Globalstar

Where Two-Way IoT Fits
Moving from Remote Visibility to Remote Action

Connected operations have evolved.

For years, IoT helped organizations answer one critical question:

What is happening in the field?

Today, mission-critical operations require the ability to take the next step:

What can we do about it?

Two-way satellite IoT enables organizations to communicate with remote assets, adjust operations and support more responsive decision-making across environments where traditional infrastructure may not reach.

Transportation & Logistics

Keeping Assets Moving Across Every Mile

Modern supply chains depend on visibility across vehicles, containers and critical assets moving through constantly changing environments.

Two-way IoT supports:

- Remote configuration updates
- Asset status requests
- Route and operational adjustments
- Exception-based communication

Industry Need

According to the American Transportation Research Institute (ATRI), operational costs for trucking reached a record $2.270 per mile in 2023, increasing pressure on fleets to improve efficiency and asset utilization[1].

Agriculture

Supporting Smarter, More Responsive Operations

Agriculture operations increasingly depend on connected systems to manage resources, equipment, and productivity across large geographic areas.

Two-way IoT supports:

- Remote sensor management
- Equipment status updates
- Irrigation and monitoring applications
- Operational adjustments without field visits

Industry Need

The World Bank estimates global food production must increase by approximately 70% by 2050[2] to meet rising demand, accelerating the need for smarter and more efficient agricultural technologies.

Energy & Utilities

Managing Distributed Infrastructure at Scale

Energy and utility organizations operate thousands of distributed assets across remote and difficult-to-access environments.

Two-way IoT supports:

- Remote asset monitoring
- Device configuration changes
- Preventive maintenance workflows
- Infrastructure visibility

Industry Need

According to the U.S. Department of Energy, power outages cost the U.S. economy billions of dollars annually[3], increasing the importance of resilient infrastructure monitoring.

Oil & Gas

Improving Visibility Across Remote Operations

Oil and gas operations require reliable communication across pipelines, equipment, offshore environments and remote production sites.

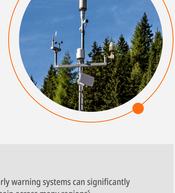
Two-way IoT supports:

- Remote equipment status checks
- Sensor communication
- Maintenance planning
- Field operational awareness

Industry Need

According to Deloitte, unplanned downtime[4] remains one of the largest operational challenges for industrial organizations, with asset reliability and predictive maintenance becoming key digital transformation priorities.

Environmental Monitoring



Turning Remote Data Into Action

Environmental monitoring applications often operate in locations where access is difficult and maintenance resources are limited.

Two-way IoT supports:

- Sensor setting adjustments
- Reporting schedule changes
- Remote diagnostics
- Long-term unattended deployments

Industry Need

The World Meteorological Organization reports that early warning systems can significantly reduce disaster-related impacts, yet coverage gaps remain across many regions[5].

From Monitoring to Managing

The future of IoT is moving beyond collecting data.

Two-way connectivity enables organizations to:

- **Communicate** with remote assets
- **Improve** operational flexibility
- **Respond** to changing conditions
- **Extend** intelligence beyond infrastructure boundaries
- **Reduce** unnecessary field visits

Two-way IoT turns visibility into action.

Reach out to our team of experts to learn more.

1. https://truckingresearch.org/2024/06/new-atri-research-industry-costs-increased-more-than-6-percent-during-freight-recession/
2. https://www.worldbank.org/en/topic/agriculture
3. https://www.jec.senate.gov/public/index.cfm/democrats/2024/1/how-renewable-energy-can-make-the-power-grid-more-reliable-and-address-risks-to-electricity-infrastructure
4. https://www.deloitte.com
5. https://wmo.int

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