MEASUREMENT AND ANALYTICS

ABB Ability™ Verification for measurement devices — SRV500

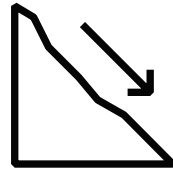## Verification made easy

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Key challenges faced by industrial operations

Downtime, product quality issues, and unnecessary service visits for measurement devices

Per the ARC Advisory Group:

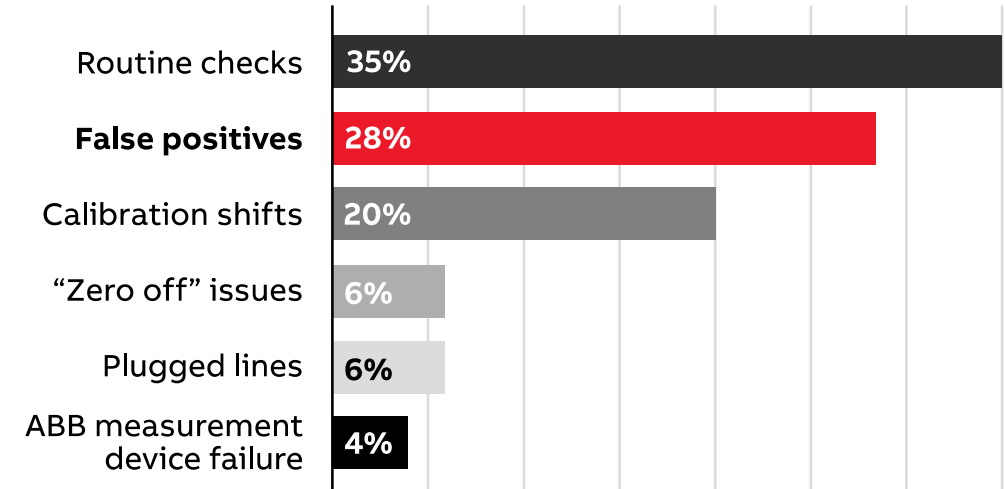**5%** of annual production lost to downtime and poor product quality

80% of those losses are avoidable

40% of losses due to operator error

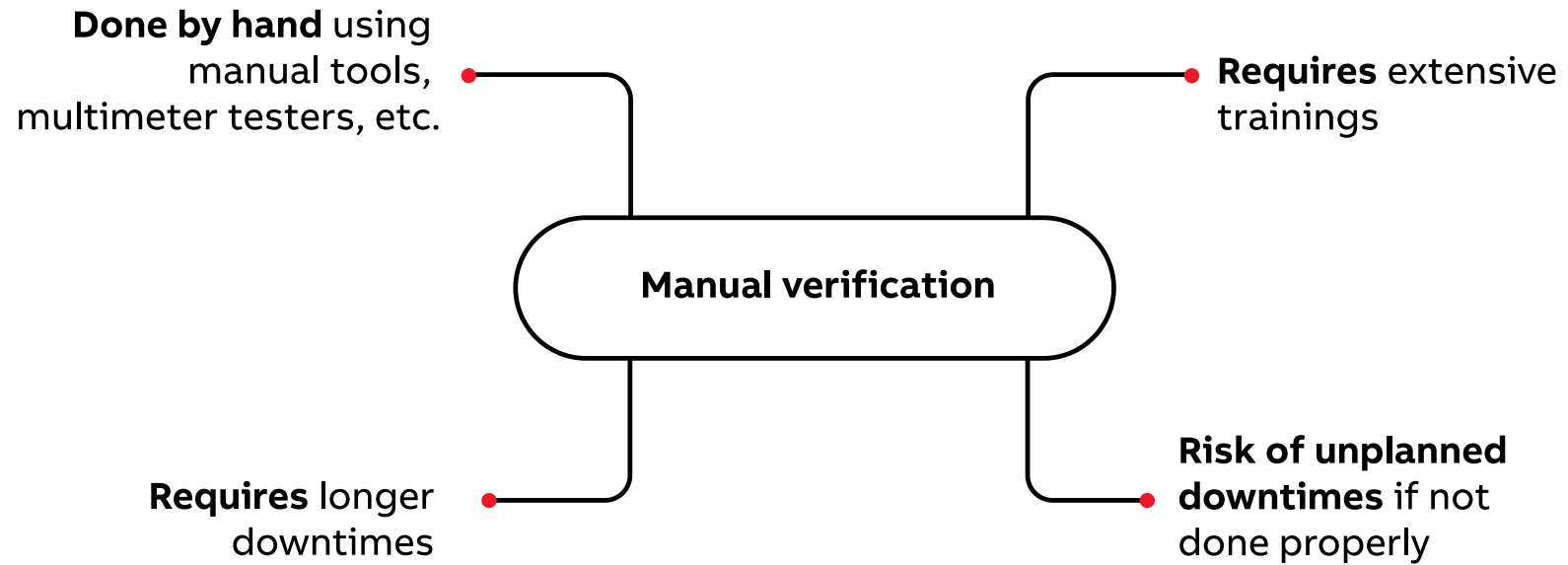**ABB studies show that our field service visits are for:**

Category	Percentage
Routine checks	35%
False positives	**28%**
Calibration shifts	20%
"Zero off" issues	6%
Plugged lines	6%
ABB measurement device failure	4%

Eliminate the avoidable

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Manual verification is slow and problematic

Meaning longer downtimes

Done by hand using manual tools, multimeter testers, etc.

Requires extensive trainings

Manual verification

Requires longer downtimes

Risk of unplanned downtimes if not done properly

Software verification is faster

But you need multiple software packages for multiple device types

Software 1

Software 3

Software 2

Software 4

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Communication protocols limit functionality

Historically, one verification software did not work with all communication protocols

NFC

Digital HART

Infrared

HART modem

You would need to match the communication protocol to the type of measuring device
and then match that to a verification software package.

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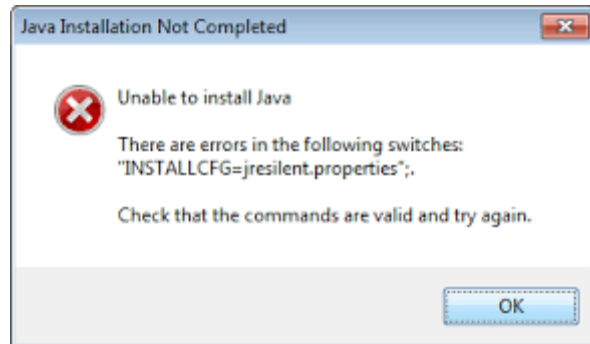# Difficult and outdated software technologies

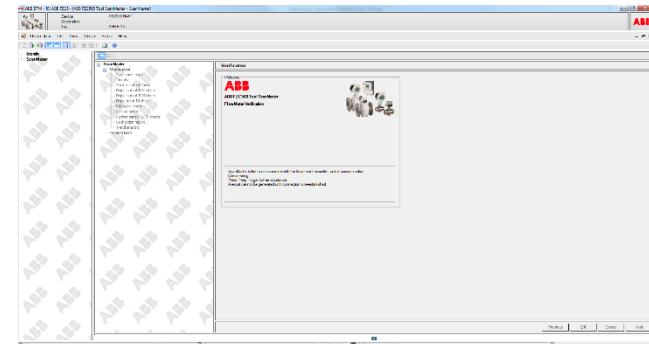Slows down or delays verification process

Windows XP OS and lower

32 bit based

Problems during installation

Outdated software design

Introducing ABB Ability™ Verification for measurement devices

One software package verifies multiple device types

Order for next releases:

Priority 1:

- Magneto-restrictive level (LMT)
- Coriolis

Priority 2:

- Positioners (EDP, TZIDC)
- Continuous water analyzers
- Hybrid electromagnetic flowmeters

Priority 3:

- Pressure 266
- TTX300 temperature
- Thermal mass flowmeters

VortexMaster   SwirlMaster   ProcessMaster

Sensyflow FMT500ig   WaterMaster   AquaMaster

1 software for a variety of device types = simpler, faster verification

Compatible with all 4 communications protocols

Plug in the appropriate USB adapter

Using one software package on
your tablet or notebook, you can
communicate using the 4 most
common protocols to verify multiple
types of measurement devices.

HART modem

Infrared

Digital
HART

NFC

Easy-to-install and use
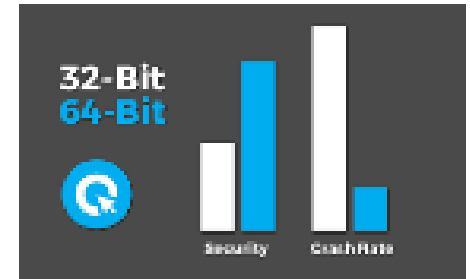
Automated, Fast & One click installation process

- Easy to install: first download and install the SRV500 program and then your device-specific Verification Definition Files (VDFs)
- Runs on latest supported OS by Microsoft.
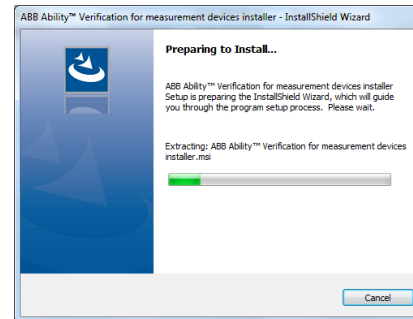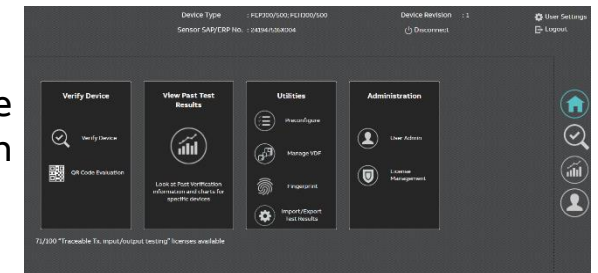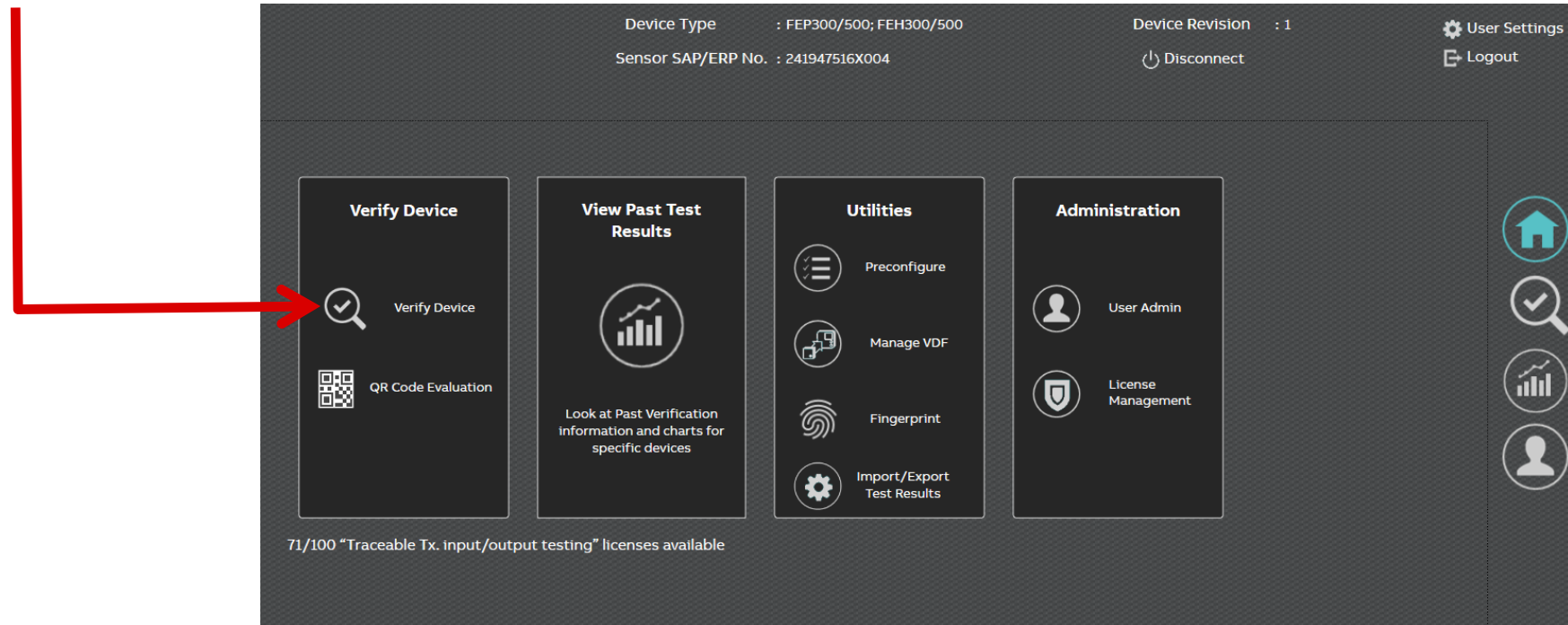- Runs tablet / PC / laptop

Newest OS

64 bit

Easy to install

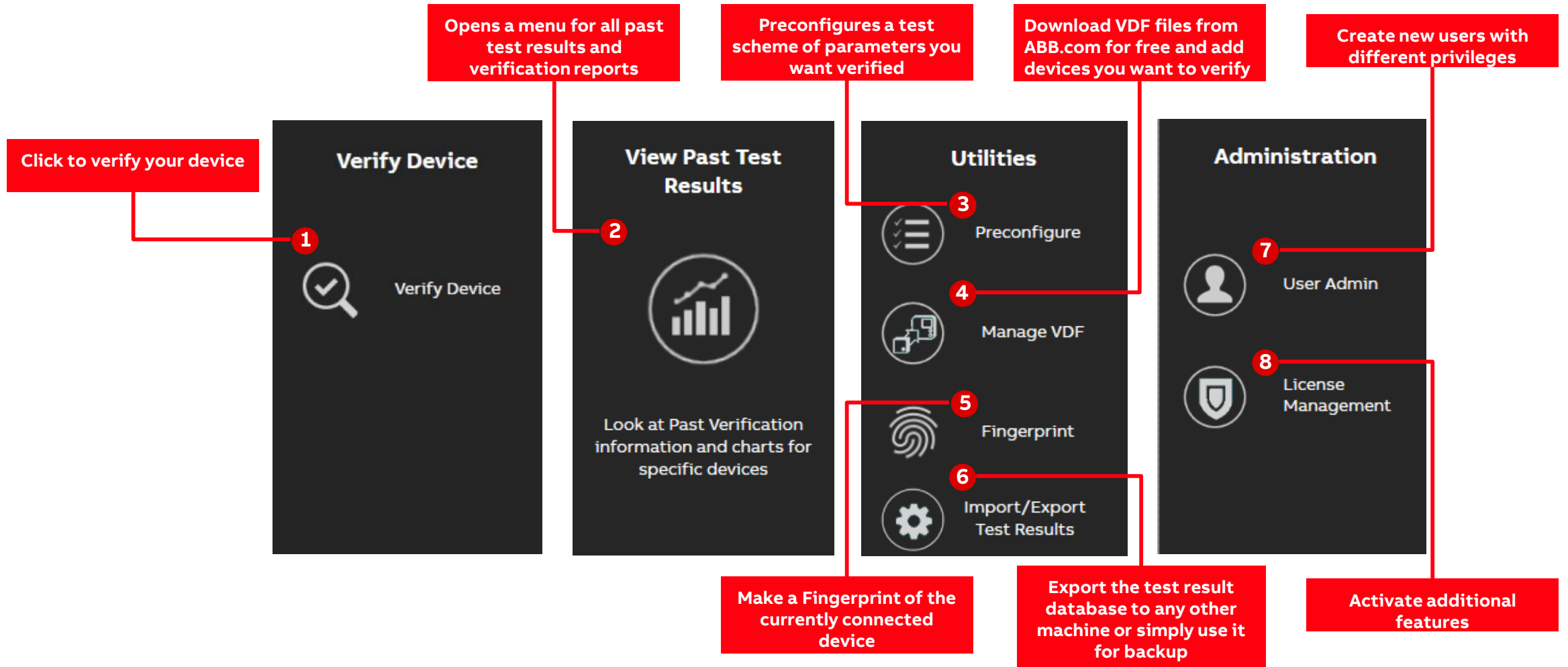Intuitive design

Latest technologies = faster tests

Intuitive, simple user interface

Most tests involve just one click

Easy-to-use = faster tests

Straightforward functions

Verify Device

Verify Device

View Past Test Results

Look at Past Verification information and charts for specific devices

Utilities

3 Preconfigure

4 Manage VDF

5 Fingerprint

6 Import/Export Test Results

Administration

7 User Admin

8 License Management

Click to verify your device

Opens a menu for all past test results and verification reports

Preconfigures a test scheme of parameters you want verified

Download VDF files from ABB.com for free and add devices you want to verify

Create new users with different privileges

Make a Fingerprint of the currently connected device

Export the test result database to any other machine or simply use it for backup

Activate additional features

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Verify devices to design parameters

Quickly, without production loss

Auto-verification extends your calibration cycle:

- Reduce costs by only calibrating when necessary*

Verification is now used to meet:

- ISO 9000 / 9001 QMS
- Industry regulations (e.g. WRAS,ACS, DVGW W270, NSF – 61, AZ/NZ 4020)
- Safety requirements

* Verification is NOT calibration and will NOT provide a certificate of conformance to ISO 17025.

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Reduce costs, speed up verification

Manual vs. automated verification

Cost reduction example	
Annual revenue	$150,000,000
Personnel $/hour	$60
Production hours	24/7/345
Measurement devices	75
Annual verification $ for regulatory requirements	$150,000
Annual maintenance & repair on devices	$100,000
Lost production due to poor quality	5%

Summary & results	Low estimate	High estimate
Reduced maintenance	$162,000	$170,000
Improved quality production	$75,000	$150,000
Increased throughput (production)	$130,435	
Risk reduction	$730,435	
Total potential annual reduction to costs	**$1,097,870**	**$1,180,870**

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The basic program is no cost

Try it before you buy it

1) Google "SRV500" and download the verification software to try before you buy it.

2) Download the Verification Definitions Gons Files for each type of measurement device.

The complimentary version lets you run the verification for your measurement device, delivering either a PASS or FAIL result.
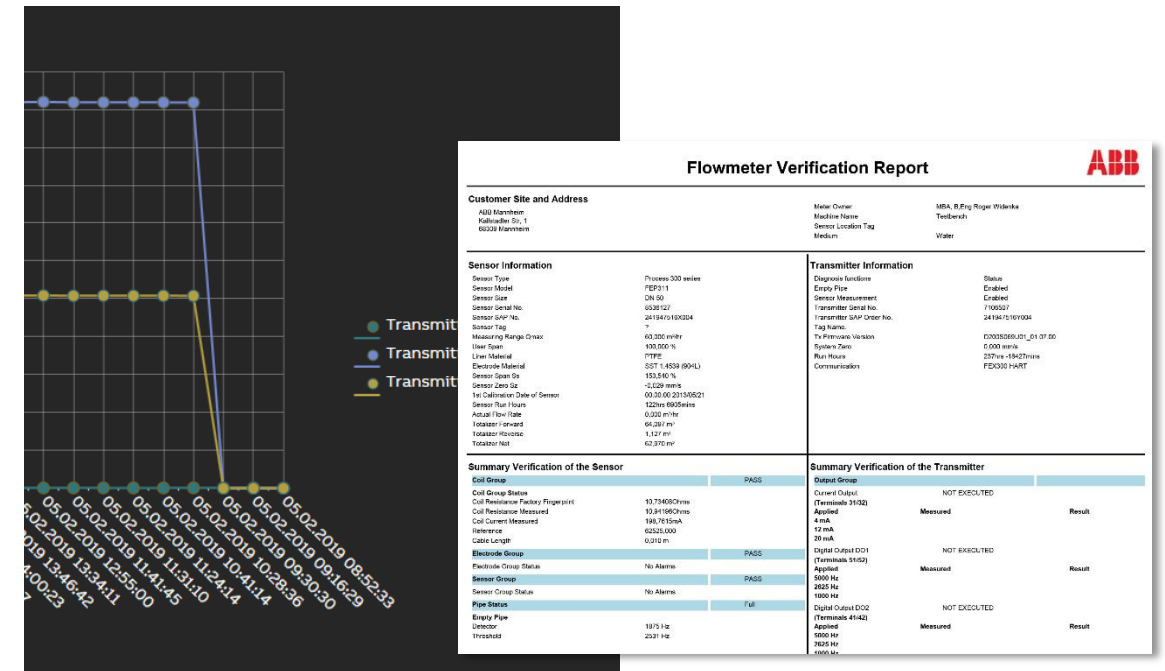
Quickly verifies your measurement devices.

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Full-feature software does much more

Enables predictive maintenance via condition monitoring

1) **Verification reports:** print/import/export test results. Results can be uploaded to user's servers.

2) **Chart past and current test results** to trend diagnostic data. In other words, perform predictive maintenance based on the actual condition of the device.
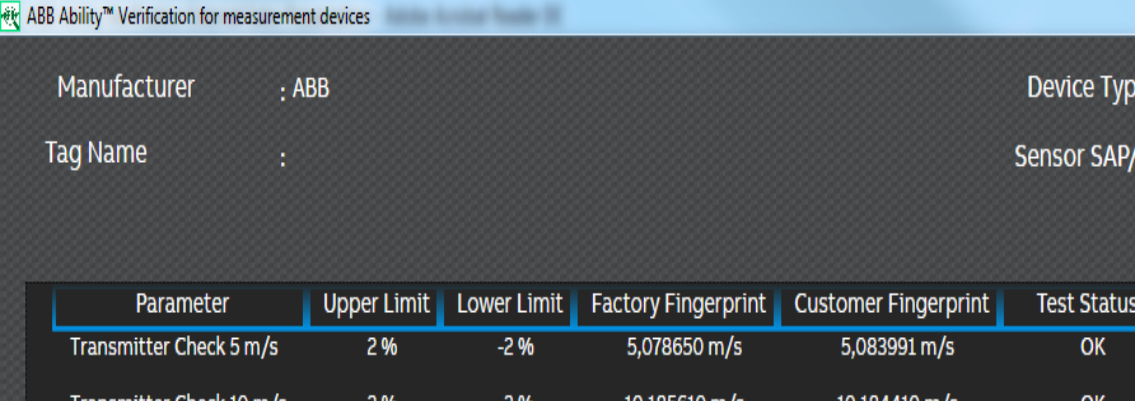
Diagnosis data trending:

Predictive maintenance maximizes your production availability

Fingerprint function

Fingerprint to Factory or on-site verification tests

1) **Fingerprint to Factory:** verify the device to its original factory verification test to ensure performance has not degraded

   or

2) **Fingerprint on Demand:** after device commissioning, create a new Fingerprint based on the actual conditions at your site

Compare the device's actual performance to the most relevant benchmark for your production process

Cyber security for SRV500

Meets all of the following ABB requirements

Minimum cyber security requirements

Implementation
- Removal of backdoors
- Confirm quality of crypto and security functionality
- Hardening

Processes
- Vulnerability handling
- Patch management
- Digital certificates
- Use of ABB Public Key Infrastructure

Verification
- Security assessment
- Robustness testing
- Malware prevention

Documentation
- End-user documentation
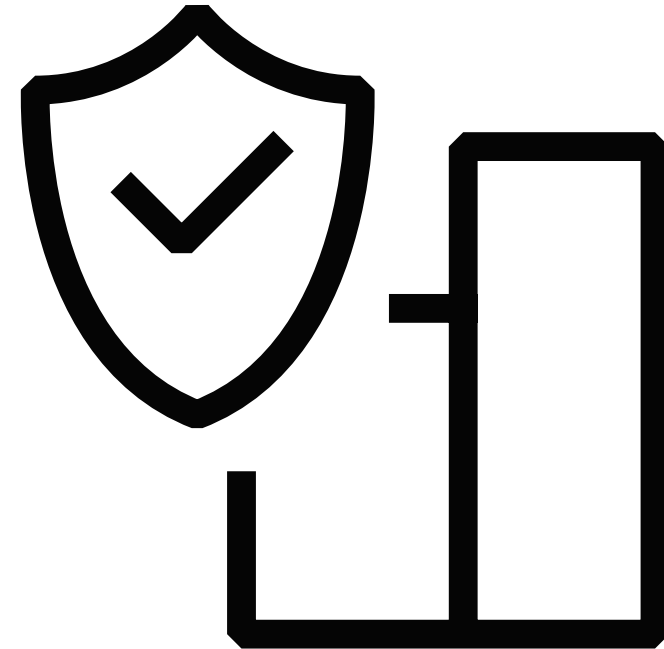- Deployment guidelines

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ABB Ability™ Verification for measurement devices

Channel partner testimonials

From pump rental supplier:

"We have now been using the new software for months. It has cut down the time needed to test the magnetic flowmeter considerably. We now have no waiting time when testing. The layout of the new software is also great, with clear indications on 'pass' or 'failed' results. The ability to reference each unit at a later date will be very useful."

Electrical Asset & Support Manager

From a flow measurement service provider:

"I would just like to say a big thank you for helping us with the software. The software is a treat. Not only has this software potentially stopped us from being kicked off a contract, it may well open future doors."

Sales Manager

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ABB Ability™ Verification for measurement devices

Summary of SRV500 benefits

Feature	Benefit
Universal	Tests multiple device types
One-click	Fully automated test
Fast	4x faster than manual tests
Compatible	Handles common device protocols
Intuitive	Minimized learning curve & training investment
Secure	Less risk for cyber attacks & related impacts
Fingerprint	Faster, more effective decisions

Verification made easy

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