Optimize production by unleashing and leveraging real-time data from all of your OT devices
Process facilities that capitalize on the value of real-time data found in disparate OT devices make faster, better decisions.

The key to optimizing production and successfully navigating the IIoT journey is real-time OT data integration and visualization.
The data dilemma
Gaining actionable insights from data is more challenging than ever

Effective decisions rely on real-time, complete and quality data. But that’s a challenge for today’s process facilities.

For one thing, industrial companies are able to meaningfully use just 20% of the data they generate. Plus 73% of the data gathered across enterprises is never analyzed for actionable insights. Then there’s the challenge of asset complexity.

Most process facilities have thousands of disparate IT, OT (Operational Technology) and ET (Engineering Technology) devices and systems, all of which speak different languages. The result? These devices and systems gather data that is neither contextualized nor helpful.

The value of data-driven decisions

Making smart, data-driven decisions that accelerate value creation is critical to success. Real-time, integrated, contextualized data is the key to:

- Improving profit potential
- Maximizing return on assets
- Optimizing maintenance costs
- Mitigating safety risks
- Alleviating security risks
- Increasing energy efficiency

* McKinsey
ABB Ability™ EdgeInsight™
Optimize production by unleashing and leveraging real-time data from all of your OT devices

ABB Ability™ EdgeInsight™ is a software solution that helps process facilities capitalize on the value of real-time data from the discrete and disconnected OT field devices, gateways and PLCs in their OT environments.

- Improves data operations
  - Collects different types of data from multiple sources into one cloud platform for better, faster decision making

- Increases data integrity
  - Enables process facilities to safely provide suppliers the operational data needed to deliver their services

- Minimizes financial risk
  - Reduces investment commitment through a SaaS subscription model

Disparate devices
Disparate systems

Your operations team

ABB Ability™ EdgeInsight™

ABB service support
ABB Ability™ EdgeInsight™
Analyze, build and view plant and equipment performance and health KPIs

ABB Ability™ EdgeInsight™ makes real-time data available anywhere, anytime. It helps you realize the value of predictive maintenance, data-driven asset life decisions, and optimized production.

Capture, visualize and transmit data
Collect data from existing or new devices and control systems using edge gateway technology, and distribute that data securely.

Improve operations in real time
Use real-time control data (time series, alarms and events, high frequency, objects and structures) and contextualize it to improve asset, process and risk performance.

Combine OT & IT data for improved business outcomes
Gather and integrate different types of data and information from multiple sources into one cloud platform to make better business decisions.

Get your data completely, directly and more quickly

Conventional data path
- With typical OT systems, you must go through up to five networks to get data.
- Each network layer and firewall filters the data and slows the process.

ABB Ability™ EdgeInsight™ data path
- Data is collected close to the source and unfiltered; enabling data context to be retained.
- One place to manage data.
**Smarter, faster decisions—from your operators to across your enterprise**

### Streaming data

**Before ABB**

As the VP of Technology at a hydro-electric station, I understand the benefits of Industry 4.0—and the shortcomings of having our data on-premise. We must collect data from dozens of disparate OT field devices, gateways and PLCs—all of which speak different languages. This translates into slow time to value from data analytics through our traditional DCS. We have a big gap between the data generated and the data available for analysis. Plus, the data is often trapped in devices, control systems or plant historians that are not easily accessible to me.

**With ABB Ability™ EdgeInsight™**

ABB Ability™ EdgeInsight™ collects data from all of our devices and control systems using an edge gateway. It collects data at a rate of thousands of samples per second, uploading it to the cloud so my team can visualize, analyze and predict operations across our assets easily and efficiently. This streaming, software-as-a-service model significantly reduces our financial risk in all our operational software investments. By migrating our on-premise functionality to the cloud, we reduce costly maintenance and service operations for hardware and software systems at site. Additionally, we can test new analytics and solutions to problems before deciding which ones to deploy to best support our evolving business needs.

### Scalable solutions for industry-specific applications

**Before ABB**

As the Production Manager on an oil rig located on the Norwegian Continental Shelf, I need rapid access to data. Without real-time data, I can’t make data-driven decisions. The trouble is, our data networks are highly complex as our site architecture consists of dozens of OT and IT networks. Plus, our data is stored in silos. All field devices speak different languages, and it is difficult and time consuming to interface with each of them. The result? I can’t predict the resources and services I need at any given time. I need a way to gain insights from the data generated by our disparate devices and systems, but the solution must be fast and scalable.

**With ABB Ability™ EdgeInsight™**

ABB Ability™ EdgeInsight™ provides a common interface for all of our industrial data. It delivers rapid visibility of our entire OT environment. By streaming data to the cloud, ABB lets me conduct process improvement analysis much more quickly—and accurately. ABB customized the EdgeInsight dashboard to our industry-specific application. Now, I can see at a glance how to optimize production in real time. By unleashing and leveraging real-time data from all of our OT devices.

### Full service

**Before ABB**

As the Production Manager at a chemical processing plant, I am keenly aware that we need help collecting, visualizing and analyzing data across our assets easily and efficiently. We don’t just need technology, but a technology partner. We face issues when collecting data because of disparate field devices and network layers in my OT environment. We find gaps when analyzing the data because of the different and non-integrated technologies. But we analyze only a tiny percentage of our OT field data for actionable insights. We are looking to improve our data flow beyond a traditional process historian yet don’t have the bandwidth to look in the data for improvement opportunities, so performance is rarely optimal.

**With ABB Ability™ EdgeInsight™**

ABB delivers a full-service solution to our operational challenges with ABB Ability™ EdgeInsight™ and services. Now, we extract data from our field equipment and DCS safely and independent of control system vendor. And enjoy a complete, unrivaled view of our operation from both IT and OT devices. We gain better operational insights by saving up to 75% of the data we used to send through our control system databases. And we now access visualization and analytics tools instantly. The ABB Service Group is on hand to help us capitalize on the value of real-time data found in our disparate OT devices. Plus, the service is subscription based, so I pay for what I need and have flexibility to decide when I need it.
Features and benefits
Harness the power of real-time IIoT data for faster decisions

ABB Ability™ EdgInsight™ integrates your OT device data where it matters—at the edge. It then distributes the data securely so that you visualize, analyze and predict operations across your assets easily and efficiently. ABB Ability™ EdgInsight™ is simple, secure, scalable and smart.

### ABB ABILITY™ EDGEINSIGHT™

<table>
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<tr>
<th>Features</th>
<th>Benefits</th>
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| Simple   | • All field devices speak one common language at site before you distribute and use the device data  
• Connects to all industrial field device protocols and translates to OPC UA or AMQP  
• Installs in one minute |
| Secure   | • Internal architecture guarantees no direct access to field devices or systems  
• Data is streamed outbound only  
• Uses uncoupled plugins as connections to field devices  
• Queue-centric design  
• Designed to traverse network layers |
| Scalable | • Migrate on-premise functionality to the cloud and reduce costly maintenance and service operations for hardware and software systems at site  
• Modify data stream, applications and services according to your needs  
• Reduce financial risk with SaaS subscription model |
| Smart    | • One common interface for all relevant industrial data using insights dashboards  
• Access visualization and analytics tools instantly  
• Enable Condition Monitoring—move up to 97% of maintenance from site to office |

### EDGEINSIGHT™ ARCHITECTURE

![Diagram of EdgeInsight™ architecture](image)
Why ABB

If your process facility needs to optimize production by unleashing and leveraging real-time data from all of your OT devices, you should choose ABB. Here’s why.

Pioneer and market leader in the design of Distributed Control Systems for process industries

Industrial automation heritage. Leverage our OT expertise to better understand and protecting the integrity of your existing infrastructure

Leader in industrial data analytics, helping firms turn data from their industrial plants into actionable insights

Superior customer value. ABB provides the platform, the models and the domain experts with the ability to help customers take the model outcomes and implement them into real time system optimization at the facility level. No other firm can do this

Speed - implement quickly and achieve value in days and weeks

ABB
Operating in more than 100 countries.

new.abb.com/oil-and-gas/digital/edgeinsight