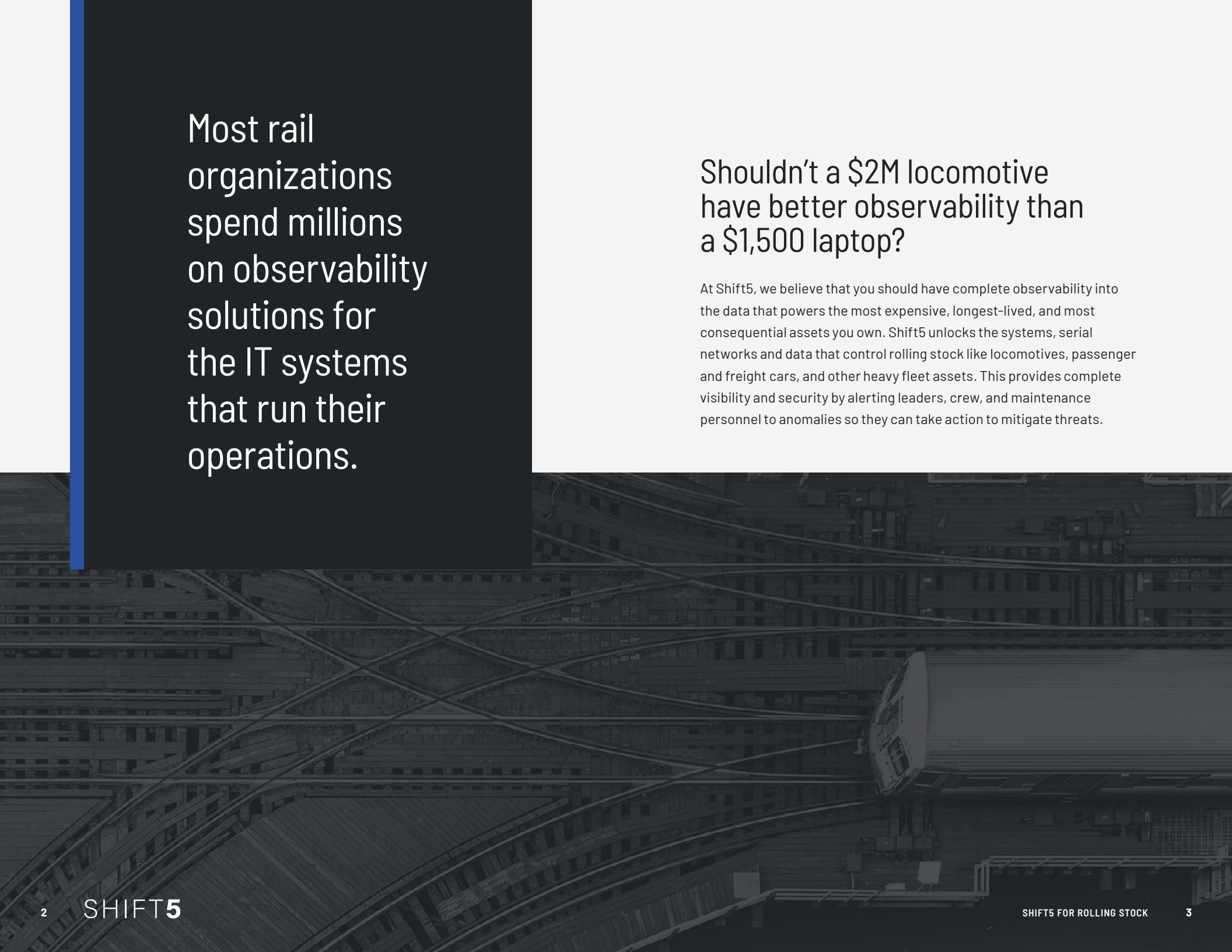# SHIFT5 FOR ROLLING STOCK

The world's most comprehensive data and cybersecurity platform for planes, trains, and tanks.

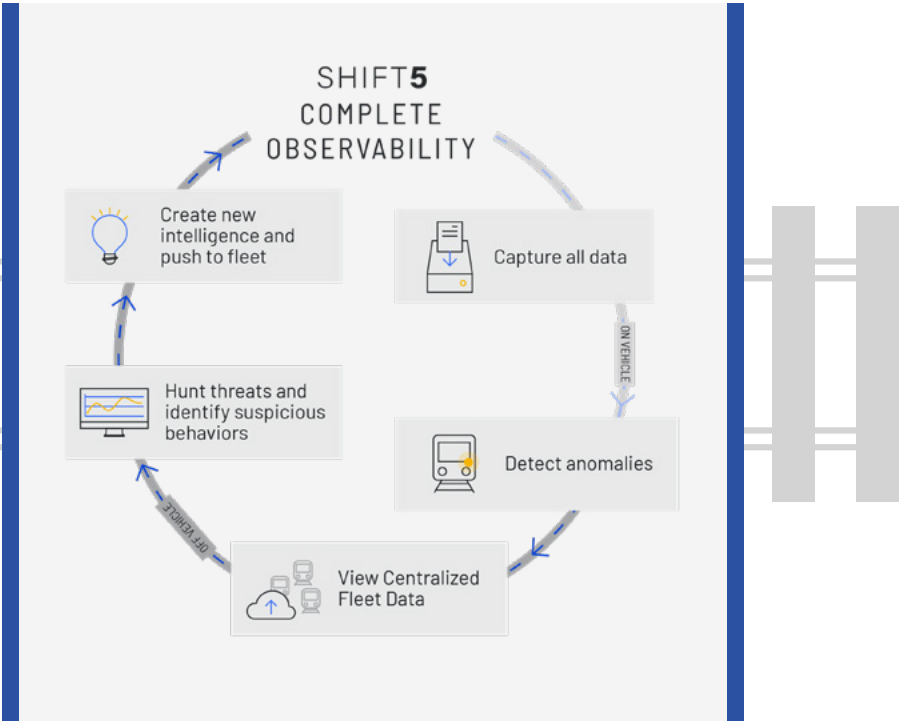SHIFT**5**

Most rail organizations spend millions on observability solutions for the IT systems that run their operations.

Shouldn't a $2M locomotive have better observability than a $1,500 laptop?

At Shift5, we believe that you should have complete observability into the data that powers the most expensive, longest-lived, and most consequential assets you own. Shift5 unlocks the systems, serial networks and data that control rolling stock like locomotives, passenger and freight cars, and other heavy fleet assets. This provides complete visibility and security by alerting leaders, crew, and maintenance personnel to anomalies so they can take action to mitigate threats.

How it Works

Trains are composed of thousands of digital components, each emitting valuable data that can be collected and transformed into useful intelligence. Shift5 provides modern observability into these assets so organizations can improve cybersecurity and increase operational efficiency.

CAPTURE ALL DATA:
Onboard data traverses serial bus networks that often rely on embedded protocols. Shift5 captures all data crossing onboard serial bus networks and detects anomalies in real-time, directly on the vehicle.

DETECT ANOMALIES:
Shift5 layers rules-based detection for known attacks with advanced machine learning and analytics-based methods to find anomalies that do not contain a specific fingerprint. This means the Shift5 technology can detect attacks that have never been seen before. Shift5 further increases detection rates by continually writing signatures and rules for observed attacks. The more data Shift5 collects, the better it defends OT platforms.

CENTRALIZE DATA:
Data collected from vehicles across the fleet is centralized in a public, private, or government cloud for analysis. This analysis can support threat hunting, operational efficiency, or incident response use cases and provides crew and maintenance with essential situational awareness.

HUNT THREATS AND IDENTIFY SUSPICIOUS BEHAVIOR:
Armed with large amounts of weapon system network data collected over time, threat researchers can model, test, and proactively hunt for new threats before they do damage.

CREATE NEW INTELLIGENCE:
Intelligence created through analysis of the aggregated fleet data is fed back to the vehicles so anomaly detection is continuously improved.

Next Steps

Gaining observability into the onboard OT networks that power your most important assets is a journey. To learn more about the possibilities, go to **shift5.io** to schedule a briefing. Classified briefings are available to organizations with the proper security clearance.

About Us

Shift5 is the onboard OT data and cybersecurity company for planes, trains, and tanks. Created by founding members of the U.S. Army Cyber Command who pioneered modern weapons system cyber assessments, Shift5 defends military platforms and commercial transportation systems against malicious actors and operational failures. Customers rely on Shift5 to detect threats and maintain the readiness and availability of today's planes, trains, tanks, and weapons systems and tomorrow's next-generation vehicles.

For more information, visit **shift5.io.**
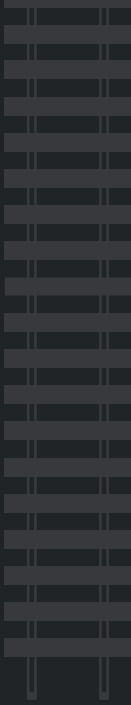
SHIFT5 FOR ROLLING STOCK

SHIFT**5**