



# TeamViewer IoT for **Remote Assistance**

Detect, analyze, and resolve issues on your IoT endpoints remotely — reducing mean time to repair (MTTR) and cutting maintenance costs



## Introduction



Companies across industries are prioritizing IoT solutions as part of their strategic initiatives to optimize, automate, and grow their business at every level. But, attaining even the most obvious revenue and efficiency opportunities with IoT is not as straightforward as people assumed it would be. While **early adopters have paved the way**, they faced challenges and were only able to **implement IoT projects after multiple proofs of concept**.



Now, with a plethora of emerging IoT use cases ready for large-scale deployment, **late adopters realize they must act fast** or risk missing out on the **competitive edge IoT offers** – potentially jeopardizing their current marketplace standing.



One of these ready-to-scale IoT use cases is **Remote Assistance** to fix incidents on dispersed endpoints. Using remote management, diagnostics, and control functionalities to resolve issues remotely **significantly reduces operations costs**. When issues cannot be resolved remotely, remote assistance enables **support staff to assess and diagnose problems**, so they can **escalate incidents quickly and deploy appropriate technicians**. In other cases, if simple, in-person repairs are required, you can use remote assistance to **guide on-site personnel through steps to fix problems**.



This is where **TeamViewer helps businesses quickly set up secure Remote Assistance** for distributed endpoints with an easy-to-use, secure, and scalable cloud IoT solution.

## What IoT Remote Assistance means

→ Remote Assistance is the ability to detect issues **on IoT endpoints remotely and resolve them faster** (e.g. detect, diagnose, and fix issues remotely without an on-site technician, escalate support requests to the best fit technician, or help direct personnel already on-site)

→ Remote Assistance has **fast ROI across all industries and numerous use cases** for huge array of endpoints (e.g., production machines, elevators, electric vehicle charging stations, harbour cranes)

## The Value IoT Remote Assistance Brings To Business



**Decrease downtime through faster incident management and immediate remediation**



**Cut down cost per repair by deploying appropriate field technicians**

# IoT market is on the rise fueled by three mega trends

The market for IoT is growing at ~20 percent p.a. receiving substantial attention and funding. IoT revenues are expected to double from ~\$230B in 2017 to >\$520B\* by 2021 across industries.

Decision makers across industries are increasingly aware that **not investing in IoT use cases will affect their competitive position in the short- to medium-term.**

By 2021, **smart and connected endpoints** are expected to reach approximately **36 billion\*\*** – 3 mega trends fueling IoT growth:



Massive increase in **computing power** and data processing capabilities



Drastic decrease in the cost of **connectivity, bandwidth,** and data storage



**AI and Machine Learning innovation** enabling better, automated decision-making

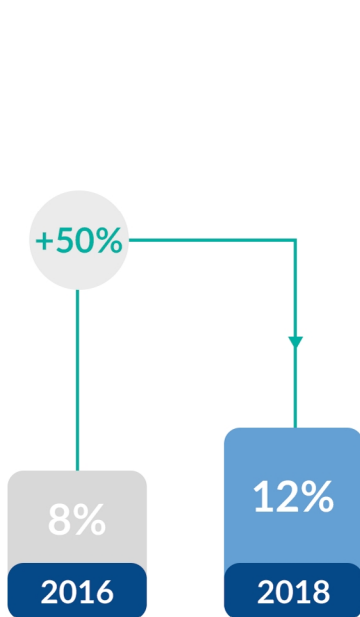
## IoT adoption rising, but many companies still evaluating

Almost 50 percent of large enterprises and SMBs across industries\*\*\* in the US, Europe, and APAC, have engaged in IoT proofs of concept in 2018. However, only 12 percent of companies had entered into extensive deployments that year.

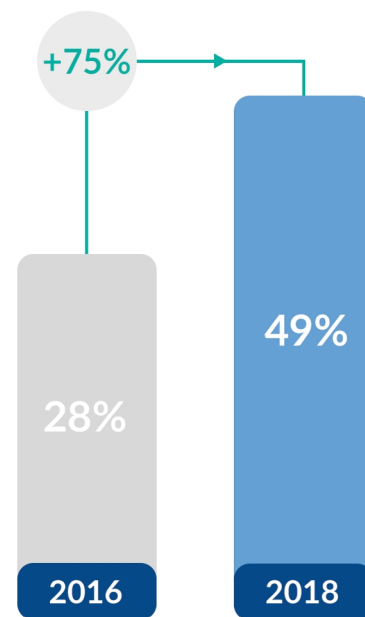
As more and more companies engage in IoT, the execution hurdles become more visible, while decision makers' view on the strategic importance has indeed solidified.

### Companies by stage of IoT adoption

Extensive implementation



PoCs or partial implementation



Key lessons learned

Almost all **companies learn IoT through PoCs**

- Large enterprises often run **multiple PoCs in parallel** before entering large-scale deployments
- Many PoCs produce **mixed results** – often due to lack of rigor and cross-functional ownership
- Leaders in IoT adoption have built up substantial **internal use case and security know-how**

## 3 main challenges of moving from PoC to full-scale IoT deployment



**Complexity of integration with IT and business processes – especially with legacy IT infrastructure**



**Uncertainty of returns on investment**



**Security concerns, especially regarding proprietary data and cyber attacks**

\* Source: Bain & Company; \*\* Source: IHS; \*\*\* Source: Bain & Company; survey decision makers across industries in US, Europe, and APAC; ~60 percent SMBs and ~40 percent LE, N=627 (2018) and 533 (2016)

# TeamViewer “democratizes” IoT

## Easy and fast setup, flexible integration



### Get started immediately

- Install TeamViewer IoT on your endpoints/edge devices today
- Save deployment time through quick setup and smooth integration with enterprise IT
- Avoid building out complicated and hard-to-manage IoT VPNs
- Test your IoT concept with the TeamViewer IoT Starter Kit



### Flexibly integrate and customize your IoT solution

- Compatible with most widely used protocols
- TeamViewer IoT easily integrates into several third-party platforms using TeamViewer’s SDK and ready-to-use APIs

## Clear return on investment

### Significantly reduce downtime and repair cost



**Reduce downtime by fixing incidents faster** (e.g., remotely troubleshoot technical issues on production machines, effectively reducing downtime)



**Cut down cost per repair** through more precise prepping of field technicians with the corresponding spare parts and instructions, thus avoiding unnecessary truck rolls (e.g., remotely analyse the malfunctioning problems for operators of solar cells and deploy adequate engineers with necessary information)

Low total cost of ownership and predictable investment with a SaaS license model (typically <6 months payback)

## Highest security standards



### Secure your data

- End-to-end encryption – no one, including TeamViewer, can read the encrypted data stream
- Store your data either in the TeamViewer cloud (hosted in Germany, ensuring GDPR compliance) or keep it in your network, and only send alarms by using TeamViewer’s rule engine on the edge – ensuring full data sovereignty in both cases



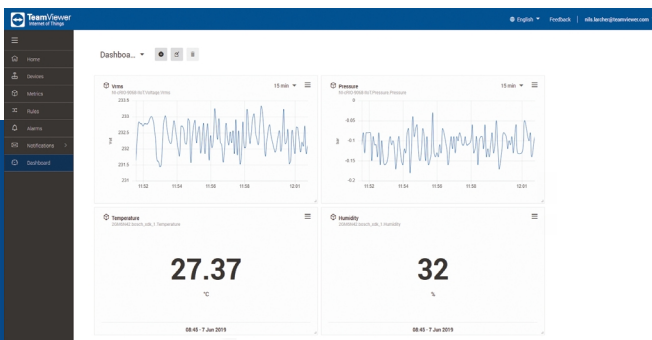
### TeamViewer provides a second “safety net”

- TeamViewer IoT does not require your remote workers to be part of the company/machinery network
- This sets us apart from most VPN solutions that expose your company network to remote workers’ computer – and all the threats that it may host



# Secure remote access, control, and monitoring for all your devices and machines

- Leverage our high performance, **low latency network** with >1,100 routers around the world
- Operate **touch control panels** remotely (“Remote Screen”)
- Access your **front-end machine management** remotely (“AppControl”)
- Get full control accessing the command line with our **Remote Terminal**
- Leverage TeamViewer’s **Global Access Network for secure connectivity**, no complicated VPN required
- Get **dashboard insights** with near real-time **edge visualizations of IoT data**, and **set rules to trigger alarms and next action(s)**
- Connect securely using our **end-to-end encryption** and state-of-the-art **authentication**



The screenshot shows the TeamViewer IoT Devices list. It includes a search bar and a table with columns for Device, Group, Sensors, Metrics, Status, Alerts, and Control. The table lists various IoT devices such as Pump, Car (IoT), Car Parking, Starter Kit 1, PMSA010A002, IoT Starter Kit 3, Client-Learn on-board, Synology-H275 (Smartlog), Synology-H275 (Smartlog), and IoT Starter Kit 4.

Device	Group	Sensors	Metrics	Status	Alerts	Control
Demo - Pump	IoT Demo Devices	9	9 metrics	Online		Control
Car (IoT NOT used)	IoT Demo Devices	4	10 metrics	Offline		Control
Demo - Car Parking	IoT Demo Devices	3	8 metrics	Offline		Control
Starter Kit 1	IoT Demo Devices	7	68 metrics	Online		Control
PMSA010A002	Connectors	3	4 metrics	Offline		Control
IoT Starter Kit 3	IoT Demo Devices	13	140 metrics	Offline		Control
Client-Learn on-board	IoT Demo Devices	0	0 metrics	Offline		Control
Synology-H275 (Smartlog)	IoT Devices	0	0 metrics	Offline		Control
Synology-H275 (Smartlog)	IoT Devices	0	0 metrics	Offline		Control
IoT Starter Kit 4	IoT Demo Devices	7	68 metrics	Online		Control

## Predictable costs and simple pricing model



**Predictable endpoint-based fee for the most common IoT use cases**



**High-volume discounts, no hidden costs**

## Get started today with a TeamViewer IoT Starter Kit

**Test your IoT concept**, build a **fully functional POC** with a TeamViewer IoT Starter Kit. Get all the hardware and software components you need to **kickstart your IoT project** with **instant connectivity, monitoring, and remote control**.

- **Avoid high upfront investments** while having a secure end-to-end encrypted solution that can easily be scaled

**Price: €1,990 (Europe) or \$2,249\* (US and APAC)**

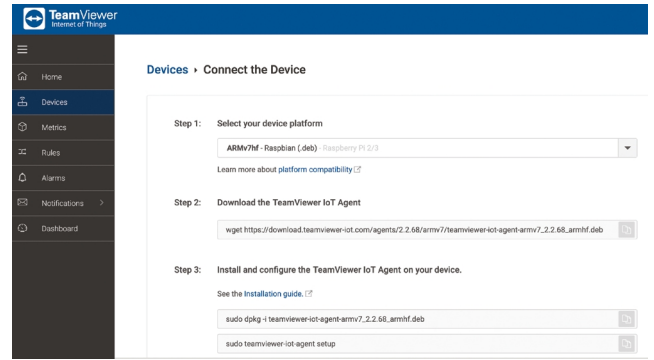
TeamViewer IoT Starter Kit includes:

- **1x Dell 3001 Edge Gateway** including antennas and connectors
- **3x Bosch XDK110** with sensors measuring temperature, humidity, acceleration (vibration), light and gyroscope
- **1x TeamViewer IoT account**, 6-month license
- **One full day of onboarding training** & consulting services

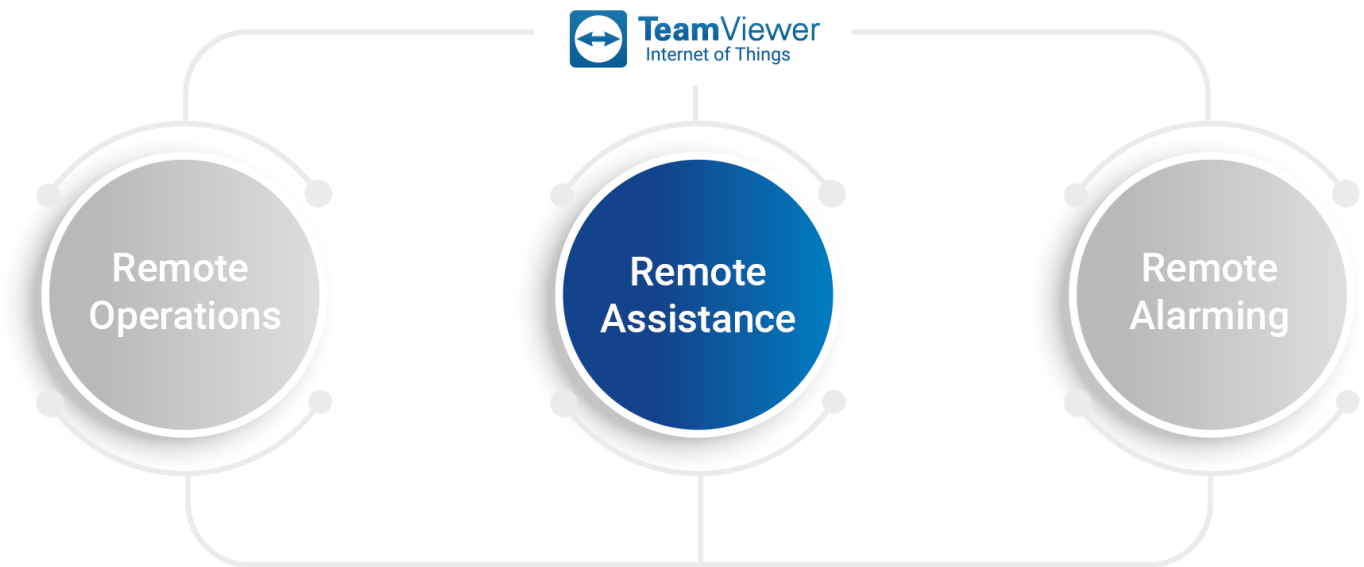
\*Suggested Retail Price (SRP) excluding Value Added Taxes (VAT)

# TeamViewer tools & characteristics enabling fast deployment

- ✓ **Several SDKs available** for integration and customizing
- ✓ **Simple integration** into several third-party platforms
- ✓ Compatible with **most widely used protocols**
- ✓ Exposing functionalities via **documented APIs**
- ✓ **No complicated VPNs** or firewalls required



## TeamViewer IoT – 3 use cases in 1 product



## Growing ecosystem of partners

### IoT Hardware Partners



### Integration Partners



### Platform Integration

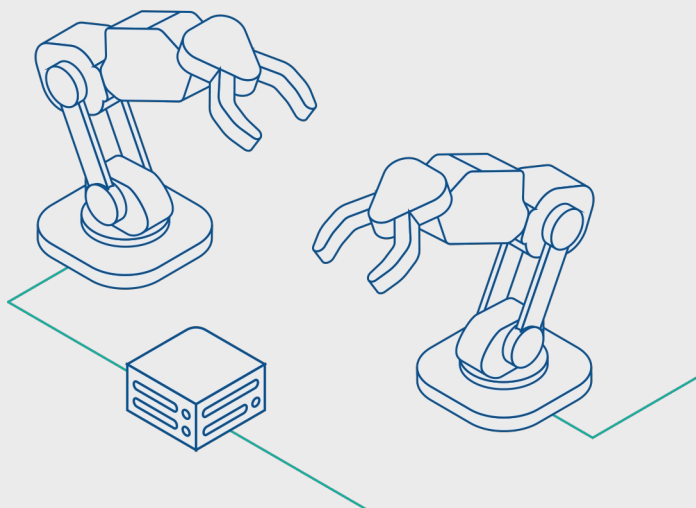


# Discrete Manufacturing

INDUSTRY SPOTLIGHT

Manufacturing companies increasingly use IoT solutions along the end-to-end supply chain – from automated supplier management and predictive maintenance to quality control and inventory or asset tracking.

While these use cases have high-value potential, most solutions require companies to purchase new IoT-enabled machines, which is often cost-prohibitive.



With TeamViewer IoT, existing machines can be retrofitted enabling remote assistance, delivering immediate value, by allowing companies to fix issues faster and increase operational efficiencies.

## How does this help you?

There are many opportunities to optimize costs and/or improve production in discrete manufacturing:

- **Fix issues remotely** increasing production throughput – typically resulting in a payback period of less than a year\*
- **Dispatch the best fit technician, equipped with the right spare parts** based on a remote analysis of machine issue
- **Support local technicians** within dispersed production facilities through shared and centralized expert support services reviewing errors remotely

## What does this look like?

There are endless types of IoT endpoints that can be outfitted with remote support/assistance in discrete manufacturing:

- Solve software problems in high-performance **cutting machines (slicers)** remotely
- Guide and assist local on-site technicians during the configuration and repair of **sheet metal machinery** from your centralized expert team
- Prepare repairs for **metrology devices** with accurate remote error assessments and briefings

\* Example: One FTEs (average salary of € 60k p.a.) performing one troubleshoot for each slicer per quarter with an average duration of 1h per service for 870 endpoints, compared to the corresponding costs for the TeamViewer IoT solution.



## How TeamViewer can help?

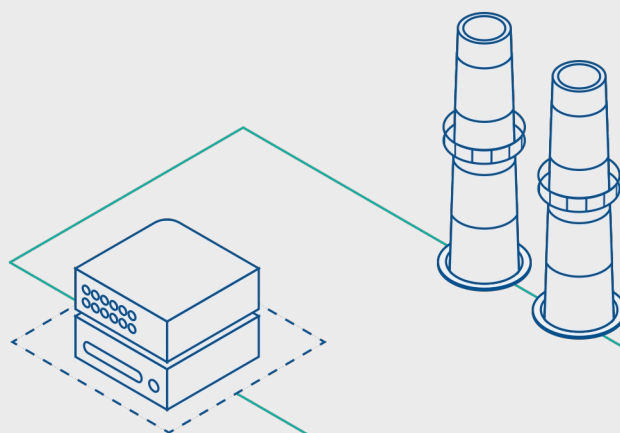
Remote assistance with TeamViewer IoT **improves machine performance** and **reduces downtime** enabling **real-time incident management** and **efficient resolution**, with minimum delay.

# Process Manufacturing

INDUSTRY SPOTLIGHT

With large and often dispersed plants and remote facilities, the process industry has many IoT opportunities with immediate payback.

Opportunities range from remote assistance and troubleshooting of critical elements in the production flow (e.g., pumps, conveyor belts) to fully automating entire facilities (e.g., oil rigs, paper mills, chemical reactors) – significantly reducing the need for human interventions.



Given the detrimental effect that damage to equipment and facilities can have to both human life and/or physical assets, IoT solutions for the process industry need to be highly secure, reliable, and extremely robust.

## How does this help you?

There are many opportunities to improve performance and drive efficiency in process manufacturing:

- **Increase the utilization of field force technicians** by ensuring that their working time is primarily used to solve technical issues effectively with the proper components
- **Drive efficiency and minimize costs** by reducing the need to deploy experts on-site
- **Perform troubleshooting** of software issues **from distance** – with a **payback period of half a year\***

## What does this look like?

There are various IoT endpoints that can be outfitted with remote support/assistance within the processing industry:

- **Connect to coke elevator drives** in steel production to fix software issues remotely at any time
- **Support** local technicians during **repair or installation of centrifugal pumps remotely**
- **Optimize replacement process in dosing machines by reading out error logs remotely** and briefing the service technician, with tailored information about broken components

\* Example: One FTE (average salary of € 60k p.a.) troubleshooting drives of two coke elevator drives per week with an average duration of 12h per service, compared to the corresponding costs for the TeamViewer IoT solution.



## How TeamViewer can help?

TeamViewer's IoT remote assistance solution for the process industry offers a **wide set of features to remotely troubleshoot and fix machines and devices** at anytime from anywhere, ultimately increasing efficiency and reducing costs.

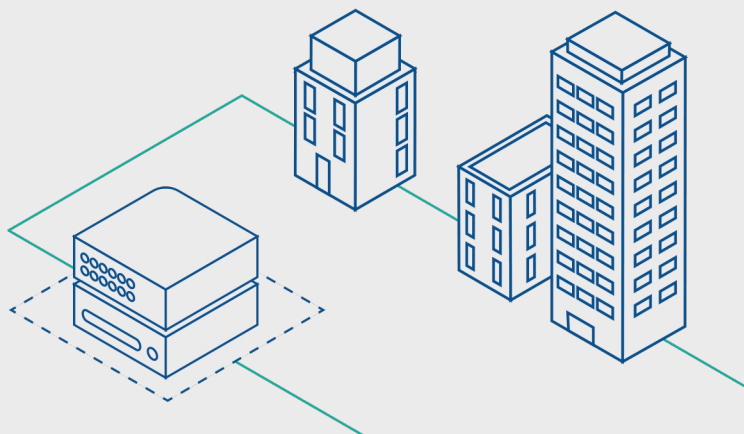


# Building and Infrastructure

INDUSTRY SPOTLIGHT

IoT opportunities in buildings and infrastructure range from monitoring and controlling single elements in a building to smart cities, connecting people and infrastructure.

While smart cities have not materialized in successful large-scale deployments yet, more practical and fast ROI use cases continue to gain traction.



Housing service providers, real estate developers and hotel chains still have ample opportunities to lower their cost positions and increase customer satisfaction by implementing IoT solutions with embedded remote support/assistance capabilities in their respective facilities.

## How does this help you?

There are many opportunities to optimize costs and/or increase customer satisfaction in the building and infrastructure industries:

- **Reduce downtime** of mission-critical equipment by **fixing issues remotely**
- **Reduce field force support costs** by analyzing incident root causes remotely and dispatching the right technician with a briefing on the issue at hand – payback typically less than 12 months\*
- **Assist** remotely in emergency or **critical situations**
- **Help fix technical issues** based on remote incident analyses

## What does this look like?

There are various IoT endpoints in the building and infrastructure industries that can be outfitted with remote assistance/support:

- **Fix a stuck elevator remotely**, reducing the wait time for repair completion and field support costs
- **Detect and diagnose** the root causes of **heating system** malfunctions, and dispatch the adequate technician, briefed on the situation and equipped with the required spare parts
- Provide assistance when **house surveillance systems** detect possible threats, analyzing the situation remotely and identifying potential false alarms

\* Example: one FTE (average salary of € 60k p.a.) performing 20 digital content updates per months on 15 endpoints for an average of 0.25h per endpoint, compared to the corresponding costs for the TeamViewer IoT solution



## How TeamViewer can help?

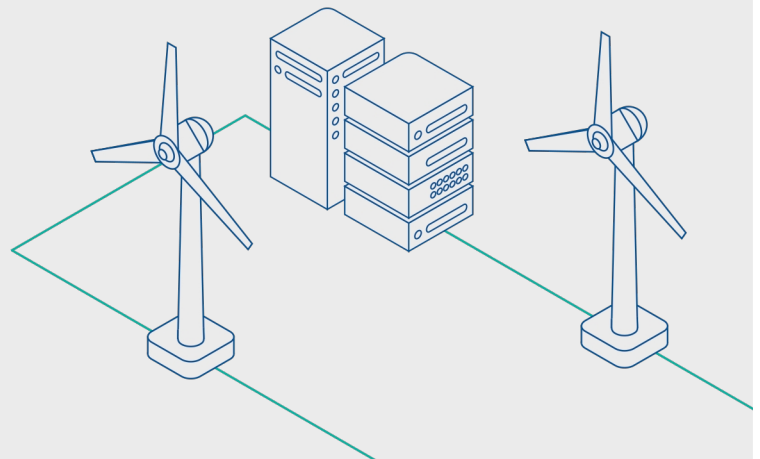
Companies turn to TeamViewer when they need **proven expertise in remote assistance for building and infrastructure devices**. With TeamViewer's IoT solution, you can support and assist every connected device – even hard-to-access endpoints, at **anytime from anywhere**.

# Utilities - Renewable Energy

INDUSTRY SPOTLIGHT

Utilities are famous for having the most mature large-scale IoT deployments: smart metering of electricity and heating consumption.

While smart metering has advanced with new connectivity types (especially low-power-wide-area mobile connectivity) and smarter data analytics, there is still a huge opportunity around remotely troubleshooting, repairing and offering assistance in distributed renewable power generation and storage (e.g., windmills, solar panels, and power plants).



Constant regulatory and political interventions, promoting renewable energy, as well as growing customer environmental awareness, increase the need for more economical and efficient management of renewable power generation.

## How does this help you?

There are many opportunities to optimize cost structure and/or reduce downtime in the utilities and renewable energy industries:

- **Fix devices and machine issues instantaneously** through remote assistance, **regardless of how dispersed** they are, with payback periods for the solution of less than six months\*
- **Drive efficiency by reducing machine downtime** and proactively handling malfunctions; **minimize costs by reducing travel and on-site repair visits**
- **Prepare field technicians with the corresponding spare parts and instructions**, when manual repair cannot be avoided, to **improve overall performance and repair resolution time**

## What does this look like?

There are various IoT endpoints that can be outfitted with remote support/assistance capabilities within the utilities and renewable energy industries:

- **Fix management software for electric vehicle charging stations** remotely, instead of dispatching technicians
- Decide which technicians to dispatch to fix issues with **solar panels** and equip them with the correct spare parts
- Provide remote assistance to technicians fixing issues in **wind turbines**

\* Example: one FTE (average salary of € 60k p.a.) performing two maintenance checks per year on 100 endpoints for an average of 5h per endpoint, compared to the corresponding costs for the TeamViewer IoT solution



## How TeamViewer can help?

TeamViewer's IoT remote assistance solution **offers a wide set of features to remotely troubleshoot issues** on IoT endpoints within the utilities and renewable energy industries. TeamViewer IoT enables you to **log in and fix devices remotely** effectively reducing field support cost and downtime.

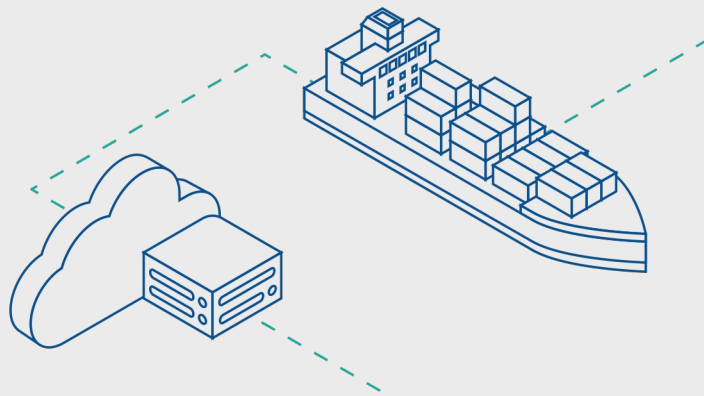
# Logistics and Transportation

INDUSTRY SPOTLIGHT

Logistics and transportation is an early adopter of IoT (e.g., track and trace retrofits and in-car/in-truck dongles to monitor vehicles).

These IoT solutions have given leading logistics companies a competitive edge from more efficient use of resources (e.g., drivers, vehicles) by enabling them to use resources more efficiently (e.g., drivers, vehicles) and provide better services

However, large economic potential is untapped in providing remote support/assistance in case of incidents.



Logistics and transportation shipment volumes constantly grow, driven by globalization, e-commerce, and worldwide GDP growth. Supply chains become more complex while delivery times are shortened. IoT solutions outfitted with remote support/assistance capabilities become increasingly important to help tackle these challenges.

## How does this help you?

There are many opportunities to analyze and fix problems remotely in logistics and transportation:

- **Fix issues remotely** and reduce field force support cost while shortening downtime – typically resulting in payback within 6 months\*
- **Analyze root causes** of incidents remotely and **provide assistance to the staff** on the ground to fix issues without dispatching an expert
- **Decide which type of support expert to dispatch** for a given incident based on a remote incident analysis

## What does this look like?

Despite large fleets of connected cars, trucks, ships, etc., there is more potential for remote support/assistance:

- Fix incidents in the control software of **container ships** remotely instead of dispatching technicians
- Provide assistance to the driver of a **harbor crane** and help to solve technical issues
- Decide which technician to dispatch for fixing issues with an **airport jet bridges** based on remote incident analyses

\* Example: 20 percent reduction in on-site maintenance time (part of health checks now conducted over the air) and cost reduction for on-site servicing expert (utilizing remote inspection results to deploy adequately skilled technician) assumed



## How TeamViewer can help?

TeamViewer's IoT solution offers a **wide set of features** to support and assist transportation and logistics endpoints remotely, minimizing field support costs and reducing downtime. We provide **exceptional expertise** that will enable you to manage even hard-to-access devices — **at anytime, from anywhere.**



**Talk to our IoT experts:**

e-mail us  
at [americaspartners@teamviewer.com](mailto:americaspartners@teamviewer.com)

## **About TeamViewer**

As a leading global remote connectivity platform, TeamViewer empowers users to connect anyone, anything, anywhere, anytime. The company offers secure remote access, support, control, and collaboration capabilities for online endpoints of any kind and supports businesses of all sizes to tap into their full digital potential. TeamViewer has been activated on approximately 2 billion devices; up to 45 million devices are online at the same time. Founded in 2005 in Goeppingen, Germany, the company employs about 800 people in offices across Europe, the US, and Asia Pacific.

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