

DirectView

Reinventing Asset Tracking



Supply chain is facing multiple challenges...



Lack of accuracy

Delivery delays, lost inventory



Poor SKU management

Inaccurate inventories and inefficient delivery routes



Limited traceability

No real time tracking, estimated location of goods

... that existing solutions do not fully address



Barcode technology provides no real time tracking and does not avoid errors and loss.



RFiD technology requires a heavy infrastructure and restrictive process.



LoRaWan technology used as geolocalization method provides very poor results.



Vehicle onboard telematics does not enable SKU tracking.



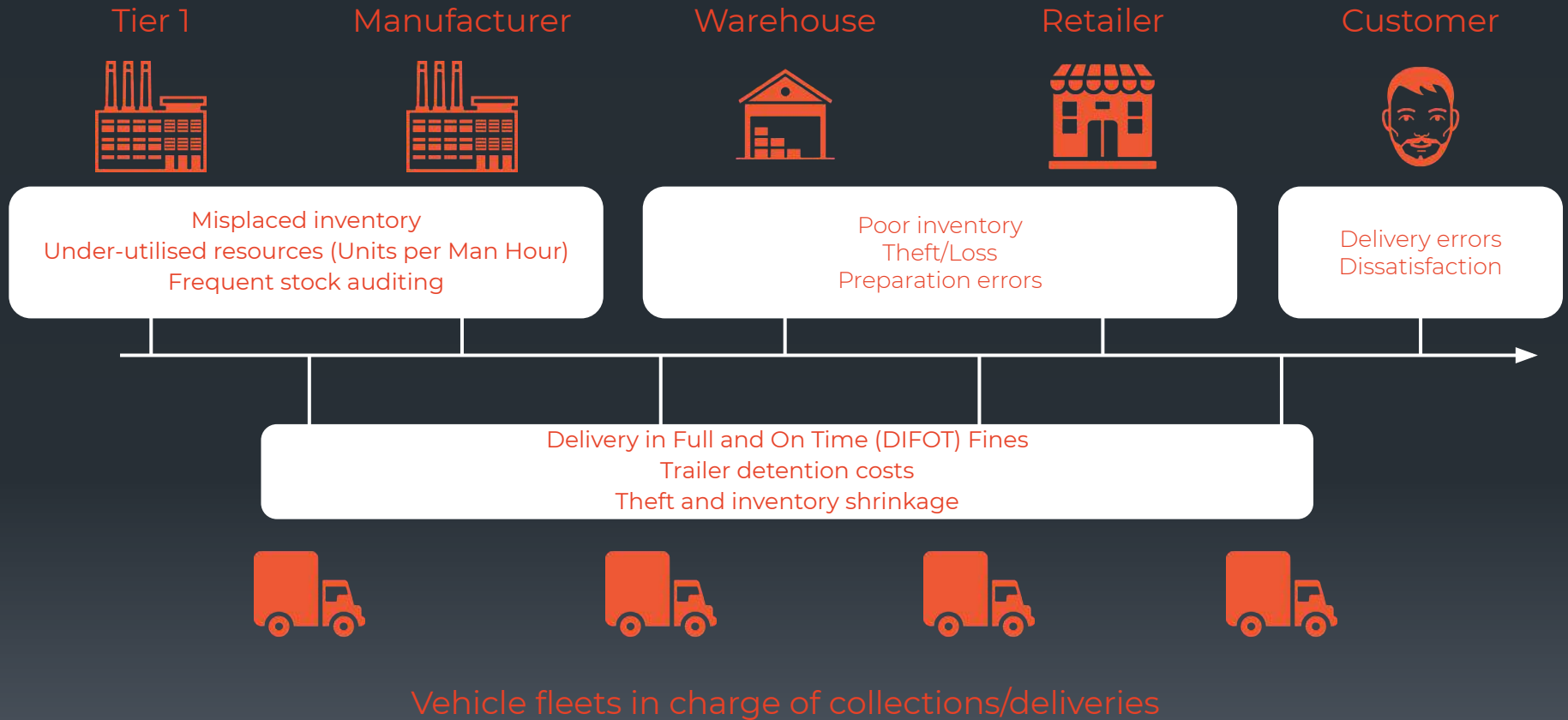
Historic 

Real time 

Savings 

Accuracy 

Issues with Supply Chain



DirectView

is a Plug n Play asset tracking solution allowing organizations to fully monitor and control their supply chain in real time



Full control over SKUs and flows



Continuous real time tracking
From production to delivery



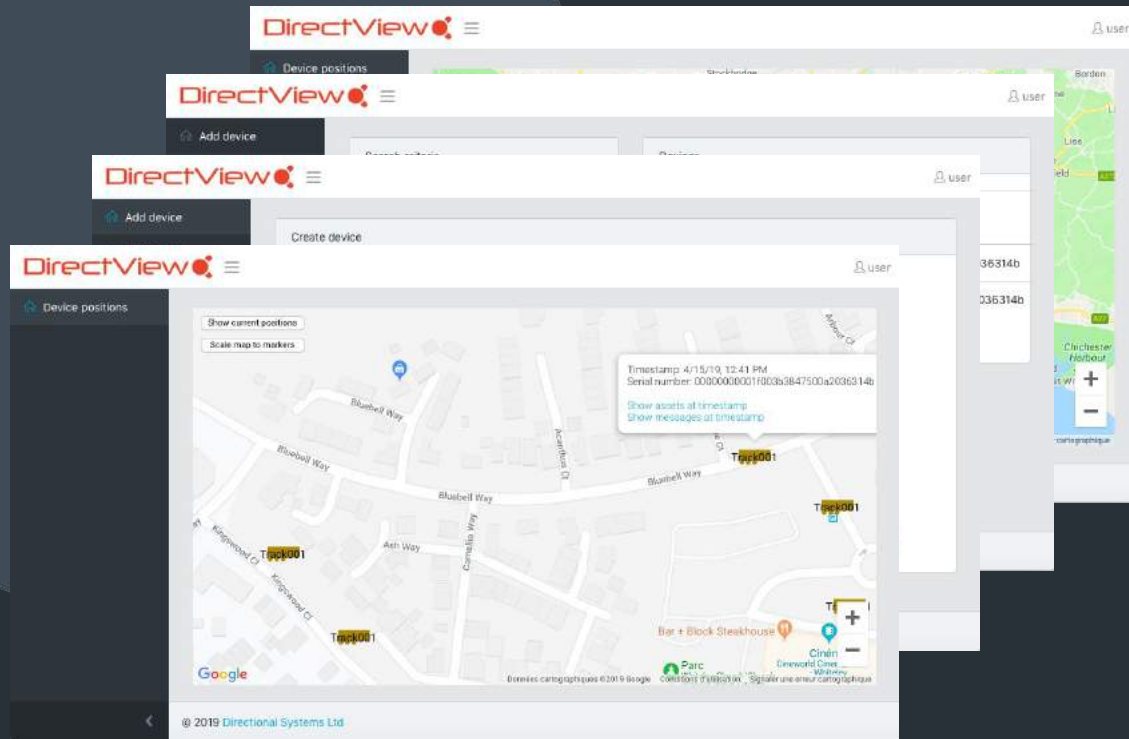
Performance follow-up
Dashboard, KPIs and reporting



Security
Geofencing and alerts



Authentication
Unique ID for each SKU or container



Features

DirectView

PopTag

Asset tracking



PopTag10

- Bluetooth
- Range 160m
- 10 year lifetime

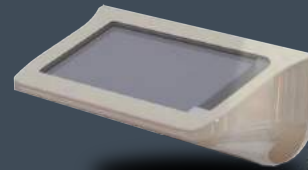


PopTag3

- Bluetooth
- Range 160m
- 3 year lifetime

Spotter

Static or mobile reader



Spotter

- GPS, GLONASS, SBAS, QZSS, BeiDou and Galileo
- Worldwide Network Connectivity
- Battery powered with Energy Harvesting Technology

Static on-site modular solution...



Real time inventory



Materials tracking



Production follow-up

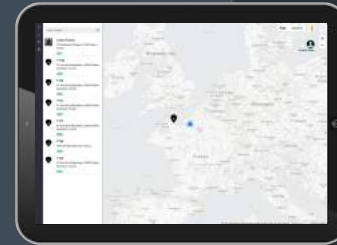
Spotter units surrounding = contactless reading of PopTags in the vicinity

Scan - Attach - Track



Scan

Scan the tag to register it into the database



Track

Track SKUs and containers in real time



Attach

Attach the tag to a SKU or a container

...and/or in itinerary mode



SKU tracking in real time



Spotter



Theft detection



Collection/delivery follow-up

Remote detection via smartphone application

DirectView 



Search and detect PopTags in vicinity



Geofencing and alerts



PopTag registration



Why DirectView?



End-to-end

Lean management with advanced information on production flows.



Highly localized

Supports localisation to sub-metre accuracy



Future Proof

Regular and remote updates and upgradable features

Easy-to-Install

modular set-up enables simple, customized installation

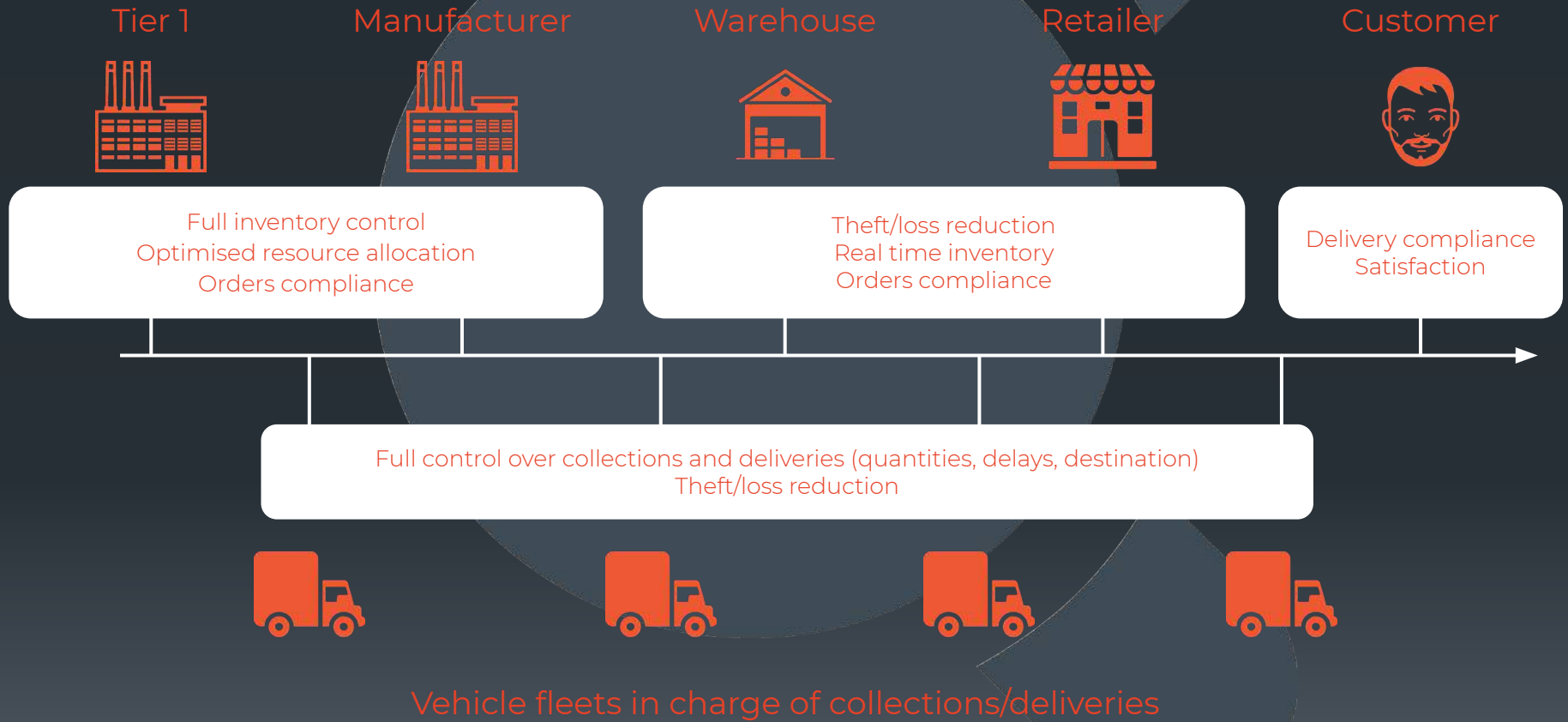


Scalable

Service platform supports increased traffic



End-to-end control of the activity



What benefits?



Control

Complete view of logistical flows in both historical and real-time contexts

Geozone breach **Alerts**

Collections/Deliveries
Compliance



Simplicity

Ready-made, configurable and evolving solutions

Process **Automation**

Ergonomic Applications



Savings

Time saving on inventories and SKU localization

TCO improvement with SKU theft/loss reduction

Productivity **Improvement**



DirectView

Historic 

Real time 

Savings 

Accuracy 

DIRECTIONAL
SYSTEMS

Directional Systems Tracking Ltd.
3700 Parkway
Solent Business Park
Fareham
PO15 7AW
United Kingdom

Addendum

Pricing

A disruptive business model that fits to any company size.

1 000 000 PopTags

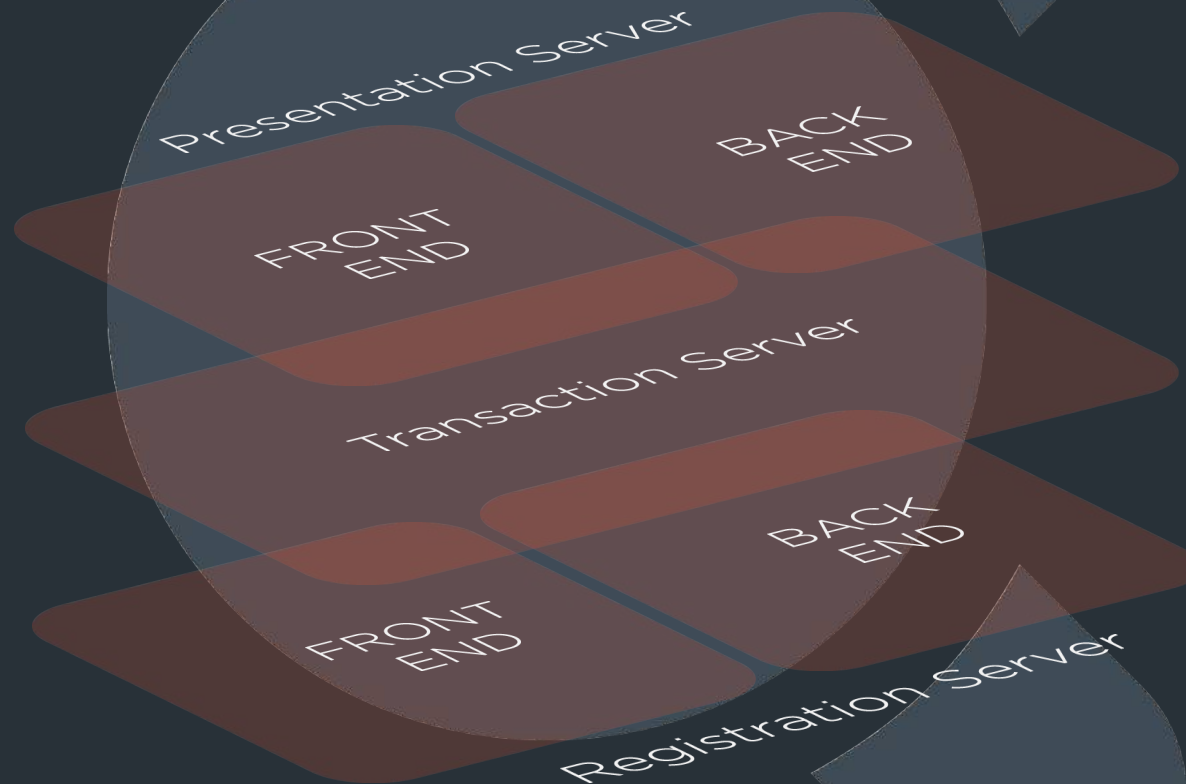
£1/year/PopTag* **
(£0,08/month)

No additional cost
Infrastructure provided***

- *4 year minimum commitment
- ** invoiced by quarter in advance
- *** Deployment by customer

DirectView

A simple and robust architecture enabling a consistent, efficient and scalable service.



Full integration to existing customer legacy SI with API & Web Services.

PopTag



PopTag10

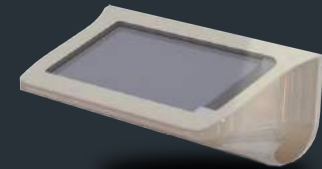
- Bluetooth LE 4.2 / 5.0
- IP67
- Period 10 seconds
- Range 160 meters
- Dimension 54x25x6,8mm
- Lifetime 10 years



PopTag3

- Bluetooth LE 4.2 / 5.0
- IP67
- Period 10 seconds
- Range 160 meters
- Dimension 45x25x3,5mm
- Lifetime 3 years

Spotter



Mobile Connectivity

- Dual-Band UMTS/HSPA+ 900/2100MHz
- Quad-Band GSM/GPRS/EDGE 850/900/1800/1900MHz
- Upgradeable to LTE-M/Cat 1

Active Components

- GPS Location: 16 channel, GPS L1/GLONASS, SBAS, QZSS, BeiDou and Galileo
- Accelerometer: full scale: $\pm 2/\pm 4/\pm 8/\pm 16$ g
- Untethered Dead Reckoning: Triaxial accelerometer & triaxial gyroscope
- Bluetooth LE enabled:
- Measures: 320mm x 150mm x 180mm
- Weight: 1300 grams

Power supply

- Battery: Custom Lithium Ion, 18,200mA, certified to IEC62133
- 12/24V charging

Environmental constraints

- Operating ambient temperature: -30°C to 85°C
- Non-operating temperature: $<-30^{\circ}\text{C}$ $>85^{\circ}\text{C}$
- Protection: IP67 dust and immersion
- Patented battery protection
- Patented outgassing protection
- Certified to CE, WEE, RoHS, IP67