UNIPOWER

Power Quality Management System

Enhance cost-efficiency through effective

Power Quality

Management System

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Agenda

Welcome

- ✓ Presentation of Unipower AB
- ✓ A powerful Power Quality Management System can help you saving money

  Event map
  Disturbance immunity tolerance
  Statistical Analysis
  Verify Renewable Installations
  Continuous scan
  AI

- ✓ Q&A
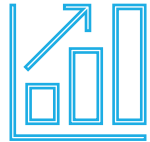
Gothenburg February, 2024

A long term partner

Market leading technology
World class instrument design and database architecture
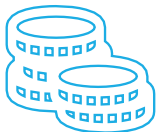
Smart Grid Cloud server solutions

High Growth Company

Member of WG IEC 61000-4-30 Class A

PQ Secure System
Automated solutions since 2001, historical overview to real-time early warning applications

METAS
Federal Office of Metrology

Strong financials

AAA

Products in over 87 countries +33 years in the market

SP
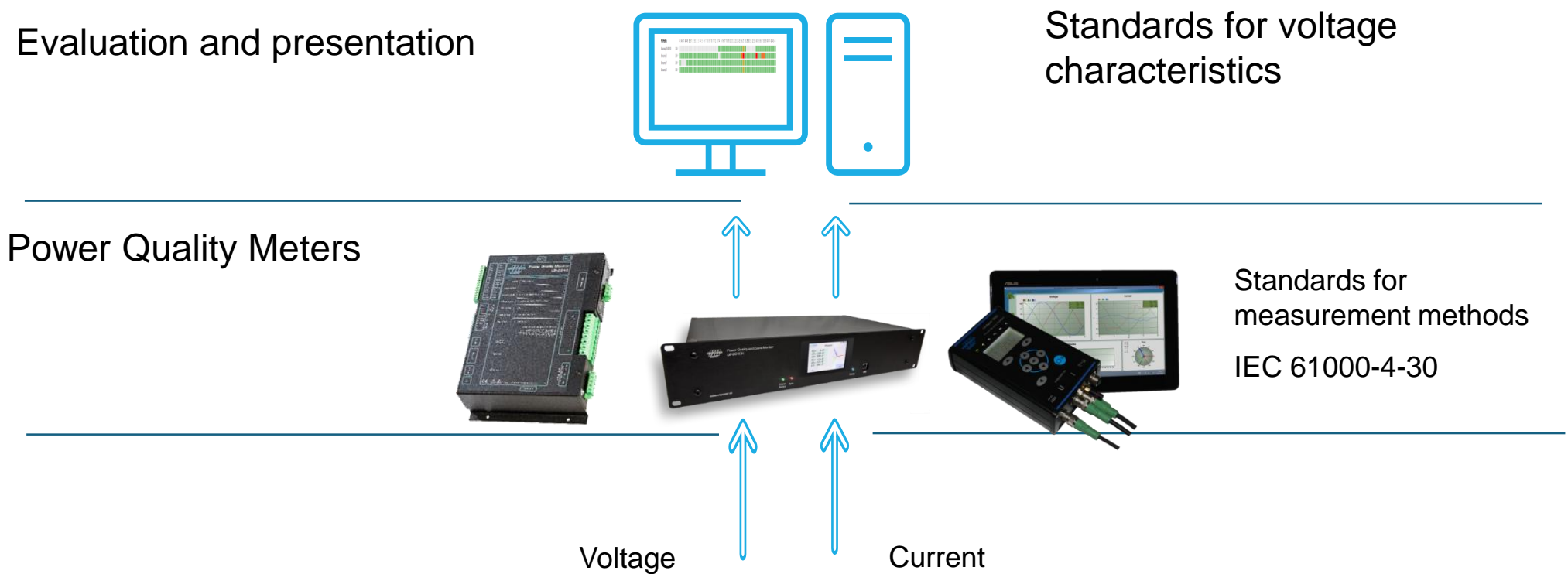Technical Research Institute of Sweden

Global System Deployment
75+ countries have installed **Unipower PQ Management System**

A powerful Power Quality Management System can help you saving money

From raw data to presentation

Evaluation and presentation

Standards for voltage characteristics

Power Quality Meters

Standards for measurement methods

IEC 61000-4-30

Voltage   Current

There's money to be made on having the right power quality

- ✓ Built-in alarms for early-warnings
  find problems before they occur
- ✓ Automated analysis and reporting tools
- ✓ Reduce the time needed to find faults
- ✓ Find and eliminate disturbance sources
- ✓ Put pressure on the "polluters"
- ✓ Build smart – optimize according to the standards
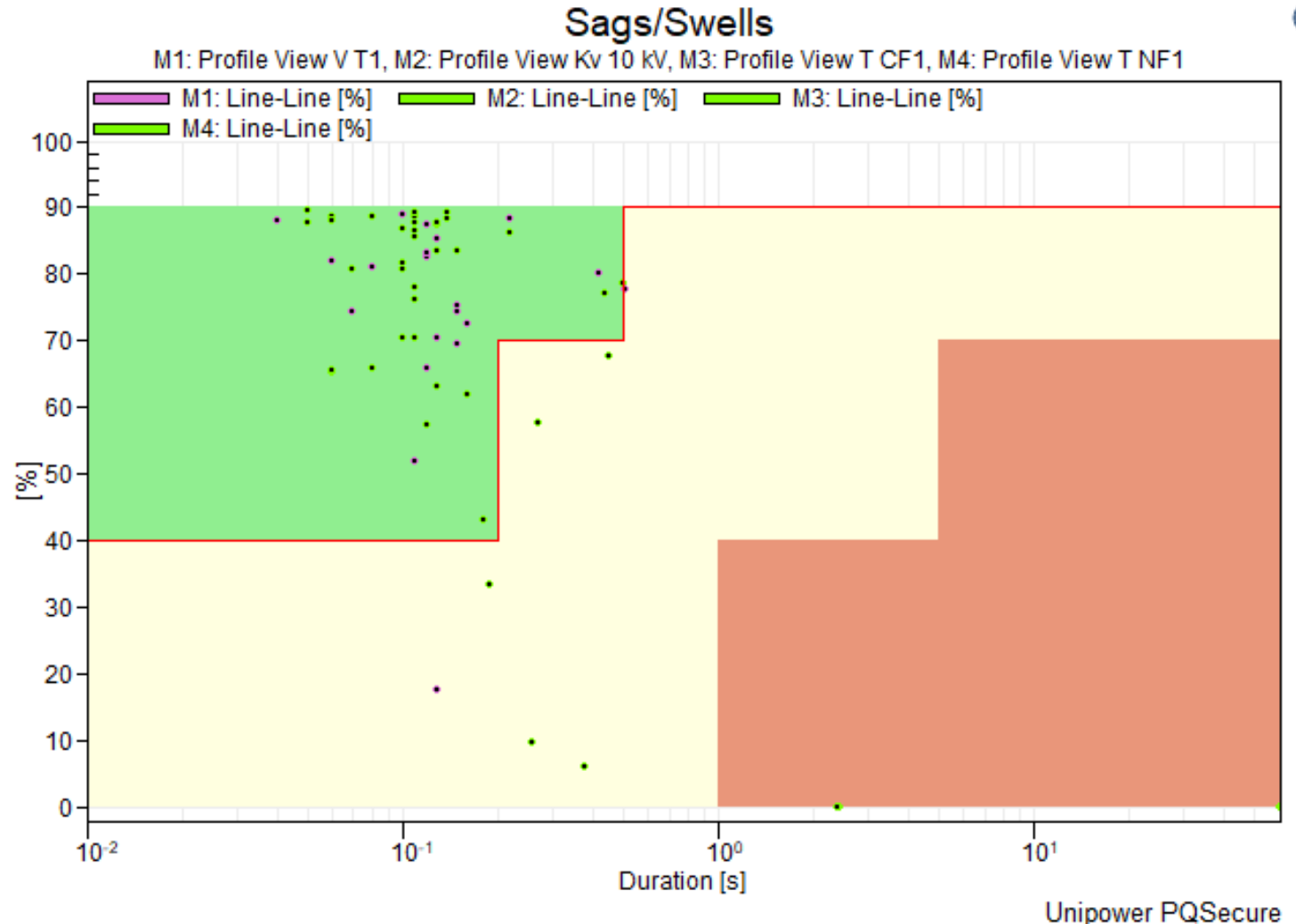- ✓ Cyber security

Event Map

Disturbance propagation

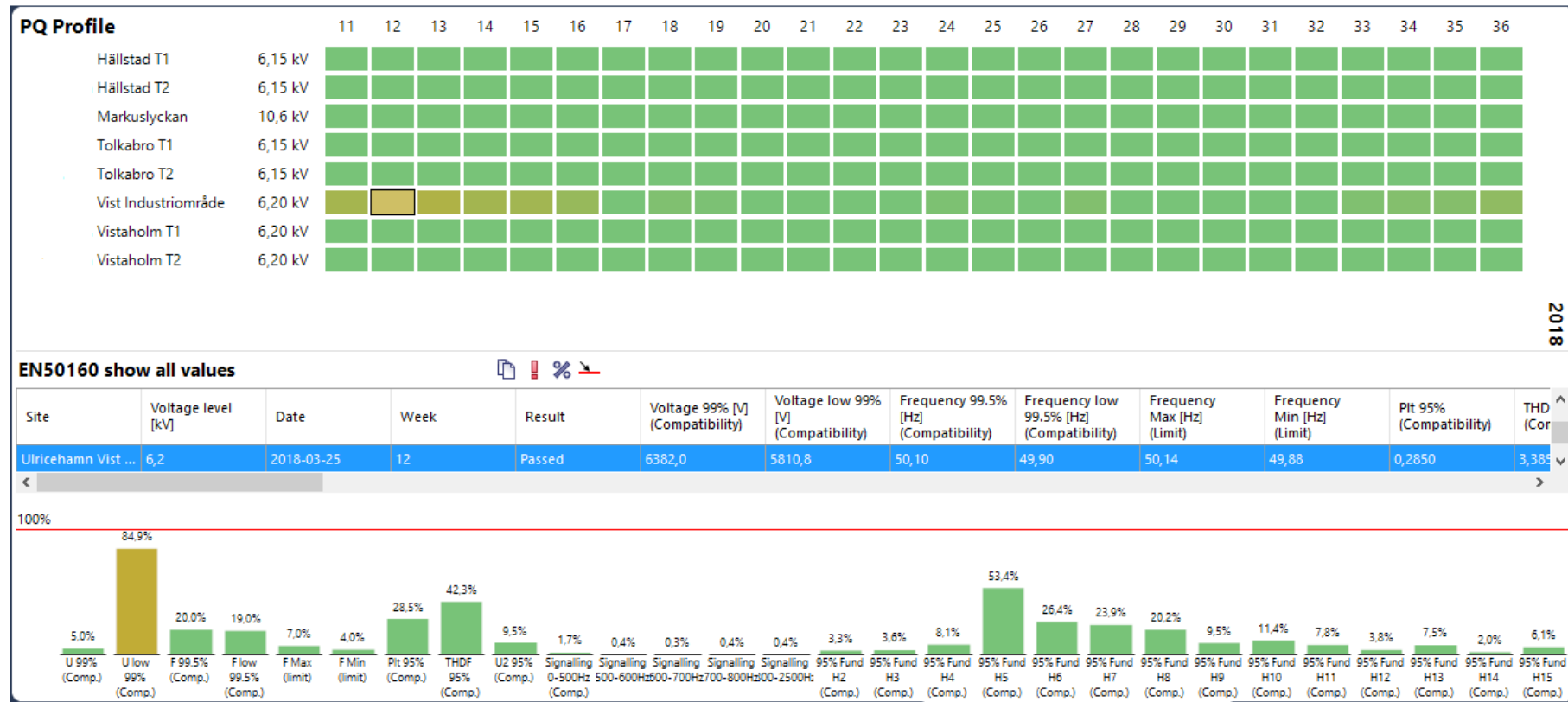Verify how a disturbance is propagating in the network.
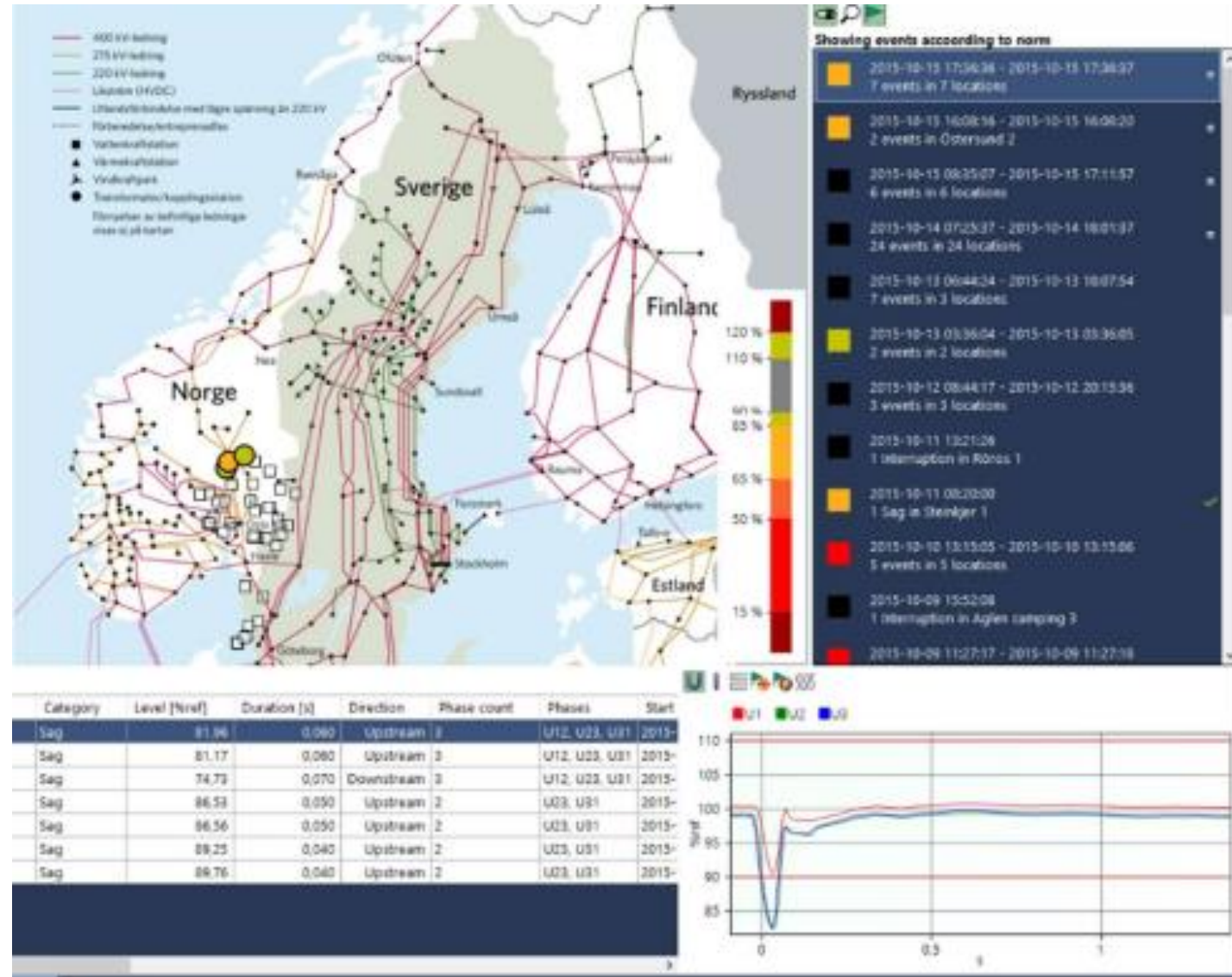
Disturbance immunity tolerance

Verify that the disturbances in the network are not causing problems for equipment.

Statistical Analysis

Monitor large areas of the network during many weeks to see deviations in the Grid Code or Planning levels.

Verify Renewable Installations

Monitor prior to a new installation.

Monitor at commissioning to verify function.

Monitor after commissioning to verify dynamic performance.

Continuous scan

Automatic sampling speed depending on event.

PMU absolute phase angle measurements between different locations in the electrical network.

No special setup required

Continuous measurement of all data for several months. Norm compliant power quality measurement at the same time

Waveform presentation with resolution up to 1024 points per cycle

Load balance investigation. Study voltage and active and reactive power

Verifying renewable generation

Detailed study of network performance. Inrush current, filter response
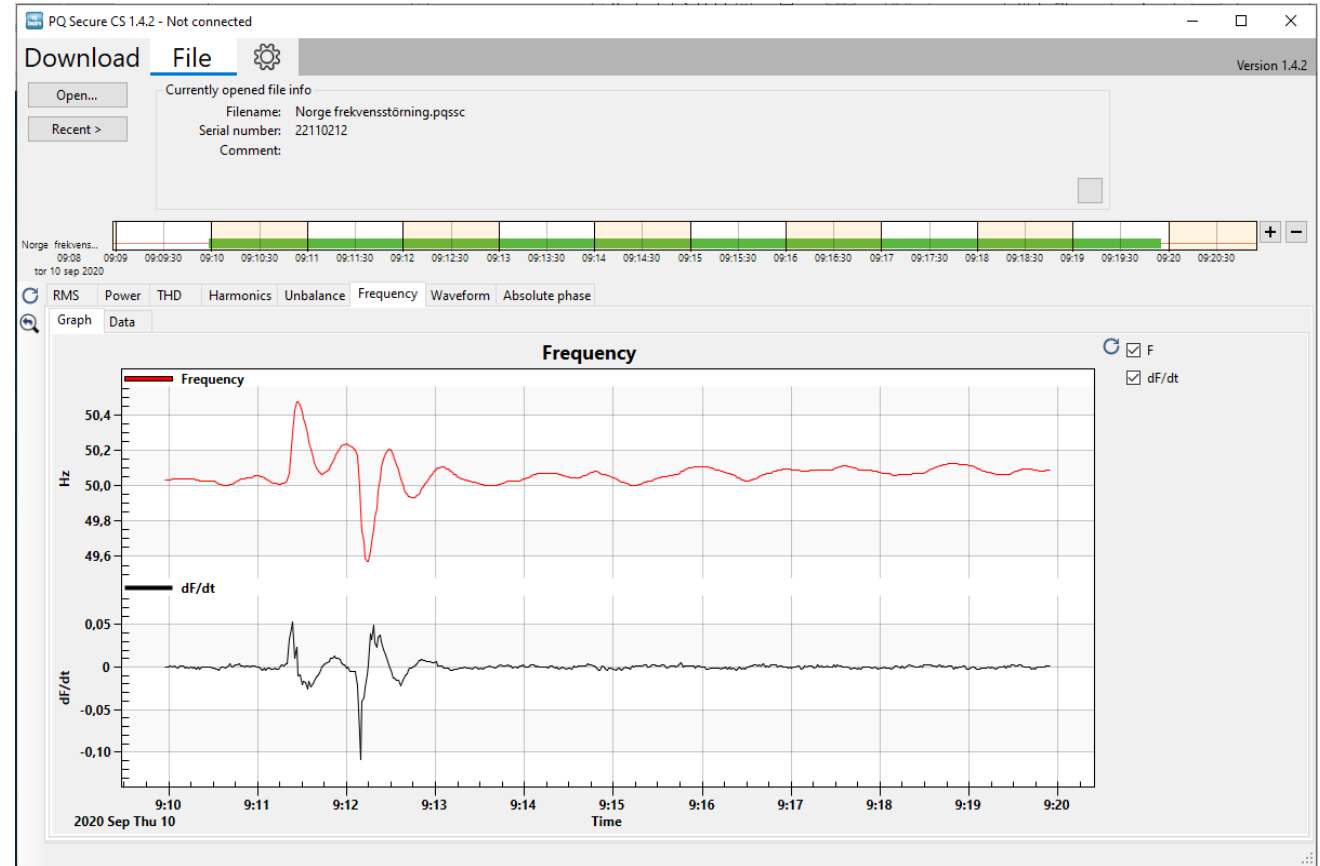
Data from PQ and AI

Warning

The module is able to generate an alarm for days, or even weeks before a severe fault occurs.

Cause

It understands and explains the underlying reason for the event, allowing the user to be aware and also avoid failure.

Location

It understands and explains where the fault will occur, allowing the user to save time and resources to prevent the failure.

Benefit s

- Reduced number of outages
- Reduced outage time
- Reduced O&M cost

- Increased life-lengths of components
- Increased grid stability
- Eased implementation of renewable energy sources

Knowledge Transfer/Exchange

Upcoming training sessions in:

Angola, March

Congo, April

Sweden, August

Training session at KGTC
October, 2022