



## CASE STUDY

# How Tercom Streamlined Fiber Network Design and Engineering Processes with iBwave



Tackling the challenges of standardization and scalability, Tercom, an established telecom construction company in the Pacific Northwest, transformed its design and engineering processes with iBwave FiberPass. Through collaboration and implementation, they achieved a **5x increase** in project throughput and a **2x boost** in resource capacity, streamlining their operations effectively.



## Overview

**Tercom Construction** is a leading fiber optics engineering and construction company. They excel in all aspects of survey, design, engineering, and construction. However, they faced significant challenges in their design and engineering processes as customer requirements expanded to turnkey project management. Tercom is focused on providing reliable and efficient connectivity solutions and recognized the need to improve standardization, scalability, and knowledge dissemination within their organization.

By leveraging iBwave's suite of products, including iBwave FiberPass, iBwave FiberPass Mobile, and iBwave Unity, Tercom successfully transformed its operations, achieving significant results in terms of increased capacity, streamlined workflows, and enhanced accuracy.



## The Challenges

### 1 Standardization

As Tercom expanded its turnkey Fiber to the Home (FTTH) support and took on more complex projects, the lack of standardized processes posed a challenge. Variations in design practices were causing inefficiencies and hindering project progress.

### 2 Scalability

With the inclusion of buried/underground Overbuild in their portfolio, Tercom faced limitations in capacity as their projects expanded. The previous survey tool used for Aerial-Overbuild lacked the necessary functionality for underground projects, where linear distances differed from aerial messenger projects. Additionally, relying on a single manager for all designs caused bottlenecks and delayed project timelines.

### 3 Knowledge Dissemination

Tercom aimed to disseminate valuable knowledge and best practices across their team, ensuring expertise was not limited to a few individuals. However, with manual processes and inconsistent practices, effective knowledge sharing proved challenging.

“Deciphering our customer's unique Labor Codes to provide cost estimates, engineer jobs, and close-out billing has proven to be one of the more specialized tasks that we face. With FiberPass, we can customize our Component Database and codify Labor Codes and Material Part numbers as subparts to primary design objects. This has led to major benefits around standardization and quality improvement while removing the Labor Code interpretation as the stage gate in our process. Before, only 3-4 resources had this knowledge. We are now double that and growing.”

– Chris Bettencourt,  
Engineering Manager



## The Solution



**iBwave FiberPass:** Tercom implemented the iBwave FiberPass desktop application to address the challenges of standardization and eliminate manual processes. This powerful software provided a comprehensive library of standardized components and streamlined workflows, reducing errors and inconsistencies in designs.

**iBwave FiberPass Mobile:** For enhanced scalability and efficient data collection, Tercom embraced iBwave FiberPass Mobile. Technicians utilized the mobile app for capturing accurate site information, site surveying, and seamless collaboration with the design team. Real-time data sync bridged field-office coordination gaps, even with buried pathway variables.

**iBwave Unity:** Tercom utilized Unity to erase bottlenecks and enhance knowledge sharing during densification. The software fostered cross-team collaboration, allowing effective sharing of designs, annotations, and project data. Unity's intuitive interface expedited onboarding and increased overall productivity.



## The Results

### 2x Increase in Resource Capacity for Job Quotation

Implementing iBwave solutions significantly expanded Tercom's design capacity, particularly for densification and underground projects. Distribution of design work across staff eliminated single-manager bottlenecks, resulting in a remarkable **2x increase** in job quotation resources. This enhancement enabled handling multiple projects simultaneously and responding more efficiently to customer requests.

### 5x Increase in Project Throughput

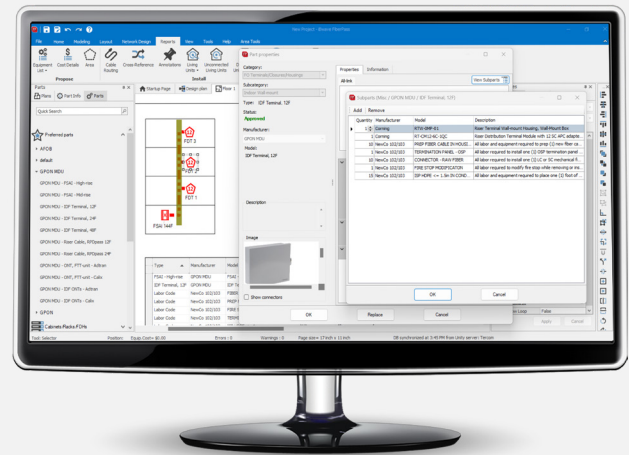
Tercom's adoption of iBwave solutions led to a tremendous **5x increase** in project throughput. Streamlined workflows and automated processes accelerated project timelines, ensuring swift project completion while maintaining the highest quality and accuracy in their designs. This exceptional advancement translated into heightened customer satisfaction and a more competitive market position.

### 20% Time Savings and Streamlined Workflows

iBwave's solutions streamlined design and engineering workflows, even in the face of complexities introduced by underground projects. Automated processes for generating the bill of materials (BOM) and bill of labor (BOL) reduced manual errors and time previously spent on tedious tasks. Tercom has seen a **20% decrease** in cycle time for Design, BOM and BOL turnarounds. Designers could now focus on higher-value activities, leading to improved productivity and faster project completion.

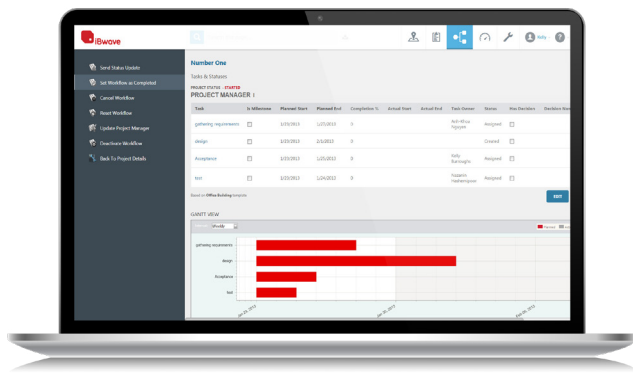
## Enhanced Accuracy and Standardization

With standardized components and labor codes readily available in iBwave's software, Tercom achieved greater accuracy and consistency in their designs, including precise length measurements required for **FlexNAP** product utilization. The risk of errors and variations in project deliverables was substantially reduced, resulting in higher customer satisfaction and reduced rework.



## Improved Knowledge Dissemination

iBwave Unity played a pivotal role in propagating valuable knowledge across Tercom's organization, particularly during densification transitions and diverse projects. Codifying best practices empowered designers to access and leverage peers' expertise, fostering a more capable and confident workforce. This enabled Tercom to tackle complex projects confidently.



“Integrating FiberPass into Tercom's operations has been a very exciting and long-awaited endeavor. FiberPass addresses the modernization challenges we foresee in the future, and we have only scratched the surface of the tool's capabilities. The time-savings, resource leveraging, and standardization have quickly justified the expense, and we have a roadmap to begin leveraging the mobile tool for our construction team, closing the circle on our migration to digitized documentation.”

– David Tucker,  
Director of Operations

