

Bentley[®]
Advancing Infrastructure

Project Summary

Organization:

iForte Solusi Infotek

Solution:

Communications Networks

Location:

Jakarta, Indonesia

Project Objectives:

- iForte sought to implement a connected work environment to improve data network lifecycle processes and centralize data collection to accelerate accurate information mobility.
- The organization wanted to meet customer network requirements and increase sales.

Project Playbook:

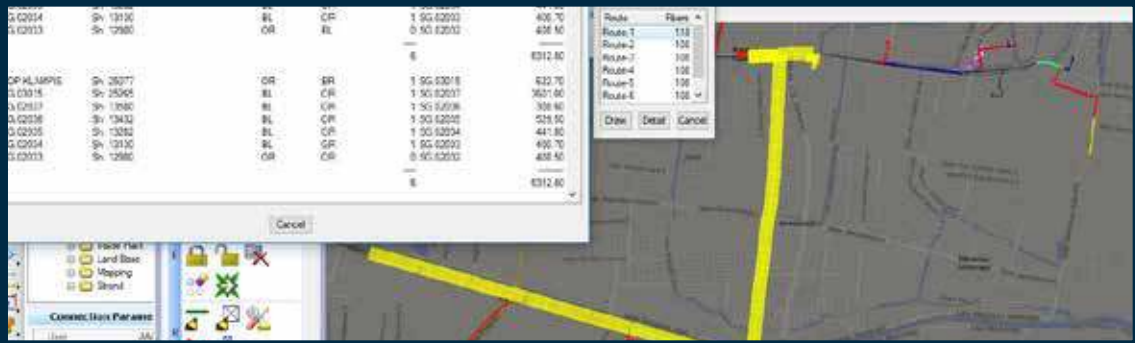
Bentley Communications[®], Bentley Fiber, Bentley Inside Plant, Bentley Expert Designer Communications, Bentley Geo Web Publisher[®] for Communications, MicroStation[®]

Fast Facts

- iForte developed a digital fiber optic management system to improve lifecycle workflows, optimize network planning and maintenance, and increase sales.
- Bentley's integrated technology solution accommodated different data formats and time constraints to efficiently migrate network infrastructure into a centralized database.

ROI

- Bentley Communications synergized workflows to improve customer delivery efficiencies by 90 percent.
- Using Geo Web Publisher for Communications enabled real-time data access and strategic network visibility to increase design delivery by four times and mean time to repair by two hours.
- The integrated network management platform will significantly increase sales.



Indonesian Network Communications Operator Digitalizes Data, Optimizes Lifecycle Workflows

Working in a Managed Environment Streamlines Processes to Yield a 203% Return on Investment

Committed to Lifecycle Network Management

One of the fastest growing fiber optic network operators in Indonesia, iForte Solusi Infotek provides information technology communications (ITC) services to customers on the densely populated Java Island and other areas throughout the country. The company's network communications infrastructure includes more than 6,000 kilometers of fiber optic cable, 17,000 towers, 3,500 very small aperture terminal (VSAT) ground stations, and 240 points of presence (POP). Having a large infrastructure used for numerous business applications requires optimal workflows to efficiently meet customer requirements.

With decentralized data and unsystematic manual processes driving network engineering, planning, sales, and maintenance, iForte lacked synergy among its departments, leading to slow project delivery and customer response times. "We need to overcome these challenges to optimize the whole process," explained Taufan Yudha, fiber optic project manager at iForte. To centralize data and information, streamline workflows, improve strategic analysis, and enhance decision making, the company committed to developing a digital fiber optic management system for more efficient collaboration and communication throughout all lifecycle stages.

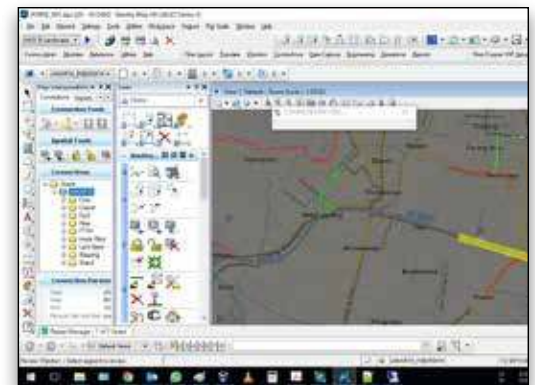
A Connected Digital Solution

To quickly complete the initial migration of the dispersed data in numerous file formats into a single platform, iForte relied on Bentley Communications applications. The company used MicroStation and Bentley Fiber for design and migration of all outdoor network equipment and data, cable route and utilization information, fiber optic systems connecting to customer premises, and customer information. Bentley Inside Plant was utilized for the indoor data, POP, and other inside network infrastructure assets. Using the interoperable software facilitated precise network modeling, accommodated different data formats, and accelerated accurate migration to a centralized database. Bentley Expert Designer streamlined network engineering, integrating engineering and work management to achieve seamless transition from design creation to approval and production of as-built drawings.

The company configured Geo Web Publisher for Communications (GWPC) to provide real-time access to inside and outside plant views via a web browser to sales, maintenance, and all stakeholders, regardless of location, ensuring detailed viewing of current network information, and enabling simultaneous spatial analysis and modifications in a user-friendly environment. Leveraging Bentley's interoperable communications applications provided a connected data environment for iForte to migrate existing data, streamline lifecycle workflows, and establish its integrated fiber optic management system. "With this total solution from Bentley, iForte believes they will reach the top position as leaders in the telecommunications industry in Indonesia," said Vallianzi Alfin, the business development manager at iForte.

Bentley Communications Improves Planning Efficiency

Prior to implementing its fiber optic management system, iForte relied on manual planning processes, which required extensive paperwork that increased error potential due to inaccurate data and slowed down project delivery. Manual planning from the research and conceptual design stages, through to design review, optimization, and delivery took



Bentley's communications applications enabled iForte to migrate data, streamline workflows, and establish its integrated fiber optic management system on a connected data environment.

“Bentley Communications helps to synergize planning, operations and maintenance, and sales teams. With this synergy, it helps the sales team to reduce more than 60 minutes into less than 6 minutes of the sales activities.”

*– Taufan Yudha Perdana,
Fiber Optic Manager,
Iforte Solusi Infotek*

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eight hours. With Bentley Communications applications, the company produced and distributed digital conceptual designs, automated calculations and reporting, streamlined approval workflows, and optimized design solutions to deliver plans in two hours – four times faster than the previously manual planning process. The software provided a centralized platform to store real-time accessible data and enabled tracking and utilization of project progress and accurate reporting, resulting in more efficient planning and ultimate savings in capital expenditures.

Working in a connected data environment, iForte staff can visualize and access existing or planned assets in real time for better network decision making to establish more effective mitigation plans. With accurate, visual insight into the network, the company was able to determine that an original design plan requiring 1,400 meters of rerouted cable overlapped with existing infrastructure. Using Bentley software avoided interference with current network assets, and resulted in a revised network layout that required only 100 meters of cable, saving 1,300 meters of cable and associated costs. The expanded strategic network visibility provided by Bentley technology improves design modeling for optimal future planning and project delivery.

Optimizing Maintenance and Sales Processes

The immediate visibility into the network and automated capabilities provided using Bentley Communications applications also ensures accurate information mobility, streamlining workflows to optimize maintenance and sales processes. Specifically, the redline feature in GWPC allows sales teams to capture existing and potential customer requirements and generate bills of quantity and plan costs in less than 10 minutes. From a maintenance perspective, a redline drawing can be generated for any modified network configuration in the field and accessed by the engineer in real-time to notify the network operation center of the situation on site. Having all activities documented and centralized in the Bentley-based fiber optic management system provides an optical trace for every customer and network.

Using Bentley applications to visualize the fiber optic route, assets, and customer information enables impact analysis to be performed for all customers affected by an outage and allows for prioritization of the necessary maintenance work. The software displays the cable outage position to assist the maintenance team in identifying the exact fiber cut location. This enables a quick, on-site response for a more efficient operations and maintenance process, reducing mean time to repair by at least two hours, and improving service level maintenance performance. Additionally, compared to the prior 60-minute manual sales processes, iForte can now create a redline request, review the network plan with the customer, design a solution, calculate the bill of quantity, and deliver the documents and designs to the customer within six minutes using Bentley applications. As a result, customer delivery time increased by 90 percent. With optimal, coordinated maintenance and sales procedures, the company can ensure that customer needs are met more efficiently.

Integrated System Delivers Savings

“Bentley Communications helps to synergize planning, operations and maintenance, and sales teams,” stated Alfin. With a digital integrated system to centralize data and information, visualize the fiber optic network, and manage and streamline workflows, iForte accelerated analyses, calculations, and performance to overcome data constraints and slow project delivery times. The USD 230,000 digitalization project improved sales, planning, and maintenance processes to save USD 699,000 in costs, resulting in a 203 percent return on investment for the company over a three-year period.

Using Bentley applications as the foundation for its centralized fiber optic management system provides greater visibility into network utilization and company asset and revenue analysis, as well as insight to build business intelligence with accurate data and information. The integrated technology solution provides intangible company value to achieve better performance and growth compared to industry competitors, and it will help iForte significantly increase future sales.