



ActionPLAN Dashboard and AMAP User Guide

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ActionPLAN User Guide

February 2019

Overview: What is ActionPLAN?

The ActionPLAN technology consists of several different components that collect and analyze data from the Plant Floor. This data is presented on the ActionPLAN Dashboard, in the form of a top 10 list of actionable items to address in order to improve efficiency.

ActionPLAN Components

ActionPLAN Dashboard: The ActionPLAN Dashboard is a secure web interface that presents the plant managers with the single input in their plant that is costing them the most money, with its exact location, its exact root cause, and its exact cost. Customers access this interface to view their dashboard and standardized reports from any browser-based hardware platform. To log in to the ActionPLAN Dashboard a certificate, username, and password are required.

ActionPLAN Dashboard PC: A miniature fan-less stick PC used to display the ActionPLAN Secure Web Interface on the Plant Floor Display. The Dashboard PC can be connected via HDMI ports or Display Port if connecting directly from the DCD.

ActionPLAN Data Collection Device (DCD): A hardened fan-less PC used for the collection and secure transmission of data from the Plant Floor. The DCD resides in the customer's plant and is programmed to communicate, using industry standard OPC/UA, with PLCs and other controlling devices. It is internally firewalled from the plant's network. The DCD can also function as an ActionPLAN Dashboard PC.

MobiNET: Route1's universal identity management system and service delivery platform. The centralized infrastructure is configured to securely transport process data from the industrial hardened DCD, and transform and aggregate the data into an Enterprise-grade database.

Route1 CryptoPath: Used to provide secure communication between MobiNET, the Plant Floor, the servers, and the ActionPLAN Dashboard Display. The Plant does not need to open any inbound firewall ports – all data is encrypted and transmitted using Route1's CryptoPath high assurance communication service.

MobiNET Agent Software: Route1 Software deployed on the DCD to allow for secure transmission of data.

Administration Management for ActionPLAN: Administration Management for ActionPLAN (AMAP) is an administrative module where organizations, users, devices and reports can be managed.

ActionPLAN Efficiency: ActionPLAN Efficiency is a report which displays the impact of any outages during the current shift. The lines and cells that comprise them are color-coded: Green (when Target Efficiency Quota is being surpassed), Yellow (when Target Efficiency Quota is being met) or Red (when Target Efficiency Quota is not being met).

ActionPLAN HR: ActionPLAN HR identifies the true, exact sources of lost production and effect on profits. Prolonged instances (Machine) and short instances (Process) of lost production can both be drilled down to determine maintenance response times, repair times, repair effectiveness, staff performance, etc...)

Setting up your ActionPLAN Data Collection Device (DCD)

Hardware Installation

1. Ensure all the contents of the package are present and that nothing was damaged or misplaced during shipping.
 - a. Fan-less DCD Chassis
 - b. HDMI Display Port Adapter
 - c. Power Adapter
 - d. Wall Mounting Brackets
 - e. Port & Dust Blocking Kit
2. In order for the DCD to communicate with desired PLCs, the IP address, subnet, and gateway of each PLC is required.
3. This information must be provided to Route1 or HTM Sensors prior to set up, for the DCD to function properly.
4. The DCD should have network access to the same network as the PLCs it needs to communicate with.
5. An Engineer will then configure the DCD to access that PLC.
6. The DCD can also display the **ActionPLAN Dashboard**, by being connected directly to the **Plant Floor Display**.
7. The DCD can interface with the Plant Floor display in one of two ways:
 - a. Option 1: Plug the DCD directly into the **Plant Floor Display** using a Display Port cable.
 - b. Option 2: Plug the DCD directly into the **Plant Floor Display** using the HDMI adapter.
8. Once the DCD has been connected to the Plant Floor Display. Connect the power adapter, keyboard, mouse, Ethernet cable, and press the power button.
9. Once the DCD has booted the browser will launch automatically to the **ActionPLAN Dashboard**.

DCD Technical Specifications

Wireless: Intel 8260 M.2 Module (2230) with Wi-Fi AC, Bluetooth 4.0

Antenna: Wi-Fi Dual Band Magnetic Antenna, 195mm (7.68")

Power: Power Adapter DC 19 V, 65 W Level 5 Right Angle DC Plug

Ports: USB 3.0 (4), Gb LAN (1), Parallel (1), Audio Output (1), Mini-Display (2)

Accessories: Mini DisplayPort to HDMI Active Adapter

Accessories: Wall Mounting Brackets

Accessories: Computer Port & Dust Blocking Kit

Setting up your ActionPLAN Dashboard PC

1. Ensure all the contents of the package are present and that nothing was damaged or misplaced during shipping.
 - a. Fan-less Mini PC Stick
 - b. HDMI Extension cable
 - c. Power adapter
 - d. Velcro mounting tape
2. The Dashboard PC can be connected to the Plant Floor Display in one of two ways
 - a. Option 1: Plug the Dashboard PC directly into the Plant Floor Display HDMI Port.
 - b. Option 2: Mounting the Dashboard PC using the HDMI Extension Cable and Velcro mounting tape. This is done by:
 - i. Attach HDMI extension cable to the Dashboard PC and the Plant Floor Display.
 - ii. While connected to the display, find a location where the Dashboard PC will also have access to a power and an Ethernet jack, if required.
 - iii. Mark it using the Velcro mounting tape.
 - iv. Attach the Velcro mounting tape to the flat side of the Dashboard PC and attach it to the previously marked spot on the wall.
3. Once the Dashboard PC has been securely connected to the Plant Floor Display. Connect the power adapter, keyboard, mouse, Ethernet cable, and press the power button.

4. Once the Dashboard PC has booted the Edge browser will launch automatically to the **ActionPLAN Dashboard**. If the **ActionPLAN Dashboard** does not open immediately upon starting the device, navigate to the internet browser to automatically open the **ActionPLAN Dashboard**.

ActionPLAN Dashboard PC Technical Requirements

Display Input Requirement: HDMI Port

Power Requirements: Minimum 5V 3Amp required; Power adapter included.

Network Requirements: Maximum 100mb/s Down

Operating Temperature: 0 – 35 Degrees Celsius

ActionPLAN Dashboard

Each ActionPLAN User will receive a unique PKI (Public Key Infrastructure) certificate to enable Multi-Factor Authentication into the **ActionPLAN Dashboard**. Without the certificate, the **ActionPLAN Dashboard** will not launch. Each certificate is encrypted with a unique password for each ActionPLAN User. This password and the login credentials will be provided to each ActionPLAN User, by phone, during an ActionPLAN training session.

Installing the Certificate and Credentials

You will be provided with a certificate required to access the ActionPLAN Dashboard.

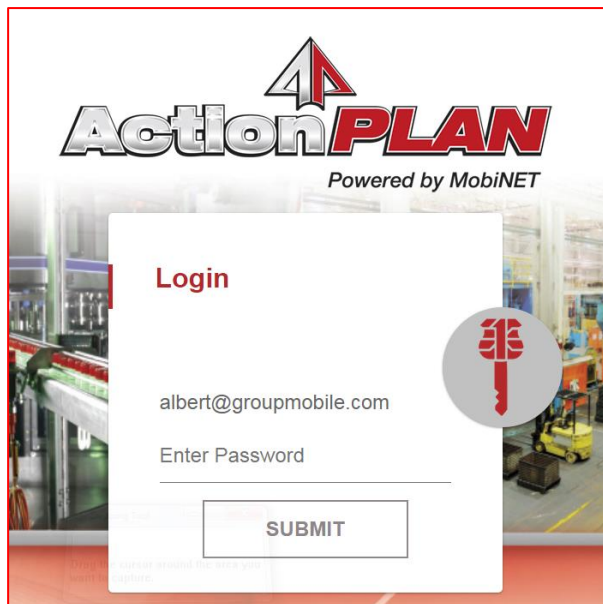
| Internet Explorer | Edge | Firefox | Chrome |
|--|---|--|--|
| <ol style="list-style-type: none"> 1. Double click on the certificate 2. Click "Next" to accept all default configurations 3. When prompted for the password, enter the password as provided to you by Route1 4. Continue with the default configuration until you have received an "Install Successful" message 5. Launch IE | <ol style="list-style-type: none"> 1. Double click on the certificate 2. Click "Next" to accept all default configurations 3. When prompted for the password, enter the password as provided to you by Route1 4. Continue with the default configuration until you have received an "Install Successful" message 5. Launch Edge <p><i>*browser not officially tested</i></p> | <ol style="list-style-type: none"> 1. Launch Firefox 2. Click "Tools" "Options" 3. Click "Advanced" "Certificates" "View Certificates" 4. From the "Your Certificates" tab, choose "Import..." 5. Browse to the saved certificate and select "Open" 6. When prompted for the password, enter the password as provided to you by Route1 7. Click "OK" to exit the installation window <p><i>*browser not officially tested</i></p> | <ol style="list-style-type: none"> 1. Double click on the certificate 2. Click "Next" to accept all default configurations 3. When prompted for the password, enter the password as provided to you by Route1 4. Continue with the default configuration until you have received an "Install Successful" message 5. Launch Chrome |

Launching the ActionPLAN Site

1. Once you start your ActionPLAN DCD or ActionPLAN Dashboard PC, the internet browser should open automatically to the **ActionPLAN Dashboard**.
 - a. If it does not open right away, start your internet browser and go to:
<https://www.actionplan.route1.net>
2. The ActionPLAN User will then be prompted to choose a certificate.
 - a. Select the certificate installed in the previous section.
3. Upon successfully confirming the certificate, the user will be presented the **ActionPLAN Dashboard** login screen.

ActionPLAN Dashboard Navigation

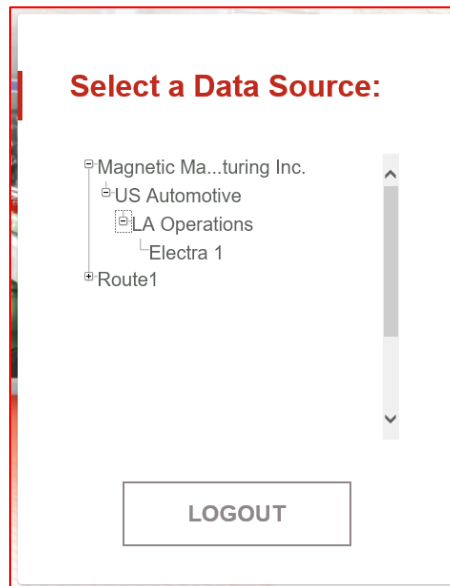
Login Screen



- Upon starting the Dashboard PC, the internet browser will automatically launch and prompt the ActionPLAN User for a certificate.
- Once chosen, the ActionPLAN User will be taken to the Login screen with their user information already populated.

- To login, the ActionPLAN User will just have to enter their password, which will be provided by Route1.

Organization View and Selecting a Data Source



- Once the ActionPLAN User has entered their password they will be prompted to select a **Data Source**
 - This is used to navigate to the **ActionPLAN Dashboard** and the different lines and inputs within a plant, group, or company.
- The ActionPLAN Users are able to access different **Data Sources** based on their level of access. These can range from the entire **Company** or **Company Group**, to a specific **Plant** or **Line**.
- The ActionPLAN User can also select the **Logout Button** on this page to log the current ActionPLAN User out of the **ActionPLAN Dashboard** and return to the login screen.
- The **Management Button** will open the ActionPLAN Management portal. This will be covered in the ActionPLAN Management Portal section.
- The **Change Password Button** will prompt the ActionPLAN User with the following dialogue to change their password. Passwords must be minimum 8 characters long and should contain at least one lowercase, one uppercase character and one numeric digit. Printable special characters are permitted.

Change Password

Old Password


New Password

Re-Enter Password

Password must be minimum 8 characters long and should contain at least one lowercase, one uppercase character and one numeric digit. Printable special characters are permitted.

- The **Contact Button** in the top left-hand corner of the dashboard will bring up the **Contact Us** page, pictured below.

Contact Us



In the United States: [1889 Maryland Ave.,
Niagara Falls, NY 14305
U.S.A.](#)

In Canada: [3419 Mainway,
Burlington, Ontario L7M 1A9
Canada](#)

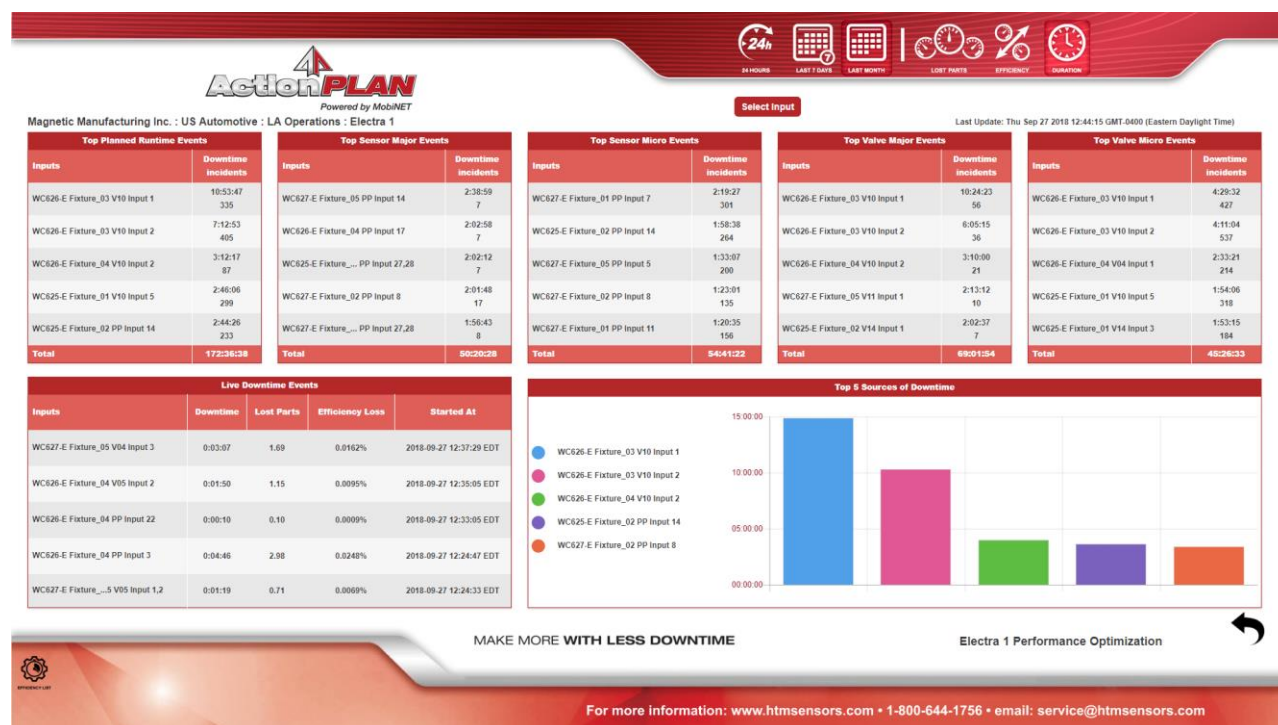
Toll Free Phone: [1-800-644-1756](#)

Email: service@htmsensors.com

Visit us at: www.htmsensors.com

- Select the **Back Button** to return to the Organization View.

ActionPLAN Dashboard Page



- Once the ActionPLAN User selects a **Data Source** from the **Organization View** they will be prompted with the **Dashboard Page**.
- The **Dashboard Page** is refreshed every 30 Seconds to provide real time updates.
- This data is presented in the form of several top 5 lists of actionable items to address in order to improve efficiency.
 - These lists can include the following:
 - Top Sensor Major Events
 - Top Sensor Micro Events
 - Top Valve Major Events
 - Top Valve Micro Events
 - Top Planned Runtime Events
 - Live Downtime Events
 - Top 5 Sources of Downtime
 - Live Fault Data

- Data on the **Dashboard page** can be manipulated using the buttons at the top right-hand corner of the dashboard.
 - **24 Hours Button** – Changes the scope of data to only include the last 24 Hours
 - **Last 7 Days Button** - Changes the scope of data to only include the last 7 days
 - **Last month Button** - Changes the scope of data to only include the last month
 - **Lost parts Button** – changes the scope of data to show which inputs suffered the most lost parts over the given scope of data
 - **Efficiency Button** – changes the scope of data to show which inputs suffered the most lost efficiency over the given scope of data
 - **Duration Button** – changes the scope of data to show which inputs suffered the most downtime over the given scope of data
 - **Efficiency List** – Brings the ActionPLAN User to the efficiency report page. This report shows the impact of any outages during that shift which become highlighted, based on predetermined efficiency threshold levels, the lines and the cells that comprise them are color-coded: Green, Yellow or Red. This colour scheme can also be represented on the data source selection screen.
 - **Page Flip** – Represented as a rectangle with a curved arrow, this button will appear for applicable organizations using a template that supports page flipping. Page flipping allows the Dashboard Page to flip to Page B. Page B can display 10 widgets, and if an organization has Robot, Valve, Sensor and Safety faults, they're able to see widgets for all these categories in Page B.
- On the **Dashboard Page** the ActionPLAN User can select any one of the inputs for to bring up the **Input Detail Page** of that specific input. This page includes information on downtime, lost parts and efficiency loss.
 - This **Input Detail Page** can also be accessed via the **Search Button** which will be covered in the next section.
- ActionPLAN Users can press the **Back Button**, to return to the **Organization View**

Selecting an Input

- ActionPLAN Users can use the **Input Select Button** for more information on a specific input by searching and bringing them to the desired **Input Details Page**.

- Selecting the **Input Select Button** will prompt the ActionPLAN User with search dialogue for a particular input. This can be specified by Company Group, Plant, Line, Cell, Fixture, Input Type. Additionally, the ActionPLAN User can specify a time interval for the input data.

Input Selection
✕

Magnetic Manufacturing Inc.

Select Company Group:

US Automotive ▼

Select Plant:

LA Operations ▼

Select Line:

Electra 1 ▼

Select Cell :

WC625-E ▼

Select Fixture :

Fixture_01 ▼

Select Input Type :

Valve01 ▼

Enter Input String :

2

Specify Interval :

☒

From :

05/18/2020

0

Hrs

0

Min

To :

05/28/2020

0

Hrs

0

Min

Submit

- Search Criteria for the **Input Select Button** are as follows and will have a drop-down list of available options
 - Company Group, Plant, Line, Cell, Fixture, Input Type, Input String and Time Interval.
 - The Input String must be entered manually by the ActionPLAN User.
 - The time interval option can be toggled using the check box shown in the picture above

- This will allow the ActionPLAN User to specify the time frame from two dates down to the desired hour or minute.

Input Details Page

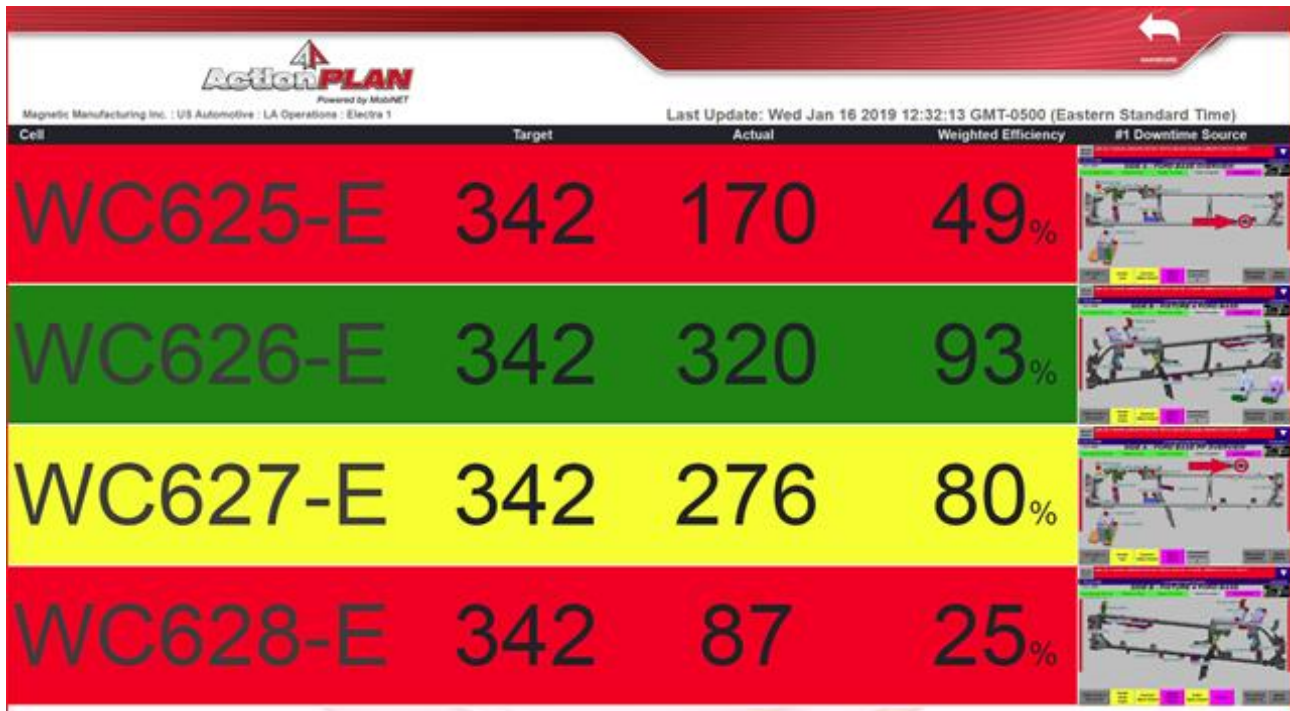
- The summary of all the data of a specific sensor or valve with a supporting image to show where the problems are physically occurring.
- The scope of data in this report can be manipulated using the **24 Hours**, **Last 7 Days** and **Last Month Buttons** in the top right-hand corner of the Dashboard, just like the **Dashboard Page**.
- The **Input Detail Page** also contains a chart that shows **Downtime**, **Lost Parts** and **Efficiency Loss** for the associated input during the selected scope of data.
- An image corresponding to the fault for an input is displayed



- A table containing the top 5 events for a given fault will be displayed. The table includes the downtime duration, lost parts and efficiency loss.

Efficiency Report Page

- This report shows the impact of any outages during that shift which become highlighted, based on predetermined efficiency threshold levels.
- The lines and the cells that comprise them are color-coded: Green, Yellow or Red. This color scheme is represented on the data source selection screen.
 - Green means that the target efficiency quota is being surpassed.
 - Yellow means that target efficiency quota is being met.
 - Red means that target efficiency quota is not being met.



The screenshot shows the ActionPLAN interface with a table of efficiency data. The table has five columns: Cell, Target, Actual, Weighted Efficiency, and #1 Downtime Source. The rows are color-coded: Red for WC625-E and WC628-E, Green for WC626-E, and Yellow for WC627-E. Each row includes a small thumbnail image of the cell layout.

| Cell | Target | Actual | Weighted Efficiency | #1 Downtime Source |
|---------|--------|--------|---------------------|--------------------|
| WC625-E | 342 | 170 | 49% | [Thumbnail] |
| WC626-E | 342 | 320 | 93% | [Thumbnail] |
| WC627-E | 342 | 276 | 80% | [Thumbnail] |
| WC628-E | 342 | 87 | 25% | [Thumbnail] |

- Cell Column (or Line Column if viewing the Line Efficiency Report Page):
 - Display Name of Cell/Line
 - In the Line Efficiency Report page, clicking on a Line will redirect the ActionPLAN website to the Cell Efficiency Report page
- Target Column:
 - Target Efficiency for the current shift

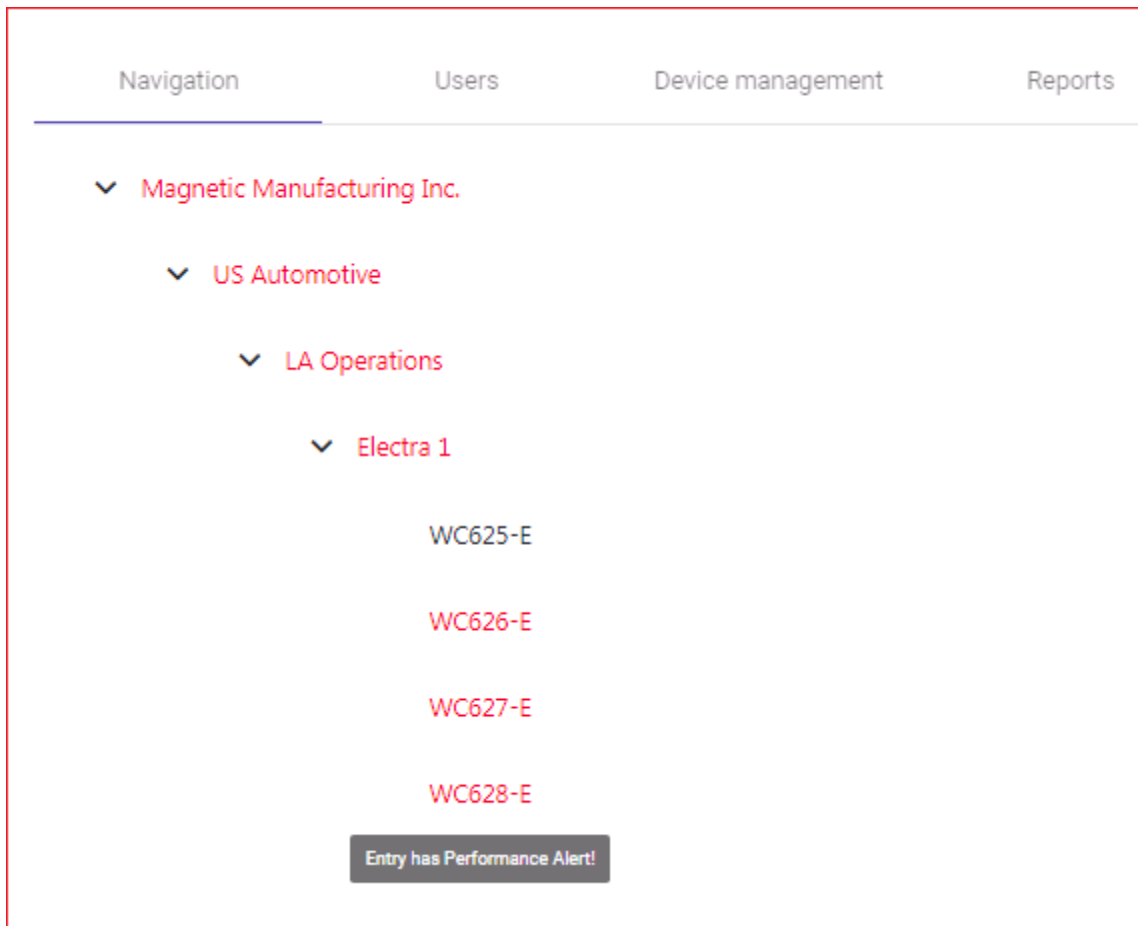
- Actual Column:
 - Efficiency met for the current shift
- Weighted Efficiency Column:
 - Weighted Average for the efficiency of each cycle during the current shift (Cell)
 - Weighted Average for the efficiency of each Finishing Cell (Line)
- #1 Downtime Source Column:
 - The fault that represents the worst offender during the current shift
 - Clicking on this will redirect the ActionPLAN website to the Input Details page
- When the target efficiency quota is not met over the last 7 days, the organization tree will display the organization name in red.



- When the target efficiency quota is met or surpassed over the last 7 days, the organization tree will display normally.



- The same rules apply for the organization tree within the Administration Management for ActionPLAN page (AMAP). More info on AMAP can be found at Page X.

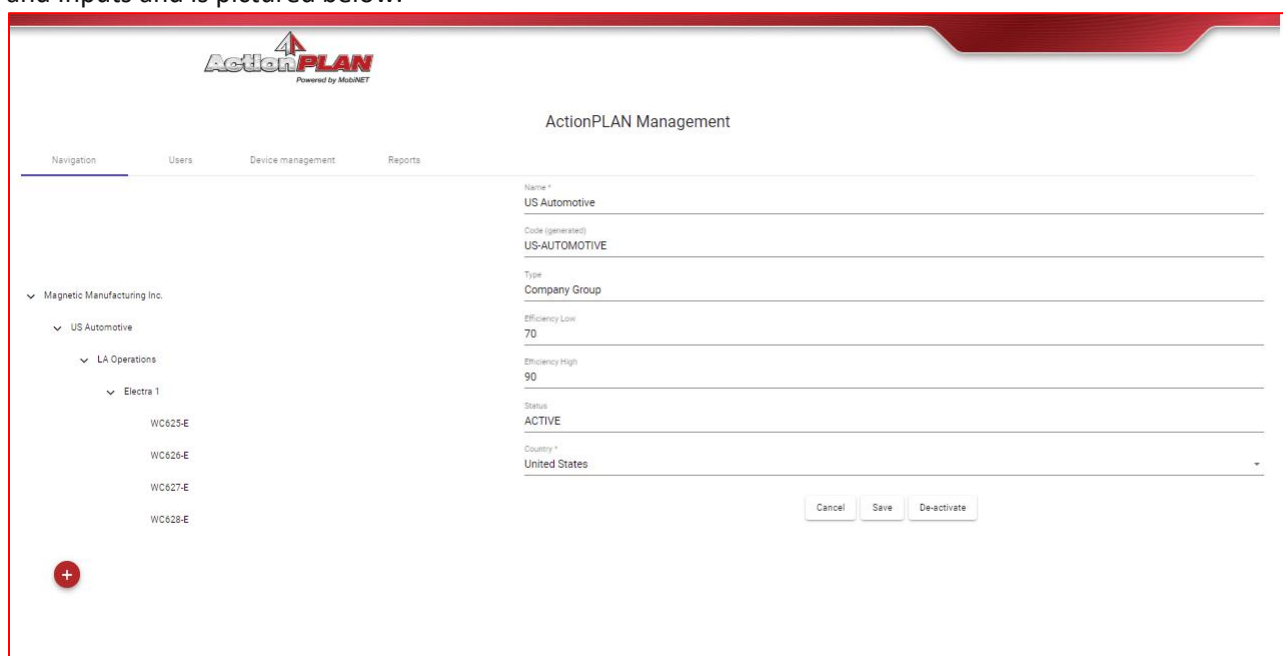


Administration Management for ActionPLAN (AMAP)

Administration Management for ActionPLAN (AMAP) is used to administer users, Devices, Company Groups, Plants, Lines, Cells, Fixtures, and Inputs. There are 4 primary areas of **AMAP**: the **Navigation**, **Users**, **Device Management** and **Reports** tabs.

Navigation Tab

The **Navigation Tab** is used to create, modify and remove Company Groups, Plants, Lines, Cells and Fixtures and Inputs and is pictured below.



Company Details Page

This page of the Company record allows ActionPLAN Users to modify and deactivate the record as well as check the status. The Company Details Page is pictured above.

Adding Companies

To add a Company, select the red circular “+” sign button at the bottom left-hand corner of the page. The ActionPLAN User will then have to enter the **Name**. Once the required information has been entered select the **Save Button** to complete the creation of the Company Group record.

Name - The name chosen by an ActionPLAN User to represent the Company in **AMAP** and the **ActionPLAN Dashboard**

Efficiency Low - The efficiency minimum set by the AMAP User to determine low efficiency in the **Efficiency Report**

Efficiency High - The efficiency target set by the AMAP User to determine High efficiency in the **Efficiency Report**

Code - A prepopulated unique identifier used to represent the Company in **AMAP** and the **ActionPLAN Dashboard**

Modifying Companies

To modify a Company, select the company group that needs to be modified to bring up the details page. Once the desired information has been modified select the **Save Button** to complete the changes

Deactivating Companies

To deactivate a Company, select the Company that needs to be deactivated to bring up the details page. Select the **Deactivate Button** at the bottom of the page. This will prompt the user to confirm the deactivation. Once confirmed the Company status will change to “Inactive.” To reactivate select the **Activate Button**; this will prompt the user to confirm the reactivation. Once confirmed the Company status will change to “Active.”

Setting Weight Factor, Efficiency High and Efficiency Low

Setting the Efficiency High sets the threshold for what is considering an unmet quota when efficiency is calculated (where the efficiency will be displayed as red). Setting the Efficiency Low will set the threshold for what is considered a surpassed quota (where the efficiency will be displayed as green). The Weight Factor is used when calculated the weight average (which is the Efficiency percentage seen in the Efficiency report page).

Navigation Tab – Company Groups

Company Group Details Page

This page of the Company Group record allows ActionPLAN Users to modify and deactivate the record, as well as check the status. Pictured below.



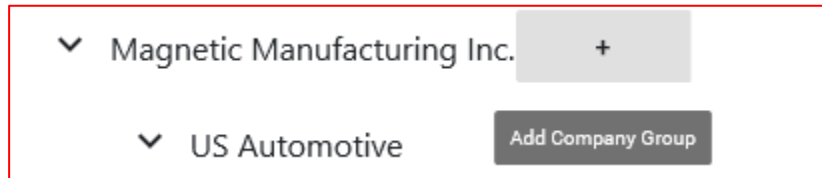
The screenshot shows a form for editing a company group. The fields are as follows:

| | |
|------------------|---------------|
| Name * | US Automotive |
| Code (generated) | US-AUTOMOTIVE |
| Type | Company Group |
| Efficiency Low | 70 |
| Efficiency High | 90 |
| Status | ACTIVE |
| Country * | United States |

At the bottom of the form are three buttons: **Cancel**, **Save**, and **De-activate**.

Adding Company Groups

To add a Company Group to a Company, select the “+” sign button that will appear next to the Company record (pictured below). The ActionPLAN User will then have to enter the **Name** and **Country** of the Company Group. Once the required information has been entered select the **Save Button** to complete the creation of the Company Group record.



Name - The name chosen by an ActionPLAN User to represent the Company Group in **AMAP** and the **ActionPLAN Dashboard**

Code - A prepopulated unique identifier used to represent the Company Group in **AMAP** and the **ActionPLAN Dashboard**

Efficiency Low - The efficiency minimum set by the AMAP User to determine low efficiency in the **Efficiency Report**

Efficiency High - The efficiency target set by the AMAP User to determine High efficiency in the **Efficiency Report**

Country – Geographic Location of the Company Group, used to differentiate Company Groups and Plants.

Modifying Company Groups

To modify a Company Group, select the Company Group that needs to be modified to bring up the details page for that record and select the **Edit Button**. Only the **Name**, **Country**, **Efficiency High and Low** can be changed once created. Once the desired information has been modified select the **Save Button** to complete the changes

Deactivating Company Groups

To deactivate a Company Group, select the Company Group that needs to be deactivated to bring up the details page. Select the **Edit Button** then the **Deactivate Button** at the bottom of the page; this will prompt the user confirm the deactivation. Once confirmed the Company Group status will change to “Inactive.” To reactivate select the **Activate Button**; this will prompt the user confirm the reactivation. Once confirmed the Company group status will change to “Active.”

Setting Weight Factor, Efficiency High and Efficiency Low

Setting the Efficiency High sets the threshold for what is considering an unmet quota when efficiency is calculated (where the efficiency will be displayed as red). Setting the Efficiency Low will set the threshold for what is considered a surpassed quota (where the efficiency will be displayed as green). The Weight Factor is used when calculated the weight average (which is the Efficiency percentage seen in the Efficiency report page).

Navigation Tab – Plants

Plant Details Page

This page of the Plant record allows ActionPLAN Users to modify and deactivate the record as well as check the status. The Plant Details page is pictured below.

Plant Details
Fixtures
Personnel

Name
LA Operations

Code (generated)
LA OPERATIONS

Type
Plant

Time Zone
US/Eastern

☐ DST Observed

Street Number
Street Name
Street Type
Street Direction

Apartment/Unit

P.O. Box
Rural Route Number
Postal Code

Phone Number*
000-000-0000

Productivity Factor
WEIGHT

Efficiency Low
70

Efficiency High
90

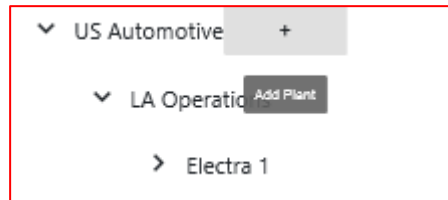
Weight Factor
1

Status
ACTIVE

Close
Edit

Adding Plants

To add a Plant to a Company Group, select the “+” sign button that will appear next to the Company Group record (pictured below).



The ActionPLAN User will then have to enter at least a **Name** create a new plant. Each Plant can also have an address and time zone associated with it; this is optional to create the Plant. Once the desired information has been entered select the **Save Button** to complete the creation of the Plant record.

Name - The name chosen by an ActionPLAN User to represent the Plant in **AMAP** and the **ActionPLAN Dashboard**

Code - A prepopulated unique identifier used to represent the Plant in **AMAP** and the **ActionPLAN Dashboard**

Address Information – Geographic location of the Plant, including **Time Zone, Daylight Savings Time Observed, Street Number, Street Name, Street Type, Unit Number, P.O. Box, Rural Route Number, Postal Code or ZIP Code** and **Phone Number**.

Modifying Plants

To modify a Plant, select the Plant that needs to be modified to bring up the details page for that Plant record and select the **Edit Button**. Once the desired information has been modified select the **Save Button** to complete the changes.

Deactivating Plants

To deactivate a Plant, select the Plant that needs to be deactivated to bring up the details page for that Plant record and select the **Edit Button**. Select the **Deactivate Button** at the bottom of the page; this will prompt the user confirm the deactivation. Once confirmed the Plant status will change to “Inactive.” To reactivate select the **Activate Button**; this will prompt the user to confirm the reactivation. Once confirmed the Plant status will change to “Active.”

Fixture Page

This page of the Plant record displays the **Plant Fixture Table** and allows ActionPLAN Users to add, modify, deactivate and delete Fixture records as well as check the status of them. Fixture records can also be sorted using the filter field at the top left-hand corner of the page. ActionPLAN Users can also select the Fixture hyperlink under the **Name** column to bring up a **Fixture Details Dialogue** at the bottom of the page.

Adding Fixtures

Select the **Edit Button** represented by a red pencil button then to add a new Fixture, select the “+” sign button at the bottom right-hand corner of the **Plant Fixture Table**. The ActionPLAN User will then have to enter a **Name** to create a new Fixture.

Name - The name chosen by an ActionPLAN User to represent the Fixture in **AMAP** and the **ActionPLAN Dashboard**

Code - A prepopulated unique identifier used to represent the Fixture in **AMAP** and the **ActionPLAN Dashboard**

Display Name - The name of Fixture to be displayed on the widgets in the **ActionPLAN Dashboard**

Description - A brief description used to describe the Fixture and its purpose.

Fixture Details Dialogue

Plant:

LA Operations

Name *

WC625-E FIXTURE-01

Code (generated)

WC625-E-FIXTURE-01

Display Name *

Fixture_01

Description

Status

ACTIVE

Cancel

Save

De-activate

Delete

Modifying Fixtures

This dialogue allows ActionPLAN Users to modify the Name, Display Names and Description of the selected Fixture, as well as check the status. To begin modifications, select the **Edit Button**, and once the desired changes have been made select the **Save Button**.

Deactivating Fixtures

Select the **Edit Button** then the **Deactivate Button** at the bottom of the page; this will prompt the user confirm the deactivation. Once confirmed the Fixture status will change to “Inactive.” To reactivate select the **Activate Button**; this will prompt the user to confirm the reactivation. Once confirmed the Fixture status will change to “Active.”

Deleting Fixtures

Select the **Edit Button** then the **Delete Button** at the bottom of the page; this will prompt the user to confirm the Deletion. Once confirmed the Fixture will be removed from the **Plant Fixture Table**.

Personnel Tab:

The Personnel tab is where Personnel for a Plant can be specified. Each Personnel has a badge number, name and function. The three functions are Operator, Maintenance and Supervisor. Personnel can be modified by clicking on their first name. They can be added by clicking on the red circle with a plus sign.

| Plant Details Fixtures Personnel | | | | |
|--|-------------|------------|-------|-------------|
| Filter _____ | | | | |
| First Name | Middle Name | Last Name | Badge | Function |
| Dunban | | MacKinnon | 25003 | OPERATOR |
| Melia | | Loucks | 25004 | MAINTENANCE |
| Shulk | | Ledesma | 25047 | SUPERVISOR |
| Reynn | | Ricabierta | 25023 | OPERATOR |
| Fiora | | Gel Lopez | 25031 | OPERATOR |
| Zanza | | Mariano | 25052 | SUPERVISOR |
| Klaus | C | Almazan | 25046 | OPERATOR |
| Galaria | | Jagmohan | 25049 | OPERATOR |
| Dickson | | Olivete | 25041 | OPERATOR |
| Alvis | | Adu | 25026 | OPERATOR |

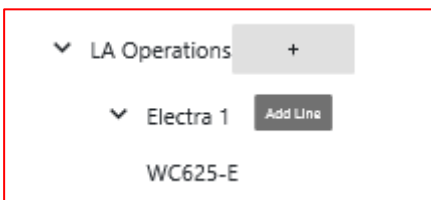
Setting Weight Factor, Efficiency High and Efficiency Low

Setting the Efficiency High sets the threshold for what is considering an unmet quota when efficiency is calculated (where the efficiency will be displayed as red). Setting the Efficiency Low will set the threshold for what is considered a surpassed quota (where the efficiency will be displayed as green). The Weight Factor is used when calculated the weight average (which is the Efficiency percentage seen in the Efficiency report page).

Navigation Tab – Lines

Adding Lines

To add a Line to a Plant, select the “+” sign button that will appear next to the Plant record (pictured below).



Line Details Page

This page of the Line record allows ActionPLAN Users to modify and deactivate the record as well as check the status and update the **Planned Runtime** for the line. The Line Details page is pictured below.

Line Detail

Display Name

Electra 1

Name

Electra 1

Code (generated)

ELECTRA 1

Type

Line

Tag Line

Electra 1 Performance Optimization

Hr Planned Runtime 24 hr

960

Hr Planned Runtime 28 day

19200

Hr Planned Runtime Week

4800

Planned Runtime (in UTC timezone) *

Sunday:

Monday: 12:0 - 24:0 ✕

Tuesday: 0:0 - 4:0 ✕ 12:0 - 24:0 ✕

Wednesday: 0:0 - 4:0 ✕ 12:0 - 24:0 ✕

Thursday: 0:0 - 4:0 ✕ 12:0 - 24:0 ✕

Friday: 0:0 - 4:0 ✕ 12:0 - 24:0 ✕

Saturday: 0:0 - 4:0 ✕

Weight Factor

1

Monetary Factor

Monetary Currency

USD

Efficiency Low

70

Efficiency High

90

Status

ACTIVE

The ActionPLAN User will then have to enter the following variables to create a new Line. Once the desired information has been entered select the **Save Button** to complete the creation of the Line record.

Name - The name chosen by an ActionPLAN User to represent the Line in **AMAP** and the **ActionPLAN Dashboard**

Display Name – The name chosen by an ActionPLAN User to represent the Line’s name in the **Efficiency Report page**

Code - A prepopulated unique identifier used to represent the Line in **AMAP** and the **ActionPLAN Dashboard**

Tagline - A brief description or slogan used to describe a Line and its purpose.

Hr Planned Runtime 24 Hr - The amount of runtime to be measured for the specified Line over 24 hours.

Hr Planned Runtime 28 Day - The amount of runtime to be measured for the specified Line over 28 Days.

Hr Planned Runtime Week - The amount of runtime to be measured for the specified Line over 7 Days.

Planned Runtime - The amount of runtime to be measured for the specified Line over the course of a week. The amount of **Planned Runtime** can be specified by each day of the week. For more information on how to adjust the runtime for each day refer to the **Modifying Lines** section below.

Modifying Lines

To modify a Line, select the Line that needs to be modified to bring up the details page for that Line record. Once the desired information has been modified select the **Save Button** to complete the changes. To adjust the **Planned Runtime** of a Line select the “+” button next to the desired day of the week. Once selected a **Clock Button** will appear allowing the ActionPLAN User to set the desired runtimes. Once the times are chosen select the **Checkmark Button** to confirm the change and update the **Planned Runtimes** for that Line.

Deactivating Lines

To deactivate a Line, select the Line that needs to be deactivated to bring up the details page for that Line record. Select the **Deactivate Button** at the bottom of the page; this will prompt the user to confirm the deactivation. Once confirmed the Line status will change to “Inactive.” To reactivate select the **Activate Button**; this will prompt the user to confirm the reactivation. Once confirmed the Line status will change to “Active.”

Setting Weight Factor, Efficiency High and Efficiency Low

Setting the Efficiency High sets the threshold for what is considering an unmet quota when efficiency is calculated (where the efficiency will be displayed as red). Setting the Efficiency Low will set the threshold for what is considered a surpassed quota (where the efficiency will be displayed as green). The Weight Factor is used when calculated the weight average (which is the Efficiency percentage seen in the Efficiency report page).

Navigation Tab – Cells

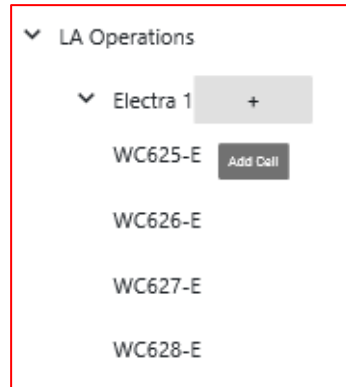
Cell Details Page

This page of the Cell record allows ActionPLAN Users to modify and deactivate the record as well as check the status of Cells. The Cell Details page is pictured below.

| | |
|---|--|
| Display Name | WC625-E |
| Name | WC625-E |
| Code (generated) | WC625-E |
| Cell Type | Generic Cell |
| Ignore Time | 3600 |
| Break Threshold | 300 |
| Cycle Duration | 96 |
| Micro Macro Threshold | 180 |
| Parts Per Cycle | 1 |
| Start Cycle Substring | TTSideAAtWeld |
| Start Cycle Column | 6 |
| Start Cycle Substring 2 | |
| Start Cycle Column 2 | |
| Start Cycle Substring 3 | |
| Start Cycle Column 3 | |
| Start Cycle B Substring | |
| Start Cycle B Column | |
| Start Cycle B Substring 2 | |
| Start Cycle B Column 2 | |
| Start Cycle B Substring 3 | |
| Start Cycle B Column 3 | |
| Cell Substring | WC625-E |
| Cell Column | 1 |
| Fault Class | NONE |
| Scan Class | NONE |
| Load Time Class | NONE |
| <div>Appliances</div> <div>Appliances associated with this cell</div> | |
| Last Fault | Fixture: Fixture_02, Input Type: PP, Fault: (6), At: 2019/01/17 16:20:19 |
| Last Tag | NA |
| Weight Factor | 1 |
| Efficiency Low | 70 |
| Efficiency High | 90 |
| <input type="checkbox"/> Track Load Time | |
| Status | ACTIVE |

Adding Cells

To add a Cell to a line, select the “+” sign button that will appear next to the desired Line record (pictured below).



The ActionPLAN User will then have to enter **Display Name, Name, Break Threshold, Parts per cycle, Cell Substr, Cell Column** to create a Cell. Once the desired information has been entered select the **Save Button** to complete the creation of the Cell record.

Display Name - The name of Cell to be displayed in widgets on the **ActionPLAN Dashboard**

Name - The name chosen by an ActionPLAN User to represent the Cell in **AMAP** and the **ActionPLAN Dashboard**

Code - A prepopulated unique identifier used to represent the Cell in **AMAP** and the **ActionPLAN Dashboard**

Break Threshold - An outage is no longer considered an outage when it surpasses the supplied **Break Threshold**.

Cell Substr - A string used to identify a specific cell of data retrieved from a PLC. Used in combination with the **Cell Column**.

Cell Column - Column identifier for data retrieved from the PLC that is used in combination with the **Cell Substr** to identify a specific cell of data.

Parts per cycle - The amount of expected parts to be used during each cycle, specified by the **Cycle Duration**.

Modifying Cells

To modify a Cell, select the Cell that needs to be modified to bring up the details page for that Cell record. Once the desired information has been modified select the **Save Button** to complete the changes.

Deactivating Cells

To deactivate a Cell, select the Cell that needs to be deactivated to bring up the details page for that Cell record. Select the **Deactivate Button** at the bottom of the page; this will prompt the user to confirm the deactivation. Once confirmed the Cell status will change to “Inactive.” To reactivate select the **Activate Button**; this will prompt the user confirm the reactivation. Once confirmed the Cell status will change to “Active.”

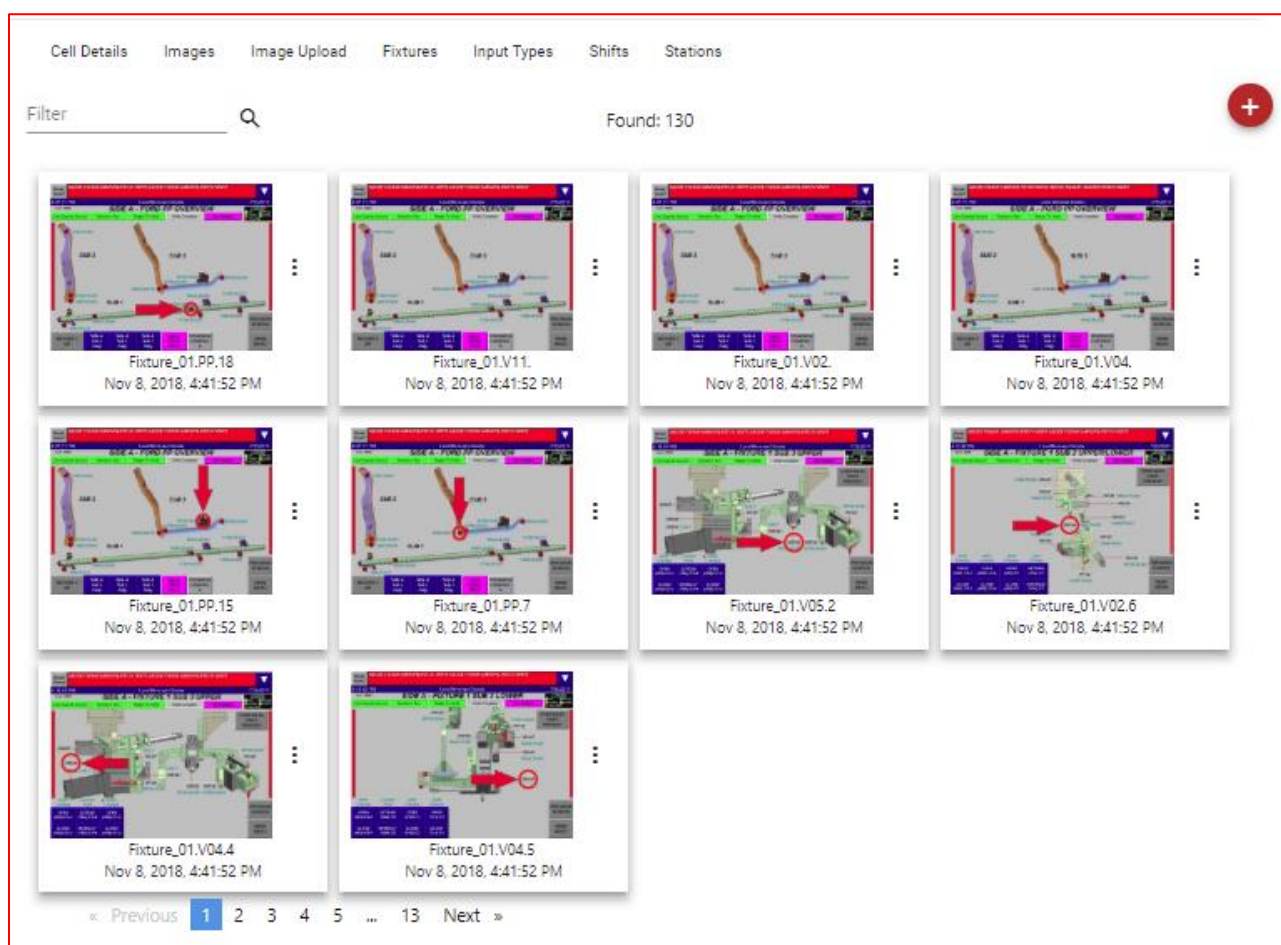
Enabling Track Load Time

Enabling this (by clicking) will draw a red checkmark in the box. This allows the Load Time class file that is uploaded to be used to determine Operator Load Time for faults where applicable.

Images and Image Upload Pages

The **Image Page** of the Cell record shows all the images associated with the selected cell and allows ActionPLAN Users to upload, associate and delete images.

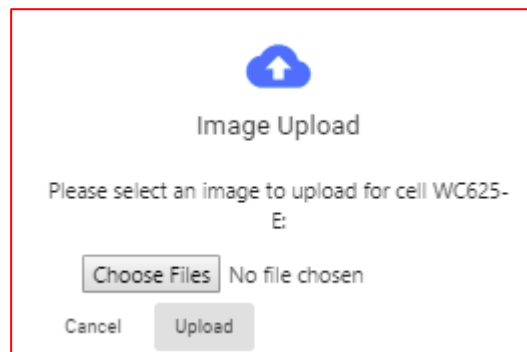
The Image page is pictured below.



The **Image Upload Page** of the Cell record shows only the uploaded images to the selected cell by the current ActionPLAN User and allows them to upload, associate and delete images.

Upload an image

To upload an image, select the red circular “+” sign button at the top right-hand corner of the page. This will prompt the ActionPLAN User with an image upload dialogue window (pictured below). This dialogue also allows ActionPLAN Users to upload multiple images at once. Select the **Browse Button** to select the desired image to be uploaded. Once chosen select the **Upload Button** to upload the image to the current Cell record.



Please Note: Images uploaded here will also be associated with the currently selected Cell record.

Navigating the Image Pages

The **Previous**, **Next** and **Number Buttons** at the bottom of the page allow ActionPLAN Users to navigate multiple pages of records. These records can also be sorted using the filter field at the top left-hand corner of the page.

Modifying Image associations

Each image has a **Three Dots Button** on the right side of the of each image record. Selecting this presents the ActionPLAN User with 3 Options: **Zoom in**, **Associate**, and **Delete**.

Zoom in Button - Selecting this will present the ActionPLAN User with a larger version of the selected image.

Associate Button – This button will prompt the ActionPLAN User with the Associate Image Dialogue allowing them to select the Fixture, Input Type and Input Index to be associated with the selected image. Once the information has been entered, select the **Associate Button** again to complete the association or the **Cancel Button** to return to the previous screen.

Delete Button – Selecting this button will prompt the ActionPLAN User with a dialogue to confirm deletion of the selected image. Selecting the **OK Button** will delete the image from all associated

Cells, Fixtures and Inputs. Selecting the **Cancel Button** will return the ActionPLAN User to the previous screen.

Input Types Page

This page of the Cell record displays the **Input Types Table**. This table displays information on all the inputs for the selected Cell. On this page ActionPLAN Users will be able to modify, add, delete and check the status of these input records.

Adding Input Types

Select the red circular “+” sign button at the top right-hand corner of the page. This will prompt the ActionPLAN User with a dialogue to add a new Input Type. The dialogue is pictured below:

The ActionPLAN User must then complete the required fields to add the Input Type:

Display Name - The name of Input Type to be displayed in widgets on the **ActionPLAN Dashboard**

Fixture – The Fixture to be associated with the Input Type. Selected from a drop down list of available Fixtures.

Name – The name chosen by an ActionPLAN User to represent the Input Type in **AMAP** and the **ActionPLAN Dashboard**

Code - A prepopulated unique identifier used to represent the Input Type in **AMAP** and the **ActionPLAN Dashboard**.

Input Type Substr - A string used to identify the Input Type from data retrieved from a PLC. Used in combination with the **Input Type Column**.

Input Type Column - Column identifier for data retrieved from the PLC that is used in combination with the **Cell Substr** to identify data relevant to the specific Input Type.

Fault Substr - A string used to identify Fault data retrieved from a PLC. Used in combination with the **Fault Column**.

Fault Column - Column identifier for data retrieved from the PLC that is used in combination with the **Fault Substr** to identify if the tag is a Fault.

Type Category - Selected from a drop down list of the following options: **PP, VX, ND, SE, RF**, and **RT**.

Register Size – Determines how many inputs correspond to each **Offset**.

Offset Regexp - The Offset regular expression. This is applied to the value in the **Offset Column** and used to calculate the **Offset**.

Offset Column - A column of data retrieved from a PLC. The regular expression is applied to the value of the **Offset Column** and used to calculate the **Offset**. This is an optional field.

Modifying Input Types

To modify an Input Type record, select the hyperlink for the desired record under the **Code** column. This will bring up the **Input Type Details** dialog allowing the ActionPLAN User to modify the Input Type information. Once the desired information has been modified select the **Save Button** to complete the changes or the **Cancel Button** to return to the previous screen.

Deleting Input Types

Selecting the **Delete Button** will prompt the ActionPLAN User with a dialogue to confirm deletion of the selected Input Type. Selecting the **OK Button** will delete the Input Type from the **Input Types Table**. Selecting the **Cancel Button** will return to the Input Type Details dialogue.

Adding Shifts

Cell Details

Images

Image Upload

Fixtures

Input Types

Shifts

Stations

Shifts for WC625-E

Monday:

Shift 1:

Start Time:

HH * MM *

5 : 30

Shift Length *

8

1 *

2 *

3 *

4 *

5 *

6 *

7 *

8 *

78

44

77

33

77

33

67

78

+

+

Tuesday:

Shift 1:

Start Time:

HH * : M...

Shift Length *

8

1 *

2 *

3 *

4 *

5 *

6 *

7 *

8 *

+

+

Wednesday:

+

Thursday:

+

Friday:

+

Saturday:

+

Sunday:

+

Save

Multiple shifts can be added for Monday, Tuesday, Wednesday, Thursday, Friday, Saturday and Sunday. For each shift, the Start Time (in your Plant's time zone) can be entered, along with the length of the shift. When specifying the length of a shift, for each hour of that period, X amount of targets can be specified. The Efficiency Report calculates efficiency by comparing how many parts per were created in a cycle versus the target (desired) amount for the hour.

Adding Stations

Stations for a Cell can be added. This represents parts created by Operators that manually badge in and out of the station.

Cell DetailsImagesImage UploadFixturesInput TypesShiftsStations

Filter

Stations for WC625-E, total: 1

| Display Name | Name | Code | Station Sub String | Station Column | Track Scan | Target Load Time | Scan Sub String | Scan Columns | Scan Station Sub String | Scan Station Column | Load Sub String | Load Column | Status |
|--------------|--------|------|--------------------|----------------|------------|------------------|-----------------|--------------|-------------------------|---------------------|-----------------|-------------|--------|
| STATION 1 | GeoOP1 | ST1 | Cyc1 | 2 | ✓ | 15 | BadgeD | 4 | BadgeD | 4 | Last | 5 | ACTIVE |

Station Sub String – A string used to identify the Cell Name generated by the PLC

Station Column – The column to use when seeking the Station Sub String

Track Scan – Enable or disable scan tracking

Target Load Time – Specifies the load time quotas for operators

Scan Sub String – A string used to identify the Scan tag generated by the PLC

Scan Columns - The column to use when seeking the Scan Sub String

Scan Station Sub String – A string used to identify the Scan Station tag generated by the PLC

Scan Station Column - The column to use when seeking the Scan Station Sub String

Load Sub String - A string used to identify the Load Sub tag generated by the PLC

Load Column - The column to use when seeking the Scan Sub String

By identifying these properties for a Station, Maintenance Response and Load Time data for Personnel can be determined.

User Tab

User Administration Table

This page of the User Tab displays the **User Administration Table**. This table displays information on all the Users being administered by the current ActionPLAN User. On this page ActionPLAN Users will be able to modify, add and delete other ActionPLAN Users. Additionally, the **User Administration Table** can also be sorted using the filter field at the top left-hand corner of the page.

Adding Users

Select the red circular “+” sign button at the bottom right-hand corner of the page. This will prompt the ActionPLAN User with a dialogue to add a new ActionPLAN User. The ActionPLAN User must then fill out the **First Name**, **Last Name**, and **Alternative Name** and select an **ActionPLAN User Role**. For more information on this refer to the **ActionPLAN User Roles** section of this document.

First Name - The first name of the ActionPLAN User

Last Name - The Last name of the ActionPLAN User

Alternative Name - The email of the ActionPLAN User. **Please Note:** The link to credentials will be emailed to the address entered here and will be used in the generation of the certificate.

Temporary Password - A temporary password to be set by the **ActionPLAN User Admin** for when the password reset process is initiated.

ActionPLAN User Details Page

| Navigation | Users | Device management | Reports |
|---|-------|-------------------|---------|
| # \$ Details | | | |
| First Name * | | | |
| # | | | |
| Last Name * | | | |
| \$ | | | |
| Alternative Name * | | | |
| #\$\$ | | | |
| User Type | | | |
| AP | | | |
| Organization | | | |
| Password Status | | | |
| Must Change | | | |
| Invalid Password Attempts | | | |
| 0 | | | |
| <input type="checkbox"/> Dashboard User <input type="checkbox"/> AMAP User <input type="checkbox"/> Customer Manager <input type="checkbox"/> Plant Admin <input checked="" type="checkbox"/> User Admin <input type="checkbox"/> Device Admin <input type="checkbox"/> Image Editor <input type="checkbox"/> Line Manager <input type="checkbox"/> Line Technician <input type="checkbox"/> Report Admin | | | |
| <input type="checkbox"/> Dashboard Layout | | | |
| Status | | | |
| Active | | | |
| <div> <div>Cancel</div> <div>Save</div> <div>Generate Credential</div> <div>Delete</div> <div>Reset Password</div> </div> | | | |

Modifying Users

To modify an ActionPLAN User select the hyperlink for the desired user under the ALTERNATIVE NAME column. This will bring up the **ActionPLAN User Details Page** allowing the ActionPLAN User to modify the user information. Once the desired information has been modified select the **Save Button** to complete the changes or the **Cancel Button** to return to the previous screen.

Reset Password Button – Selecting this will prompt the ActionPLAN User to confirm the password reset process. Selecting the **OK Button** will reset the selected ActionPLAN User’s password and change the password status to “Must Change.” Selecting the **Cancel Button** will return to the **ActionPLAN User Details Page**.

Generate Certificate Button – Selecting this will prompt the ActionPLAN User Admin to enter a Common Name (CN) for the certificate and a password to be used by the selected ActionPLAN User. Once that information has been entered select the **Generate Button** to create and begin downloading the newly created certificate. Selecting the **Cancel Button** will return to the **ActionPLAN User Details Page**.

Deleting ActionPLAN Users

To delete an ActionPLAN User, select the **Delete Button** from the **ActionPLAN User Details Page** of the desired ActionPLAN User. Once selected the ActionPLAN User Admin will be prompted to confirm the deletion. Selecting the **OK Button** will delete the selected ActionPLAN User from the **User Admin Table**. Selecting the **Cancel Button** will return to the **ActionPLAN User Details Page**.

ActionPLAN User Roles

The following is a list of various ActionPLAN User roles and the privileges for each. Each ActionPLAN User has a defined set of roles that includes at least one of the following.

| Role | Description |
|--------------------------------|---|
| Dashboard User | Log into and view the ActionPLAN Dashboard |
| Customer Manager | Create and edit Company Groups |
| Plant Administrator | View all plant information. Create and edit contacts. Reset user passwords. |
| ActionPLAN User Admin | Create users and generate credentials. Reset user passwords. |
| ActionPLAN Device Admin | Create and assign devices. Generate DCD credentials. Generate DCD configurations. |
| Image Editor | Upload and modify images. |
| Line Manager | View Line configurations. |
| Line Technician | Configure Lines. |

| | |
|---------------------------------------|---|
| ActionPLAN Report Admin | Schedule report generation. Create and modify distribution groups. |
| Dashboard Layout Administrator | Create and modify Dashboard Templates |

Device Management Tab

Device Administration Table

This page of the Device Management Tab displays the **Device Administration Table**. This table displays information on all the devices being administered by the current **ActionPLAN Device Admin**. On this page ActionPLAN Users will be able to modify, add, check the status, and delete devices. Additionally, the **Device Administration Table** can also be sorted using the filter field at the top left-hand corner of the page.

Adding Devices

Select the red circular “+” sign button at the bottom right-hand corner of the page. This will prompt the ActionPLAN User with a dialogue to add a device. The **ActionPLAN Device Admin** must then fill out the **Type, Name, Alias, Serial Number, CryptoPath Connection** as well as the **IP Address, Network Mask, Gateway** for Interface 1 and 2 if using Dynamic Host Configuration Protocol (DHCP).

Type - The type of device to be created. Selected from a drop down list with the options for **Data Collection Device (DCD), Dashboard Personal Computer (DPC) or External Operator (XOP)**.

Name - The preassigned name used to represent the Device in the **ActionPLAN Administration Portal** and **ActionPLAN Dashboard**. Device **Names** are prepopulated.

Code - A prepopulated unique identifier used to represent the device in **AMAP** and the **ActionPLAN Dashboard**.

Alias - A name chosen by the **ActionPLAN Device Admin** used to represent a device in the **ActionPLAN Administration Portal**.

Serial Number - The manufacturer’s identifying number located on the physical device.

CryptoPath Connection - The type of connection to be used by CryptoPath. Selected from a drop down list, there are two options: **User Datagram Protocol (UDP)** or **Transmission Control Protocol (TCP)**

Description - A brief description used to describe the device and the purpose.

Device Details Page

| Navigation | Users | Device management | Reports |
|--|-------------------------|---|---------|
| Type * | Target IP Address * | Target IP Port * | |
| DCD | 1.1.1.1 | 123 | |
| Code (generated) | Name | | |
| 1 | DCD.1 | | |
| Alias * | Description | | |
| 1 | 111111 | | |
| Serial Number * | CryptoPath Connection * | | |
| NO_SERIAL | UDP | | |
| Interface 1 <input checked="" type="checkbox"/> DHCP <input checked="" type="checkbox"/> Wifi | | Interface 2 <input checked="" type="checkbox"/> DHCP <input checked="" type="checkbox"/> Wifi | |
| CryptoPaths CryptoPath 1: Configured Reconfigure CryptoPath 2: Not Configured Configure | | Update Zones Zone 1: Not Configured Configure Zone 2: Not Configured Configure | |
| CP Credentials: Not Generated Generate AP Credentials: Generated | | Database schema: Not Configured Configure | |
| Device Passwords ▼ CryptoPath IP Addresses ▼ | | | |
| Status INACTIVE | | | |
| Cancel Save Generate All Activate | | | |

Modifying Devices

To modify a device, select the hyperlink for the desired user under the **Name** column. This will bring up the **Device Details Page** allowing the **ActionPLAN Device Admin** to modify the device information. Once the desired information has been modified select the **Save Button** to complete the changes or the **Cancel Button** to return to the previous screen.

Generate and Generate All Buttons – There are two **Generate Buttons**: one for **CP Credentials** and the other for **AP Credentials**. Selecting either button will generate the respective credentials for the selected device. Once completed the status will change from "Not Generated" to "Generated." The **Generate All Button** will generate both ActionPLAN (AP) and CryptoPath (CP) credentials for the device, simultaneously.

Configure and Reconfigure Buttons – Under the CryptoPath section on the **Device Details Page** there are options to configure CryptoPath 1 and 2. Once the **Configure Button** is selected, the request will be processed and the status will change from "Not Configured" to "Configured" and the **Configure Button** will change to the **Reconfigure Button**. This process is the same for the Update Zones section containing Zone 1 and 2.

DHCP Switch - The Dynamic Host Configuration Protocol (DHCP) Switch allows the **ActionPLAN Device Admin** to toggle the DHCP connection type for interface 1 and 2 on and off.

Wi-Fi Switch - Wi-Fi Switch allows the **ActionPLAN Device Admin** to toggle the Wi-Fi connection type for interface 1 and 2 on and off.

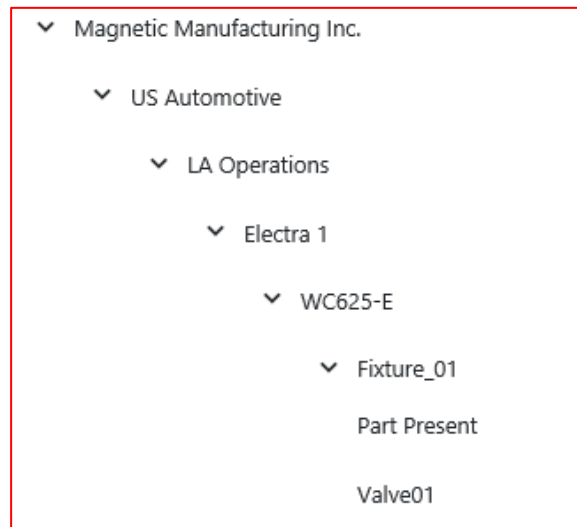
Deactivating Devices

To deactivate a device, select the **Deactivate Button** from the **Device Details Page** of the desired device. Once selected the **ActionPLAN Device Admin** will be prompted to confirm the deletion. Selecting the **OK Button** will deactivate the selected Device and change the Status to “INACTIVE”, Selecting the **Cancel Button** will return to the **ActionPLAN User Details Page**.

Reports Tab

Report Administration Page

This page displays live reports for the selected Company, Company Group, Plant, Line, Cell, Fixture or Input. These reports show the amount of parts and efficiency lost over the selected duration. The duration can be changed using the **Duration Buttons**. To select a specific report, you may use the same method used in the Navigation Tab, with the only change being **ActionPLAN Report Admins** can select specific Fixtures and Inputs. The hierarchy is pictured below.



Duration Buttons - The duration buttons in the top right-hand corner of the page include options for the Last 30 Days, Last 7 Days, Yesterday and 24 Hours. Selecting one will change the duration of the selected report.

PDF Button – This button in the top right-hand corner of the **Report Administration Page** opens a page to a list of **Scheduled Email Report** PDFs, which can be downloaded and viewed at the **ActionPLAN Report Admin's** discretion

Last 30 Days

Last 7 Days






Yesterday

24 Hours

PDFs

Time Zone: US/Eastern

Total downtime for the last 30 days (HH:MM:SS) 22:07:58 incidents: 706

| Top 5 priorities (the last 30 days) to take action | | | | | |
|---|--|----------|------------|-----------------|-----------|
| State | Input | Duration | Parts Lost | Efficiency Lost | Incidents |
|  | Magnetic Manufacturing : US Automotive : LA Operations Electra 1 WC625-E Valve01 Input:22 | 05:36:18 | 1,186.95 | 0.8341% | 147 |
|  | Magnetic Manufacturing : US Automotive : LA Operations Electra 1 WC627-E Valve11 Input:13 | 04:19:06 | 914.45 | 0.6426% | 36 |
|  | Magnetic Manufacturing : US Automotive : LA Operations Electra 1 WC625-E PART PRESENT Input:1 | 02:56:27 | 622.78 | 0.4376% | 432 |
|  | Magnetic Manufacturing : US Automotive : LA Operations Electra 1 WC628-E Valve11 Input:2 | 02:17:36 | 485.64 | 0.3413% | 12 |
|  | Magnetic Manufacturing : US Automotive : LA Operations Electra 1 WC626-E Valve05 Input:7 | 01:32:30 | 326.46 | 0.2294% | 6 |

- A red circle indicates low efficiency
- A yellow circle indicates efficiency that is met
- A green circle indicates high efficiency
- A white circle indicates that efficiency is not accounted for

ActionPLAN HR (Human Resources)

Process vs Machine Section

- Divides Lost Production into two sources: Machine Faults and Process Faults
 - Machine Faults: Faults with a duration of 5 minutes or higher
 - Process Faults: Faults with a duration below 5 minutes
- Lost Production percentages can be viewed during different time periods
 - Last 24 Hours
 - Last 7 Days
 - Last 30 Days
 - Current Shift or Previous Shift

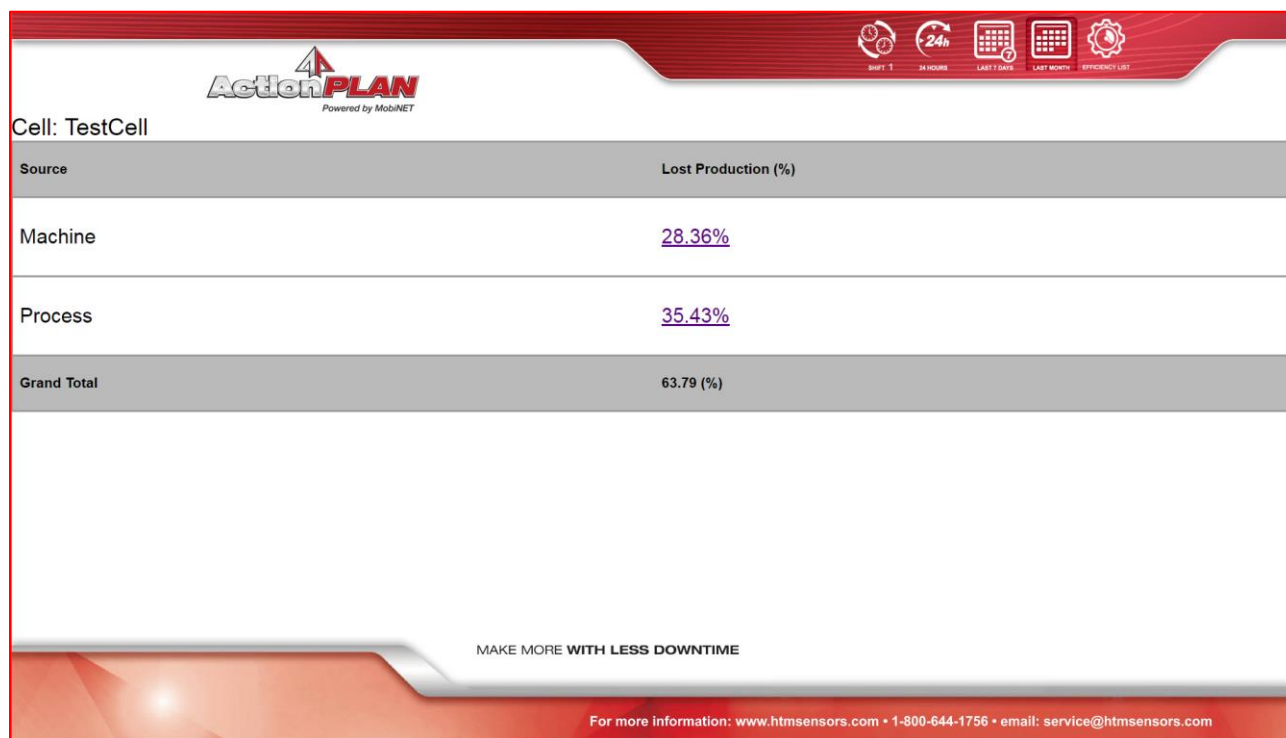
Select a Shift for Efficiency:

☒ Shift 2 - Thu

☐ Shift 1 - Fri

Cancel

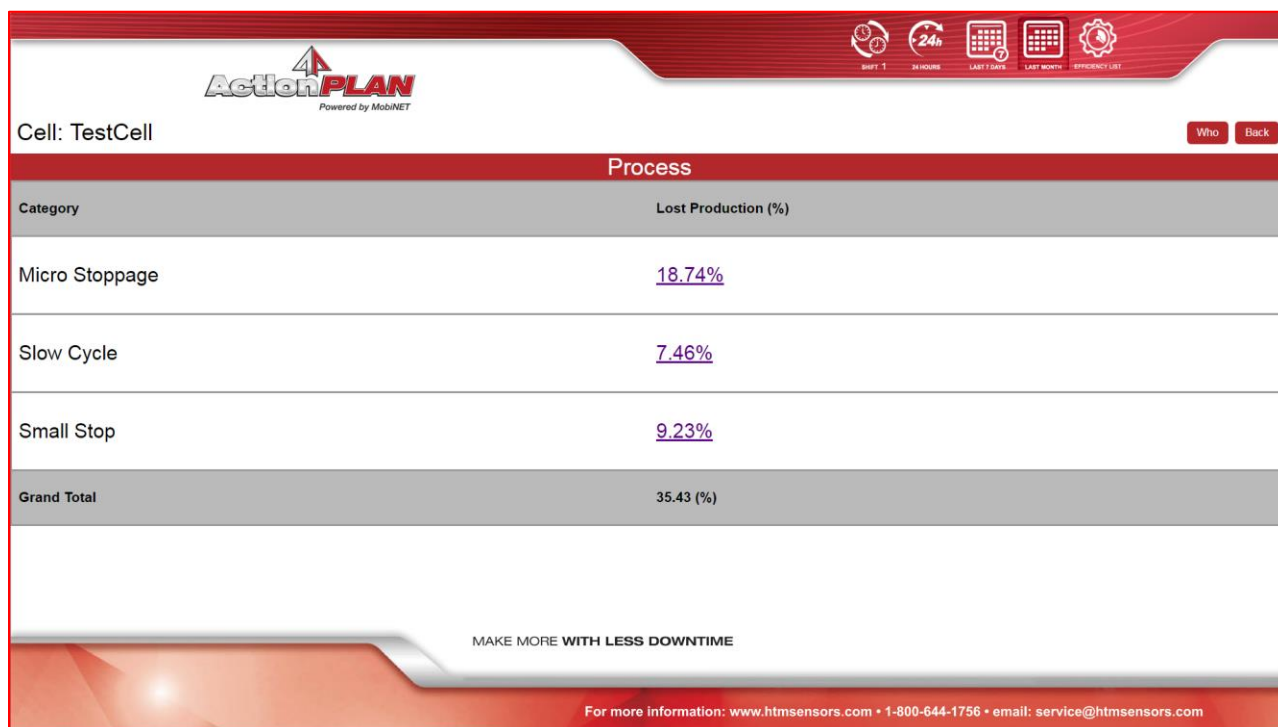
Ok



- Clicking on “Efficiency List” will redirect the browser to the Efficiency Report page
- It’s possible to drill down for more information. Clicking on Process will lead to the Process page

Process Section

- The Process page shows the lost production percentage for Micro Stoppage, Slow Cycle and Small Stop faults
 - Micro Stoppage: Total Lost Efficiency due to Downtime instances less than 1 Cycle
 - Slow Cycle: Total Lost Efficiency due to Downtime instances GREATER than 1 cycle and less than 2 cycles
 - Small Stop: Total Lost Efficiency due to downtime instances greater than 2 cycles and less than 5 minutes




Process Section – Operator Efficiency Page






- The “Who” button can be clicked to view the Operator Efficiency Page which has the following information
 - Operator: Personnel of Operator type
 - Operator Station: Station which Operator operates
 - Avg. Load vs Target (Seconds): Average Load Time vs Target (Target is specified in AMAP)
- In the Process page, the percentages for Micro Stoppage, Slow Cycle and Small Stop can be clicked to drill down further. This will show the categories that faults are tied to.



Process Section – Downtime Type Category Pages

- This page will display the Lost Production for each input type category
- The lost production for each input type category can be viewed for each downtime type
- When viewing the categories, it's possible to drill down further to see the top 5 faults that correspond to a category. This is done by clicking on the “Widget” button.




Cell: TestCell






Category Operator Efficiency
 Widgets
 Back

| Process DT Type: Micro Stoppage | |
|---------------------------------|---------------------|
| Category | Lost Production (%) |
| Part Present | 0% |
| Robot | 0% |
| Safety | 0% |
| Valves | 0% |
| Grand Total | 0 (%) |

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Cell: TestCell


Category Operator Efficiency Widgets Back






Process DT Type: Slow Cycle

| Category | Lost Production (%) |
|--------------|---------------------|
| Part Present | 1.98% |
| Robot | 0.48% |
| Safety | 0% |
| Valves | 5% |
| Grand Total | 7.46 (%) |

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Cell: TestCell

Category Operator Efficiency Widgets Back

Process DT Type: Small Stop

| Category | Lost Production (%) |
|--------------|---------------------|
| Part Present | 3.26% |
| Robot | 0.71% |
| Safety | 0% |
| Valves | 5.27% |
| Grand Total | 9.24 (%) |


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Process Section – Widgets Page

- From the Widgets page, any one of the top 5 events can be clicked, which will then redirect the website to the Input Details page, similarly to how the widgets in the Dashboard Report works (as well as the worst offender in the Efficiency Report page).









Cell: TestCell Process widgets Back

| Inputs | Downtime Incidents |
|--------------------------------|------------------------|
| WC626 Fixture_04 PP Input 6 | 0:43:10 149 |
| WC626 Fixture_04 PP Input 25 | 0:10:50 30 |
| WC626 Fixture_03 PP Input 13 | 0:06:33 36 |
| WC626 Fixture_04 PP Input 17 | 0:05:42 22 |
| WC626 Fixture_04 PP Input 9,10 | 0:04:17 8 |
| Total | 2:18:18 413 |

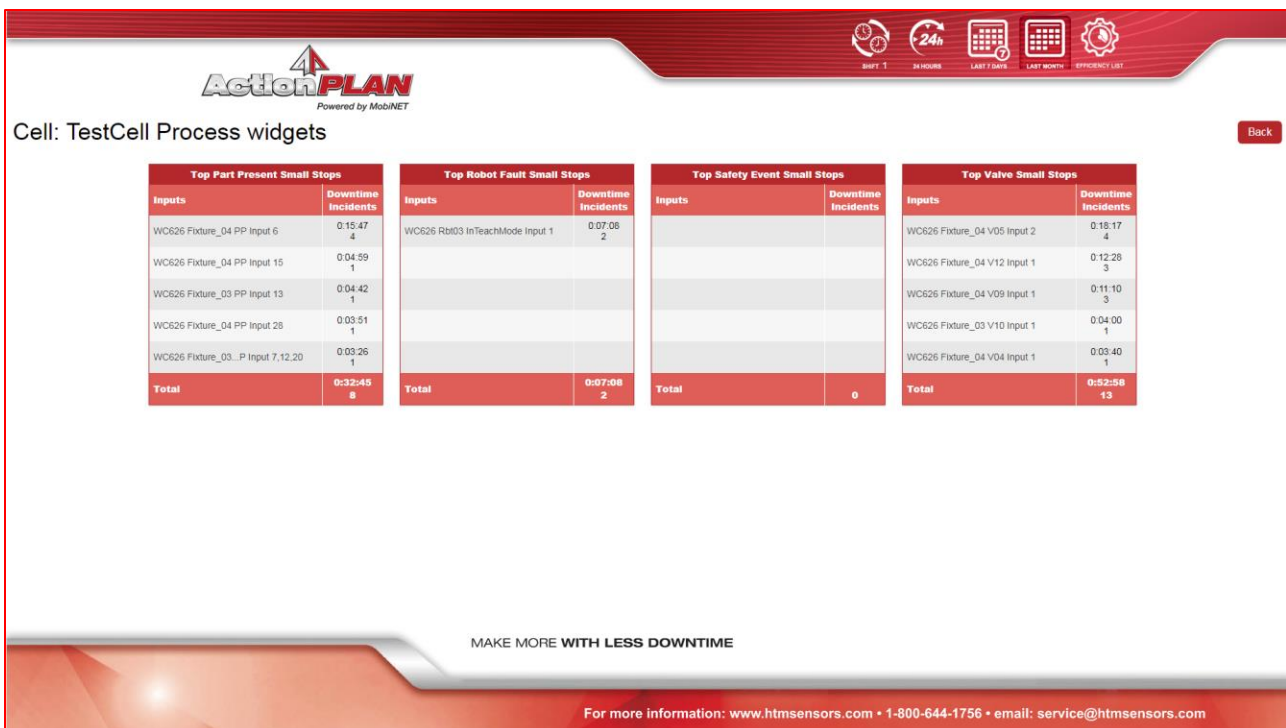
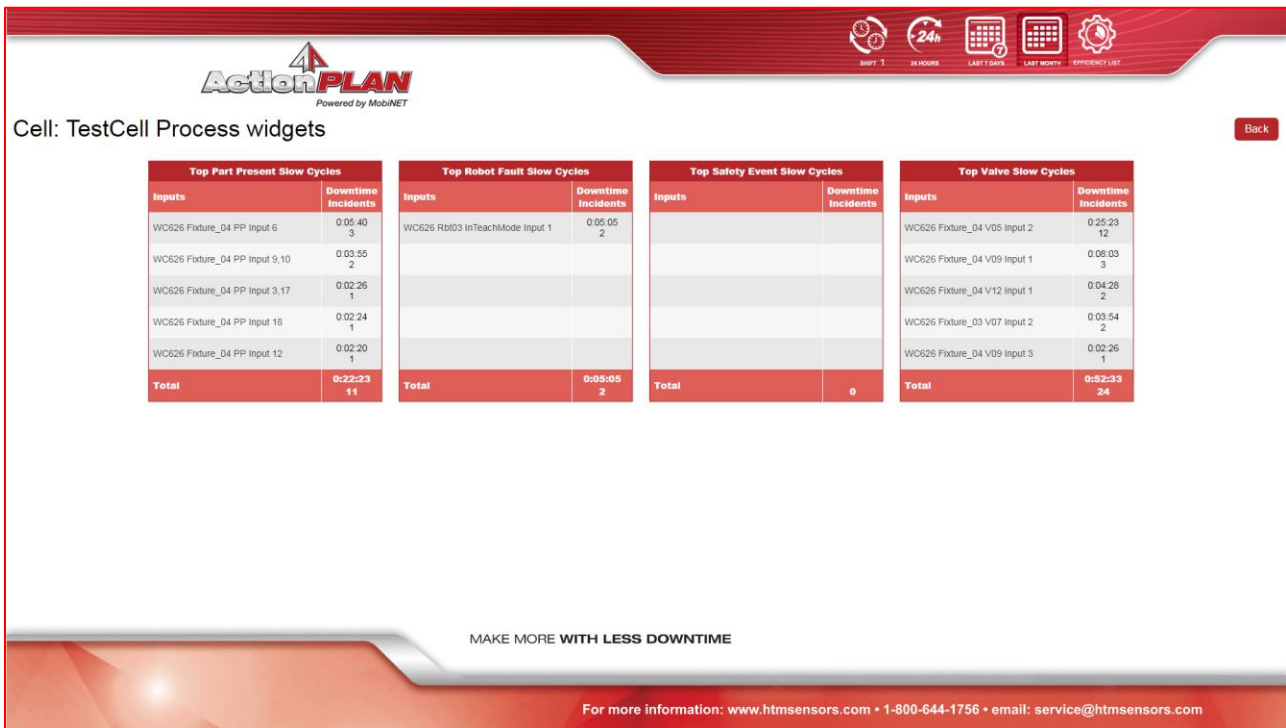
| Inputs | Downtime Incidents |
|---------------------------------|----------------------|
| WC626 Rbt03 InTeachMode Input 1 | 0:02:02 2 |
| | |
| | |
| | |
| | |
| Total | 0:02:02 2 |

| Inputs | Downtime Incidents |
|--------------|--------------------|
| | |
| | |
| | |
| | |
| | |
| Total | 0 |

| Inputs | Downtime Incidents |
|------------------------------|------------------------|
| WC626 Fixture_04 V05 Input 2 | 0:15:12 34 |
| WC626 Fixture_03 V07 Input 2 | 0:14:05 36 |
| WC626 Fixture_04 V04 Input 1 | 0:05:24 12 |
| WC626 Fixture_04 V09 Input 3 | 0:05:18 18 |
| WC626 Fixture_04 V09 Input 1 | 0:04:17 24 |
| Total | 1:11:26 172 |

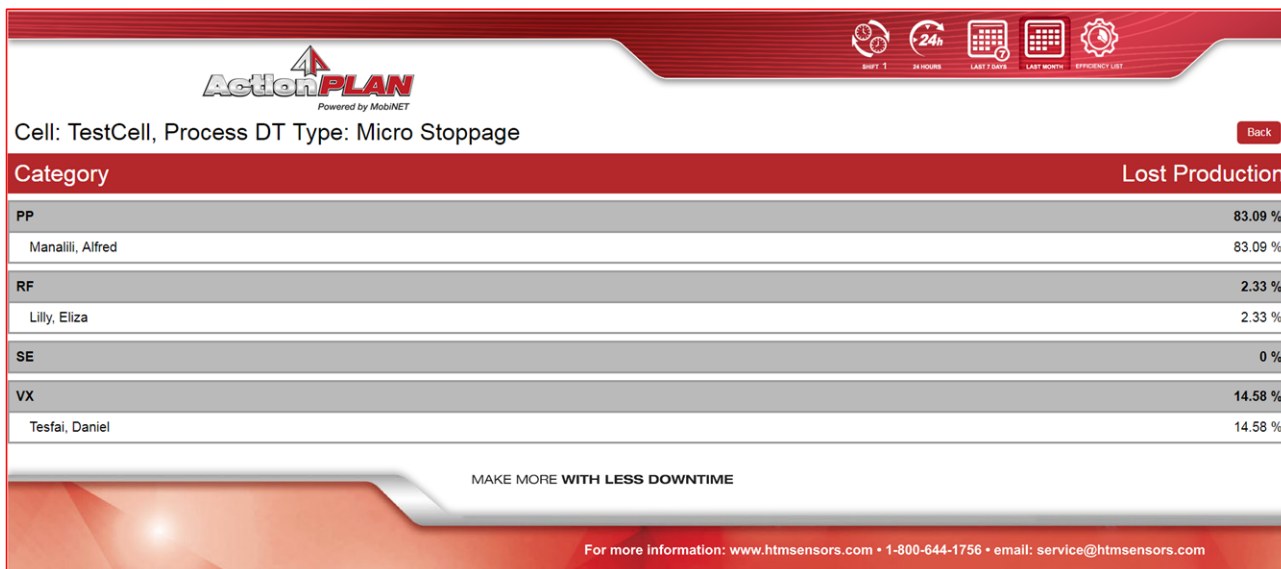
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Process Section – Category Operator Efficiency Page

- From the Input Type Category page, it's possible to click on “Category Operator Efficiency” to see which of the personnel are at fault
- The Lost Production percentage represents a ratio between the four category types
- Each category also represents a ratio between all personnel that apply
- The Category Operator Efficiency Page can be viewed for each Downtime type



Cell: TestCell, Process DT Type: Micro Stoppage Back

| Category | Lost Production |
|------------------|-----------------|
| PP | 83.09 % |
| Manalili, Alfred | 83.09 % |
| RF | 2.33 % |
| Lilly, Eliza | 2.33 % |
| SE | 0 % |
| VX | 14.58 % |
| Tesfai, Daniel | 14.58 % |

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Cell: TestCell, Process DT Type: Small Stop Back

| Category | Lost Production |
|------------------|-----------------|
| PP | 77.71 % |
| Tesfai, Daniel | 77.71 % |
| RF | 0 % |
| SE | 22.29 % |
| Manalili, Alfred | 22.29 % |
| VX | 0 % |

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Cell: TestCell, Process DT Type: Slow Cycle Back


| Category | Lost Production |
|------------------|-----------------|
| PP | 86.24 % |
| Manalili, Alfred | 86.24 % |
| RF | 0 % |
| SE | 0 % |
| VX | 13.76 % |
| Tesfai, Daniel | 13.76 % |






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Machine Page

- The Machine page will immediately show faults based on input type categories
- From the Machine page, it's possible to click on either "Maintenance Response Times" or "Widgets"
- "Widgets" will take you to the widgets page, similar to what was seen in the Process section
- Maintenance Response Times will take you to the Maintenance Response Times page



Cell: TestCell

Widgets
 Maintenance Response Times
 Back

| Machine | |
|--------------------|---------------------|
| Category | Lost Production (%) |
| Part Present | 10.96% |
| Robot | 2.65% |
| Safety | 0% |
| Valves | 14.75% |
| Grand Total | 28.36 (%) |

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Machine Section – Widgets Page

- Any one of the top 5 events can be clicked, which will then redirect the website to the Input Details page, similarly to how the widgets in the Dashboard Report works (as well as the worst offender in the Efficiency Report page).









Cell: Test Machine widgets

Back

| Top Part Present | |
|-------------------------------------|-------------------------|
| Inputs | Downtime Incidents |
| OP3 MH Robot 3 R...E.OAT PP Input 1 | 24:58:42 139 |
| OP3 PickUp 1 Par... Fault Input 4 | 0:49:51 4 |
| OP3 Unload Sln P... Fault Input 10 | 0:28:43 3 |
| OP3 Pick Up 2 Pa... Fault Input 3 | 0:12:22 1 |
| OP3 Pick Up 2 Pa... Fault Input 5 | 0:05:37 1 |
| Total | 26:33:15 148 |

| Top Robot Fault | |
|-------------------------------------|-----------------------|
| Inputs | Downtime Incidents |
| OP3 Weld Robot 6... Fault Input 1 | 2:17:49 10 |
| OP3 Weld Robot 6... Faults Input 1 | 2:08:38 12 |
| OP3 Weld Robot 6... Fault Input 1 | 1:54:15 12 |
| OP3 Weld Robot 7... Fault Input 1 | 0:49:18 5 |
| OP3 Weld Robot 5... Faults Input 35 | 0:18:06 2 |
| Total | 7:41:37 42 |

| Top Safety Event | |
|-------------------------------------|-----------------------|
| Inputs | Downtime Incidents |
| OP3 Unload Sln S... y Fault Input 2 | 6:32:26 34 |
| OP3 Unload Sln S... y Fault Input 3 | 0:27:15 1 |
| Total | 6:59:41 35 |

| Top Valve | |
|-------------------------------------|-----------------------|
| Inputs | Downtime Incidents |
| OP3 Unload Sln M... n Fault Input 4 | 1:21:42 7 |
| OP3 Unload Sln M... aut Input 7:10 | 0:12:00 1 |
| OP3 Unload Sln M... n Fault Input 3 | 0:09:12 1 |
| OP3 Unload Sln M... aut Input 8:11 | 0:08:57 1 |
| Total | 1:51:51 10 |

Machine Section – Maintenance Response Times page

- The Maintenance Response Times page will show for a fault with a downtime duration that has exceeded 5 minutes (5 minutes being an example) how long it took for



The screenshot shows the ActionPLAN interface for 'Cell: TestCell, Maintenance Response Times'. It features a table with maintenance workers and their average response times. The table has two columns: 'Maintenance Worker' and 'Average Response Time'. The data rows are: Daisuke, Kuze (0:00:47), Ramos, Raphael (0:02:02), and Kazuo, Kiriyaama (0:03:56). The overall average response time is 0:02:15. The page includes a 'Back' button and a footer with contact information.

| Maintenance Worker | Average Response Time |
|------------------------------|-----------------------|
| Daisuke, Kuze | 0:00:47 |
| Ramos, Raphael | 0:02:02 |
| Kazuo, Kiriyaama | 0:03:56 |
| Average Response Time | 0:02:15 |

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Glossary of Terms

ActionPLAN Account Manager - The Route1 employee responsible for assisting ActionPLAN Users and Account Owners with the deployment, maintenance and operations of ActionPLAN.

ActionPLAN Device Admin - The ActionPLAN Device Administrator. This user has the ability to modify, add, delete and generate credentials for DCDs and other devices.

ActionPLAN Dashboard - Customers access this interface to view their dashboard and standardized reports from any browser-based hardware platform. To log in to the ActionPLAN Dashboard a certificate, username, and password are required.

ActionPLAN Dashboard PC - A miniature fan-less stick PC used to display the ActionPLAN Secure Web Interface on the Plant Floor Display. The Dashboard PC can be connected via HDMI ports or Display Port if connecting directly from the DCD.

ActionPLAN Data Collection Device (DCD) - A hardened fan-less PC used for the collection and secure transmission of data from the Plant Floor. The DCD resides in the customer's Plant and is programmed to communicate, using industry standard OPC/UA, with PLCs and other controlling devices. It is internally firewalled from the Plant's network. The DCD can also function as an ActionPLAN Dashboard PC.

ActionPLAN Report Admin - The ActionPLAN Report Administrator. This user has the ability to view and generate reports as well as request scheduled reports from the **ActionPLAN Account Manager**.

ActionPLAN User - The end user of the ActionPLAN solution. Different ActionPLAN Users can have visibility of different Plants and Lines.

ActionPLAN User Admin - The ActionPLAN User Administrator. This user has the ability to modify, add, delete and reset the password of other ActionPLAN Users.

Address Information – Geographic location of the Plant, including **Time Zone, Daylight Savings Time Observed, Street Number, Street Name, Street Type, Unit Number, P.O. Box, Rural Route Number, Postal Code or ZIP Code** and **Phone Number**.

Alias - A name assigned by the **ActionPLAN Device Admin** used to represent a device in the **ActionPLAN Administration Portal**.

Alternative Name - The email of an ActionPLAN User. **Please Note:** The link to credentials will be emailed to the address entered here and will be used in the generation of the certificate.

Break Threshold - An outage is no longer considered an outage when it surpasses the supplied **Break Threshold**.

Cell Substr - A string used to identify a specific cell of data retrieved from a PLC. Used in combination with the **Cell Column**.

Cell Column - Column identifier for data retrieved from the PLC that is used in combination with the **Cell Substr** to identify a specific cell of data.

Configuration - An arrangement of devices according to their nature, number, and chief characteristics.

Often, configuration also pertains to the choice of hardware, software, firmware, and documentation. The configuration affects system function and performance.

Code - A prepopulated unique identifier used to represent a record in **AMAP** and the **ActionPLAN Dashboard**.

Country – Geographic Location of the Company Group, used to differentiate Company Groups and Plants.

Cycle Duration - The specified duration of time to capture information from the cell and used by the **Parts per cycle** variable.

CryptoPath Connection - The type of connection to be used by CryptoPath. Selected from a drop down list, there are two options: **User Datagram Protocol (UDP)** or **Transmission Control Protocol (TCP)**

Display Name - The name of Input Type to be displayed in widgets on the **ActionPLAN Dashboard**

Data Source - The ActionPLAN Users are able to access different data sources based on their level of access; these can range from the entire **Company** or **Company Group**, to a specific **Plant** or **Line**.

Description - A brief description used to describe the record and its purpose.

First Name - The first name of the ActionPLAN User

Fixture – The Fixture to be associated with the Input Type. Selected from a drop down list of available Fixtures.

Fault Substr - A string used to identify Fault data retrieved from a PLC. Used in combination with the **Fault Column**.

Fault Column - Column identifier for data retrieved from the PLC that is used in combination with the **Fault Substr** to identify if the tag is a Fault.

Hr Planned Runtime 24 Hr - The amount of runtime to be measured for the specified Line over 24 hours.

Hr Planned Runtime 28 Day - The amount of runtime to be measured for the specified Line over 28 Days.

Hr Planned Runtime Week - The amount of runtime to be measured for the specified Line over 7 Days.

Input Type Substr - A string used to identify the Input Type from data retrieved from a PLC. Used in combination with the **Input Type Column**.

Input Type Column - Column identifier for data retrieved from the PLC that is used in combination with the **Cell Substr** to identify data relevant to the specific Input Type.

Input Detail Page – The summary of all the data of a specific sensor or valve. This report is found by selecting the specific input on the **Dashboard Page** or using the **Search Button**. The scope of data in this report can be manipulated using the **24 Hours**, **Last 7 Days** and **Last Month Buttons** in the top righthand corner of the Dashboard, just like the **Dashboard Page**.

Last Name - The Last Name of the ActionPLAN User

Line - An assembly or production line, located within a manufacturing plant.

Micro Macro Threshold - This value is used to determine the Micro and Macro events that appear in widgets on the

ActionPLAN Dashboard

MobiNET - Route1's universal identity management system and service delivery platform.

MobiNET Agent Software - Software deployed on the DCD being accessed when users are remote.

Name – The assigned name used to represent a record in **AMAP** and the **ActionPLAN Dashboard**. Names are automatically assigned to devices.

Offset Regexp - The Offset regular expression. This is applied to the value in the **Offset Column** and used to calculate the **Offset**.

Offset Column - A column of data retrieved from a PLC. The regular expression is applied to the value of the **Offset Column** and used to calculate the **Offset**. This is an optional field.

Parts per cycle - The amount of expected parts to be used during each cycle, specified by the **Cycle Duration**.

Planned Runtime - The amount of runtime to be measured for the specified Line over the course of a week. The amount of **Planned Runtime** can be specified by each day of the week. For more information on how to adjust the runtime for each day refer to the **Modifying Lines** section under the “Navigation Tab – Lines” section of this User Guide.

Plant – The physical manufacturing plant where goods are produced or assembled.

Plant Floor Display - Located at the customer Plant to display the dashboard.

Register Size – Determines how many inputs correspond to each **Offset**.

Dashboard Page - Page of the ActionPLAN Dashboard that shows several reports from across the entire data source. These reports can be manipulated to the ActionPLAN User’s need to show things like Lost Parts, Lost Downtime and Lost Efficiency.

Route1 CryptoPath - Used to provide secure communication between MobiNET, the Plant Floor, the servers, and the ActionPLAN Dashboard Display. The Plant does not need to open any inbound firewall ports – all data is encrypted and transmitted using Route1’s CryptoPath high assurance communication service.

Serial Number - The manufacturer’s identifying number located on the physical device.

Tagline - A brief description or slogan used to describe a Line and its purpose.

Temporary Password - A temporary password to be set by the **ActionPLAN User Admin** for when the password reset process is initiated.

Type - The type of device to be created. Selected from a drop down list with the options for **Data Collection Device (DCD)**, **Dashboard Personal Computer (DPC)** or **External Operator (XOP)**.

Type Category - Selected from a drop down list of the following options: **PP**, **VX**, **ND**, **SE**, **RF**, and **RT**.

XOP – External Operator (XOP) is an entity that is connected to **CryptoPath**. It is an option for the **Device Type** variable.

Contact

Phone Numbers

Telephone: +1 416-848-8391

Toll Free: +1 866-286-7330

Fax: +1 416-848-8394

Arizona

5590 W. Chandler Boulevard, Suite 3

Chandler, Arizona. 85226

Colorado

1200 W. Mississippi Ave.

Denver, CO 80223

Florida

951 Broken Sound Parkway, Suite 108

Boca Raton, Florida. 33487

Tennessee

6031 Century Oaks Drive

Chattanooga, Tennessee. 37416

Virginia

9962 Brook Road, Suite 607

Glen Allen, Virginia. 23059

Canada

Corporate Head Office

8 King St. East, Suite 600

Toronto, Ontario. M5C 1B5

Email

support@route1.com

sales@route1.com

Visit us at: www.route1.com