

A high-speed train, white with blue accents, is shown in motion on a curved concrete bridge. The bridge spans a lush green valley with a river and forested hills in the background. The train is moving from left to right, and the background is slightly blurred to convey speed. The overall scene is bright and scenic, with green mountains and a clear sky.

# Engineering rail across the full lifecycle

Intelligence in every mile.  
Nothing Less.

# Powering the next-generation of rail mobility

**23 years**  
Experience

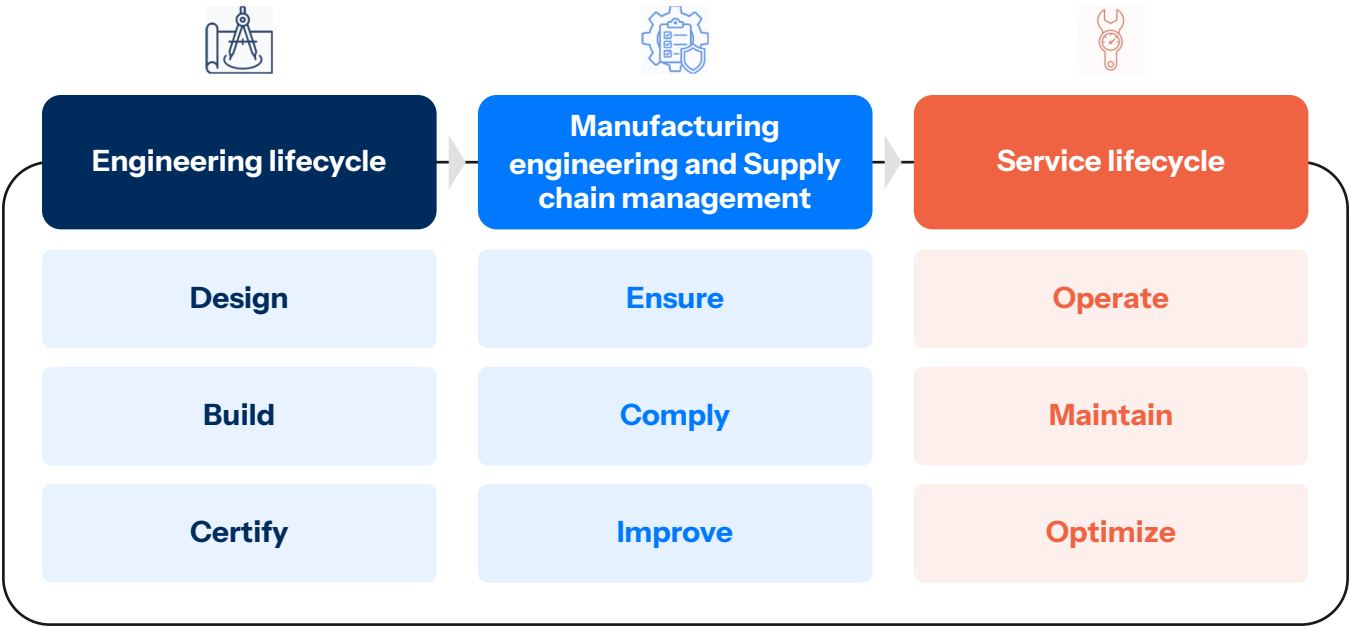
**350**  
Global projects in rail

**35 million**  
Hours of engineering

Rail modernization is no longer a linear journey from design to deployment. As rolling stock, signaling, infrastructure, and operations become more connected and software-defined, every stage of the lifecycle must work as one. Cyient brings engineering depth, digital capabilities, and rail domain expertise to help customers de-risk programs, accelerate delivery, and extend asset value.

## Lifecycle engineering. Not isolated engagements.

We don't just support projects, we engineer, digitize, automate, and optimize across the complete rail lifecycle, ensuring progress never slows between phases. Most service providers specialize in a single domain. Cyient delivers across every stage, with seamless execution, accelerated delivery, and a partner committed from planning to performance.



## Why now?

The rail industry is entering a high-stakes modernization cycle where capacity, safety, uptime, and asset life depend on how fast engineering and digital execution come together.

**\$436B**  
Rail market by 2030 demands lifecycle-ready engineering at scale.

**58%+**  
New rail projects need digital signaling, V&V, and commissioning expertise.

**\$81B**  
Digital rail market in 2026 calls for connected, intelligent operations.

**AI**  
Predictive maintenance improves uptime, reduces failures, and extends asset life.

## Our rail transportation portfolio

Integrated engineering, digital, and lifecycle solutions across rolling stock, signaling, infrastructure, communications, and operations.

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|  <h3>Rolling stock</h3> <ul style="list-style-type: none"><li>• Carbody</li><li>• Interiors and mechanical systems</li><li>• Electrical and electromechanical systems</li><li>• Train control management system (TCMS)</li><li>• Rail control system (RCS)</li><li>• Manufacturing engineering services</li><li>• Model-based systems engineering (MBSE)</li></ul> |  <h3>Signaling and infrastructure</h3> <ul style="list-style-type: none"><li>• Signaling interface design — wayside, onboard, ERTMS, CBTC, PTC, RRI</li><li>• Signaling data design — interlocking, RBC, OCC</li><li>• Telecommunication: LTE, 5G, Fiber Optic</li><li>• BIM</li><li>• V&amp;V test automation</li></ul> |  <h3>Aftermarket and operations</h3> <ul style="list-style-type: none"><li>• Content management system</li><li>• Field service management</li><li>• Asset management</li><li>• Reliability, availability, maintainability, safety</li><li>• Value engineering and obsolescence management</li><li>• Contracts and life cycle management</li><li>• Predictive maintenance</li></ul> |  <h3>Multimodal</h3> <ul style="list-style-type: none"><li>• Intelligent ticketing system</li><li>• Smart station solution</li><li>• AI-based personalized experience</li><li>• Mobile apps</li><li>• Electronics and mechanical hardware design</li><li>• Data and cloud platforms</li></ul> |
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## In the spotlight: Key case studies

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>01</b>  <h3>Digitalizing engineering</h3> <p>Hyperautomation reduces design cycle time for rail rolling stock development.</p> | <b>02</b>  <h3>Custom fare systems</h3> <p>Personalized LCD screens and ticket barrier design improve the passenger mobility experience.</p> | <b>03</b>  <h3>Ride quality monitoring</h3> <p>IoT and AI-enabled devices improve ride quality with real-time vibration and location tracking.</p> | <b>04</b>  <h3>Training rail operators</h3> <p>CBTC-focused training simulators integrate subsystem-specific capabilities into a unified simulator.</p> | <b>05</b>  <h3>Rail signaling solutions</h3> <p>CBTC, ERTMS, and PTC software solutions powered by automation and domain expertise.</p> |
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# Innovation in our DNA

## CyFAST for V&V

An automation platform for dependable, efficient software testing.

## Cycero

An IoT-based cab alarm system delivering a single response point for cab events, safety, and reliability.

## Rail electrification

End-to-end sustainable transportation solutions.

## IPDP Framework

A methodology for designing systems from scratch or re-engineering them, including regulator-mandated upgrades.

## CyARC for certification

A regulatory compliance platform for product compliance.

## iFRACAS

Streamlines compliance, certification, and regulatory assurance across the rail lifecycle, helping organizations ensure safety, traceability, and operational excellence.

## CYiNGINE (Engineering Integration Platform)

Connects the entire rail lifecycle, from design and certification to compliance, operations, maintenance, and optimization.

## Generative AI self-service

Distributes contextual content to stakeholders in natural language using open AI APIs.

# Expertise in global standards

Cyient's rail engineering practice is aligned with the standards and bodies that govern safe, interoperable rail systems worldwide, including IRSE, IEC, IRIS Certification, RISQS, IEEE, and AREMA.

|       |      |                    |
|-------|------|--------------------|
| IRSE  | IEC  | IRIS Certification |
| RISQS | IEEE | AREMA              |

# Co-creating value with our partners

|              |           |                             |           |
|--------------|-----------|-----------------------------|-----------|
| Siemens DISW | Microsoft | ADS (American Data Systems) | Prospecta |
| AWS          | Prolim    | Dassault                    | KYNEA     |

Built for rail leaders who need a lifecycle engineering partner that can connect design, compliance, commissioning, operations, and digital innovation into one delivery model.

**Advance rail mobility with intelligent engineering. Nothing Less.**  
**Get in touch with our experts, today!**

Cyient is a global lifecycle engineering services company powering mission-critical industries from design to aftermarket across products, plants, and networks. With 300+ customers and 15,000+ associates across 30+ countries, we combine human expertise, deep domain knowledge, and AI to deliver intelligent engineering for every lifecycle across Aerospace and Rail, Automotive and Mobility, Connectivity, Energy, Healthcare, Mining, Utilities, and beyond.

To learn how we deliver exemplary outcomes, nothing less, visit [www.cyient.com](http://www.cyient.com).

## North America Headquarters

USA  
T: +1 860 528 5430

## Europe, Middle East, and Africa Headquarters

UK  
T: +44 118 3043720

## Asia Pacific Headquarters

Australia  
T: +61 2 8887 8600

## Global Headquarters

Hyderabad  
T: +91 40 6764 1000