communications, telemetry and predator identification via the Yarn enabled in-built AI/ML camera for embedded image processing and classification. In a project area with no cellular connectivity this case study provides a real-world example of the capabilities this connectivity technology enables for Predator Free projects. In this real-world deployment the nearest cellular connectivity is approx. 28km away - and inaccessible without Yarn Mesh - to the project site due to two (2) mountain ranges blocking access to this connectivity.

The project site consists of the confluence of two major valleys, the main valley being the Greenstone Valley which is intersected by the Steele Creek Valley. The project site is administered by the Southern Lakes Branch of the New Zealand Deerstalkers Association (NZDA), where they have private off-grid hunting hut known as the Greenstone Hut. The Greenstone Hut and predator eradication area sits within a working farms (Greenstone Station) summer grazing land in the valley floor and within government administered conservation land managed by the Department of Conservation (DoC). The valley system has been identified by DoC as a wild re-introduction habitat for one of New Zealand's rarest flightless birds, the Takahe.

The valley is also home to a small and important population of another rare native NZ bird the Kea, the world's only alpine parrot, an intelligent and inquisitive bird that likes to pull apart foreign objects with its beak. Kea have a habit of interfering with, and taking apart predator control traps, regularly chewing through up to 25mm of timber to access bait in traditional (manual) predator control traps.



Rare native NZ Takahe, one of the rarest native birds. The Greenstone Valley is a prospective valley for Takahe reintroduction.

Yarn Mesh & IMS Case Study



Rare native Kea, the world's only mountain parrot.

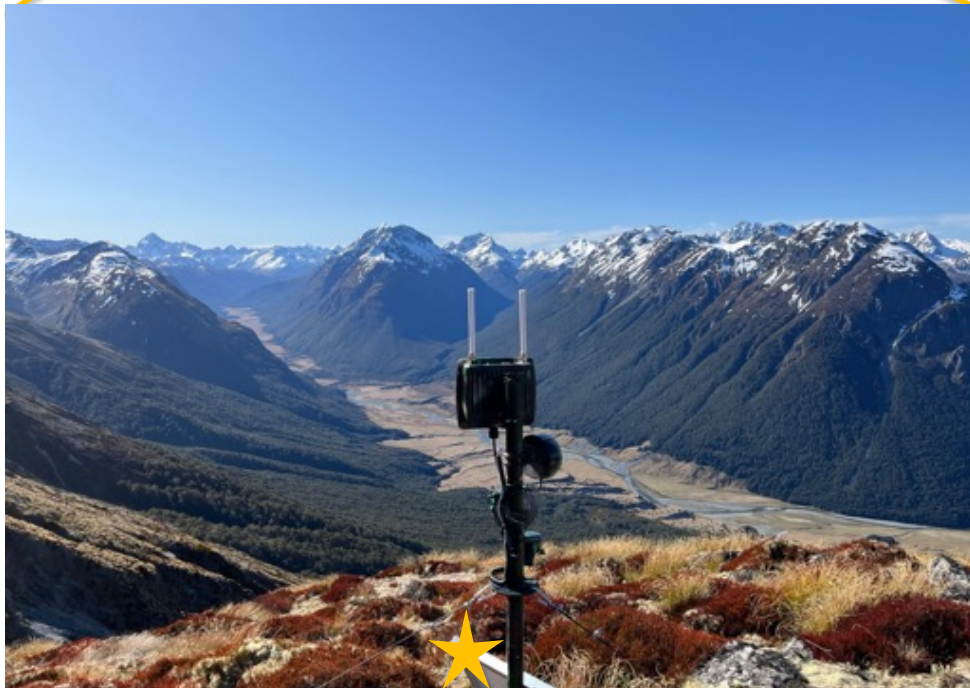
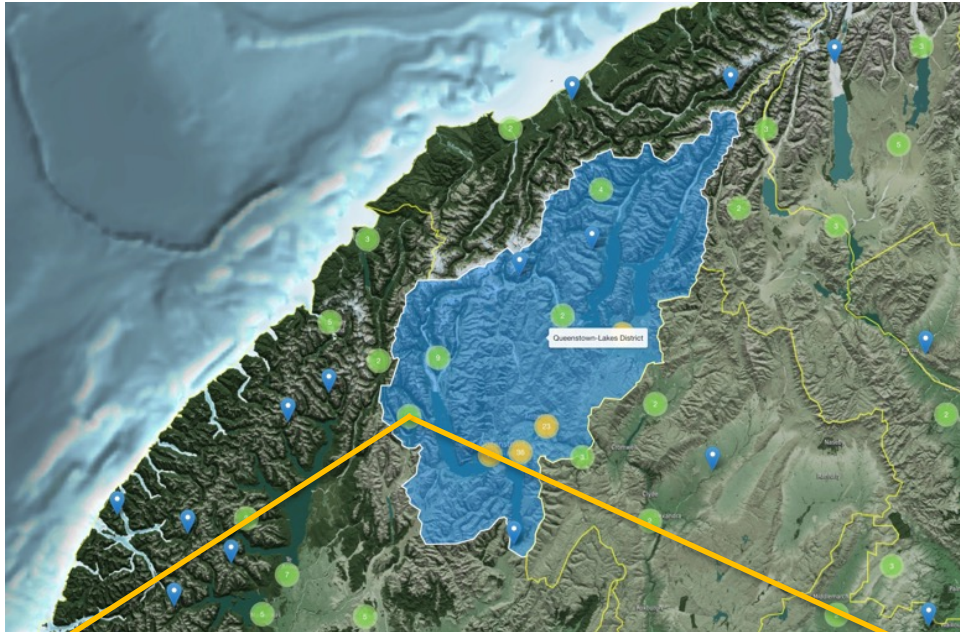
FTP's TrapNode is used inside automated predator traps to monitor the trap and both target and non-target species interactions, it sends telemetry and images from inside the trap over the Yarn mesh and out over the Yarn Gateway via IP interface over the internet to FTP's Integrated Management System (IMS) in the Cloud. FTP's IMS enables both wireless and operational project planning, network and operational monitoring, management-by-exception, alerting and reporting in a 3D/4D digital-twin like environment. The IMS technology enables 'hands free' management of large-scale operational environments for industries such as mining, agriculture, and environmental management. IMS integrates data from many devices, systems and communications technologies to build a live data-driven 4D digital-twin of each operational environment in a single integrated management system.

The FTP TrapNode uses Yarn Mesh at its core to talk with other traps via the integrated TrapNode inside. Each trap added in the environment extends the reach and coverage of the mesh, increasing the redundancy and resiliency of communications.



Yarn Mesh & IMS Case Study

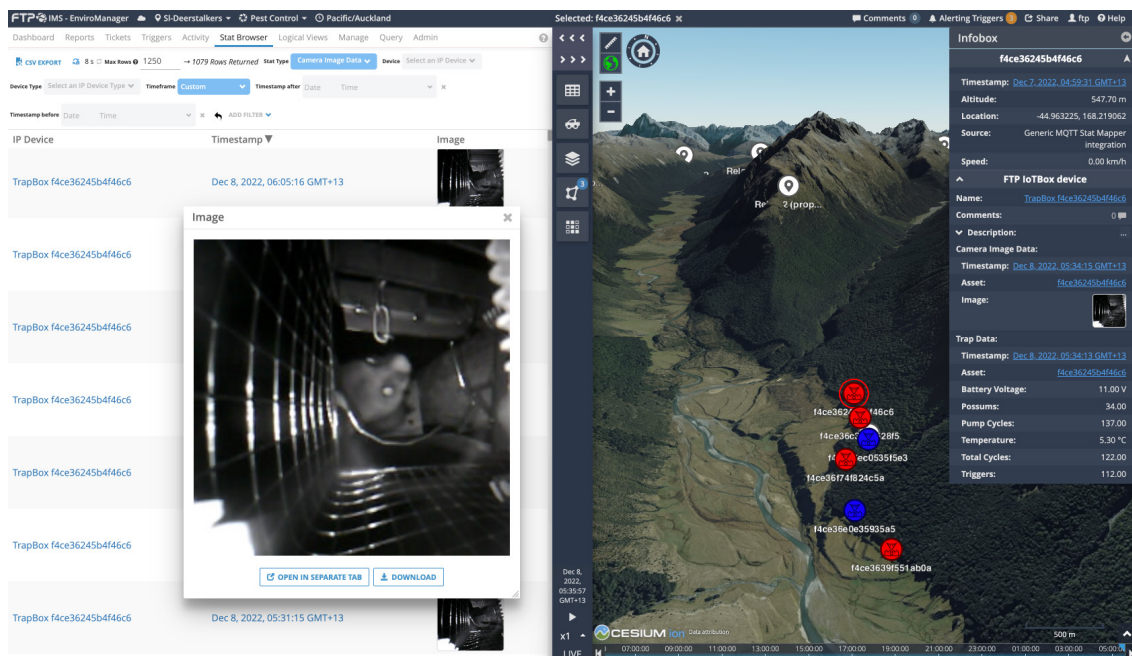
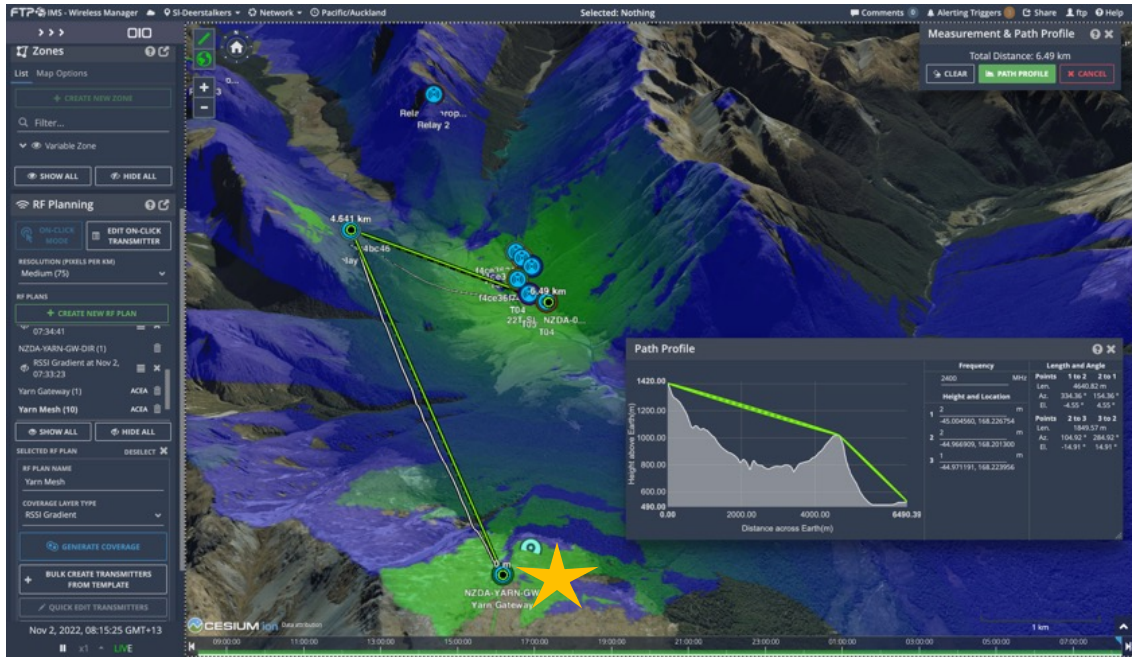
Queenstown Lakes District, NZ. Southern Lakes Sanctuary Project Area



FTP Yarn Mesh IoT Gateway, Greenstone Valley, New Zealand

Yarn Mesh & IMS Case Study

FTP Yarn Mesh AT220 TrapNode network, showing Yarn Mesh coverage area in Green & Blue, Greenstone Valley



FTP Yarn Mesh AT220 TrapNode network visualised in IMS, showing Possum being detected by TrapNode IntelliCam upon entering NZ AutoTraps AT220 trap.

Yarn Mesh TrapNodes

FTP Yarn Mesh Hardware Devices	
Product	Function
Yarn TrapNode AT220 (retrofit) no IntelliCam	TrapNode retrofits inside Gen 2 NZ AutoTraps AT220's making these a smart trap with long-range mesh communications. Provides telemetry and monitoring of trap functions and predator interactions
Yarn TrapNode AT220 (retrofit) with IntelliCam	<p>Same as TrapNode above but adds AI/ML camera module for automatic detection and classification of target and non-target species . IntelliCam instructs trap to be armed or disarmed based on identification of target or non-target species.</p> <p>Telemetry and monitoring of trap functions and including images of trap predator vs non-predator interactions..</p>
Yarn TrapNode EnduraLid 15W (AT220 Long-Life Lure and Battery Solar Lid)	<p>TrapNode EnduraLid replaces the lid on Gen 3 NZ AutoTraps AT220's.</p> <ul style="list-style-type: none"> • Provides Long-Life Lure up to 4 x volume compared to standard. • Provides large capacity Long-Life Batteries integrated inside the EnduraLid. • Provides integrated solar panel to recharge batteries and power AT220 removing the need to swap AT220 batteries in the field. • Designed for up to 2 years continuous operation of the AT220 without need for human intervention.
Yarn TrapNode EnduraLid 15W with IntelliCam (AT220 Long-Life Lure and Battery Solar Lid with AI/ML camera module)	<p>Same as TrapNode EnduraLid above but adds AI/ML camera module for automatic detection and classification of target and non-target species . IntelliCam instructs trap to be armed or disarmed based on identification of target or non-target species.</p> <p>Telemetry and monitoring of trap functions and including images of trap predator vs non-predator interactions..</p>
Yarn Solar Panel 10W (retrofit TrapNodes and power boost for EnduraLid AT220's in low-light environments)	External Solar Panel to power Yarn TrapNode. Also added for TrapNode EnduraLid AT220's installed in low-light environments.
Yarn SafeTag PLM (Personnel Locator Messenger)	Enables real-time location tracking of field staff and provides ability to send chat messages, SMS and email from the field.

TrapNodes & AutoTraps



Yarn Mesh Long-Range Antenna

Yarn Mesh Solar Panel (external)
*not shown

Yarn Mesh TrapNode IntelliCam (AI/ML camera)

NZ AutoTrap AT220 Kea Proof Lid

FTP Yarn Mesh TrapNode EnduraLid*
*not shown

New* AT220's:
FTP Yarn Mesh TrapNode compatible Controller
*from June 2023

Existing* AT220's:
FTP Yarn Mesh TrapNode (retrofit)
*available now

NZ AutoTrap AT220

Integrated Management System



IMS (Integrated Management System) is a vendor agnostic piece of software developed by FTP and catering specifically to the needs of the modern farm. This cutting-edge platform collates data from a variety of third-party systems and hardware and presents them in an easy-to-understand interface. It is a single end-to-end monitoring system that records and reports your farm data in real time, 24 hours a day.

IMS grants you access to key information geospatially, relative to exact locations on your farm. This bird's eye view of your operations allows you to monitor and track asset and animal performance and anticipate where and when issues might arise, enabling you to unlock vital performance gains. IMS is a fast, flexible and intuitive interface that gives you the ultimate vantage point on your business.



Readily Available Data

IMS gathers data from connected assets on your farm and presents them in a single-pane-of-glass. View your data in real-time or turn back the clock to identify past events.



Make Informed Decisions

IMS visualises data not only from connected devices on-site, but also pulls data from important external databases, applications and key on-farm systems to give farmers access to the information that's important to them.



Vendor Agnostic

FTP can pull data from any device that is connected to your network and display that data on the IMS platform.



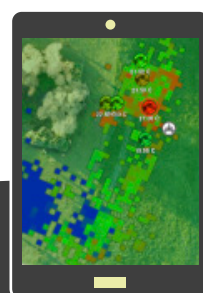
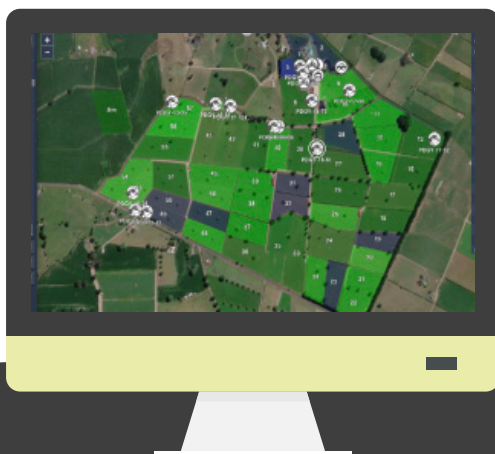
Resource Optimisation

With technology continually improving and demands in the agriculture sector increasing, effective communications are key to ensuring that all the tools available to farmers are available and performing. IMS provides the ability to set up cost-effective wireless wide-area networks in remote locations that can readily integrate the range of different devices and systems to run your operation.



Improve Operational Intelligence

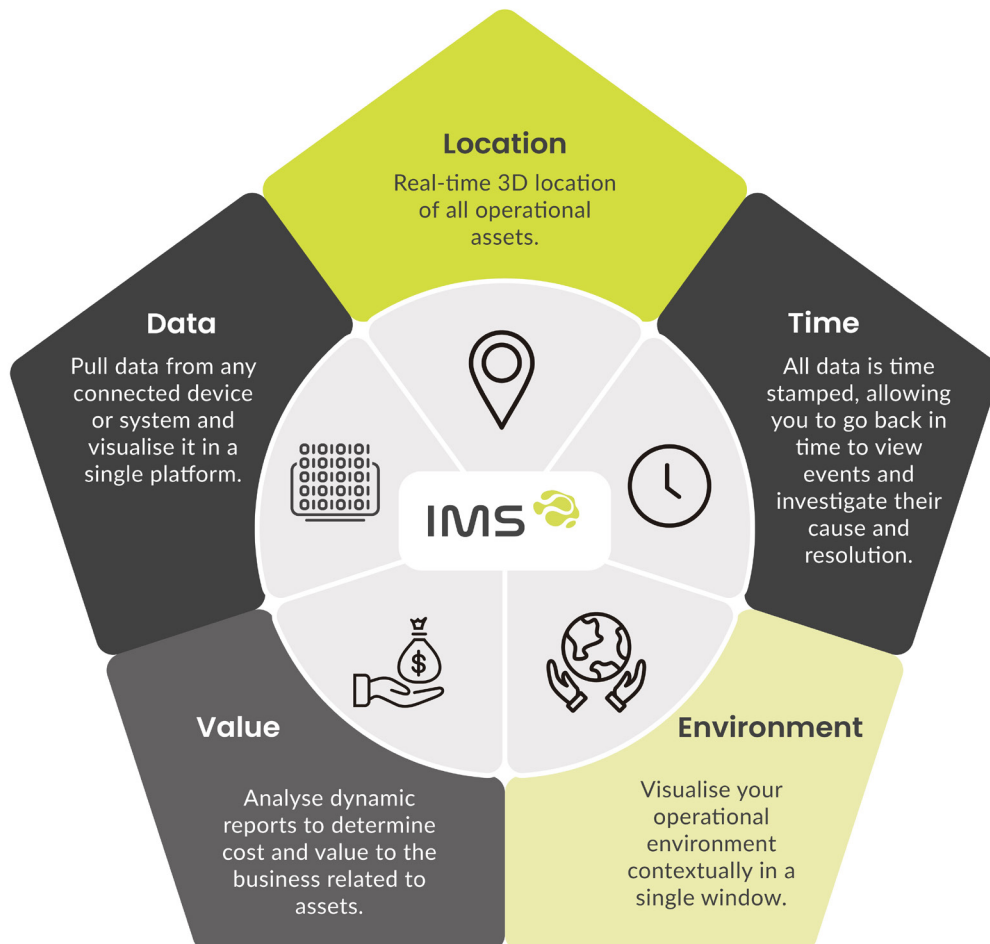
Operational Intelligence is vital to running an effective operation. It focuses on your day-to-day operations and ensures you are operating your business at maximum efficiency so that you can make more informed and accurate decisions.



Single Pane of Glass



The power of IMS pulls five key parameters of every asset and displays them in a single pane of glass.



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