High level – Technology Glossary

Manufacturer	Product	Type	Interoperability Capabilities	Hardware Specs	Data Specs	Case Studies*
Critter Solutions	AI Kill Trap	Camera	Table 5	AI Enabled Sensors	Table 5	Sensor case studies
NZ Autotraps/FTP	AT520AI	Camera	Table 5	AI Enabled Sensors	Table 5	Sensor case studies
2040	DOC AI Camera	Camera	Table 5	AI Enabled Sensors	Table 5	Sensor case studies
ASG Technologies	PredaCAM	Camera	Table 5	AI Enabled Sensors	Table 5	Sensor case studies
Critter Solutions	Flexi Comms	Direct to Cloud	Table 2	Remote comms Hardware	Table 4	Case Studies RC
Encounter Solutions	Celium	Local Network Protocol and Hardware	Table 2	Remote comms Hardware	Table 4	Case Studies RC
WTE	WTE UHF	Local Network Protocol and Hardware	Table 2	Remote comms Hardware	Table 4	Case Studies RC
WheroNet IoT	TM2 Trap Monitor	Local Network Protocol and Hardware	Table 2	Remote comms Hardware	Table 4	Case Studies RC
FTP	YarnMesh	Local Network Protocol and Hardware	Table 2	Remote comms Hardware	Table 4	Case Studies RC
eTrapper	Sigfox node	Local Network Protocol and Hardware	Table 2	Remote comms Hardware	Table 4	Case Studies RC
800 Trust	HARK	Misc Monitoring	Table 5	AI Enabled Sensors	Table 5	Sensor case studies
NZ Autotraps	AT Trap range	Smart Trap/Bait Station/ Lure	Table 5	Other sensors	Table 5	Sensor case studies
Critter Solutions	Ezy Lure	Smart Trap/Bait Station/ Lure	Table 5	Other sensors	Table 5	Sensor case studies
ZIP	Trap/lures	Mechanical Traps/BaitStations/Lure	Table 5	Other sensors	Table 5	Sensor case studies
eTrapper	Baitsense	Smart Trap/Bait Station/ Lure	Table 5	Other sensors	Table 5	Sensor case studies
Good Nature	Autorat	Smart Trap/Bait Station/ Lure	Table 5	Other sensors	Table 5	Sensor case studies
Envico	Spitfire	Smart Trap/Bait Station/ Lure	Table 5	Other sensors	Table 5	Sensor case studies

*Currently there are no case studies however, this column is placed here as future case studies should accompany the feature matrix.

Remote Communication Technology

This section covers the current modes of implementation for each communication network provider.

*Mechanical Trap refers to traps like DOC200, Cage Traps and leg holds where a sensor has to sense the activation of the trap.

**This describes the type of sensor being used currently to monitor the mechanical trap trigger

***This is about the integration with a digital trap, i.e. the trigger and actions are communicated digitally by a wired and or RF connection

TABLE 2. REMOTE COMMS INTEROPERABILITY ABILITY

Manufacturer	Remote Comms Type	Product	Hardware Dev Status	Mechanical Trap *	Mechanical Trap Sensing Mechanism**	Digital Trap***	Wire Comms Protocol	Notes
Encounter Solutions	Local Network Protocol and Hardware	Celium	In Market	In Market	Magnetic, Vibration	Under Development		
WTE	Local Network Protocol and Hardware	WTE UHF	In Market	Under Development	TBC	TBC		
WheroNet IoT	Local Network Protocol and Hardware	TM2 Trap Monitor	In Market	In Market	Magnetic	Unplanned		
FTP	Local Network Protocol and Hardware	YarnMesh	In Market	Under Development	TBC	In Market		
eTrapper	Local Network Protocol and Hardware	Sigfox node	In Market	In Market	Vibrations	Unplanned		eTrapper is not responsible for the remote comms tech.
Critter Solutions	**Direct to Cloud**	**Flexicomms**	Under Development	Unplanned	**None**	Under Development		For terrestrial Cellular, it will operate as current terrestrial cellular

Remote Comms Hardware Specs

Table 3 exposes relevant hardware features used for choosing a remote communication network technology.

TABLE 3A. REMOTE COMMS HARDWARE SPECS

Manufacturer	Remote Comms Type	Product	Frequency Band	Operation Frequency	Network Protocol	Wired Interface	Integrated Sensors
Encounter Solutions	Local Network Protocol and Hardware	Celium	VHF	30-300MHz	Proprietary	TBC	Magnetic, Vibration
Encounter Solutions	Direct to Cloud	Celium	VHF + LEO Cellular/Terrestrial Cellular		Proprietary	TBC	Magnetic, Vibration
WTE	Local Network Protocol and Hardware	WTE UHF	UHF	346 MHz	Proprietary	TBC	TBC
WheroNet IoT	Local Network Protocol and Hardware	TM2 Trap Monitor	license-free ISM	915-928 MHz band	LoRaWAN	TBC	Magnetic
FTP	Local Network Protocol and Hardware	YarnMesh	IEEE 802.15.4	2400–2483.5 MHz band	OpenThread Based	TBC	TBC
FTP	Direct to Cloud	YarnMesh	IEEE 802.15.4 + LEO Cellular/Terrestrial Cellular		OpenThread Based	TBC	TBC
eTrapper	Local Network Protocol and Hardware	Sigfox node	license-free ISM	862 to 928 MHz	Sigfox	TBC	Vibrations
Critter Solutions	Direct to Cloud	Flexicomms	LEO Cellular/Terrestrial Cellular	1800 MHz band (LEO)	Cellular	UART	None
Critter Solutions	Terrestrial Cellular Only	Flexicomms	Terrestrial Cellular		Cellular	UART	TBC

TABLE 3B. REMOTE COMMS HARDWARE SPECS

Manufacturer	Hardware Dev Status	Node Battery	Node Solar panel	Node Battery Life	Node Battery Size	Hub Battery	Hub Solar panel	Hub Battery Life	Hub Battery Size	IP Rating	Notes
Encounter Solutions	In Market	Internal	None			Internal	External				
Encounter Solutions	Under Development	Internal	None								

WTE	In Market	Internal	Internal	38K-48K transmission	AA	Internal	Internal				
WheroNet IoT	In Market	Internal	None			TBC	TBC				
FTP	In Market	Internal	Internal			Internal	Internal				
FTP	Under Development	Internal	Internal								
eTrapper	In Market	Internal	None			TBC	TBC				
Critter Solutions	Under Development	TBC	TBC			TBC	TBC				For terrestrial Cellular, it will operate as current terrestrial cellular

Table 4 outlines the data packet sizes and availability of API access once data is online.

TABLE 4. REMOTE COMMS DATA CAPABILITIES

Manufacturer	Remote Comms Type	Product	TX Data avg	TX Data Max	RX Data Max	Data Encryption	Native Dashboard	Data API
Encounter Solutions	Local Network Protocol and Hardware	Celium				yes	yes	yes
WTE	Local Network Protocol and Hardware	WTE UHF		100 bytes		TBC	no	yes
WheroNet IoT	Local Network Protocol and Hardware	TM2 Trap Monitor				TBC	TBC	yes
FTP	Local Network Protocol and Hardware	YarnMesh				yes	yes	TBC
eTrapper	Local Network Protocol and Hardware	Sigfox node				TBC	no	no
Critter Solutions	Direct to Cloud	Flexicomms				TBC	yes	TBC
Critter Solutions	Terrestrial Cellular Only	Flexicomms				TBC	yes	TBC

Sensors

Table 5 is an overview of the currently interoperability of sensors to remote communication networks.

TABLE 5A. SENSORS AND INTEROPERABILITY

Manufacturer	Product	Type	Hardware Dev Status	Wire Comms Protocol	Ave Data pkg size	Min Data pkg size	Max Data pkg size
NZ Autotraps	AT230	Smart Trap/Bait Station/ Lure	In Market	**UART**			
NZ Autotraps	AT220	Smart Trap/Bait Station/ Lure	In Market	**UART**			
Critter Solutions	Ezy Lure	Smart Trap/Bait Station/ Lure	In Market				
eTrapper	Baitsense	Smart Trap/Bait Station/ Lure	In Market				
Good Nature	Autorat	Smart Trap/Bait Station/ Lure	TBC				
Envico	Spitfire	Smart Trap/Bait Station/ Lure	Under Development				
Critter Solutions	AI Kill Trap	Smart Trap/Bait Station/ Lure	Under Development				
NZ Autotraps/FTP	AT520AI	Camera	In Market				
2040	DOC AI Camera	Camera	In Market				
ASG Technologies	PredaCAM	Camera	In Market				
800 Trust	HARK	Misc Monitoring	Under Development				
NA	Leg Hold	Dumb Traps/BaitStations/Lure	In Market	NA	NA	NA	NA
NA	Live Capture Cage	Dumb Traps/BaitStations/Lure	In Market	NA	NA	NA	NA
NA	DOC kIll trap	Dumb Traps/BaitStations/Lure	In Market	NA	NA	NA	NA

TABLE 5B. SENSORS AND INTEROPERABILITY

Manufacturer	Integrated Satellite Cellular	Intergrated Terrestrial Cellular	Integrated BT walk by	Celium	WTE	LoRaWan TTN or proprietary	Sigfox	Yarn Mesh	Flexi-Comms	Notes
NZ Autotraps	✗	✗	✗	❁	✗	❁	✗	✗	✗	
NZ Autotraps	✗	✗	✗	❁	✗	❁	✗	☑	✗	
Critter Solutions				✗	✗	✗	✗	✗	✗	
eTrapper	✗	✗	✗	✗	✗	✗	☑	✗	✗	
Good Nature	✗	✗	☑	✗	✗	✗	✗	✗	✗	
Envico				TBC	TBC	TBC	TBC	TBC	TBC	
Critter Solutions		☑		✗	✗	✗	✗	✗	❁	
NZ Autotraps/FTP	✗	✗	✗	✗	✗	✗	✗	☑	✗	
2040	✗	☑	✗	❁	✗	✗	✗	✗	✗	
ASG Technologies	✗	☑	✗	✗	✗	✗	✗	✗	✗	
800 Trust	✗	☑	✗	✗	✗	✗	✗	✗	✗	Very little information is known
NA	✗	✗	✗	☑	☑	☑	✗	✗	✗	
NA	✗	✗	✗	☑	☑	☑	✗	❁	✗	
NA	✗	✗	✗	☑	☑	☑	☑	✗	✗	

TABLE 5C. SENSOR AND INTEROPERABILITY PROJECT PHASE USE

Manufacturer	Project Phase Survey	Project Phase Eradicate	Project Phase Protect
NZ Autotraps		☑	☑
NZ Autotraps		☑	☑
Critter Solutions		☑	☑
eTrapper		☑	☑

Good Nature		☑	☑
Envico		☑	☑
Critter Solutions		☑	☑
NZ Autotraps/FTP	☑	☑	☑
2040	☑	☑	☑
ASG Technologies	☑	☑	☑
800 Trust	☑	☑	☑
NA		☑	☑
NA		☑	☑
NA		☑	☑

AI Enabled Sensors

AI Enabled sensors include edge processing AI as well as cloud processing AI. Currently the majority of AI enabled devices are camera, however this section will include all sensors that have an AI aspect.

TABLE 6. AI ENABLED TECHNOLOGY

Manufacturer	Product	Status	AI	Computing	Battery	Bat. Size	Bat. Life (no. msg)	Re-Trainable	Kill enabled	Audio Monitoring	IP rating
Critter Solutions	AI Kill Trap	Under Development	Yes	TBC	TBC	TBC	TBC	TBC	Yes	TBC	
NZ Autotraps /FTP	AT520AI	In Market	Yes	Both	Internal	TBC	TBC	TBC	Yes	No	
2040	DOC AI Camera	In Market	Yes	TBC	External	TBC	TBC	TBC	No	Yes	
ASG Technologies	PredaCAM	In Market	Yes	Cloud	Internal	TBC	TBC	TBC	No	TBC	
800 Trust	HARK	Under Development	Yes	TBC	TBC	TBC	TBC	TBC	NA	Yes	

Other Sensors

These sensors have a digital component such as some form of automation. The sensors here have the ability to be connected to by a remote communication node via wire or RF.

TABLE 7. OTHER SENSORS WITH DIGITAL CAPABILITIES

Manufacturer	Product	Type	Battery	Bat. Size	Bat. Life (no. msg)	Solar integration	IP rating	Notes
NZ Autotraps	AT230	Smart Trap/Bait Station/ Lure	TBC	TBC	TBC	TBC	TBC	Epoxy pour the traps
NZ Autotraps	AT220	Smart Trap/Bait Station/ Lure	TBC	TBC	100 cycles	TBC	TBC	Epoxy pour the traps
Critter Solutions	Ezy Lure	Smart Trap/Bait Station/ Lure	TBC	TBC	TBC	TBC	TBC	
eTrapper	Baitsense	Smart Trap/Bait Station/ Lure	TBC	TBC	TBC	TBC	TBC	
Good Nature	Autorat	Smart Trap/Bait Station/ Lure	TBC	TBC	TBC	TBC	TBC	
Envico	Spitfire	Smart Trap/Bait Station/ Lure	TBC	TBC	TBC	TBC	TBC	