

Case study – BT Asset Trace for Openreach.

# Innovative track and trace solution protects high-value assets and streamlines operations.



When most people think about innovation it brings to mind the latest bright and shiny electronic gadgets. Yet away from the business to consumer market are truly innovative ideas that make businesses and processes perform better. We all benefit from this ingenuity, but few can imagine what's going on behind the scenes.

BT Asset Trace helps Openreach track millions of pounds-worth of vital telecoms apparatus – from humble home hubs to massive drums of copper cable and the superfast broadband cabinets that connect nearly all businesses and homes in the UK.

Customers get superior service. Openreach gets a better bottom line. And the environment's protected too.

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**Ian Hill,**  
Chief Sustainability Officer,  
Openreach

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BT Asset Trace saves Openreach tens of millions of pounds while improving the UK telecommunications infrastructure.

### A modern detective story: the case of the missing modems.

It started with a costly conundrum. Openreach needed to find 222,000 modems from across the country. In doing so they made an uncomfortable discovery: 18,000 units valued at nearly £½ million had simply disappeared into thin air.

Openreach is charged with installing and maintaining the local loop for the UK's telecommunications infrastructure. Every year it buys hundreds of millions of pounds-worth of complex tools, optical fibre, copper cable, and street cabinets – as well as high-volume, lower cost customer premises equipment (CPE), such as modems and home hubs.

In this particular instance, Openreach could identify exactly when new modems were delivered into its stores, but lost visibility after stock was assigned to engineers. Moreover, if modems valued at almost half-a-million pounds were missing what else had escaped attention and at what cost?

Physical assets had long been monitored using traditional paper trails. Now Openreach needed a more powerful way of tracking and tracing.

### Never lost, always found, with BT and Acumentive.

Openreach turned to BT. In turn, Acumentive, a UK organisation who specialise in real-time asset location and management, was asked to assist.

Martin Kruse, managing director of Acumentive, explains: "We use and develop smart technology to help our customers look after their assets and equipment – types, values, locations, histories and workflow processes – for full visibility and control."



BT Asset Trace for EFR provides us with a forensic ability to identify and remove faulty kit before it impacts our customers.

**Tony Mitchell**  
Director, Customer Network Services  
Openreach



BT worked with Acumentive to customise and embed the organisation's SenseAnyWare® application into the BT Asset Trace platform.

### BT Asset Trace for CPE.

Openreach now uses BT Asset Trace to monitor its entire pool of CPE (customer premises equipment) items. Darren Delsol, project lead for asset tracking at Openreach, says: "With BT Asset Trace we have a 95 per cent success rate in tracking modems. In its first year it saved almost £950,000 – not including successful warranty claims or manufacturers' refunds."

To discover how it works go to the Monitoring modems' movements text box, which describes a typical modem's lifecycle.

With BT Asset Trace, Openreach can track the exact location and status of tens of thousands of CPE items, including those once-elusive modems. It can reassign them from one engineer to another to save unnecessary journeys back to the stores and re-allocate assets between regions, rather than order unnecessary units to meet local shortages. Further, the system can determine if a broken unit is under warranty for refund or repair and help locate stock should there be a product recall.

Chris Reid, Business Improvement Specialist for Supply Management at BT, says: "Tracking smaller assets held by Openreach will help us reduce millions of pounds lost yearly. It will also help keep customer records up-to-date to avoid more problems."

Openreach was so impressed with BT Asset Trace that it decided to see how the application might be applied to other areas of its business.





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### BT Asset Trace for Tools.

Every year Openreach spends £11 million on tools with values greater than £1,500. Units like calibration systems and high-end scanners – used for installation, maintenance and repair – are assigned to engineers, often for many years.

But much like the challenges with less expensive items, Openreach didn't know if a tool was still in use, undergoing repair, or had been lost. Furthermore, if an engineer had left the company there was no way of knowing whether that expensive company property had been returned or whether it had it been reassigned to another engineer.

As a result of the previous work delivered for Openreach, Acumentive were again approached to customise SenseAnyWare® within BT Asset Trace to meet the need. Openreach can now track 35 tool categories with a total value of £7 million held by its 1,100 engineering teams. Unique identifiers are assigned to make employees responsible for high-value tools. Reassignment of tools to other employees and other regions can be tracked, while leavers are reminded to return equipment.

Over a four-month trial period, BT Asset Trace for Tools saved £200,000 in lost or missing items. Under a full rollout, Openreach will track tools held by engineers division-wide; with a total asset value of some £45 million.

### BT Asset Trace for Electronic Field Returns.

Openreach is responsible for the installation, maintenance and repair of expensive electronics like the line cards that terminate circuits. These help drive telecommunication services for large organisations and government departments.

Those electronic items can cost many thousands of pounds each so Openreach negotiates strict terms with manufacturers. If a component fails within 60 days and the manufacturer is notified within that timeframe, they have an obligation to send an advanced replacement to fix the problem. Openreach then returns the failed item and isn't charged for the replacement.

However, if the manufacturer isn't notified within the 60-day warranty, or if the part isn't returned, Openreach has to bear the cost of the replacement.

Unfortunately, Openreach didn't have full histories for such parts. Inoperative line cards might be thrown away rather than returned for repair, or manufacturers simply weren't being notified of a fault within the stipulated 60 days. Failure to track such assets was potentially costing the company a lot.

With BT Asset Trace for EFR (electronic field returns), Openreach scans electronic cards on delivery from the manufacturer. The system captures exact location, value and date of deployment. Complete histories are saved to a central repository. If a fault occurs the system determines if the component is under warranty. If it is, the manufacturer is automatically notified and the engineer compelled to return the item.

Tony Mitchell, Director of Customer Network Services at Openreach, says: “BT Asset Trace for EFR provides us with a forensic ability to identify and remove faulty kit before it impacts our customers.” It's estimated that Openreach will save at least £6 million annually with BT Asset Trace for EFR.

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### BT Asset Trace for Cable.

Every year Openreach purchases countless miles of expensive fibre and copper cable to extend or repair the country's telecommunications networks. Those assets are stored on drums in service centres across the country. For years they were tracked manually. But traditional methods met many challenges.

For example, the quantity of cable used on specific jobs couldn't be tracked. Exact national stock locations and quantities weren't known. If a section of cable was cut from a drum, the remaining length couldn't be assigned a new value. This meant some cable leftovers were never used because stock insights didn't exist.

Now with BT Asset Trace for Cable, Openreach tracks and audits millions of pounds-worth of cable in use by its contractors.

### BT Asset Trace for Cabinets.

Openreach is responsible for the thousands of ubiquitous BT green cabinets across the UK. As well as enabling cross-connection, they house electronics that drive the nation's telephony and broadband links.

The latest generation of superfast broadband cabinets for the Openreach Next Generation Access (NGA) programme are manufactured in China. Shipped in bulk in containers, they are transported all over the country and were being tracked through a largely manual system. But data capture was patchy and Openreach couldn't manage these highly-valuable assets in real time.

When a particular cabinet failed to turn up no-one had any easy way of knowing whether it had been transported to the wrong location or just lost. Sub-contractors could be left in the dark and projects delayed while new cabinets were sourced.

BT Asset Trace for Cabinets is in the process of implementation. Tracking is to be captured using barcodes with location-aware mobile devices transmitting information to a centralised operations and management information function. Openreach will be able to track cabinets' lifecycles in real time from their arrival in the country to delivery and deployment and all the way to retirement.

### Realising significant cost and service benefits.

The different flavours of BT Asset Trace in use by Openreach will not only reduce capital expenditure by many millions of pounds, but also accelerate and improve customer service. Furthermore, more efficient use of assets will speed projects aimed at improving local and regional infrastructure and loss or theft will also be curtailed. The SenseAnyWare® application from Acumentive that underpins BT Asset Trace is fully GS1 certified.

There are sustainability benefits too, in terms of less raw material consumption and elimination of unnecessary engineering journeys. Ian Hill, Chief Sustainability Officer at Openreach, concludes: "Our use of BT Asset Trace will reduce unnecessary consumption of scarce resources, eliminate disposal of branded items in landfill, and reduce carbon footprints for both BT and its customers".



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### Monitoring modems' movements.

When modems are shipped from the manufacturer to Openreach warehouses, their barcodes are scanned to capture and store date of delivery, type, serial number, value, warehouse location and similar data. When an engineer picks up the modem, it's assigned to their unique employee number making them solely accountable for it.

Installing the modem at a customer's premises the engineer scans the barcode using the application built into their iPhone or a handheld scanner. On the central system, the modem's status changes to 'installed'. Date of installation and location are stored.

If, some time later, the modem fails and a replacement is not immediately to hand, BT Asset Trace can assist an engineer find the nearest colleague with the required replacement and arrange for it to be reassigned. This avoids the need for the engineer to drive all the way back to the warehouse. Journeys are cut, which reduces carbon emissions, and customer service is accelerated.

As for the broken modem: the application reminds the engineer the modem is still in warranty. Rather than discarding the broken unit, the engineer takes it back to stores for manufacturer refund or repair.

### Core services.

BT Asset Trace applications:

- BT Asset Trace for CPE
- BT Asset Trace for Tools
- BT Asset Trace for EFR
- BT Asset Trace for Cable
- BT Asset Trace for Cabinets

Working with  
**acumentive**  
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