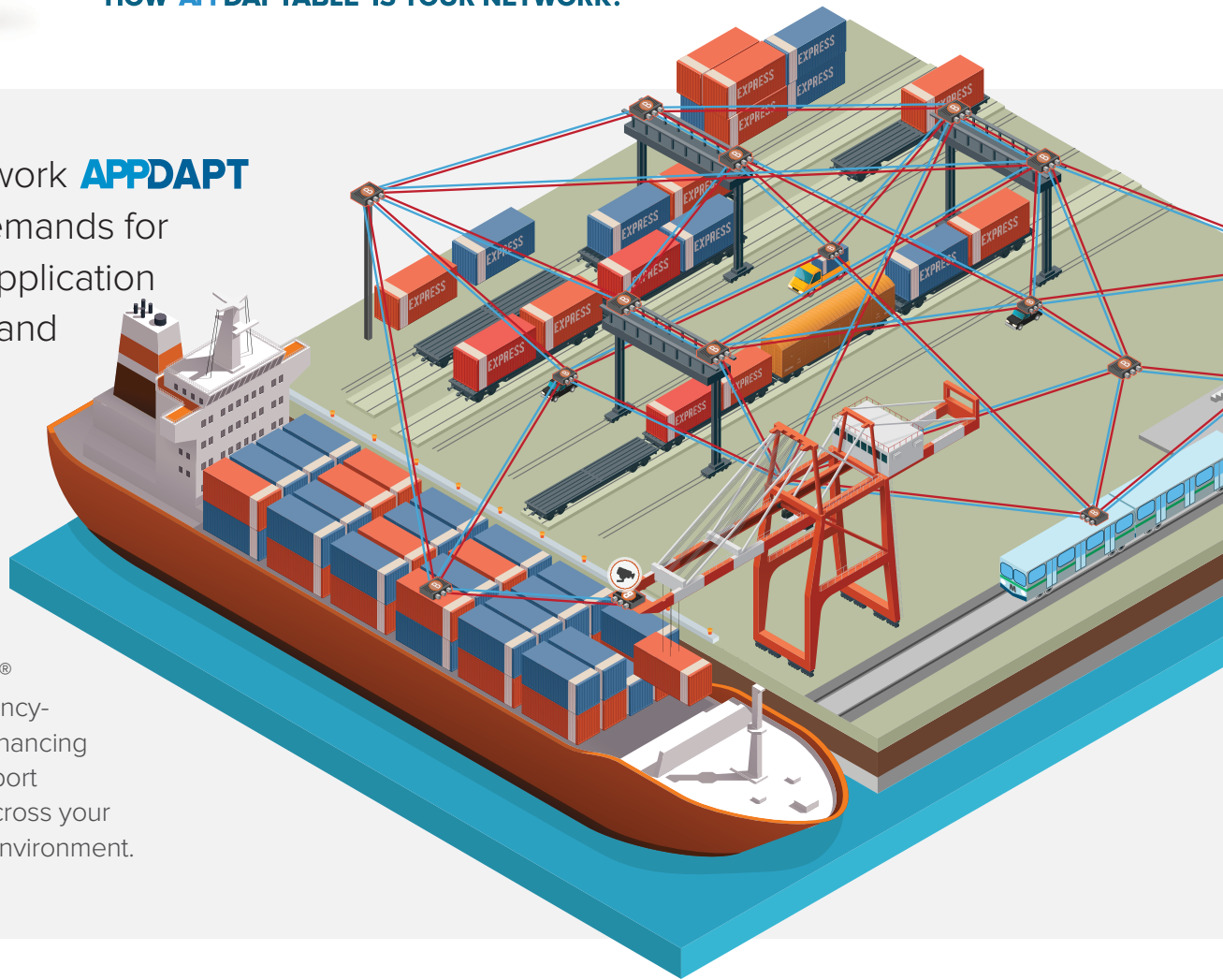# TAKE THE RAJANT
APPLICATION
CHALLENGE

HOW APPDAPTABLE IS YOUR NETWORK?

RAJANT

Can your network **APPDAPT** to growing demands for unwavering application performance and total mobility?

Rajant Kinetic Mesh® networks run efficiency- and productivity-enhancing transportation and port applications 24/7 across your diverse operating environment.

Applications Important to Streamlining Our Customers' Transportation and Port Operations:

Transportation:

- Real-Time CCTV
- Wi-Fi Internet Access
- Vehicle Health Monitoring
- Vehicle Health Maintenance
- Positive Train Control
- Signalling Intelligence
- Fleet Offload
- Train Door Monitoring
- Bus Door Monitoring

- Passenger Information Systems
- Video Monitoring
- GPS-Based Locations and Schedules
- Time Collection
- TPMS (Tire Pressure and Temp Monitoring)
- Fuel Management

Ports:

- Crane Management
- Vehicle Automation
- RFID
- Asset Management / Tracking
- GPS Container Location
- Trailer Positioning
- Traffic / Truck / Vehicle Management
- Automatic Truck Identification
- Security and Surveillance
- Container Terminal Automation

Many of the business-critical applications listed are supported in Rajant customer networks.

Maximize Network Adaptability with Easy-to-Deploy BreadCrumb® Wireless Nodes

Using Rajant's industrial-strength BreadCrumb wireless nodes powered by our patented InstaMesh® networking software, you can create a self-healing network able to dynamically adapt as people and assets move across your environment—all while keeping the network available, intact, and secure.

Each BreadCrumb can connect with multiple neighboring nodes via multiple links, providing fully redundant communications throughout the network. InstaMesh orchestrates this traffic and automatically optimizes communications based on physical surroundings and frequency availability.

BreadCrumb LX5

BreadCrumb ME4

Any BreadCrumb can be fixed or mobile, infrastructure or edge. The small-footprint, lightweight nodes are readily deployed on vehicles, towers, lampposts, buildings, and personnel.

Consider the following ways a Rajant Kinetic Mesh® network can help your transportation and port operations to both reduce expenses and enhance profitability.

REDUCE COSTS with Improved Operational Efficiency.

Minimize unplanned downtime.

A single train delay can cost up to **$213 per hour** of the delay.[1]

Rajant's network supports sensors, cameras, and devices on trains to remotely monitor and proactively manage vehicle health, speeds and locations, traffic optimization, and more.

Move to a condition-based maintenance (CBM) model.

A CBM system can save as much as **20% in decreased stock in spare parts.**[2]

Run equipment health monitoring applications that give you real-time status of high value trains, port equipment, and more—so that service efforts correlate to condition.

Prevent safety issues and violations.

According to the Department of Transportation, automated trains could **prevent up to $91 million** worth of accidents per year.[3]

A Kinetic Mesh® network can support a plethora of sensors installed in trains to decrease human error and increase safety, from PTC to CBTC.

INCREASE REVENUES with Greater Productivity.

Attract more ridership to your rail lines.

There has been a **28% increase in ridership** from 2010 to 2015 on Amtrak rail lines alone.[4]

Implement applications that enhance the onboard customer experience to make your line the preferred choice, from train tracking apps to onboard Wi-Fi, passenger information systems, and more.

Automate operations for added productivity gains.

11,000 cargo containers are moved daily in and out of some of the US's busiest ports.[5]

Automation applications supported by Rajant's network can improve operating discipline while minimizing personnel safety risks, helping ports work at peak efficiency to keep up with everyday demands.

Increase equipment effectiveness.

At peak efficiency, a single crane can move about **40 shipping containers** per hour.[6]

Run port-side applications that perform advanced analytics to identify new ways to optimize everything from machine movements to unloading schedules—all driving greater productivity.

See the ROI for Yourself

Submit your application requirements—both current and desired—to Rajant's team at **www.rajant.com/applicationchallenge** to get started today!

1. https://www.researchgate.net/publication/236589043_Rail_Passenger_Service_Delays_An_Overview
2. http://www.ipr.mdh.se/pdf_publications/1756.pdf
3. http://www.dailydot.com/opinion/train-safety-tech-commuter-accidents/
4. http://www.cnn.com/2014/10/15/travel/irpt-train-comeback
5. http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/freight_shipments_in_america/html/entire.html
6. https://www.flexport.com/blog/port-automation-oakland-rotterdam/

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