

Enriching Data, Empowering Action

Data-powered decision-making to reduce downtime, increase safety, and lower costs

Having access to the **right data** can mean the difference between uptime and downtime, customer cost savings and rate hikes, growing margins and crippling expenses—even life and death.

By combining artificial intelligence and machine learning, utilities can quickly turn a massive amount of data into actionable insights.

The 3 Keys to Better Business Decisions:



Accelerate

Speed up data collection, processing, and analysis by optimizing processes.



Automate

Improve process safety and accuracy by employing robotics and AI.



Amplify

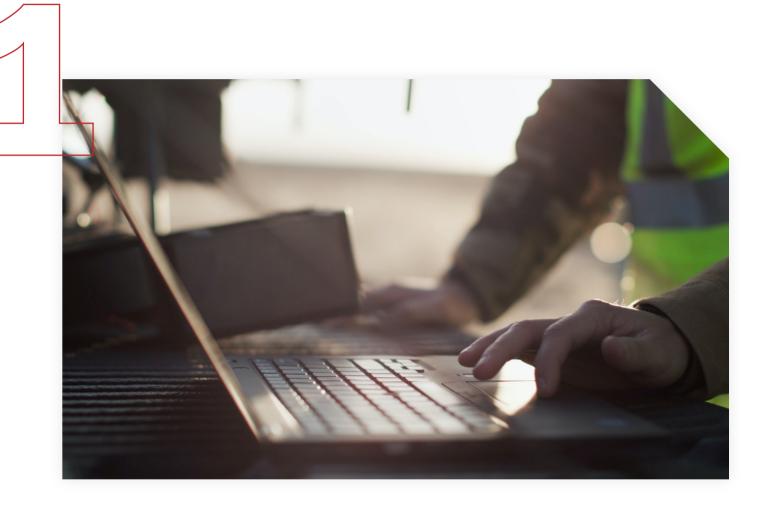
Increase the volume and detail of the data collection by using precision tools.



What Keeps Data From Being Actionable?

Insights can be hidden because...

- Data is unavailable, inaccurate, or unactionable
- Poor data quality from outdated and subjective collection methods
- Data isn't integrated into the right workflows



EMPOWER ACTION

- **1.** Select the most effective data collection method for the project
- 2. Feed existing data into software scripts to automate the processing
- 3. Use machine learning models to narrow down what needs to be reviewed by a human

DATA: O ACCELERATED

Speeding up the workflow of collecting, processing, and analyzing data—without sacrificing quality—helps utilities make fast, accurate decisions on time-sensitive issues.

How Much Time Can I Save?

Consider the workflow for a distribution line...

MANUAL PROCESSING

One to four weeks for human analysts to carefully rectify the data, look for component issues, and compare to existing system

PRECISIONANALYTICS

Less than a day for the
PrecisionAnalytics
platform to receive images
straight off the line,
process, and use ML to
push only images that
need further review
to experts

DATA: ③ AUTOMATED

Al plus human skills creates a **streamlined end-to-end data workflow** that increases accuracy and efficiency while minimizing costs.

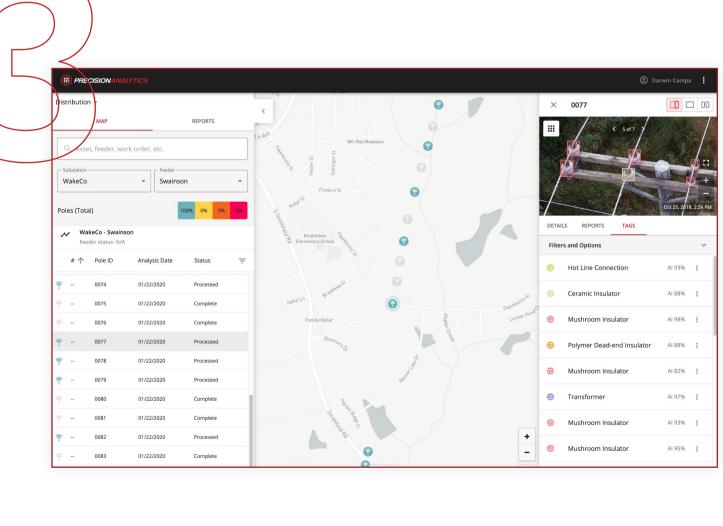
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EMPOWER ACTION

- 1. Find the optimal mix of humans and machines to meet your goals
- 2. Measure what matters to build, test, and improve machine learning models
- **3.** Incorporate AI to process massive amounts of data, such as a thermal tagging program to identify and prioritze potential issues

How Do Al and ML Work Together in PrecisionHawk?

- PrecisionAnalytics is an artificial intelligence (AI) platform that leverages machine learning (ML) object recognition models
- To train the model, the team annotates images and feeds them into the model
- The model learns how to identify issues on different backgrounds, in varying types of light, and from different angles
- The model continues to refine its abilities as more data is fed into it in real-life situations



DATA: >< AMPLIFIED

Utilities need the right data to make smart business decisions—but there also needs to be enough of it in the hands of the right people.

EMPOWER ACTION

- 1. Break down data silos between departments with integration into existing workflows
- 2. Ensure data security by using systems proven to be secure for multiple stakeholders every step of the way3. Generate easily understandable reports to
- drive action

How Much Data is Enough Data?

Amplifying data is about more than increasing the number of images. Images need to be...

- Captured from correct angles
 Have a high level of detail and
- Have a high level of detail and focusInclude the proper tags
- Taken at a high temporal resolution

Data that Drives Results

Accelerating, automating, and amplifying data helps utilities collect the vast amounts of data needed to ensure accuracy and usefulness. Al and machine learning can filter data down to the most relevant information. The balance of automation and human intervention makes the process costeffective as well.

With the right data, utility personnel can now make the best decisions to **increase safety, customer satisfaction, and cost savings**—decisions that will benefit the utility today and tomorrow.