Water Environment
Association of Texas

Change management: What is it and where is it going

What is asset/change management?

Asset Management according to [Wikipedia](#)

…Alternative views of asset management in the engineering environment are: the practice of managing assets to achieve the greatest return (particularly useful for productive assets such as plant and equipment), and the process of monitoring and maintaining facilities systems, with the objective of providing the best possible service to users in all dimensions (appropriate for [public infrastructure](#) assets).

From Google Dictionary
change man·age·ment
noun
noun: **change management**
1.the management of change and development within a business or similar organization.
2.the controlled identification and implementation of required changes within a computer system.

Automation Assets

Water & Waste water facilities have
100s or 1000s
OF AUTOMATION ASSETS
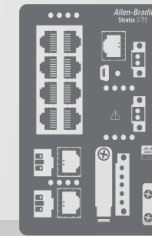PHYSICAL, PROGRAMMED AND CONFIGURED COMPONENTS
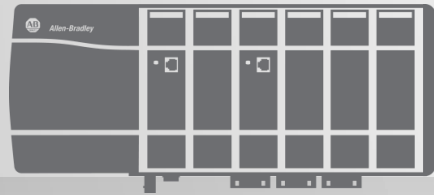
Automation Controller Programs

Human Machine Interface Configurations

Drives, Motion, Robot Configurations

Ethernet Switch Configurations

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Common Challenges & Potential Risks

LOST CONFIGURATION & DEVICE FAILURE

PRODUCTION ENVIRONMENT CHANGE

UNAUTHORIZED & UNDOCUMENTED **ACCESS**

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Good security follows a holistic Approach

A secure application depends on multiple layers of protection and industrial security must be implemented as a system.
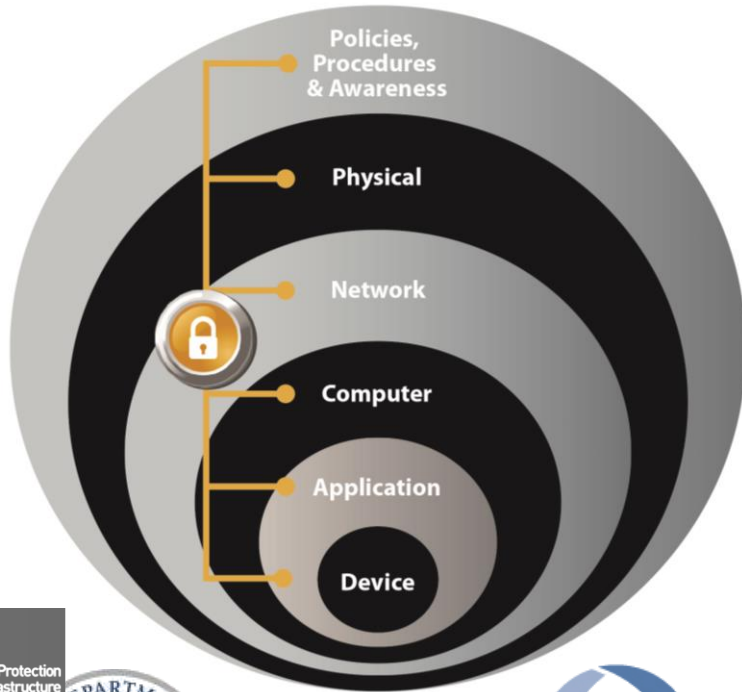
Consider:

CIA Triad of Information Security
     Confidentiality
     Availability
     Integrity

Asset Management/Change Management Overview

ARCHIVE & DISASTER RECOVERY

- Centrally manage versions of programs, files and folders
- Automate backup of automation assets
- Generate detailed difference detection reports of assets

AUDIT

- Track user actions – Who did What, When, Where?
- Produce ad hoc reports associating users, assets and programs to paint a full picture
- Automate the reporting process via email

SECURITY

- Restrict viewing of artifacts
- Helps prevent unauthorized access to make changes
- Helps prevent unauthorized users from creating new versions
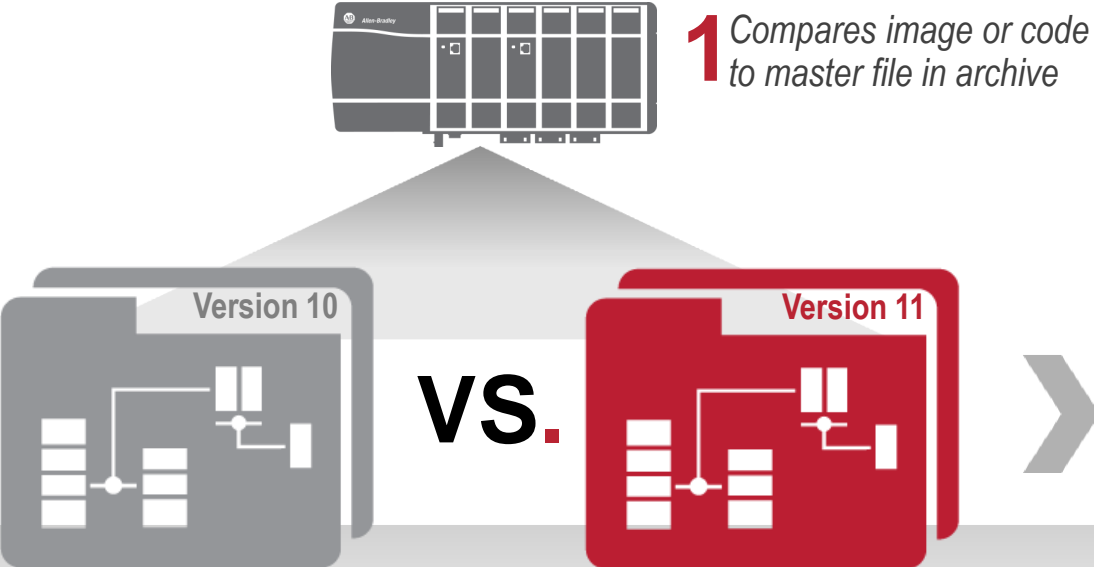
EXTENSIBILITY

- Ability to extend and add support for third-party devices
- Web client available to track assets from a mobile device

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Archive: Version Control / Source Control

MASTER FILE *Automatic version control maintains proper file management*

Backup/Recovery

1 Compares image or code to master file in archive

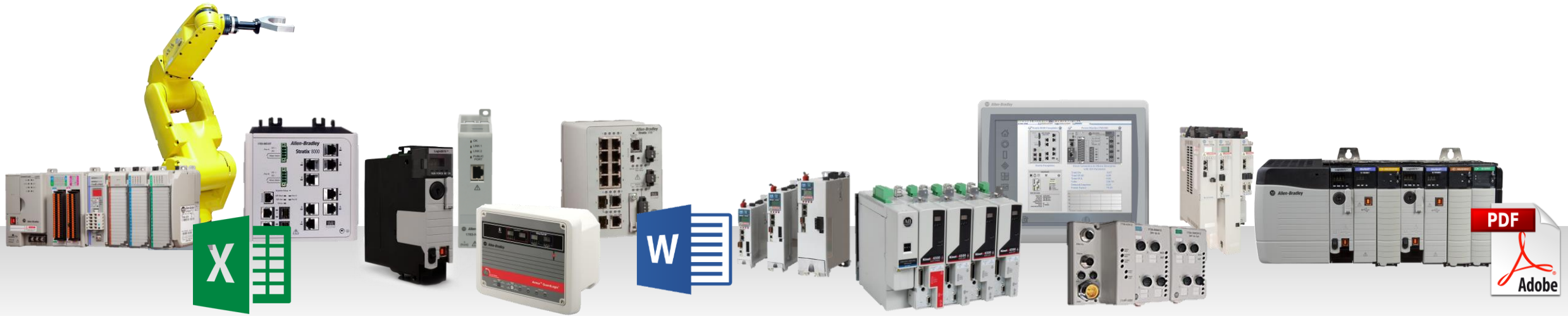**2** Detects differences and generates an event that can be reported on.

3 Email containing difference report sent to users

Version 10

VS.

Version 11

View Today's Studio 5000 Logix Designer Changes
Searching Audits

Total number of record found		201
Output limited to a maximum number of records		100

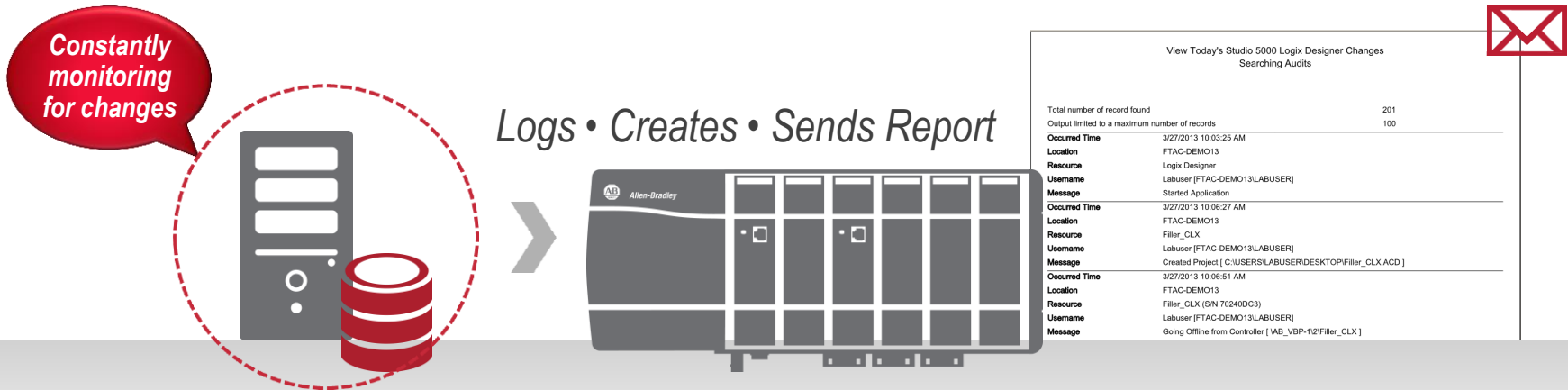|	
Occurred Time	3/27/2013 10:03:25 AM
Location	FTAC-DEMO13
Resource	Logix Designer
Username	Labuser [FTAC-DEMO13\LABUSER]
Message	Started Application
Occurred Time	3/27/2013 10:06:27 AM
Location	FTAC-DEMO13
Resource	Filler_CLX
Username	Labuser [FTAC-DEMO13\LABUSER]
Message	Created Project [C:\USERS\LABUSER\DESKTOP\Filler_CLX.ACD]
Occurred Time	3/27/2013 10:06:51 AM
Location	FTAC-DEMO13
Resource	Filler_CLX (S/N 70240DC3)
Username	Labuser [FTAC-DEMO13\LABUSER]
Message	Going Offline from Controller [\AB_VBP-1\2\Filler_CLX]

Backup/Recovery can be configured to create a new archive version
WHEN A DIFFERENCE IS DETECTED

Backup/Recovery Options

Controllers, Windows Files

Tamper Detection

Searching and Reporting

Program Modification By Shift Or Line

Archive History For Modifications

Search Audit Logs

View Today's Studio 5000 Logix Designer Changes
Searching Audits

Total number of record found		201
Output limited to a maximum number of records		100
Occurred Time	3/27/2013 10:03:25 AM	
Location	FTAC-DEMO13	
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Resource	Filler_CLX (S/N 70240DC3)	
Username	Labuser [FTAC-DEMO13\LABUSER]	
Message	Going Offline from Controller [\AB_VBP-1\2\Filler_CLX]	

CREATE
Ad-hoc or Scheduled Searches

VISUALIZE
Reports

Track User Actions: Audits / Events

	WHEN			WHERE		WHO	WHY
Logged Time	**Occurred Time**	**Source**	**Location**	**Resource**	**Username**		**Message**
4/2/2015 1:56.13	4/2/2015 1:56.9	Logix Designer	FTAC-DEMO15	Filler_CLX(S/N 7	FTAC-DEMO15\L		Changed Data Value of Tag
4/2/2015 1:55.2	4/2/2015 1:55:15	Logix Designer	FTAC-DEMO15	Filler_CLX(S/N	FTAC-DEMO15\		Going Offline from Controller
4/2/2015 1:55.0	4/2/2015 1:54:59	Logix Designer	FTAC-DEMO15	Logix Designer	FTAC-DEMO15\		Started Application
4/2/2015 1:54.3	4/2/2015 1:54:31	FactoryTalk® AssetC..	FTAC-DEMO15	Client	FTAC-DEMO15\		Checked out file

Log Time Details

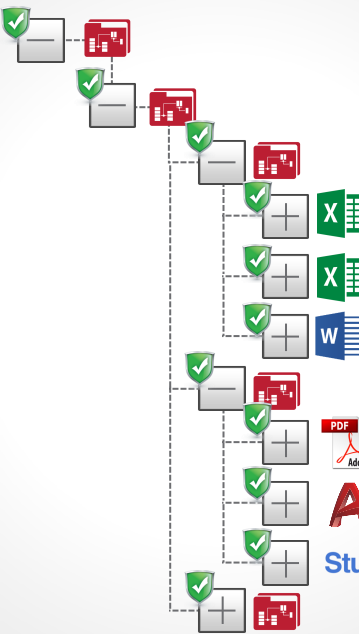|			
Logged at:	4/2/2015 1:56.13 PM	**Location:**	FTAC-DEMO15
Occurred at:	4/2/2015 1:56.09 PM	**Username:**	FTAC-DEMO15\LABUSER
Source:	Logix Designer	**Resource:**	Filler_CLX (S/N 70243FF1)
Attachments:	0		

WHAT

Rockwell Automation

User Access and Authentication

Lesson's learned

100s or **1000s**

OF AUTOMATION ASSETS
PHYSICAL, PROGRAMMED AND
CONFIGURED COMPONENTS

Policies, Procedures & Awareness
Physical
Network
Computer
Application
Device
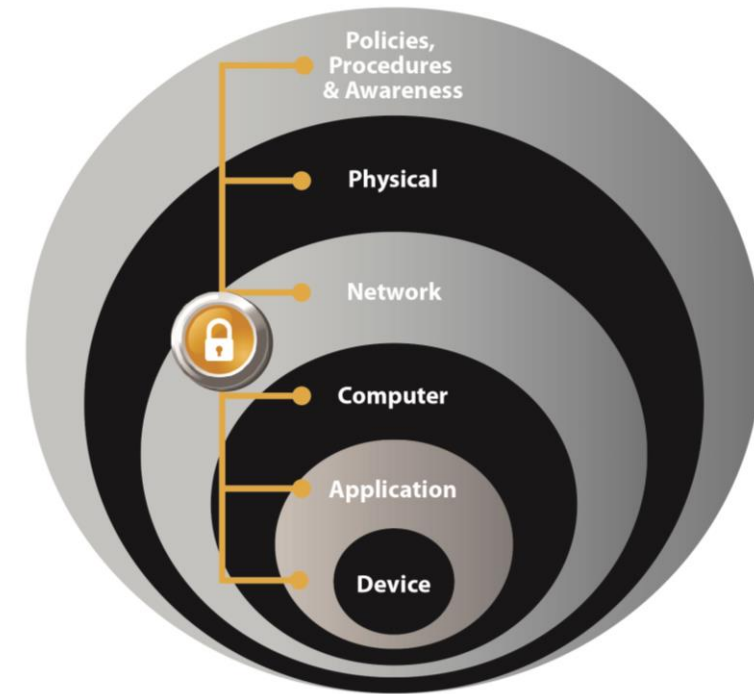
Remember

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  Availability
  Integrity