

# Accelerating fiber deployment across Oman

## Introduction

Oman Broadband, founded in 2014, has been working to empower the nation of Oman with high-speed fiber broadband, aiming to deliver maximum national coverage in line with the Digital Oman Strategy and Oman Vision 2040's goal of enriching the digital experience for households and businesses across the nation.

The company specializes in deploying broadband infrastructure, offering wholesale access to telecommunication service providers and retail access to private network owners and operators, empowering end users to make efficient use of high-speed fiber.

Oman Broadband's network has reached a major milestone, now passing 891,647 homes—covering 60% of all housing units in Oman. Among these, 422,234 homes are in Muscat, representing 95% coverage in the capital. Additionally, there are 300,000 active customers across various ISPs, constituting approximately 34% of the total homes passed.

## The challenge

Oman Broadband relied on Ericsson Network Engineer (ENE) to manage its network infrastructure and service delivery. However, ENE's inherent limitations created significant bottlenecks, hindering the company's ability to meet its homes-passed targets. Additionally, ENE lacked mobile capabilities, a critical feature Oman Broadband sought to enable efficient last-mile service delivery directly from the field.

Faced with the additional challenge of ENE nearing its end of life, Oman Broadband urgently needed to transition to a modern, GIS-based asset management solution. The new system would be required to enhance network management, streamline maintenance processes, and improve service delivery — all with the goal of accelerating customer connections.

### Project scale

- > Network footprint: Nationwide
- > Over 15M records
- > Over 150k monthly transactions
- > Over 890,000 premises passed
- > Over 300,000 active FTTH customers

## The solution

Partnering with 3-GIS, Oman Broadband launched a transformative GIS initiative, setting a new benchmark for digital transformation in the Middle East's telecom sector. The objective was to transition service delivery operations into a fully digitized, mobile-optimized environment, moving away from the legacy ENE solution. The endeavor transitions from a dated client/server application to a contemporary web-based architecture, tapping into the advantages of web and mobile technologies.

The project's critical performance indicators included:

- > Elevating customer service by streamlining service delivery
- > Transforming field operations by implementing mobile technologies
- > Leveraging advanced web technologies for enhanced workflow integration and management dashboards
- > Expediting project timeline and delivery by implementing a new data loading tool to import large datasets quickly

## ENE to 3-GIS: Solution workflow comparison summary

| Workflow              | ENE                                                  | 3-GIS                                                    |
|-----------------------|------------------------------------------------------|----------------------------------------------------------|
| Data loading          | Data loading process took days                       | Data loading reduced to 8 minutes (based on 6,400 units) |
| Workflow automation   | Manual processes slowed task completion              | Automated workflows improve field efficiency             |
| Field team updates    | Limited to office-based access with no field support | Real-time mobile access for fiber tracing and updating   |
| Task management       | Manual interventions required                        | Automated task management via 3-GIS   Task               |
| Schematics            | Manual designs and slower updates                    | Automated design tools with GIS/CAD integration          |
| Work order management | Manual work order processing meant slower execution  | Automated work order delivery for faster operations      |
| Reporting             | 4 hours to generate equipment utilization report     | Export bulk equipment reports in minutes                 |
| User experience       | Installation requirement and hardware limitations    | Web-based, user-friendly interface with easy access      |

## The results

To successfully execute the project, 3-GIS developed a detailed implementation plan meticulously tailored to meet the initial requirements set forth by the Oman Broadband team. The team navigated the project's challenges by recognizing the need to innovate and devise multiple novel solutions to completely transform the existing workflows established in the ENE solution.

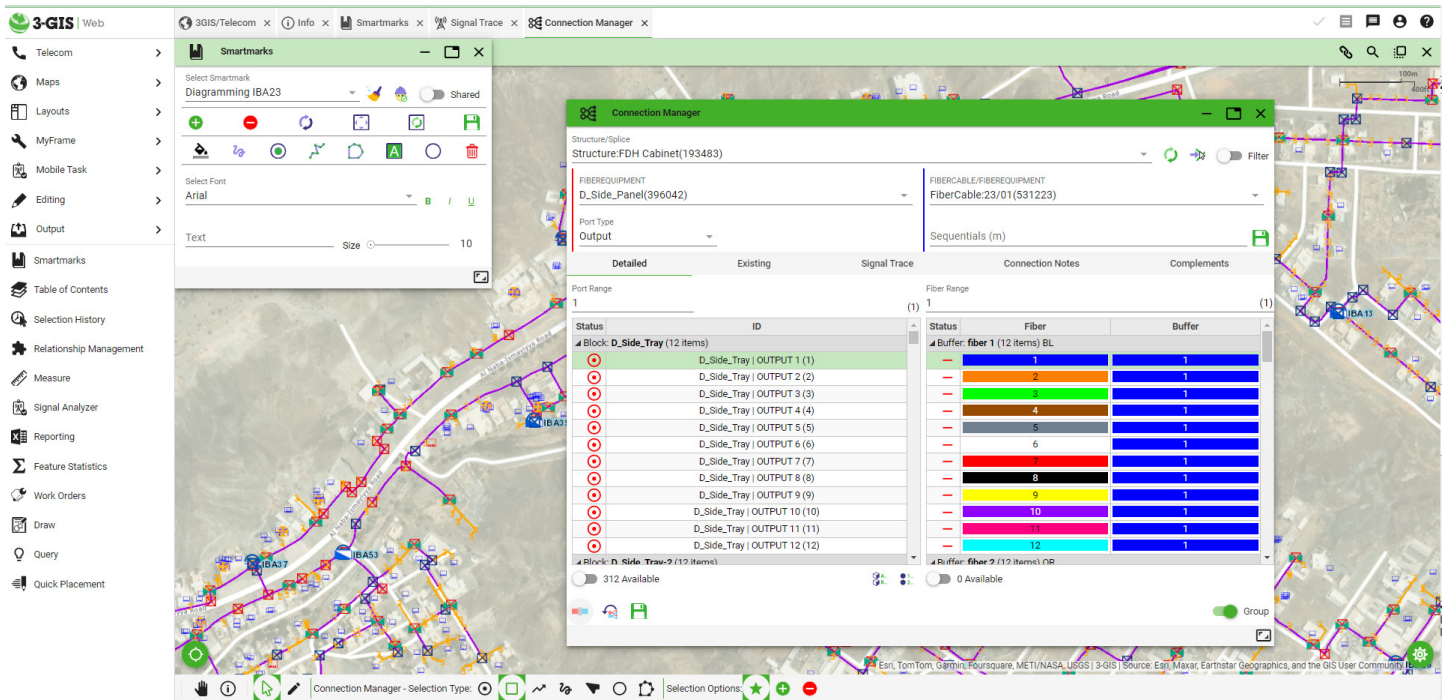
The expansion of 3-GIS | Network Solutions capabilities went beyond mere configuration and data transition, but also necessitated the following:

- > The creation of 3-GIS | Task, a new consumer-facing application designed to automate and streamline field operations for last-mile service delivery, allowing Oman Broadband to connect over 400 customers per day
- > Pioneering an on-demand schematic generation tool to help the team quickly visualize how the network is connected at the fiber strand and equipment port level
- > Achieving time-savings in the data loading process to reduce overall project timelines by approximately 15%
- > Utilization of 3-GIS | Mobile to enable accurate and swift tracing of fiber connectivity, previously limited to in-house users, allowing contractors to access critical data from the field
- > Transforming troubleshooting and helping to optimize responsiveness and customer service using signal tracing functionality

Today, the web and mobile applications provide access to over 250 3-GIS users at Oman Broadband.

*"We are proud to have replaced the legacy Network Engineer system with the 3-GIS Solution, making us the first in the region to adopt this advanced technology and placing us as pioneers in attracting the latest geospatial technologies. Thank you to 3-GIS for their commitment to innovation and playing a pivotal role in revolutionizing our operational processes and increasing our efficiency."*

- Mohammed Al Maktoumi, GIS Department Lead



Modeling connectivity in 3-GIS | Web

## About 3-GIS

3-GIS, an SSP Innovations company, empowers companies to achieve better operating efficiencies and to meet the challenges of building increasingly complex fiber networks. 3-GIS uses a data driven approach based on geospatial reference, rules-based calculations, mobility, and web-based services to revolutionize the potential and realize the market opportunities of fiber assets. Our fully-configurable solutions allow users to plan, design, and manage networks; provide real-time data that is used enterprise-wide; and enable automation for faster service activation, in one seamless system. The company has development, product support, and operational staff in five countries challenging the status quo every day to improve the economic visibility of fiber networks; creating a more connected, informed, and lighted world.



Contact us to learn how 3-GIS can benefit your organization.

+1 720.279.9894  
 sales@3-GIS.com  
 www.3-GIS.com

