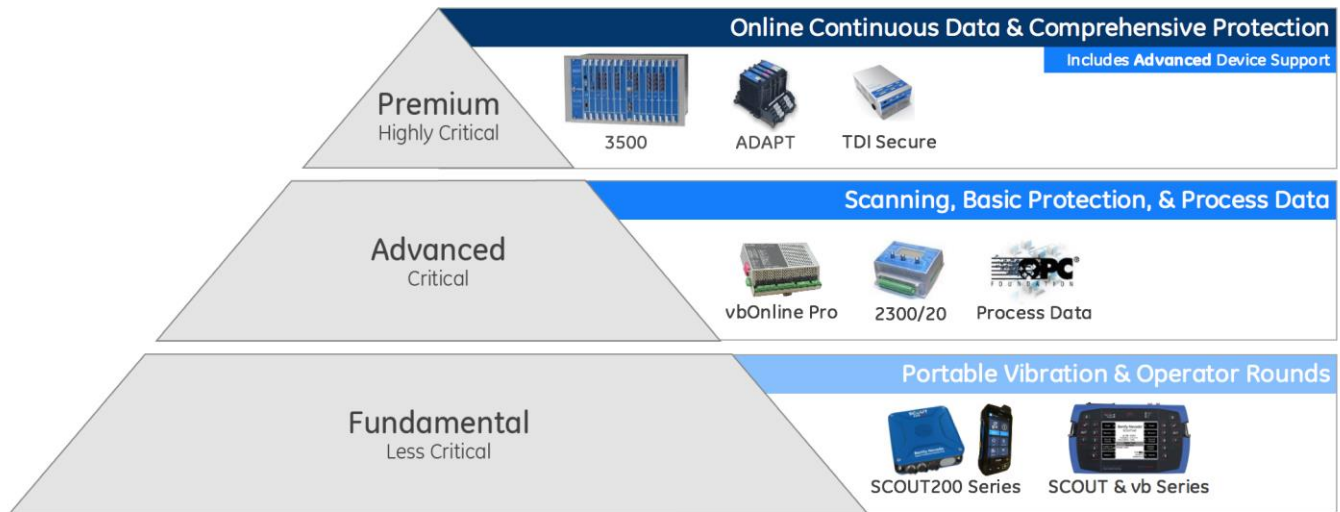# System 1*
Machinery Condition Monitoring

Industrial Packages

System 1* represents GE Bently Nevada's flagship condition monitoring (CM) solution with seamless integration to our industry leading line of online continuous, scanning, basic protection, & portable devices. **System 1 Industrial Packages** are designed to enable complete plant-wide monitoring for your facility. The software is licensed based on the size of your facility, which provides complete flexibility to connect to the BN field devices of your choice without considering a-la-carte import licensing. Build out your plant-wide CM strategy with software fully licensed and ready to connect to your equipment.

Online Continuous Data & Comprehensive Protection
Includes **Advanced** Device Support

Premium
Highly Critical — 3500, ADAPT, TDI Secure

Scanning, Basic Protection, & Process Data

Advanced
Critical — vbOnline Pro, 2300/20, Process Data

Portable Vibration & Operator Rounds

Fundamental
Less Critical — SCOUT200 Series, SCOUT & vb Series

System 1 Packages

Keys to a Successful CM Program
Bently Nevada Solution Scope

People + Process + Technology

Establishing and maintaining a best-in-class CM program at your facility requires equipment knowledge with an understanding of failure modes and operational criticality combined with a cross functional team, process rigor, and enabling technology. Bently Nevada offers flexible solutions ranging from product delivery with deployment services to complete solution coverage through a supporting service agreement where we partner with your facility to manage the CM program.
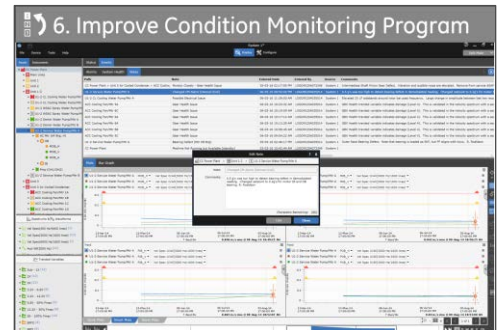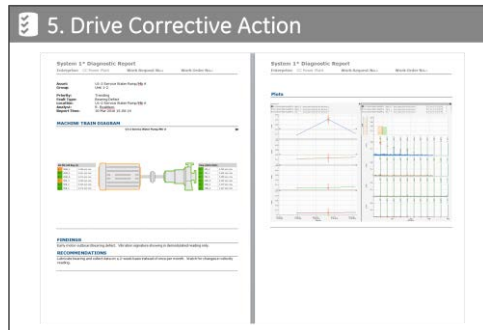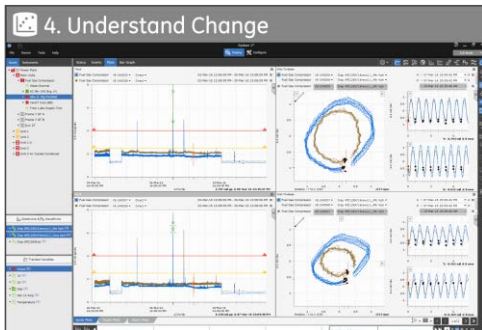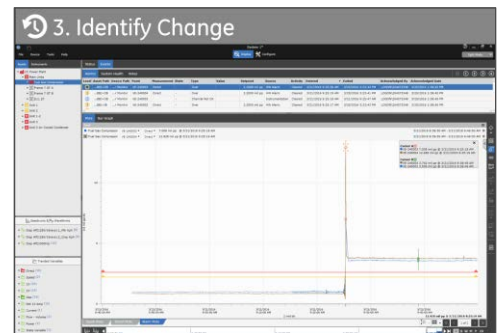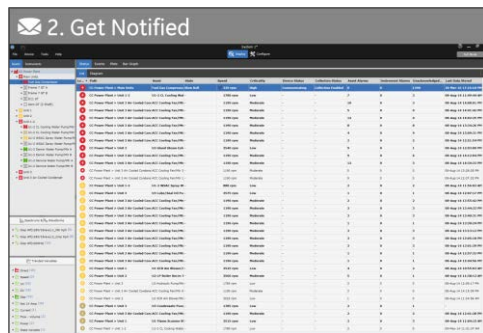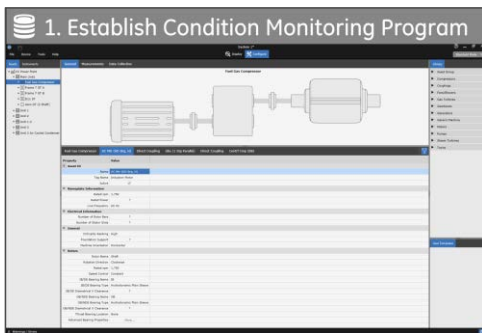
The Evolution of System 1*

System 1 represents the core of Bently Nevada's CM solution and the **latest version** represents a refreshed approach in our mission to provide users with a single ecosystem for plant-wide machinery management.

Get Connected to Bently Nevada's best-in-class line of Online and Scanning devices, and once connected, **Get Insights** from this data to monitor the health of your equipment over time.

- Leverage CM alarms to be notified when a change in equipment operation has been detected
- Utilize long-term trended data to determine whether change warrants further investigation
- Deep dive to identify root cause with a complete dataset and best-in-class advanced plotting
- Share supporting information with team members when necessary
- Adjust CM alarms and add observational notes to improve your CM program over time

User Experience

Modern consumer software applications have pushed the envelope when it comes to user experience; we believe the same expectations apply for industrial CM applications

- ✓ Modern and Intuitive Interface
- ✓ Continuous User Involvement
- ✓ User Driven CM and Diagnostic Workflows

Capability

System 1* provides scale when it comes to database management, diagnostics, and work prioritization

- ✓ High resolution trend, alarm, & startup/shutdown data
- ✓ Short-term black box flight recorder for trend data
- ✓ Anti-Friction & Hydrodynamic Bearing Diagnostics
- ✓ Diagnostic Reporting

Accessibility

Successful CM programs require collaboration between departments and controlled access to the tools

- ✓ Data replication to view data on Business Network
- ✓ Client/Server Deployment Model (2 Ports)
- ✓ 2X/Citrix® Enabled
- ✓ System 1 Fleet Connectivity

Embedded Expertise

System 1 differentiates itself by providing equipment-focused solutions and best practice configuration & diagnostics

- ✓ Equipment State-Based Data Collection & Alarming
- ✓ Equipment Models drive best practice configuration
  Technical Associates & ISO configuration wizards

Package Ordering

General Industrial Package

3071/70 System 1 for Industrials
3071/70-AA-BB-CC

AA: Industry Type

01 – Pulp and Paper
02 – Air Separation
03 – Sugar Production
04 – Wastewater
05 – Drilling Rigs
06 – Steel Production
07 – Food & Beverage
08 – Manufacturing
09 - Pharmaceuticals

BB: Package Size

01 – Small Database
02 – Medium Database
03 – Large Database
04 – Extra Large Database

CC: Quantity of Server Licenses

– **Numeric Entry** [1→25]

Package	Online Continuous CM	Scanning & Process CM	Portable CM
Premium+	✓	✓	✓
Premium	✓	✓	
Advanced+		✓	✓
Advanced		✓	
Fundamental			✓

Industrial Packages Include

- ✓ Premium+ license(s)
- ✓ Unrestricted device import (Limits based on server)
- ✓ Unrestricted process data import (OPC DA)
- ✓ Unrestricted process data export (OPC DA)
- ✓ Unlimited Display Clients

Industrial Packages Do Not Include

- ✓ Database Replication

Power Generation Perpetual Package

3071/80 System 1 for Power Generation Perpetual
3071/80-AA-BB-CC

AA: Package Option

01 – New Order
02 – Expansion Order

BB: Plant Output (MW)

– **Numeric Entry** [1-30,000 MW]

CC: Quantity of Server Licenses

– **Numeric Entry** [1→25]

📶 Get Connected

3500 Series

3500 Monitoring System – Full Rack

/22, /25, /32, /33, /40, /42, /44, /45, /50, /60, /61, /64, /65

Standard & M series monitors

- ✓ 14 monitor slots with simultaneous sampling
- ✓ 1 sec trend / 10 min waveform data capture
- ✓ High resolution alarm data capture
- ✓ High resolution startup/shutdown data capture

3500 Monitoring System – Mini Rack

Same monitors as Full Rack

- ✓ 7 monitor slots
- ✓ Same capabilities as Full Rack

TDI Secure

 /42E /45E /PV

All functionality of 3500 TDI (/22):

- ✓ 24 simultaneous Vibration + 24 Process points + 4 Tachs
- ✓ Connection to non-Bently vibration systems
- ✓ Cyber security solution for separating protection and CM

Distributed Series

ADAPT Monitoring System

/40, /44, /46

- ✓ 12 simultaneous monitoring points + 2 Tachs
- ✓ 1 sec trend / 10 min waveform data capture

Condition Monitoring & Basic Protection

vbOnline Pro Monitoring System

- ✓ 12 simultaneous monitoring points + 2 tachs
- ✓ 30 sec trend / 10 min waveform data capture
- ✓ Simultaneous Alarm Snapshot (1 per 30 sec)

2300 Monitoring System

- ✓ 2 simultaneous monitoring points + 1 tach
- ✓ 1 sec trend / 10 min waveform data capture

Process Data

OPC DA Import

- ✓ Improve CM capability with process correlation
- ✓ License includes over 1000 tags for a System 1 Server
- ✓ 1 sec trend data capture

OPC DA Export

- ✓ License includes up to 10000 tags for a System 1 Server
- ✓ 1 sec data export rate

Portables

Analyzers & Data Collectors

- ✓ 2 & 4 Channel Models
- ✓ Hazardous Area Approvals

Database Replication

3071/16-AA-BB-CC System 1 Replication

AA: License Value of Tx Server(s)*25% (# - 1→n)

BB: Quantity of Rx Server Licenses (# – 1→n)

CC: Physical Installation Media

    01 – **No (Default)**

    02 – **Yes**

(AA) What is a Tx Server?

- ✓ Conduit to move data to the business network
- ✓ Contains config info and connection to devices

(BB) What is an Rx Server?

- ✓ Database that mirrors the S1 server on the Plant Network
- ✓ Supports 80-90% of daily CM tasks

Specifications

Refer to "System 1 Evolution Datasheet 108M5214" for detailed specifications & product capabilities