

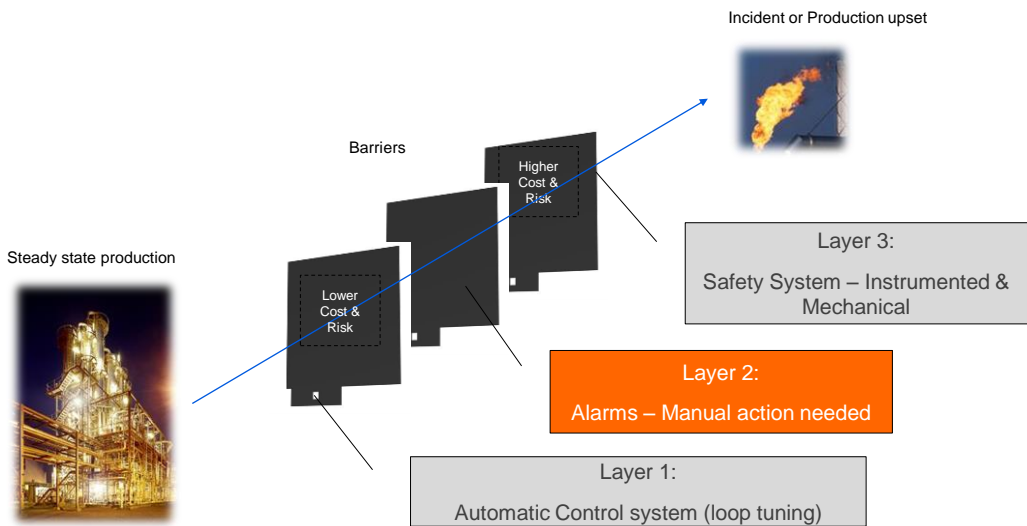
© ABB  
May 2, 2016

Slide 1

Power and productivity  
for a better world™ **ABB**

## Product introduction

### Layers of Protection



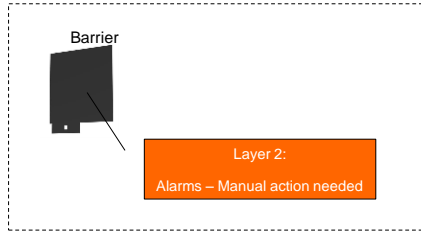
© ABB  
May 2, 2016

Slide 2

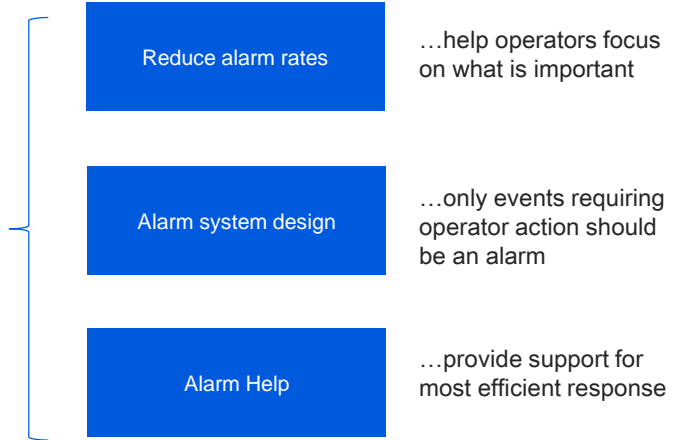
**ABB**

# Alarm Lifecycle Management

## What is it about



Enabling efficient operator response to production disturbances



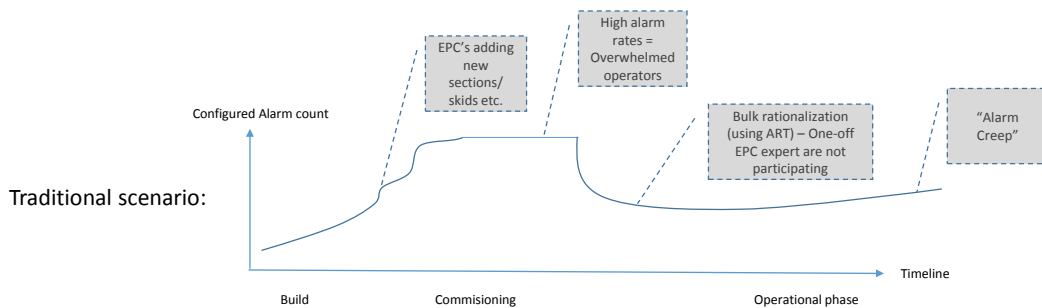
© ABB  
May 2, 2016

Slide 3



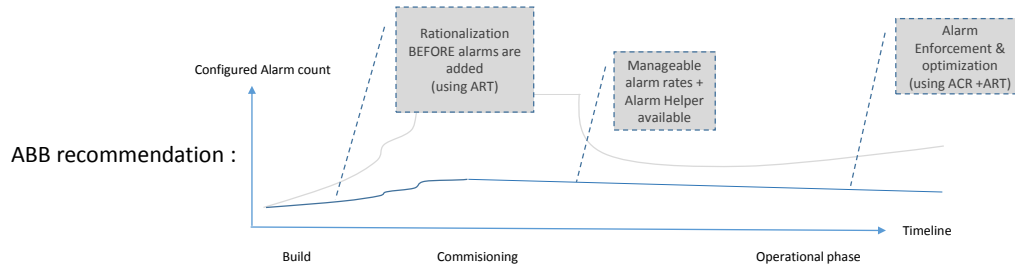
# Project / Site lifecycle

Two approaches



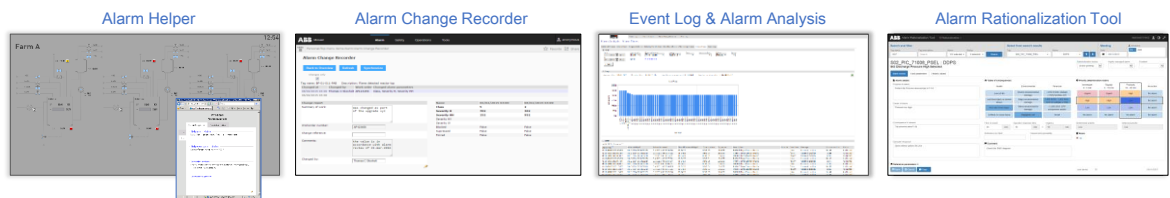
# Project / Site lifecycle

Two approaches



Power and productivity for a better world™ **ABB**

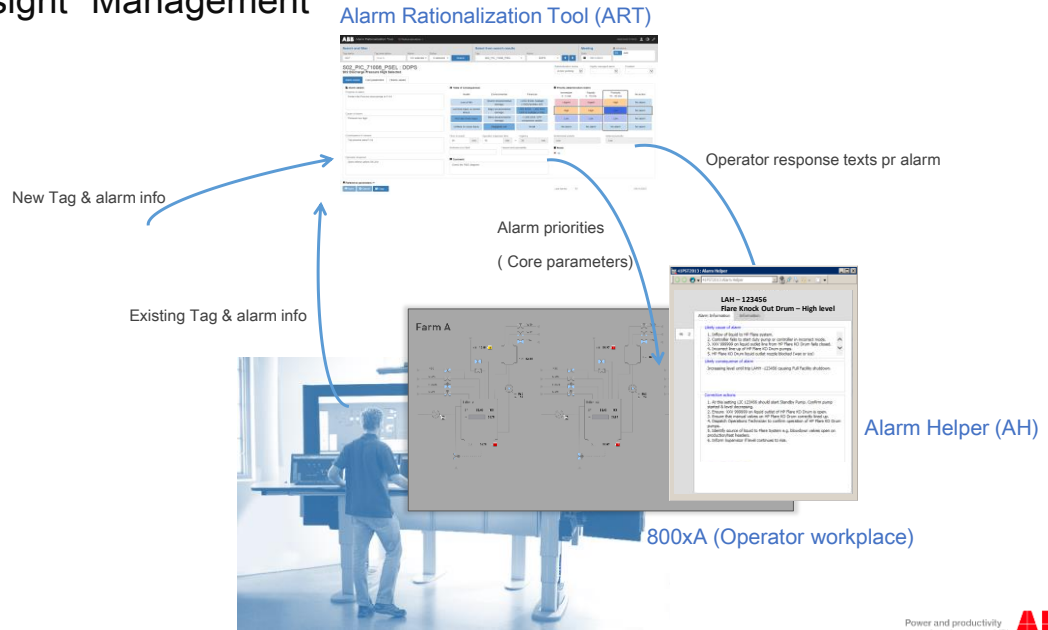
## AlarmInsight® SW Portfolio



Enable efficient operator response to production disturbances

Power and productivity for a better world™ **ABB**

# AlarmInsight® Management



Power and productivity for a better world™ **ABB**

## Evolution & Experience - Alarm Rationalization

Spreadsheets not enough

Redevelop based on EEMUA191 revision 3

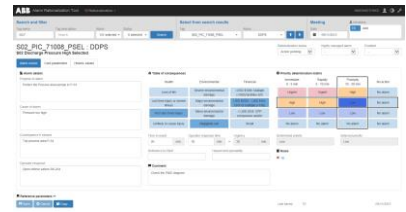
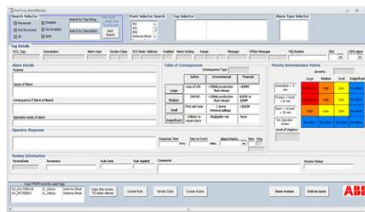
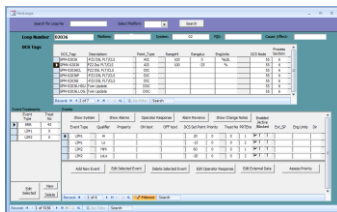
Integrated into AlarmInsight® (Alarm Helper)

1990's

2003

2012

2015



### 2 options:

- a. Standalone (installed on a PC). Transfer Excel files across
- b. Installed on a server onsite - integrated with Alarm Helper DB. DCS attributes are still transferred via Excel files.

# ABB Recommendation

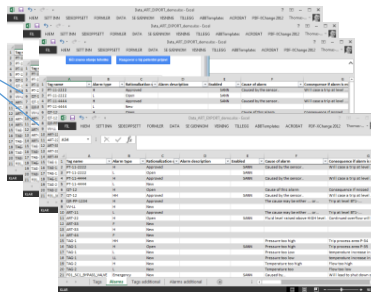
## Build phase

1. Introduce ART early



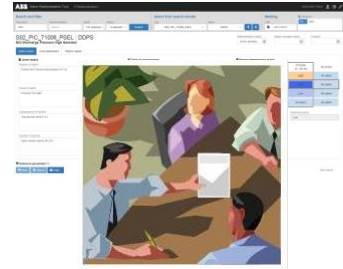
Alarm Rationalization Tool (ART)

2. Collect Alarms continuously from all EPCs



Excel on ART import format

3. Review & rationalize all alarms w/ EPC's using ART

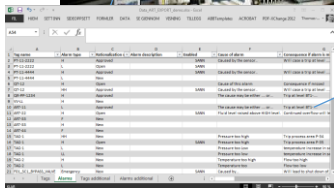


Power and productivity for a better world™ **ABB**

# ABB Recommendation

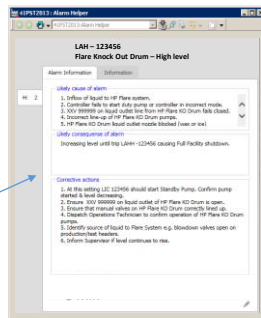
## Commissioning phase

1. Bulk Upload Rationalized Alarm into DCS (from ART via Excel)



Excel file from ART

2. Upload Operator response texts into Alarm Helper (from ART directly or Excel)



Alarm Helper

3. Commission the plant with (1) manageable alarm rates & (2) alarm help available to operators directly from the DCS



DCS

Power and productivity for a better world™ **ABB**

# ABB Recommendation

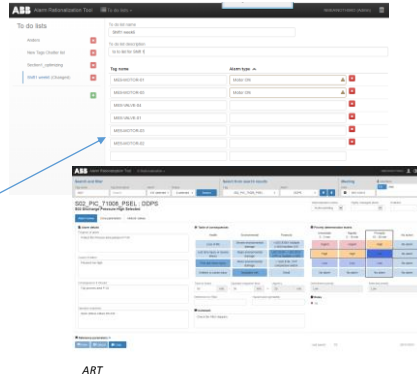
## Operational phase I - bad actors

1. Monitor alarm rates, pick top 10 alarms. Analyse



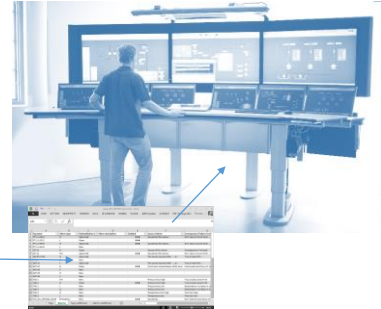
Alarm KPI reports & Alarm Analysis

2. Enter top 10 alarms in "to do" lists into ART and have the last shift review the alarms.



ART

3. Update Alarm Helper texts & DCS with optimized attributed/ priorities



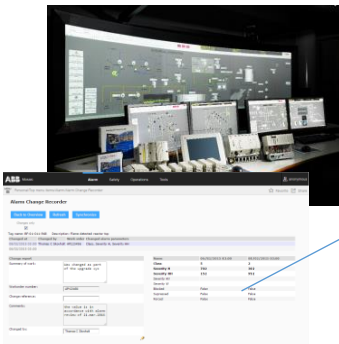
ART Excel file

Power and productivity for a better world™ **ABB**

# ABB Recommendation

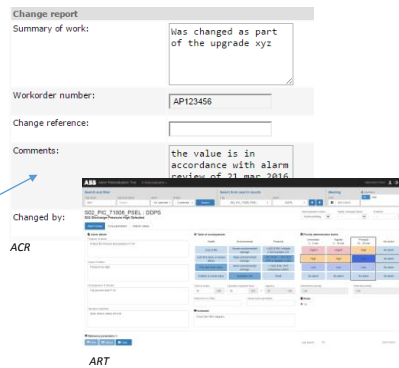
## Operational phase 2 - Enforcement

1. Monitor Alarm Attribute changes in the DCS (using ACR)



Alarm Change Recorder (ACR)

2. Approve changes in ACR and compare with design values in ART



ART

3. Look for alarms not present in ART, or with missing Alarm Helper texts. Add to "To-do" list in ART.



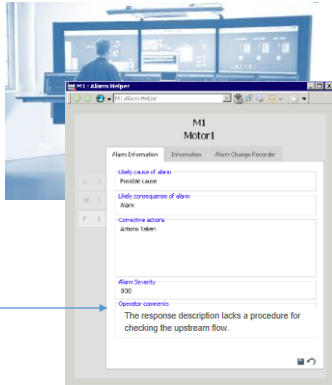
ART Excel file

Power and productivity for a better world™ **ABB**

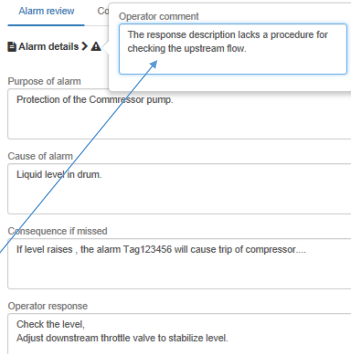
# ABB Recommendation

## Operational phase 3 - Operator involvement

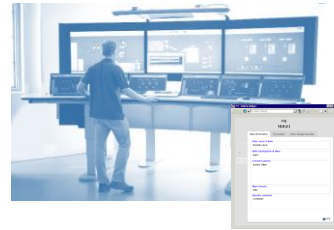
1. Operators add Comments in Alarm Helper



2. Review operator comments in ART (example; search for all alarms with operator comments in ART)



3. Upload optimized Alarm helper text. (example: data is transferred via Excel file, or directly by "approving" new for a server/ on-site installation)

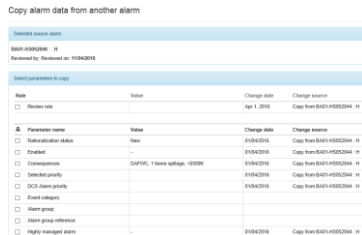


Power and productivity for a better world™ **ABB**

# ABB Recommendation

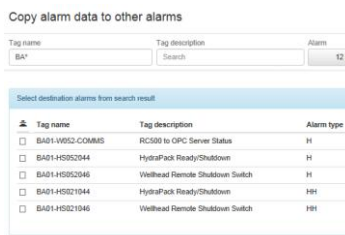
## ART - Management of Change - COPY

1. "COPY FROM": a) Copy a selection of attributes from an other alarm.



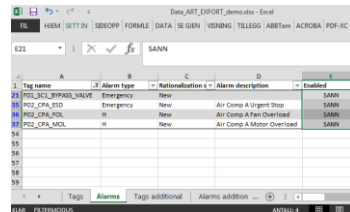
ART

2. "COPY TO": b) Copy a selection of attributes to several other alarms



ART

3. Bulk update of many alarms in Excel (i.e. export alarms, make changes, then import back into ART again)



ART Excel file

Power and productivity for a better world™ **ABB**

# ABB Recommendation

## ART – Management of Change - RULES

1. Similar Alarms can be assigned to a “Rule” in ART. i.e. Lock all the review attributes like priority, operator response etc.  
(example: all F&G Detected alarms have same priority and operational response)

**Create new rule**

Name

Comment

Cause of alarm  
 Consequence if missed  
 Operator response  
 Operator response time  
 Time to event  
 Review comment

2. Assign an alarm to an existing “Rule” to quickly Auto complete attributes & “lock” the alarm to the “rule”.  
(example: Manually in UI, or via Copy of bulk update in Excel)

**Rules**

Select from existing rules | [Create new rule](#)

Rule name:

Rule date: 26/01/2016

Rule comments: all PT H alarm in section 1 should follow this config

3. Update a “Rule” and auto update all other assigned alarms.  
(Example: update an alarm assigned to a rule and press save)

**Change in rule parameter**

You have changed a rule parameter. Please make a choice.



# ABB Recommendation

## ART – Management of Change – Process

1. Audit Trail – all attribute and status changes, all Bulk operations etc

**ABB Alarm Configuration Tool - Overview**

Audit trail

Tag name	Tag description	Alarm type	Parameter	Source
MES-VALVE-05	Demol_tag	Alarm On	Time to event	
MES-VALVE-05	Demol_tag	Alarm On	Operator response time	
MES-VALVE-05	Demol_tag	Alarm On	Operator response	
MES-VALVE-05	Demol_tag	Alarm On	Consequence if missed	
MES-VALVE-05	Demol_tag	Alarm On	Cause of alarm	
MES-VALVE-05	Demol_tag	Alarm On	Priority of alarm	
MES-VALVE-05	Demol_tag	Alarm On	Highly managed alarm	
MES-VALVE-05	Demol_tag	Alarm On	DCS alarm priority	
MES-VALVE-05	Demol_tag	Alarm On	Review date	
MES-VALVE-05	Demol_tag	Alarm On	Selected priority	
MES-VALVE-05	Demol_tag	Alarm On	Consequences	
MES-VALVE-05	Demol_tag	Alarm On	Notification status	
8401-0021-COMB	840102 to OPC Server Status	PH	Operational comment	

2. Status Field (“New”, “Outstanding”, “Approved” etc.) used to manage the work process. Configurable.

Default	Approved	Name	Order	Edit
<input type="radio"/>	<input type="radio"/>	New	1	<input type="button" value="up"/> <input type="button" value="down"/> <input type="button" value="delete"/> <input type="button" value="edit"/>
<input type="radio"/>	<input type="radio"/>	Open	2	<input type="button" value="up"/> <input type="button" value="down"/> <input type="button" value="delete"/> <input type="button" value="edit"/>
<input type="radio"/>	<input type="radio"/>	Actions	3	<input type="button" value="up"/> <input type="button" value="down"/> <input type="button" value="delete"/> <input type="button" value="edit"/>
<input type="radio"/>	<input checked="" type="radio"/>	Approved	4	<input type="button" value="up"/> <input type="button" value="down"/> <input type="button" value="delete"/> <input type="button" value="edit"/>

3. “Snapshot save”, Use this to save current state. Ability to restore to a previous “Snapshot Save”

Date time	Description	Restore
11/04/2016 12:39	test save	<input type="button" value="Restore"/>
11/04/2016 12:13	test	<input type="button" value="Restore"/>
16/03/2016 16:13	Test	<input type="button" value="Restore"/>
15/03/2016 18:06	Before IMPORT additional	<input type="button" value="Restore"/>
26/02/2016 10:22	test snapshot	<input type="button" value="Restore"/>
26/01/2016 18:02	quite a bit of data	<input type="button" value="Restore"/>

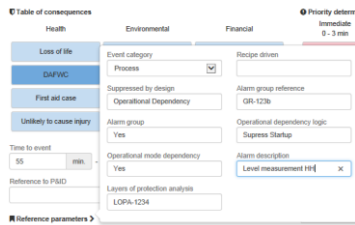




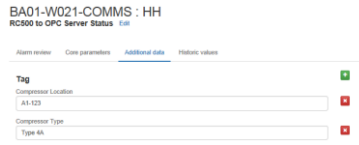
# ABB Recommendation

ART - Advanced Rationalization & Optimization

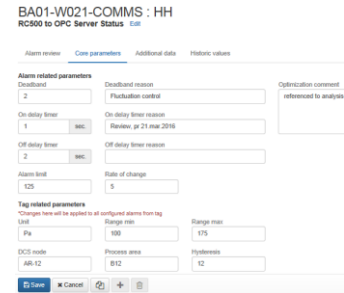
1. "Groups", keep record of alarms to be Grouped, Suppressed, Operational Dependency Logic etc.



2. Additional fields: Add "any" additional field & value required to alarm or tag.



3. "Core parameters", keep master record of Alarm parameters.



Power and productivity for a better world™ **ABB**

## Alarm Lifecycle Management Software

AlarmInsight (SW):

- Long term data storage
- Alarm KPI's
- Alarm Analysis
- Alarm Change Rec



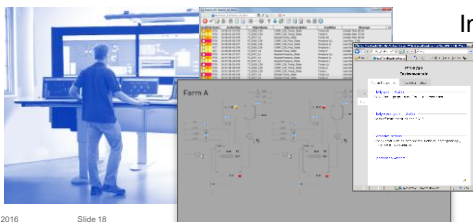
4. Sustain & Improve

1. Risk Assess

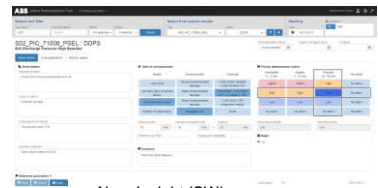
Continuous optimization

3. Implement

2. Design



800xA Alarm Lists & Alarm Configuration (DCS)  
AlarmInsight Alarm Helper (SW)

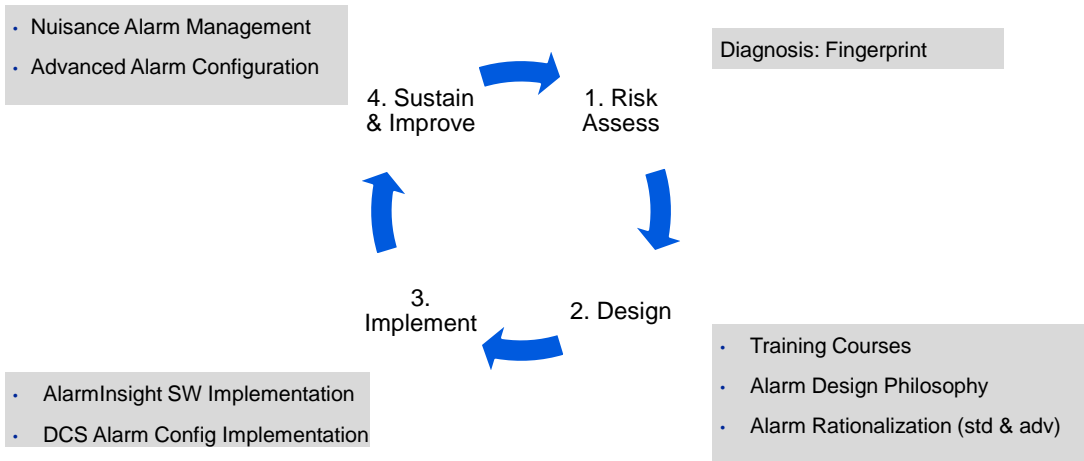


AlarmInsight (SW):

- Alarm Rationalization Tool (ART)
- Provides input to 800xA Config & Alarm Helper

**ABB**

## Alarm Lifecycle Management Services



**ABB**

© ABB  
May 2, 2016

Slide 19

## Alarm Lifecycle Management Value summary



- Reduces risk of catastrophe due to ignored alarms and overwhelmed operators
- Enables more informed and effective responses to process disturbances
- Improve production and equipment uptime
- Helps ensure compliance with government standards and industry regulations

**ABB**

© ABB  
May 2, 2016

Slide 20

## Alarm Lifecycle Management Value to users



1. ABB Alarm Lifecycle Management helps your operators prioritize and address production disturbances efficiently.
    - a. Immediate and correct actions prevent equipment downtime and production shutdowns.
    - b. It is a cost efficiency tool enabling fewer operators to run the production process with less upsets,
  2. ...as well as ensuring compliance with government regulations, HSE and company guidelines.
- No matter the status of your alarm lifecycle strategy, ABB can provide you systems or services to help ensure alarm rates are under control and operations are safe and cost efficient.

© ABB  
May 2, 2016

Slide 21

**ABB**

Every digital automation control system needs an  
alarm management solution

... and the relevant services to ensure adoption

© ABB  
May 2, 2016

Slide 22

**ABB**

## Alarm Lifecycle Management “Customer quotes”

Calgary, Canada 2015:

*«AlarmInsight  
AlarmAnalysis is  
far beyond competitors  
capabilities»*

Rashid Petroleum Company, Egypt 2007:

*«This is what success look like,  
only 6 trips in 2008 compared to 25 in 2007.  
This has significant business value.»*

ABB Alarm Management Services

Calgary, Canada 2015:

*«This is what we are  
looking for»*

AlarmInsight SW

Australia 2016:

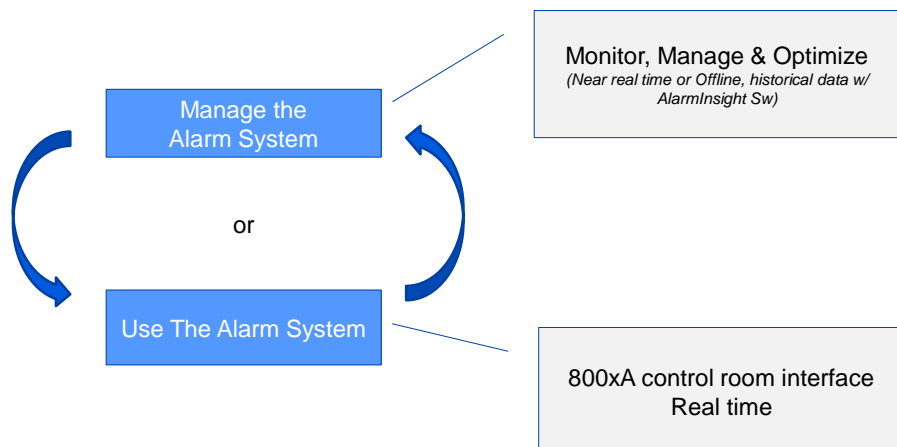
*«We recommend the use of a database tool like ABB's  
Alarm Rationalization Tool (ART) and services»*

**ABB**

© ABB  
May 2, 2016

Slide 23

## 800xA & AlarmInsight Offering

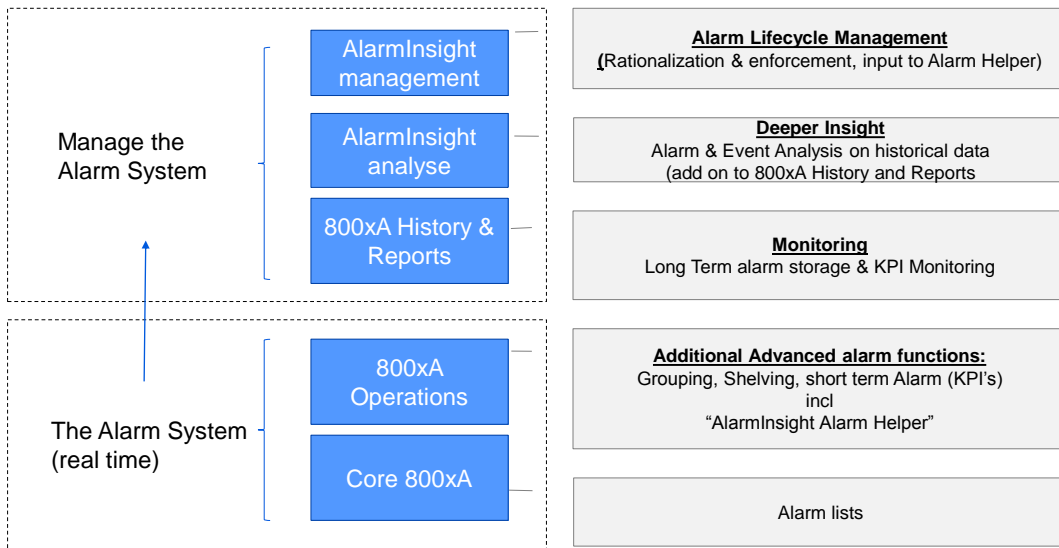


**ABB**

© ABB  
May 2, 2016

Slide 24

## 800xA & AlarmInsight Offering 1



© ABB  
May 2, 2016

Slide 25

**ABB**

### Contact us

- Sales Support: [ogp.products@no.abb.com](mailto:ogp.products@no.abb.com)
- Technical Support: [contact.center@no.abb.com](mailto:contact.center@no.abb.com)
- Product Manager - Alarm Lifecycle Management: [Thomas-christian.skovholt@no.abb.com](mailto:Thomas-christian.skovholt@no.abb.com)

© ABB  
May 2, 2016

Slide 26

**ABB**

Power and productivity  
for a better world™

