



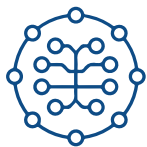
BROCHURE

Connected Construction Solution
Helps **Overcome Growing**
Industry Challenges

The construction industry is facing unprecedented pressures and market forces like never before. Labor shortages, inflated material costs, and supply chain volatility have created a perfect storm that is bringing new urgency to the need for digital transformation. As one of the least technologically integrated industries, the field of construction can leverage readily available technologies to streamline management practices at every stage of the construction process and unlock growth opportunities.

LTIMindtree's Connected Construction platform is the accelerator for digital transformation in the construction industry. It integrates machinery sensors, worker wearables, geospatial data, and other Internet of Things (IoT) and cloud-based sensors to provide an integrated system that enables informed business decisions to accelerate revenue growth and drastically increase productivity.

But don't just take our word for it. Construction organizations are already leveraging our platform and reporting outstanding results. Here is what these organizations experienced with the Connected Construction solution from LTIMindtree.



Connecting Assets through IoT and AI solutions

A large engineering, procurement and construction (EPC) player in India lacked visibility into its fleet over **11,000 total assets**.

The construction company leveraged LTIMindtree's Asset NxT solution that instruments assets through sensors and a ruggedized IoT gateway with edge analytics capabilities and AWS platform to measure fleet parameters. OEM onboarding, data collection, data transformation and data standardization were performed between different make-models and geographies. With the Asset NxT solution, the construction company experienced:



15-20%

reduction in
equipment idle
time



10-15%

improvement in
asset productivity



30-55%

improvement
in capacity
utilization



20-25%

reduction in fuel
consumption



Engaging Employees with Digital Transformation

A construction company needed a solution for employees to collaborate more efficiently, improve worker safety, and attract and retain talent.

LTIMindtree's Worker NxT solution collected data from a variety of sources—including sensors embedded into clothing, headgear, goggles, gloves and exoskeletons—to monitor health conditions, identify safety issues, amplify worker abilities, prevent injuries, and more. With the Worker NxT solution, the construction company experienced:



10-15%

improvement
in worker
availability



30-35%

reduction in
near misses and
critical incidents



20-25%

improvement
in training
effectiveness



Enlisting Aerial LIDAR Technology to Cut Survey Time

A construction firm in India was tasked with building the infrastructure needed for micro-irrigation of a farmland, which entailed a time-consuming topographic survey, highly undulated terrain, dense vegetation and wild animals and other challenges.

LTIMindtree's GeoSpatial NxT solution enabled data visualization, workflow productivity, and information exchange among engineers, project managers, business leaders and other stakeholders. It collects spatial data from multiple sources, and then converts it into actionable insights. With the GeoSpatial NxT solution, the construction company experienced:

- Implementation of a helicopter-based Aerial LiDAR Technology in just 3=three months compared to conventional technology (total station) that would take more than a year.

- With the entire project viewable digitally, they avoided having revisit the site and conduct site verification.
- Positional accuracy at the centimeter level.
- Exact quantifications of material estimated for bulk procurement and cost savings.
- Optimized pipeline alignment and design and excavation benefits.
- Easier in-house map-based mobile application tree counting process, which facilitated timely approval for forest clearance.
- Real-time alerts on map view for easy location of maintenance.



Connecting Insights to Track Progress of Projects

A large EPC player in India lacked a centralized system to report physical progress at the job site and had no single source of truth.

LTIMindtree's Projects NxT provided a mobile application with a simplified UI and ready input card for engineers to directly update progress without manual data collection and a flexible work breakdown structure format to accommodate any type of project. It also automated DPR mails, customized reports and essential dashboards, provided progress data synched with GIS maps and 3D BIM models and integrated with the ERP system to facilitate client and subcontractor billings. With Project NxT, the construction company experienced:



10-15%
reduction in
project delays



Increased
visibility and
transparency
across projects



Dependable
progress data
resulting in
forecasting
possible delays



Material Tracking on a Grand Scale

A large EPC organization involved in industrial and infrastructure projects needed visibility, utilization, right sizing and optimization of its inventory for three factories, 65 projects, 51 towers installer/day and more than 1,200 components.

LTIMindtree's Materials NxT solution provided passive RFID tags to identify all the components of the transmission tower, mobile apps for kitting, indents, receipt and issue, geotagged storage locations, integrated RF scanners for real-time inventory operation and integrated project monitoring, and production systems for end-to-end visibility. With Materials NxT, the construction company experienced:



35%

improvement in turnaround time for kitting and dispatch operations



2x

reduction in inventory holding time



65%

reduction in shortages



1.5x

increase in revenue conversion cycle



Gaining insights on Industrial Infrastructure for Maintenance and Safety

One of the largest EPC companies in the world needed to identify structural damages that weren't accessible and visible to the human eye.

LTIMindtree's Insights NxT solution helped perform AI-based vision analytics on images and videos and run analytics on drone feeds from the construction site. The solution provides real-time visibility to a wide range of industrial equipment, machines, vehicles, and systems. It leverages IoT technology to build a network of connected assets, where high-value data is intelligently linked and processed in real-time. With Insights NxT, the construction company experienced:

- Automatic alerts during significant structural damages.
- High accuracy rate of over 95%.



Connected Construction Technologies Unlock Growth

To sustain a competitive advantage, construction organizations know they must invest in digital transformation. Today, it's possible to connect construction ecosystems with IoT devices, integrated sensors with sophisticated AI-powered analytics and geospatial insights to gain real-time visibility, resolve complexities and drive productivity across construction operations.

The Connected Construction solution from LTIMindtree is purpose-built to create a complete industry 4.0 solution, providing a single platform that harnesses and synthesizes data intelligence across the entire ecosystem.



Contact us to learn how we can help your construction firm with digital transformation and unlock growth.

LTIMindtree is a global technology consulting and digital solutions company that enables enterprises across industries to reimagine business models, accelerate innovation, and maximize growth by harnessing digital technologies. As a digital transformation partner to more than 700+ clients, LTIMindtree brings extensive domain and technology expertise to help drive superior competitive differentiation, customer experiences, and business outcomes in a converging world. Powered by nearly 90,000 talented and entrepreneurial professionals across more than 30 countries, LTIMindtree—a Larsen & Toubro Group company—combines the industry-acclaimed strengths of erstwhile Larsen and Toubro Infotech and Mindtree in solving the most complex business challenges and delivering transformation at scale. For more information, please visit www.ltimindtree.com.