KelTech IoE
THE NET ZERO NETWORK

CREATING THE NEXT GENERATION CONNECTIONS

A Boldyn Case Study

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INTRODUCTION

In an era where digital transformation is paramount, asset identification has become a critical component for efficient and reliable infrastructure deployment and management.

Boldyn Networks, with a proven track record and global expertise, are the wireless network company of choice for those looking to move society forward and solve tomorrow's greatest challenges chose KelTech IoE's LOC platform to help digitise their infrastructure build on the prestigious 20 year TFL infrastructure concession in London.

This innovative IoT platform replaces traditional labelling methods with advanced, encrypted NFC (Near Field Communication) tags, ensuring data is securely stored online and easily accessible.

The deployment to date has covered approximately 70 square kilometres across some of central London's most iconic locations – from Kings Cross Station to Hyde Park Corner, to London Bridge. In collaboration with Boldyn's esteemed build partners – Telent, Magdalene and OCU – Boldyn Networks has set a new standard for digital asset identification, leveraging the power of data digitisation to streamline operations, deployment and to enhance data accuracy.

This case study delves into the objectives, implementation process, key features, challenges, solutions, and the impressive results achieved through the deployment of LOC. It highlights how Boldyn Networks has revolutionized asset identification, providing a comprehensive overview of the project's success and its impact on the infrastructure landscape.

PROJECT BACKGROUND

Boldyn Networks, in partnership with Transport for London (TFL), is undertaking an ambitious project to transform London into one of Europe's best-connected cities by enhancing connectivity across both the streetscape and the London Underground. The Streetscape project aims to install 3,900 small cells on TFL's existing assets, such as lighting columns on major roads, to significantly boost 4G and 5G connectivity in dense urban areas with high demand and poor connectivity. Powered by new gigabit fibre laid through 60km of TFL ducting, these small cells will improve mobile network capacity efficiently.

Additionally, Boldyn Networks is collaborating with the Greater London Authority (GLA) to deliver fibre connectivity to public centres and CCTV sites, benefiting all London boroughs by enhancing access to educational and economic opportunities. Complementing these efforts, Boldyn Networks is also deploying uninterrupted 4G mobile coverage on the Jubilee line, with plans to extend 4G and 5G coverage to all ticket halls, platforms, and tunnels on the London Underground by 2024, involving over 1,000 kilometres of cabling to ensure minimal disruption to passengers.

The LOC (Label on a Cable) platform, developed by KelTech IoE, plays a pivotal role in this transformation. By replacing traditional labelling methods with advanced, encrypted NFC tags, LOC ensures that data is securely stored online and easily accessible. This digitisation of infrastructure data has streamlined operations, enhanced data accuracy, and improved network build quality and also overall efficiency.

PROJECT OBJECTIVES

The deployment of LOC by Boldyn Networks aimed to achieve several key objectives:

Ensure long-term Asset Identification: **01**

- Traditional Labels are prone to wear and tear, and in harsh conditions such as underground labelling information can easily be lost. LOC addresses this with IP68 rated labels, which can last up to 20 years.

- By digitising data and storing in securely on the cloud, LOC avoids loss of asset identification information through lost excel sheets etc.

- Boldyn assets can easily be identified by the bespoke tags developed for their projects. (Photo)

Improve Operational Efficiency: **02**

- Increase the accuracy of field engineer dispatches by providing precise asset identification information. Engineers can even get directions to an asset via Google Maps or Apple Maps via the app.

- Enable quick and efficient identification of assets using the mapping and filter features.

Network Auditability: **03**

- Provide the ability for auditors to be able to validate infrastructure deployed in the field

- Provides validation & verification of Network Infrastructure Investment

Sustainability: **04**

- Promote sustainability by utilizing re-usable LOC tags

Commercial Opportunity: **05**

- To facilitate the identification of available network assets for future commercial purposes.

Data Accuracy and Security: **06**

- Data Accuracy ensured as Asset Information taken from Boldyn GIS platform, where a standardized nomenclature has been specified for all Asset types.

- Data is stored privately on the cloud. Only Boldyn Authorized users have access to view data. Any third parties are unable to read the tags, ensuring maximum data privacy.

## Streamline Deployment: **07**

- No requirement to print or configure labels for specific assets before labelling. LOC tags are dynamically assigned by the field engineer.

- Time to label is significantly reduced, as the engineer selects pre-uploaded information from the Mobile Application.

- Real-time visibility of Infrastructure Deployment via the LOC Web Application.

RESULTS

The results of the current deployment of LOC across Boldyn Infrastructure are as follows:

➡ LOC tags used to label all deployed infrastructure, ensuring the longevity of Asset Identification information

➡ Operational Efficiency increased by an estimated 10%.

➡ Ease of demonstration of available network assets to wholesale customers

➡ Re-usable tags deployed in the network reduce the carbon footprint of the Boldyn Network, along with reduced truck rolls due to the accuracy of data available.

➡ All deployed infrastructure is deployed with secure and private labels, only readable by Boldyn approved personnel.

➡ Visualisation of live infrastructure deployment. Significantly reduced time required to label assets.

➡ Real-time visibility of the infrastructure deployment. Significantly reduced time required to label assets.
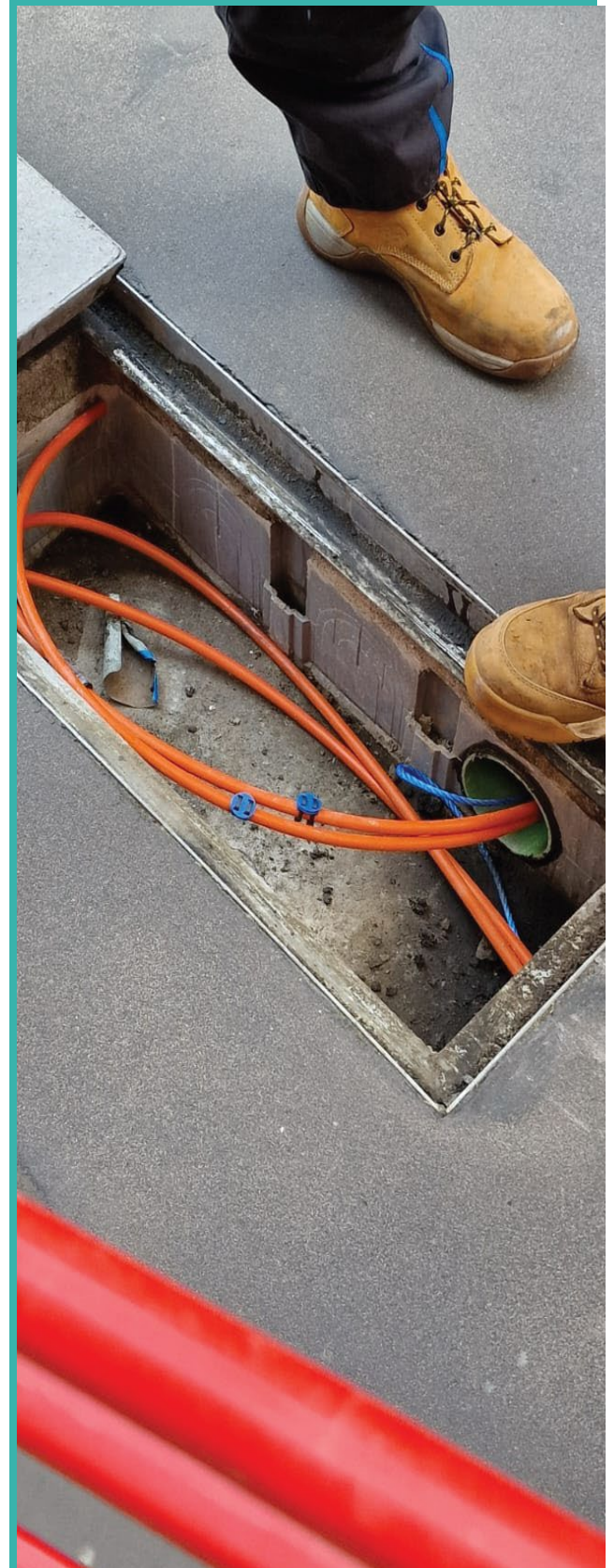
Key results from the deployment include:

➡ Comprehensive labelling of all deployed infrastructure, ensuring the longevity and accuracy of asset identification.

➡ A 10% increase in operational efficiency, demonstrating significant time and resource savings.

➡ Deployment of reusable tags, contributing to a reduced carbon footprint and fewer truck rolls due to accurate and accessible data.

➡ Secure and private labelling of infrastructure, ensuring data privacy and access control.

➡ Real-time visibility of infrastructure deployment, greatly reducing the time required to label assets.

CONCLUSION

The deployment of LOC (Label on a Cable) by Boldyn Networks represents a significant leap forward in the field of asset identification. Leveraging the innovative LOC platform developed by KelTech IoE, Boldyn Networks has successfully digitized their infrastructure build across prestigious TfL infrastructure in London, covering approximately 70 square kilometres of Central London, including iconic locations such as Kings Cross Station, Hyde Park Corner, and London Bridge.

This case study has highlighted the key objectives of the deployment, including long-term asset identification, improved operational efficiency, sustainability, data accuracy and security, streamlined deployment processes, and enhanced network auditability. By achieving these objectives, Boldyn Networks has set a new standard for digital asset identification.

TESTIMONIALS

"Utilizing the LOC platform has revolutionized our asset identification at Boldyn Networks. The digitization of data has significantly boosted our operational efficiency and speed of deployment, ensuring accurate and long-lasting asset identification. Compared to existing labelling systems, LOC offers significant long term operational benefits for fault finding"
– Will Lucas, Delivery Manager, Boldyn Networks

"Telent & our suppliers have been very impressed with the LOC system. The Engineers were able to get to grips with the system instantly & the operational benefits were seen from the outset. We particularly liked the map feature that allows the chamber you are standing next to on site, to be located & the LOC tag added very quickly. We were also impressed how easy the system is to change & update if need be after leaving site along with the support from the LOC team if we have any queries."
– Samuel Byfield, Project Manager, Telent

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