CAPNEXUS | aws

AWS ADVANCED TIER SERVICES PARTNER
CLIENT SUCCESS STORY



CASE STUDY

A Leading Natural Resources Producer Transforms Rail & Freight Operations with AWS

A strategic CapNexus + AWS Professional Services partnership — from pre-sales discovery through steady state

CLIENT	PLATFORM	PARTNERS	SCOPE
Natural resources producer U.S. mining & export logistics	**Train & Freight** Management System	**CapNexus** + AWS Professional Services	**Plan. Deliver. Run.** Discovery through steady state

SECTION 01

Executive summary

The client took a forward-thinking, proactive approach to optimizing its technology infrastructure — setting out to unify rail and freight management on a modern cloud foundation built for the pace and scale of the business ahead of it.

Rather than replicate what already existed, the client chose to lead with technology — a cloud-native AWS architecture designed around how railroaders and logistics planners actually work.

CapNexus partnered with the client and AWS Professional Services to design, build, and support a cloud-native **Train & Freight Management System** that is now the operational backbone for rail and freight activities.

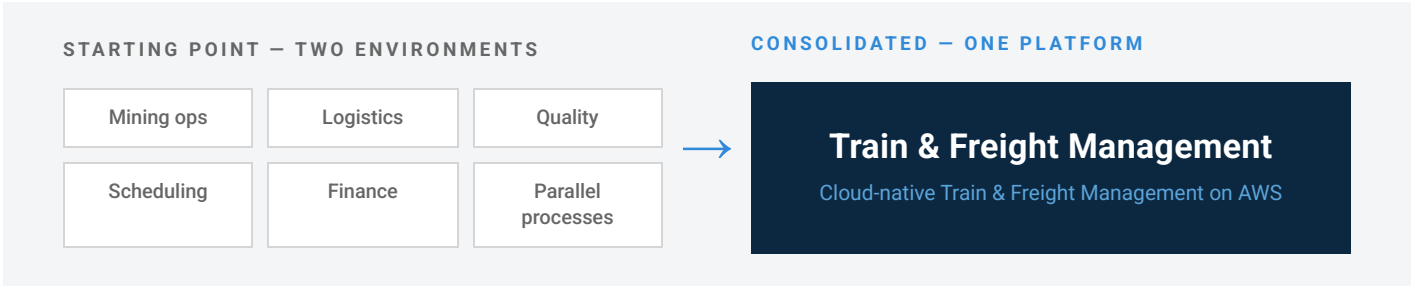
The **three teams worked as one**: The client's operators set direction, AWS Professional Services validated the architecture, and CapNexus carried discovery, UX design, implementation, and ongoing operations.

SECTION 02

The challenge: an opportunity for an unified platform

The client began its journey with two proven application environments—one from each side of a recently combined business—each supported by skilled teams and well-established processes. Both performed effectively, but operated in parallel.

Working with the CapNexus and AWS teams, the client identified an opportunity to bring the strengths of both together on a single modern platform. AWS addressed both sides: managed services to consolidate and integrate the environments, and cloud-native automation to streamline the coordination work previously handled across the two teams.



THE CONSOLIDATION OPPORTUNITY

- Unify operational and financial processes across two environments
- Integrate operational technology with enterprise systems
- Meet growing demand for operational reporting and analytics
- Deliver real-time visibility into train and freight movements
- Automate scheduling and logistics coordination activities
- Establish a secure, scalable AWS foundation with long-term operational support

SECTION 03

The solution: one Train & Freight Management System

CapNexus took a consultative approach, investing upfront in discovery and user experience design ***before project award***. By embedding UX leadership directly with client stakeholders, the team built a deep understanding of operational workflows and user requirements across the business.

That collaborative process led to **a unified Train & Freight Management System** built on AWS that consolidates critical freight functions into a single platform spanning five business domains.

DELIVERY STRUCTURE

Two dedicated CapNexus engineering teams worked in parallel with AWS Professional Services and the client's Innovation Engineering organization — accelerating delivery while holding governance, quality, and architectural consistency.

Train & Freight Management

Train & Freight Management System · AWS-native

- **Contract Management**
- **Logistics & Transportation**
- **Quality Assurance**
- **Accrual Management**
- **Invoicing & Financial Ops**

APPROACH

Discovery and UX embedded with client stakeholders before award

TEAMS

Two parallel CapNexus engineering pods + AWS ProServe + client Innovation Engineering

FOUNDATION

AWS Landing Zone, Well-Architected guidance, Terraform-managed environments

SECTION 04

A DevOps-driven delivery model

Working alongside AWS Professional Services and the client, CapNexus implemented cloud-native engineering practices that automated infrastructure deployment, streamlined application delivery, improved operational visibility, and reduced manual effort across the platform lifecycle — a scalable foundation supporting both ongoing innovation and operational stability.

KEY DEVOPS CAPABILITIES DELIVERED

01 Infrastructure as Code (Terraform) across all environments

02 AWS Landing Zone implementation and governance

03 Automated environment provisioning and configuration management

04 Continuous delivery and release management processes

05 Integrated monitoring, alerting, and incident response

06 Data pipeline automation and operational ownership

07 Security governance and secrets management

08 Cloud cost optimization and FinOps controls

09 24×7 operational monitoring and support

10 Continuous enhancement and platform evolution

Cloud engineering & automation

Terraform-based Infrastructure as Code enabled consistent provisioning across development, testing, and production — reducing manual configuration, improving deployment consistency, and compressing delivery timelines while staying aligned to AWS best practices.

Observability & operational excellence

A comprehensive monitoring and incident management framework — automated alerts, proactive monitoring, and operational dashboards — provides visibility across application workloads, integrations, and data pipelines.

DevSecOps & governance

AWS security best practices, Secrets Manager governance, continuous security monitoring, and operational controls protect critical business data. Combined with AWS Well-Architected guidance, the platform is secure and scalable by design.

SECTION 05

Results & business impact

The platform transformed how the client manages freight and rail operations, unifying operational, logistical, and financial processes into a single cloud-native platform powered by AWS.

Unified freight management

Contracts, logistics, QA, train scheduling, accruals, and invoicing run through one integrated platform.

Accelerated delivery

IaC, automated deployments, and cloud-native practices enabled faster cycles with improved consistency and less complexity.

Improved visibility

Integrated operational and financial data gives leaders a clearer view of freight operations and better-informed decisions.

Scalable cloud foundation

AWS-native architecture and DevOps practices established a secure, scalable base for future innovation and growth.



The client operates a portfolio of large-scale longwall and surface mines, supported by an extensive rail and marine export network.

SECTION 06

Why CapNexus

What makes this engagement unique is that CapNexus supported the initiative across the entire transformation lifecycle — not simply as an implementation partner, but as strategic advisor, engineering partner, and managed services provider.

- ✓ Pre-sales discovery and UX design investment
- ✓ Cloud architecture and platform engineering
- ✓ AWS Professional Services collaboration
- ✓ Data and analytics enablement
- ✓ Infrastructure as Code automation
- ✓ Enterprise systems integration expertise

SECTION 07

Plan. Deliver. Run.

From concept through continuous operations, CapNexus helped the client bring rail and freight management together on a modern, cloud-powered platform positioned for growth.

PLAN	DELIVER	RUN
Pre-sales discovery, UX design, architecture advisory	Agile engineering, DevOps automation, AWS integration	24×7 support, continuous innovation, platform evolution

STRATEGIC AWS PARTNERSHIP

CapNexus + AWS Professional Services, operating as one delivery team

Through shared governance, joint architecture reviews, collaborative planning, and integrated engineering teams, CapNexus and AWS operated as a unified delivery organization focused on customer success. That let the client draw on AWS cloud innovation alongside CapNexus' application modernization, data engineering, and DevOps expertise.

Combining AWS Professional Services' architecture guidance and Well-Architected best practices with CapNexus' hands-on delivery accelerated timelines, reduced project risk, and established a scalable foundation for growth — and created a partnership model that continues to drive operational excellence and long-term business value.

CAPNEXUS

aws PARTNER Advanced Tier Services

Plan. Deliver. Run.

AWS Advanced Tier Services Partner

Contact Us

capnexus.io/contact-us

sales@capnexus.io