# How To Set Up and Use the SAP ME POD

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**Version 2.2**

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SAP ME "How-to" Guides are intended to simplify the product implementation. While specific product features and procedures typically are explained in a practical business context, it is not implied that those features and procedures are the only approach in solving a specific business problem using SAP ME. Should you wish to receive additional information, clarification or support, please refer to SAP Consulting.

| Document Version | Description | Author |
|---|---|---|
| 1.0 | Initial version | Charlie Cutler |
| 2.0 | 6.1 updates including Touch Screen POD | Peggy Enriquez |
| 2.1 | Updated soft keyboard information | Peggy Enriquez |
| 2.2 | 15.0 updates including latest Touch UIs and new Icon table | Peggy Enriquez |
|  |  |  |

## 1.1 Purpose

The ME Help How-To-Guide for the Production Operator Dashboard (POD) feature is intended to provide sufficient information to enable the feature to be easily understood, configured and readily utilized to meet business needs, making use of available best practices.

## 1.2 Scope

This Help information covers all aspects of the POD feature and its integration with other features and Activities.

## 1.3 Glossary

POD

Production Operator Dashboard is essentially the End User mechanism or GUI used by Shop Operators or Shop end users, to process and work production information associated to a manufacturing and assembly process.

Data fields

Entry fields used for data entry where needed.

Lists

List definitions to be used throughout the application, for example: Operation List, Work List, and Component List. A list defines the label to display for each column, row sort order, etc.

Workbench

A plug-in which provides an all-in-one view of the shop floor control unit (SFC number) being produced.

Category

List maintenance attribute of a List, used to segregate lists into specific categories which help to specify what the list is used for.

VTR

Visual Test and Repair – a POD that enables operators to view a 2D and 3D graphical model of the material being tested or repaired

Activity

This business object corresponds to a functional module in SAP ME. An activity is a basic unit of client code that usually (but not always) has a graphical user interface (GUI).

Message Board

>A POD that enables the viewing and processing of messages sent to User Groups.

Display Device

>Defines the type of device, either Standard or Touch Screen, from which the POD will be viewed from and the type of Graphical User Interfaces that will be displayed.

Display Size

>For a POD that has a Display Device of Touch Screen, the display size (Extra Large, Large, Medium and Small) controls the size of the GUI and its elements.

## 2.1 Description and Applicability

The Production Operation Dashboard overall "look-and-feel" conforms to other SAP standard GUI Concepts. It provides a Modular Plug-in layout and is configurable without the need for custom code enhancements. It comes out-of-the-box with standard pre-configured POD's that may be used as-is or copied and modified according to your needs.

The POD supports selection models based on Operation or Work Center and a Shop Workbench selection model. The latter is implemented as a plug-in providing the ability to view the SFC-related information in a single tree-structured view. This includes Operations, Buyoffs, Components, Data Collection Groups, Tools, and Work Instructions nodes that are interactive and can trigger the corresponding plug-ins for the selected SFC. When Buyoffs, Work Instructions, Tools, etc. are all attached at the same Operation, Shop Workbench plug-in groups and organizes them in a convenient structure and allows the user to select from the tree to transact.

A POD may be set up to be displayed on a Standard Display Device, i.e. a standard monitor or it can be set up to be displayed on a Touch Display Device, i.e. a touch screen monitor. Default Touch Operation and Work Center PODs are pre-configured with activities that have touch screen designed Graphical User Interfaces (GUI).

Another feature that is accessible from the POD is Visual Test and Repair. It allows component selection from a visual model of a material. Visual Test and Repair:

- Utilizes graphics to better identify and communicate defective components through visualization

- Supports multiple users simultaneously viewing models and creating NCs

- Enhances the repair process of defective product through visual identification of the defective component

  The POD's also support presentation of configurable data fields, including the ability to display the fields with a pre-defined list of options for the operator to choose from. The values entered to the data fields are validated on save action. This increases data field data accuracy through a restricted list, enables tighter data integrity through additional validations, and enhances the data collection experience during manufacturing.

  The POD features benefit users in the following ways:

- Modular configuration supports customer process/workflow requirements (Message Board)

- Support for multi-mode manufacturing in both high volume and complex assembly environments

- Setup and configuration feature enable a build-your-own approach right down to a POD for each user, if needed

- Standard out of the box configurations of POD's including Operation POD, Work Center POD and Message Board POD. Touch POD's are also available out of the box for Operation and Work Center POD's.

- Layout configurations provide different end User approaches


  **Component Benefits:**

  **Operation, Work Center and Message Board POD's** (see also *Operation POD, Work Center POD and Message Board* Help)

- Modular plug-in and layout configuration

- Highly configurable to meet the disparate needs of the shop floor w/out custom coding

- Transact at both the production unit and operation levels

- Filter work by production unit, operation/resource, or work center/end item number

- Updated design to reflect modern "look and feel"

- A Touch Display device can be set up in Extra Large, Large, Medium and Small Display Size to suit the POD display to the size and resolution of the touch device.

**Shop Workbench** (see also *Shop Workbench* Help)

- Shop Work Bench is a POD plug-in that organizes all manufacturing information in a tree structure for easy viewing and access

- Displays an all-in-one view of the entire SFC number

- Ability to expand and collapse parts or all of the tree



**Visual Test and Repair** (see also *VTR* Help)

- Viewing of ECAD layouts & schematics

- Supports standard ECAD formats, including IPC-2511 (GenCam), IPC-2581 (Offspring) and ODB++

- Viewing of 2D & 3D geometry models

- Interaction with model to log a nonconformance (NC)
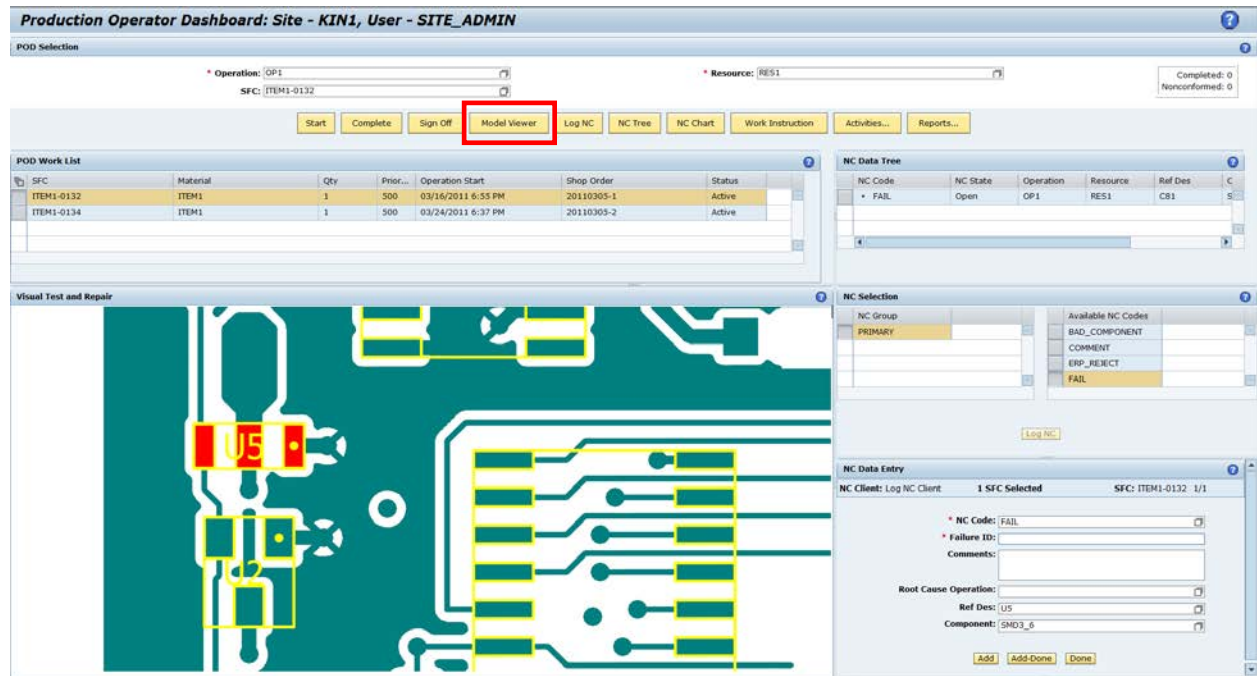
**Data Field List**

- Creates a master data field to be defined and shared across data type categories

- Offers a restricted list of values option for each data field

- Provides a pre-save validation for each data field and data type

- Provides an ability to collect SFC related data in the SFC Data POD plug-in

- Enables data integrity through validations

- Provides data accuracy through a restricted list of values

- Limits the number of lists to configure as the same data field with the list of restricted values can be used in multiple categories

- Provides the ability to collect SFC related data in a POD using the data type features

- Provides the ability to view the history of changes to the SFC related data

Configurable data fields are defined independently from data types which allow reusing of created fields in multiple data types and categories. A List field type allows for defining of a restricted list of values acceptable as data entry for this type of field, thus increasing data accuracy. Additionally, pre-save validation activities can be assigned to any data field or data type within each category to additionally validate operator's entries. The SFC category supports the collection of SFC number related data in a POD. These features provide all the

benefits of the data type features and allow for viewing of change history for the entered data, if any.

**Figure 1 List Maintenance**

**Figure 2 Data Field Definition Maintenance**



## 2.2 Business Purposes / Functions

Examples of what the POD's are used for;

- **Message Board POD** is used to view, create and process system and user generated messages and is configured as a POD that can be run as a Standalone POD or as a Plug-in in a POD.
- **Work Center POD** is configured and designed to benefit Complex Assembly manufacturing, to better enforce actions on the shop floor by personnel. This POD enables work for a certain work center and allows the user to select SFC numbers using the *POD Work List* plug-in and subsequently to select operations using the *Operation List* or *Shop Workbench* plug-ins**Operation POD** is configured and designed to benefit a simple or repeating Assembly manufacturing process (e.g. for a circuit board). This POD is operation centric and enables

work at a specific operation and resource while allowing the user to manage the *POD Work List*, configured to display *Active* SFC numbers.

- **Touch PODs** are configured to display on a touch screen device such as a touch monitor. They are designed with GUIs that are simplified and optimized for navigation on touch devices.

## 2.3   Best Practices

The POD conveys to the end user all of the configurations done to the Lists, Data Field Definition and Data Field assignment activities, in a Graphical User Interface (GUI).  It is recommended to use the out of the box POD's as is or as templates to use or configure the SAP ME system.

## 3.1   Description and Applicability

The POD allows SAP ME to be configurable to meet the needs of the shop floor without custom coding.  The functionality allows for the users to transact at both the production unit and operation levels. Additionally, allows for efficient filtering of work by production unit, operation/resource, or work center/end item number. It also provides support for multi-mode manufacturing in both high volume and complex assembly environments and allows for configuration to build your own approach right down to the user level.

The primary reasons for the POD redesign were for:

- Support of SAP GUI Standards

- Native support for SAP standards such as Accessibility

- Java technology (similar to JSF)

- Web based (i.e. no client required unlike Java Swing)

- Available library of components

> **Note:** with the re-invention of the POD's, some of the old POD's have been removed, for example PR409 - Integrated POD, PR450 - PCA Dashboard, PR403 - POD – Diagnosis, POD_COMPLEX_ASSEMBLY - Rich Complex Assembly with Pop-Over, POD_SUB_HORIZONTAL - Rich Subassembly Horizontal Display, PR650_RICH - Work Queue (SFC/Order List - Rich POD), PR660_RICH - Operation List (Work Queue - Rich POD) etc.  These have been removed for several reasons, 1) the "RICH" and "Standard" POD's have been converted to the default POD's and the "RICH" type is no longer supported with the move to the LSF/JSF implementations of the POD and in the case of

the Operation and Wordlists', those too have been converted to the Worklist category
activities and their list information defined in List Maintenance.

## 3.2 POD Maintenance

### 3.2.1 Description and Applicability

POD Types in POD Maintenance include Operation, Work Center, Message Board, Mobile and
VTR.

Selection of the **TYPE** determines what may be configured on the other tabs in POD
Maintenance.  Work Center vs. Operation vs. Message Board have unique configurability on
each of the tabs and may have lesser tabs based on the Type Selection.   For information on the
Mobile Type of POD, see the *SAP ME How-To-Guide- ME Mobile*.

Default POD configurations have already been defined out of the box for all three types of
POD's which can be used out of the box and can be selected in the POD Browse.  Default Touch
Operation and Work Center POD's are also preconfigured.

Supports the Real Time Message Display, used to display the RTMD on a POD like Work Center,
or Operation or Shop Workbench.

Display Device - There are two types of Display Devices: Standard and Touch Screen.  If Touch
Screen is selected, plug in activities that have touch screen user interfaces will display in the
POD.  If Standard is selected or there is no touch screen user interface, the plug-ins will display
a standard user interface.

Display Size: For a POD that has a Display Device of Touch Screen, the display size controls the
size of the user interface and its' elements. There are four different display sizes: Extra Large,
Large, Medium and Small.   Currently, Extra Large and Large load the same touch user
interfaces and are targeted to support touch screen monitors.  The Medium device size is
targeted to support a large tablet and the small is targeted for a medium tablet.  These are
recommendations. Both the physical size of the device and the device resolution effect the way
the POD displays on a device.

POD Session Timeout – there are two types of timeouts that occur in the system, the POD
Session timeout which is configured in POD Maintenance, and when the session expires the
users current session will be expired and they will be forced to either 1) log in again or 2) if SSO
then they will be redirected to the Activity Manager and back to their default Site.  The other
session timeout is handled by  NetWeaver security settings.

A POD pushbutton is used to launch an activity or POD plug-in.  It may be placed in five
locations on the POD: Left, Right, Above the POD Selection, Below the POD selection and at the
Page Bottom.   POD pushbuttons may be set up to displayed with a label only, an icon only or

both a label and an icon.  Out of the box, there are both standard icons (.gif) and touch icons (.png) available to display on the POD buttons.  The touch icons are available in large, medium and small sizes to fit the size of the POD or to allow the ability to change the size of the icon displayed on a button independent of the size of the POD.   See Button Tables in sections 3.3.2.1.2 and 3.3.2.2.2 for names of these icons.  See section on SAP ME Icons for a full list of icons available in SAP ME.

Accessibility functions are also available for association to buttons for the POD's by designating Hot Key buttons to the Activities and Button Groups.  Hotkey associations should use the "CTRL" keyboard button and key designation.  For example; Ctrl-A through Ctrl-Z.  Or "F" keyboard button and keyboard designation. For example F2, F3, F4, F5 etc.  In the POD, when a Browse field has focus, the Enter key or the F9 key will launch the browse function. A *Sound with Error* feature is also available.  When that feature is enabled/checked, a beep will be sounded whenever an error message is displayed in the POD.

**Figure 3 POD Maintenance**

### 3.2.2 Process Flow

This figure illustrates the primary flow of user and system actions to update a POD in POD Maintenance.

| POD Type | POD Button | POD Activity |
|---|---|---|
| WorkStation BO | HANDLE | Pod Button BO |
| Layout Type | POD_CONFIG_BO | Sequence |
| Session Timeout | BUTTON_ID | Activity BO |
| Task List Config BO | SEQUENCE | IS Plugin |
| DC List Config BO | BUTTON_SIZE | Clears SFC |
| Plugin Default | IMAGE_ICON | Open New Window |
| Display Device | | |
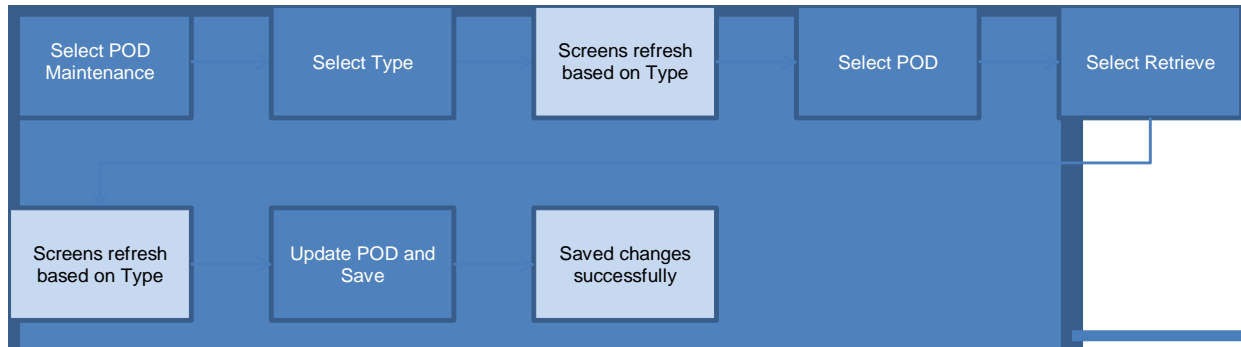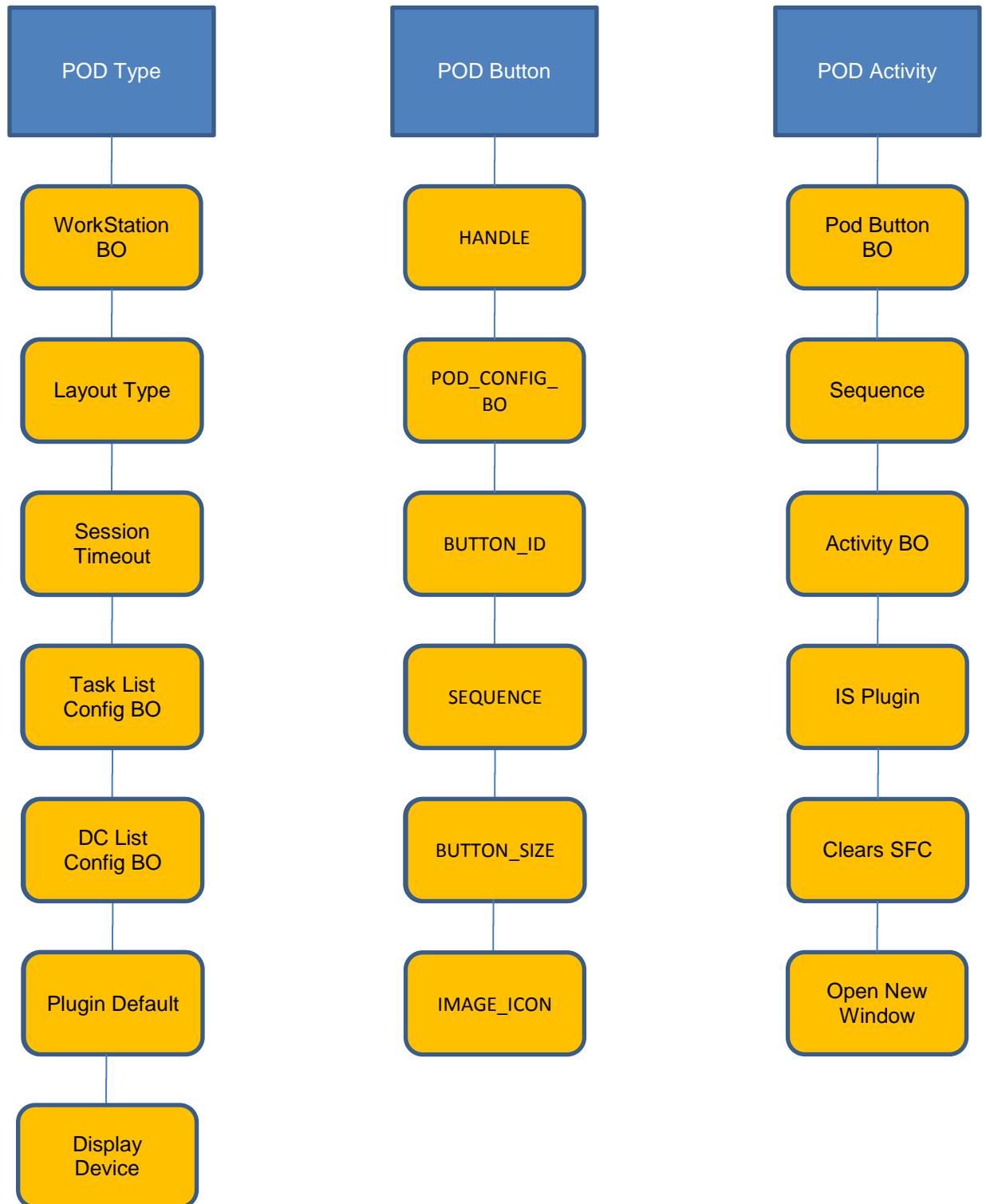
### 3.2.3 Function Specific Setup

For setting up this function, see *Pod Maintenance* ME Help for additional information. Select the TYPE (Operation, Work Center or Message Board) of POD desired to create or modify. When the Type is selected, the POD Maintenance screens will refresh to support the type selected.

The screens will display the appropriate fields available for modification based on the selection and the POD list will only allow the selection of a POD based on the Type. Select a POD; POD selection filters by the Type selected before.  Retrieve the POD and modify/update the POD the desired configuration.  To use the POD retrieved as a base, modify the POD field value and "Save" before continuing with any modifications.  This will ensure that the existing POD is not modified in the process, if it is intended to continue to use the existing POD as a guide in configuring any POD.

### 3.2.4  Best Practices

We recommend that you start with one of the predefined default POD's and modify it to suit your needs.  Operation POD is a good base for companies in the electronics (high volume manufacturing) industry, while the Work Center POD is a good base for complex assembly (Aerospace and Defense) as examples.

## 3.3  Default POD Configurations

### 3.3.1  Description and Applicability

Three POD TYPEs have been created for the Operation, Work Center and Message Board POD, and the default POD's, titled OPERATION_DEF, WORK_CENTER_DEF and MESSAGE_BOARD (see *Message Board* Help), have been defined and configured.  Two default Touch PODs have been defined and configured, titled OPERATION_TOUCH and WORK_CENTER_TOUCH.

### 3.3.2  Operation POD

The Operation POD supports Simple or High Volume Assembly manufacturing processes. One example of the Operation POD includes the running of the Assembly and NC plug-ins in the Operation POD during a Start of the Operation at a specific SFC.   For instance, when the Assemble button is clicked, the screen changes or refreshes to display the Component List and the Assemble Components plug-in.  The selected SFC information is displayed and shows the user which SFC they intend to assemble in this case.  An additional example may be when the User has selected an SFC and needs to Log a Nonconformance by selecting the Log NC button, they are presented with the NC Selection Plug-in and below that is the NC Data Entry Plug-in.  The Plug-ins all work together, to allow the user to Log the appropriate nonconformance for the selected SFC.  The plug-ins can be configured, where they can be defined to be Pop-up's, Popovers or Fixed Panels.  And what you see on the screen is defined entirely by the layout defined in the POD maintenance, associated activities, Lists, and Data Fields defined.  A final example is an example of the combined POD Work List.  This is one of the pre-defined Lists created in List Maintenance where the configuration (look and feel) and transaction capabilities are defined.  This list is combined to be used in the Operation and Work Center POD's and designed to work in either environment similarly, with some slight variations to support High volume vs. Complex assembly views and transactions. When a user clicks on any action button or executes some activity, the screen will change to support what has been selected.

**Figure 4 Default Operation POD screens**
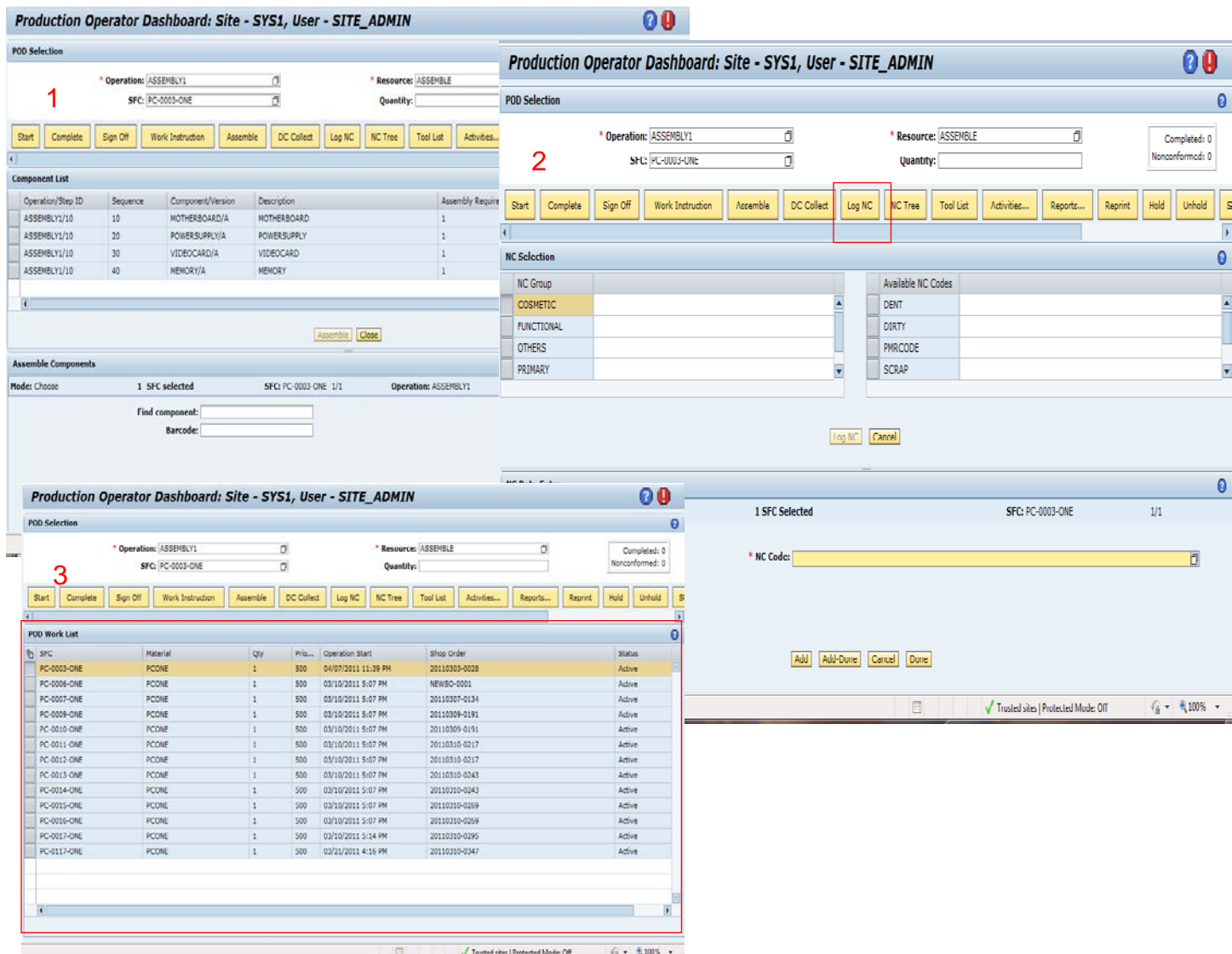


#### 3.3.2.1    Settings/Examples-Standard Operation POD

A standard default Operation POD is predefined in ME.  It uses the 3 Panel Horizontal Layout (with Popover) and the PS_OPERATION_2ROW POD Selection plug-in.  See *POD Maintenance* in ME Help.  An Operation POD with at least the following plug-ins is needed:

- An NC Client to Log nonconformance's against SFC's - LOG_NC (with NC_DATA_ENTRY and NC_SELECTION at a minimum)

- A Worklist to display the SFC's and their current status – WORKLIST_DISPLAY

- Plug-ins to collect Data  - DC_LIST_DISPLAY and DC500

- Plug-ins to perform Assembly – COMP_LIST_DISPLAY and CT500

Additionally possibly:

- Tooling plugins - TOOL_LIST_DISPLAY and LOG_TOOL

- Reports plugins - see below table

- Additional Activities plugins – see below table.

**3.3.2.1.1** Main Table- This table represents the data on the Main tab

| Field | Value |
|---|---|
| POD | OPERATION_DEF |
| Description | Default Operation POD |
| Sound with Error Message | Not checked |
| Status | Enabled |
| Display Device | Standard |
| Display Size | Extra Large Note: Only one size is supported for the out of the box standard POD |
| NC Client | LOG_NC |
| Real-Time Message Display | None |
| Special Instruction Display | Info Message |
| Session Time Out (mins:) | 30 |

**3.3.2.1.2** Buttons Table - This table represents the data on the Buttons tab.

| Button Label | Button Type | Activity | Standard Icon (.gif) |
|---|---|---|---|
| I18N[start.default.BUTTON] | Normal | PR500 | in_process.gif |
| I18N[complete.default.BUTTON] | Normal | PR510 | Complete.gif |
| I18N[signoff.default.BUTTON] | Normal | PR520 | recurring.gif |
| I18N[workinstruction.default.BUTTON] | Normal | WI_LIST_DISPLAY and WI500 | document_list.gif |
| I18N[assemblyPoint.default.BUTTON] | Normal | COMP_LIST_DISPLAY and CT500 | bill_material.gif |
| I18N[DCCollect.default.BUTTON] | Normal | DC_LIST_DISPLAY and DC500 | measureing_point.gif |
| I18N[logNC.default.BUTTON] | Normal | NC_SELECTION and NC_DATA_ENTRY | Reject.gif |
| I18N[ncTree.default.LABEL] | Normal | NC_TREE | |
| I18N[toolList.default.BUTTON] | Normal | TOOL_LIST_DISPLAY and LOG_TOOL | equipment.gif |

| I18N[activities.default.BUTTON ] | Group | CT510, CHG_EQUIP_STAT US, PR555, CREATE_MESS_PL UGIN, LOG_COMMENT, PR550, SFC_DATA_ENTR Y, SU520, SU530, and DC550 | |
|---|---|---|---|
| I18N[reports.default.BUTTON] | Group | TR700, CT700, BUYOFF_REPORT, DM710, SU750, NC700, DM700, DM730 | |

**3.3.2.1.3** Layout Table – This table represents the data on the Layouts tab:

| Panel | Type | Default Plug-in | Other Plug-ins |
|---|---|---|---|
| POD Selection | Fixed | PS_OPERATION_2R OW | |
| A | Fixed | WORKLIST_DISPLA Y | TOOL_LIST_DISPLAY , WI_LIST_DISPLAY, COMP_LIST_DISPLAY , DC_LIST_DISPLAY and NC_SELECTION |
| B | Fixed | | |
| C | Fixed | | LOG_TOOL, WI500, CT500, DC500, NC_DATA_ENTRY |
| D | Popov er | | NC_TREE |
| PS_OPERATION_2R OW | Popup | | CT510, CHG_EQUIP_STATUS, CREATE_MESS_PLUG IN, LOG_COMMENT, PR550, SFC_DATA_ENTRY, SU520, SU530, DC550, TR700, CT700, |

| | | | BUYOFF_REPORT, DM710, SU750, NC700, DM700, DM730, LT210, LT240, MESSAGE_BOARD_LIST |
|---|---|---|---|
| | | | |

**3.3.2.1.4**   List Options Table – This table represents the data on the List Options tab:

| Field | Value |
|---|---|
| Browse Work List | SFC_TASK |
| POD Work List | SFC_ACTIVE |
| Assemble List | DEF_POD |
| DC Collect List | DEF_POD |
| Tool List | TOOL_LIST_ALL |
| Work Instructions List | WORK_INSTRUCTION_ALL |
| DC Entry List | DEF_DATA_ENTRY |

**3.3.2.1.5**   POD Selection Table-  This represents the data on the POD Selection tab:

| Field | Value |
|---|---|
| Main Input | I18N[sfc.default.LABEL] |
| Default Operation | |
| Default Resource | |
| SFC Queue Button ID | |
| SFC in Work Button ID | |
| Info Line 1 | Completed Qty |
| Info Line 2 | Non Conformed Qty |
| Show Operation first | Checked |

| Show Quantity | |
|---|---|
| Operation Can be Changed | Checked |
| Resource Can be Changed | Checked |

### 3.3.2.2 Settings/Examples- Touch Operation POD

A Touch default Operation POD is predefined in ME. It uses the 1 Panel Horizontal Layout (with Popover).) and the PS_OPERATION_1ROW plug-in. See *POD Maintenance* in ME Help.

**3.3.2.2.1** Main Table- This table represents the data on the Main tab

| Field | Value |
|---|---|
| POD | OPERATION_TOUCH |
| Description | Operation Touch POD |
| Sound with Error Message | Checked |
| Status | Enabled |
| Display Device | Touch |
| Display Size | Extra Large |
| NC Client | LOG_NC |
| Real-Time Message Display | None |
| Special Instruction Display | Info Message |
| Session Time Out (mins:) | 30 |

**3.3.2.2.2** Buttons Table - This table represents the data on the Buttons tab.

| Button Label | Button Type | Activity | Touch Icon (.png) |
|---|---|---|---|
| I18N[start.default.BUTTON] | Normal | PR500 | large/start.png |
| I18N[complete.default.BUTTON] | Normal | PR510 | large/complete.png |
| I18N[signoff.default.BUTTON] | Normal | PR520 | large/signoff.png |
| I18N[workinstruction.default.BUTTON] | Normal | WI_LIST_DISPLAYand WI500 | large/workinst.png |
| I18N[assemblyPoint.default.BUTTON] | Normal | COMP_LIST_DISPLAY and CT500 | large/assemble.png |
| I18N[DCCollect.default.BUTTON] | Normal | DC_LIST_DISPLAY and DC500 | large/data_col.png |
| I18N[logNC.default.BUTTON] | Normal | NC_SELECTION and NC_DATA_ENTRY | large/nonconformance. png |
| I18N[toolList.default.BUTTON] | Normal | TOOL_LIST_DISPLAY and LOG_TOOL | large/log_tool.png |
| I18N[activities.default.BUTTON] | Group | CHG_EQUIP_STATUS, CREATE_MESS_PLUGIN | large/activities1.png |
| I18N[reports.default.BUTTON] | Group | TR700, CT700, BUYOFF_REPORT, DM710, SU750, NC700, DM700, DM730 | large/reports.png |

Note: There are three sizes of touch icons: large, medium and small.  If the Display Size is Medium and/or you want to display medium sized icons on POD buttons, they can be displayed by changing the large to a medium i.e.: medium/start.png   To display small sized icons, replace the large/ with small/  i.e. small/start.png.  The size of the touch icon you choose to display on POD buttons is Display Device independent; i.e. a large icon can be defined on a medium size POD's button. Both the standard and touch icons may be displayed on a POD button independent of the Display Device; i.e. a touch icon may be displayed on a standard POD's button.

**3.3.2.2.3** Layout Table – This table represents the data on the Layouts tab:

| Panel | Type | Default Plug-in | Other Plug-ins |
|---|---|---|---|
| POD Selection | Fixed | PS_OPERATION_1ROW | |
| A | Fixed | WORKLIST_DISPLAY | TOOL_LIST_DISPLAY, WI_LIST_DISPLAY, COMP_LIST_DISPLAY, DC_LIST_DISPLAY, NC_SELECTION, LOG_TOOL, WI500, CT500, DC500, NC_DATA_ENTRY, CREATE_MESS_PLUGIN, |
| B | Fixed | | |
| | Popup | | CHG_EQUIP_STATUS, TR700, CT700, BUYOFF_REPORT, DM710, SU750, NC700, DM700, DM730 |

**3.3.2.2.4** List Options Table – This table represents the data on the List Options tab:

| Field | Value |
|---|---|
| Browse Work List | SFC_TASK_TOUCH |
| POD Work List | SFC_ACTIVE_TOUCH |
| Assemble List | DEF_POD_TOUCH |
| DC Collect List | DEF_POD_TOUCH |
| Tool List | TOOL_LIST_TOUCH |
| Work Instructions List | WORK_INSTRUCTION_TOUCH |
| DC Entry List | DEF_DATA_ENTRY_TOUCH |

**3.3.2.2.5** POD Selection Table- This represents the data on the POD Selection tab:

| Field | Value |
|---|---|
| Main Input | I18N[sfc.default.LABEL] |
| Default Operation | |
| Default Resource | |
| SFC Queue Button ID | |
| SFC in Work Button ID | |
| Info Line 1 | Shop Order |
| Info Line 2 | Status (SFC) |
| Show Operation first | Checked |
| Show Quantity | |
| Operation Can be Changed | Checked |
| Resource Can be Changed | Checked |

### 3.3.2.3 Best Practices

The default Operation POD definition that has proven effective for viewing and processing SFC's. We recommend that it be used as a good starting point.

## 3.4 Work Center POD

The Work Center POD supports Complex Assembly manufacturing Processes. For example, the Layout defines how this screen looks upon the user logging in to the POD. The view is different than the Operation POD as they are intended on highlighting the needs of different manufacturing processes, however many of the same plug-ins and activities can be used interchangeably. The combined Worklist and also the combined Operation list (which is the same Operation List used in the Operation POD when you browse for an Operation). These lists are those that are maintained in the List Maintenance Activity. From this Work Center POD view the user has many transaction capabilities as well as activities to choose from to complete their tasks. For instance, when the user clicks on the Work Instructions button, the bottom half of the screen changes (refreshes) to now include the Work Instructions List associated to the Operations and SFC's at this Work Center. The user may choose to view those instructions, by selecting a row and clicking view or by double clicking the row which will then invoke the Work Instructions viewer and display the work instructions selected to the user as it was configured (popup, popover etc.). In another example, if the user selects the Activities button, a grouped list of activities dialog is displayed. The user can select additional activities that may be performed at the Operation and SFC in this view. Data Collection can also be defined as a Standalone activity in this list. When the User selects this activity, the Standalone Data Collection Activity dialog is displayed. These activities when selected, will display in this POD in whatever their configuration has been determined. These Activities are configured to be Popup dialogs, or Modal windows, which means they are displayed in a new window on top of the POD, so the information can be seen in the dialog while giving the ability to drag the dialog around, to view the POD data underneath.

**Figure 5 Work Center POD Screens**
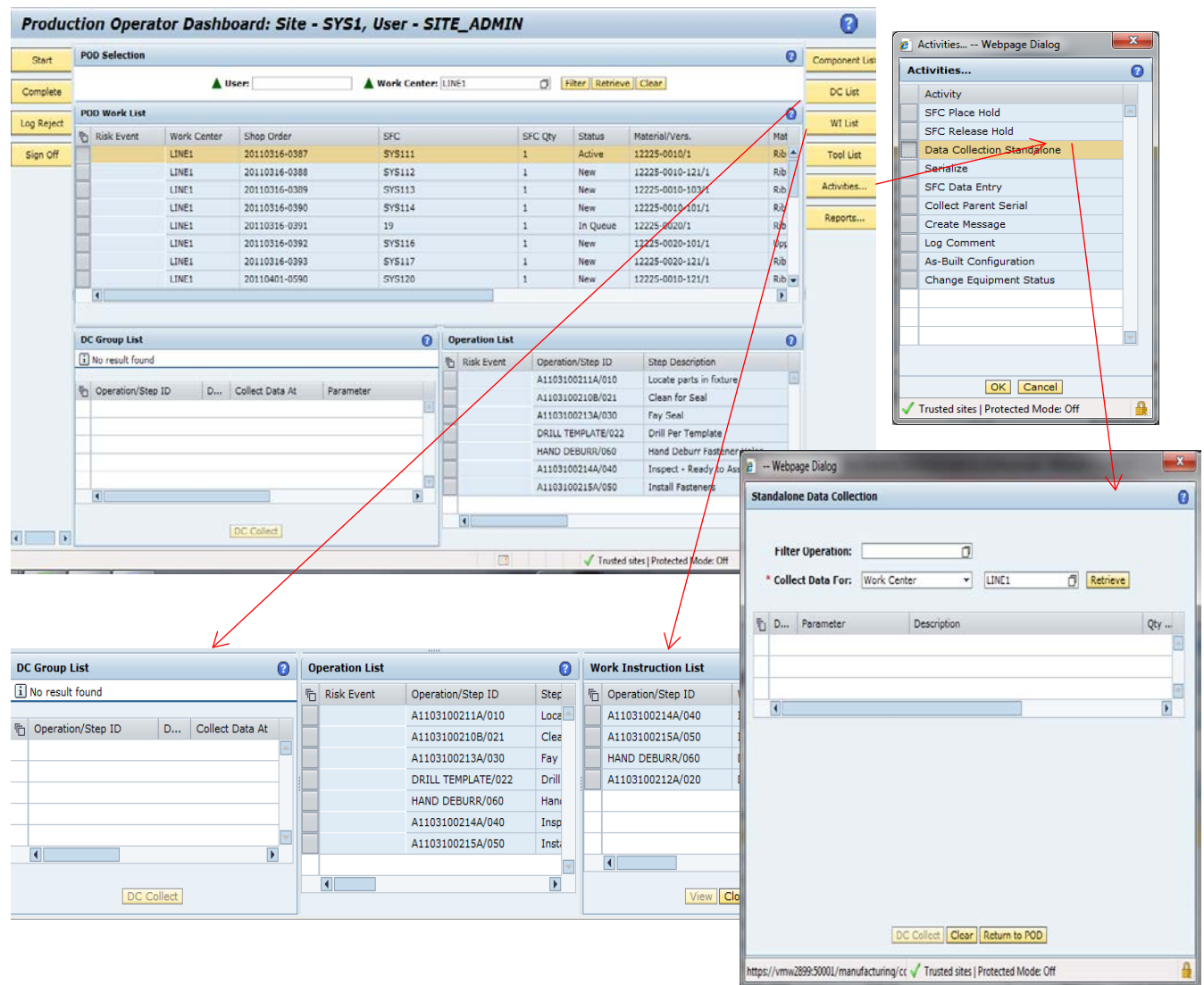


### 3.4.1   Settings/Example Standard Work Center POD:

A standard default Work Center POD is predefined in ME.  It uses the 3 Panel Horizontal Layout (with Popover).  See *POD Maintenance* in ME Help.  A Work Center POD with at least the following plug-ins is needed:

- An NC Client to Log nonconformance's against SFC's - LOGNC_REJECT at a minimum

- A Worklist to display the SFC's and their current status – WORKLIST_DISPLAY

- An Operation Plug-in display OPER_LIST_DISPLAY

- Plug-ins to collect Data  - DC_LIST_DISPLAY and DC500

- Plug-ins to perform Assembly – COMP_LIST_DISPLAY and CT500

Additionally possible:

- Tooling plugins - TOOL_LIST_DISPLAY and LOG_TOOL

- Reports plugins -  see below table

Additional Activities plugins – see below table.

### 3.4.1.1  Buttons Table - This table represents the data on the Buttons tab.

| Button Label | Button Type | Activity | Standard Icon (.gif) |
|---|---|---|---|
| I18N[start.default.BUTTON] | Normal | PR500 and LT370 | in_process.gif |
| I18N[complete.default.BUTTON] | Normal | PR510, BUYOFF_ACCEPT and LT380 | Complete.gif |
| I18N[logReject.default.BUTTON] | Normal | LOGNC_REJECT | |
| I18N[signoff.default.BUTTON] | Normal | PR520 | recurring.gif |
| I18N[compList.default.BUTTON] | Normal | COMP_LIST_DISPLAY | bill_material.gif |
| I18N[dcList.default.BUTTON] | Normal | DC_LIST_DISPLAY | measureing_point.gif |
| I18N[wiList.default.BUTTON] | Normal | WI_LIST_DISPLAY | document_list.gif |
| I18N[logNC.default.BUTTON] | Normal | NC_SELECTION and NC_DATA_ENTRY | Reject.gif |
| I18N[toolList.default.BUTTON] | Normal | TOOL_LIST_DISPLAY | equipment.gif |
| I18N[activities.default.BUTTON] | Group | CT510, CHG_EQUIP_STATUS, PR555, CREATE_MESS_PLUGIN, LOG_COMMENT, PR550, SFC_DATA_ENTRY, SU520, SU530, and DC550 | |
| I18N[reports.default.BUTTON] | Group | TR700, CT700, BUYOFF_REPORT, DM710, SU750, NC700, DM700, DM730 | |

### 3.4.1.2  Layout Table – This table represents the data on the Layouts tab:

| Panel | Type | Default Plug-in | Other Plug-ins |
|---|---|---|---|
| POD Selection | Fixed | PS_WORK_CENTER | |
| A | Fixed | WORKLIST_DISPLAY | |

| | | | |
|---|---|---|---|
| B | Fixed | | |
| C | Fixed | OPER_LIST_DISPLAY | |
| D | Popover | | COMP_LIST_DISPLAY, DC_LIST_DISPLAY, WI_LIST_DISPLAY, TOOL_LIST_DISPLAY |
| | Popup | | CT500, DC500, WI500, LOG_TOOL, LOGNC_REJECT, LT380, CT510, CHG_EQUIP_STATUS, CREATE_MESS_PLUGIN, LOG_COMMENT, PR550, SFC_DATA_ENTRY, SU520, SU530, DC550, TR700, CT700, BUYOFF_REPORT, DM710, SU750, NC700, DM700, DM730 |

**3.4.1.3   List Options Table – This table represents the data on the List Options tab:**

| Field | Value |
|---|---|
| POD Work List | DEF_WORKLIST |
| Assemble List | DEF_POD |
| DC Collect List | DEF_POD |
| Operation List | DEF_OPERATION_LIST |
| Tool List | TOOL_LIST_ALL |
| Work Instructions List | WORK_INSTRUCTION_ALL |
| DC Entry List | DEF_DATA_ENTRY |

**3.4.1.4**   **Best Practices** – The default Work Center POD definition that has proven effective for viewing and processing SFC's at the Operation and Work Center Level.  We recommend that it be used as a good starting point.

## 4.1   N/A

## 5.1   Activity Maintenance

Activities have been configured and have a default set of data that is used to configure and use in the POD's.  The activities work together to create Production Operator Dashboard for the Simple and Complex Assembly and Manufacturing environment needs.

### 5.1.1   Purpose / Effects

To provide a list of default activities in Activity Maintenance customers can use, to create their own POD's or to use them as is.

#### 5.1.1.1   Settings/Examples

The activities listed below offer a default configuration out of the box, which may be used as is or may be used as a starting point or example for configuring a POD.

An example of a POD is as follows for the Operation POD; this Activity is created as DEF_OPER_POD, this activity has been defined with the appropriate Class/Program URL as well as the TYPE defined as Standalone GUI (.jsp) indicating this is to be run as a POD.  The Shop Workbench Activity, created as SHOP_WB_Plug-in has been defined with the Class/Program and TYPE that indicates it is a Plug-in.  This Plug-in can be run from within a POD when configured in POD maintenance to do so.  You may look at the other Activities, in Activity Maintenance, identified below to see their specific configurations.

Implementations of the POD's are described below, and the Operation and wordlists' converted to the Worklist Category activities and their list information defined in List Maintenance.

#### 5.1.1.2   New Activities

- DEF_OPER_POD (POD - Operation)

  o   Default Operation POD activity

- DEF_WC_POD (POD – Work Center)

    o Default Work Center POD Activity

- MESSAGE_BOARD (Message Board )

    o Message Board POD Activity

- PS_OPERATION 2ROW (2 rows POD Selection Operation for Standard POD)

    o Operation POD selection activity (default selection area for standard POD) formally known as PS_Operation
    o Activity Rule *Display Labels* set to YES

- PS_OPERATION_1ROW (1 row POD Selection Operation for Touch)

    o Operation POD selection activity (default selection area for Touch POD)

    o Activity Rule *Display_Labels* set to NO

- PS_WORK_CENTER

    o Work Center POD selection Activity (Default selection area)

- SHOP_WB_Plug-in (Shop Workbench)

    o Shop Work Bench Activity (plug-in)

- DEF_SHOPWB_POD - POD – (Shop Workbench)

    o Default Shop Workbench POD

- COMP_LIST_DISPLAY

    o Component List Data Entry Plug-in

- DEF_VTR_POD - POD (Visual Test and Repair)

    o Default Visual Test and Repair POD

- OPER_LIST_DISPLAY (Operation List)

    o Default Operation List
- DEF_OPER_POD_TOUCH
    o Default Operation Touch POD
- DEF_TOUCH_WC_POD
    o Default Work Center Touch POD

- MESSAGE_BOARD_PANEL
  - Message Board POD selection activity
- MESSAGE_BOARD_LIST
  - Message Board POD List Area

### 5.1.1.3   Enhanced Activities

- SY130 (Data Field Assignment Maintenance)

  - Data field Assignment Activity

- SY160 (Data Field Definition Maintenance)

  - Data Field Definition Maintenance Activity

- EN090 (POD MAINTENANCE)

  - POD Maintenance Activity

- PR010  (List Maintenance )

  - List Maintenance Activity

## 5.1.2   Other Activities to consider

### 5.1.2.1   List Maintenance

**Purpose / Effects** – List Maintenance includes a default number of List's available that have been preconfigured for use as templates for customers who wish to modify them for their own need and their custom POD's or use as is.  The Lists in some cases have been combined.  Category has been converted to Worklist (which is now a combined activity that is used in Operation and Work Center POD's) and the other Lists have been named to identify which Plug-in or POD they are meant to be used for and match the names of the Activities that have been converted for instance, Assembly Point, DC Collection, NC (Tree and Data Entry Plug-ins), Tool Plug-ins, and Work Instructions plug-ins.  For many of the lists, there is a complimentary list with a *TOUCH* at the end of the name of the list.  The number of fields on these lists has been pared down to fit on a typical Touch Screen device.   The Mobile category supports list for mobile apps.

Several check boxes exist in  List Maintenance that add additional functionalities associated to the List; for Allow Operator to Sort rows, Allow Operator to Change the Column sequence (sorting ascending descending and sequence).  These functionalities determine how the list behaves when it is being viewed and used in a POD or Plug-in typically in a table view.  Finally, modification to the TYPE dropdown, where the additional types of "Material" and "Material/Ver" exist as valid types, to further

delineate the list.  Predefined lists associated to the Category types and which are already associated to the default POD's and Plug-in's exist by default.

## 5.1.2.2  Data Field Definition Maintenance

**Purpose / Effects** – The Data Field Definition maintenance activity has been provided to allow the reuse of data fields in different data types and categories.  Configurable data fields are defined independently from data types which allow reusing of created fields in multiple data types and categories. A List field type allows defining a restricted list of values acceptable as entry for this field thus increasing data accuracy. Additionally, pre-save validation activities can now be assigned to any data field or data type within each category to additionally validate a user's entry. A category, SFC, has been added to support the collection of SFC related data in POD. These feature substitutes for the SFC custom data available in ME, providing benefits of enhanced data type features and allowing viewing change history to the entered data, if any.

- Provide data integrity through additional validations

- Provides data accuracy through a restricted list

- Limits the number of lists to configure as the same data field and the list of restricted values can be used in multiple categories

- Provides an ability to collect SFC related data in POD with the data type benefits and historical view.

### 5.1.2.2.1  Settings / Example

This activity provides a mechanism for the creating data fields, assigning field type and validation mechanisms, including mask and format validation, checks against the pre-defined list of values, and customizable pre-save validations. Mask validation is performed by checking operator entries against a set of masks defined for material/material group. Format validation is performed against the selected field type (e.g. date, number) and user locale. Validation against the pre-defined list of values is available for the fields of the List type. You can define values to be selected by the operator during production activities, and they appear in the browse for the field in POD.  Only the values in this browse will pass validation when a user tries to save the entries.  Finally, the ability to define a pre-save activity allows running the custom validations to be executed during save of data values during production.

Data fields created in Data Field definition activity are additionally assigned to data types and categories in Data Field Assignment Maintenance activity. Data Type Maintenance activity provides the ability to assign one and the same field (e.g. comments) to different data types. (See *Data Field Definition* Help for more information).

### 5.1.3 NC Highlights

**Purpose / Effects** – The NC Data Tree is used to display hierarchical view of primary and secondary nonconformances logged for an SFC at an operation.  The LOG_NC functionality has been enhanced to provide the ability to perform the Close All Open NC's from this view as well as provide the Edit capability and NC Detail Report from the links in the columns.  The As-Built Link was added to the NC Data Entry screen to launch the As-Built Configuration Activity.  The capability to enter primary and secondary NC's has also been supported and is evidenced when viewing the NC's logged in the NC Data Tree.  (See *NC Help* for more information)

**Figure 6 NC Functional Highlights**



### 5.1.4 Visual Test and Repair

**Purpose / Effects** – Visual Test and Repair POD is available out of the box as a pre-defined solution enabling quick and accurate logging of defects and repairs. It contains the Visual Test and Repair plug-in, displaying the model for the selected SFC, NC Data Tree plug-in, providing the tree-structured view of NC codes logged for a component, NC Selection plug-in, providing

the list of available NC Codes and NC Data Entry plug-in allowing to Log NC code for the component. To log a nonconformance in this POD, the user selects an NC code that identifies the type of failure or defect in NC Selection and fills in required and optional fields as needed in NC Data Entry. Then user selects the failing or defective model element (component, route or test point) in the model display. The system automatically loads the info identifying the selected component to the appropriate fields of NC Data Entry plug-in (these fields are configurable in Data Field Assignment and System Setup activities). To save a logged NC Code against the selected component, the user clicks the ADD or ADD-Done button in NC Data Entry plug-in.  (See *VTR* Help for more information).

### 5.1.5 Shop Workbench Highlights

**Purpose / Effects** – The Shop Workbench plug-in is configured to be used with the Work Center POD.  The user selects an SFC from the Work List and the Shop Workbench displays the data for that SFC.    The user can view displayed data in a tree view and can collapse and expand all or part of the tree.  The top part of the tree displays the information for the SFC.   The operations with their relevant data display below the SFC data. The user may select an operation and perform a transaction by selecting a pushbutton - Start, for example.  The user may select a node from the tree, a Tool Group for example, and request the Log Tool entry activity.  In this example, the Tools node of the Shop Workbench plug-in performs like the Tool List plug-in.  Once the Tools node or a specific tool group is selected from the tree, the Log Tool pushbutton causes the plug-in to display with the selected data filled in.  Icons display next to the operation node.  The Buyoff, Components and Data Collections icons will display brightly when their corresponding data has not been collected and the icon colors fade when the data is collected to reflect the collected or done status.  (See *Shop Workbench* Help for more information).

### 5.1.6 Touch POD Highlights

**Purpose / Effects** – There are two out of the box POD's configured for a Touch Screen monitor.  One is the Operation_Touch POD which is an operation type POD and the other is the WORK_CENTER_DEF_TOUCH POD which is a Work Center type POD. Most touch screen monitors have limited screen space in order to accommodate touch navigation. Touch GUI design have been kept as simple and streamlined as possible.

When a POD has been defined as a Display Device of Touch Screen then the Touch GUI of an activity will be displayed if available.  If a Touch GUI is not available, then the standard GUI will display.  Because touch devices come in many sizes and support different resolutions, the Display Size allows you to adjust the size of the POD so that it fits on the touch device you are using.  Extra Large and Large will generally suit a Touch Screen Monitor.  Medium will work for most large tablets and Small will suit medium sized tablets.  It's recommended that you experiment with different combinations of display resolution and Display Size to find the settings that produce the clearest and best POD display for that device.

The Touch POD has an integrated On-Screen Keyboard for the Large and Medium Display Size. It is assumed that the Small Device Size that is targeted for use on a tablet will use the tablet's virtual keyboard.  The languages supported by it are: English, French, German, Italian, Turkish, Portuguese, Russian and Spanish.  To activate the On-Screen Keyboard, include the follow command in the POD URL: &SOFT_KEYBOARD=true For example:

http://*server name*/manufacturing/com/sap/me/wpmf/client/template.jsf?WORKSTATION=OPERATION_TOUCH**&SOFT_KEYBOARD=true**&ACTIVITY_ID=DEF_TOUCH_OPER_POD


For languages not supported by the integrated On-Screen Keyboard, the Microsoft On-Screen Keyboard may be used.  To set it up, see *Type without using the keyboard (On-Screen Keyboard)* in Microsoft's Windows documentation. Additionally, see SAP Note 1790160 for additional information.

The Touch POD displays in the default *Corbu* theme.  It can be displayed in the *Tradeshow Plus* them as well.  To display the Touch POD in the Tradeshow Plus theme, include the follow command in the POD URL: &THEME_NAME=TRADESHOW For example:

http://*server name*/manufacturing/com/sap/me/wpmf/client/template.jsf?WORKSTATION=OPERATION_TOUCH**&THEME_NAME=TRADESHOW**&ACTIVITY_ID=DEF_TOUCH_OPER_POD

In order to display the Logout icon on a POD, include the following command in the POD URL: &LOGOUT=true

In order to display a Touch sized UME logon screen, include the following command in the POD URL:  &DEVICETYPE=touch

- POD Maintenance – Link to POD Maintenance information in SAP ME Help; http://help.sap.com/saphelp_me60/helpdata/EN/0d/2d279543704a9ab97f7ad830baea9b/content.htm

- Security policy on User IDs and Passwords:
  http://help.sap.com/saphelp_nw73/helpdata/en/49/386a11c657200be10000000a42189c/content.htm

- LDAP directory as data source:
  http://help.sap.com/saphelp_nw73/helpdata/en/48/d1d13f7fb44c21e10000000a1550b0/content.htm

- Configuring the UME to Use an LDAP Directory as Data Source:
  http://help.sap.com/saphelp_nw73/helpdata/en/12/7678123c96814bada2c8632d825443/content.htm


- Managing Users, Groups, and Roles – Link to UME setup and Configuration information in SAP ME Help;
  http://help.sap.com/saphelp_nw73/helpdata/en/48/0D9FE9439612DBE10000000A42189D/content.htm



## 7.1   Work Center POD Selection

**Purpose / Goal** – The purpose of this is to describe test scenarios for verification of Work Center POD Selection functionality that serves as the entry point for the user when retrieving data to transact on within the Work Center POD.

For this scenario the following preconditions apply:

- In Rich POD Supervisor Assignment, assign SFCs from the following shop orders to USER1: USR1WC1EUN1 SFC, USR1WC1EUN2 SFC, USR1WC12EUN2 SFC and USER1WC12EUN2.

- In Rich POD Supervisor Assignment, assign SFCs from the following shop orders to USER2: USR2WC12EUN1 SFC, USR2WC2EUN1 SFC, USR2WC12EUN2 SFC and USR2WC2EUN2

- New POD of Work Center type is configured (with Work Center POD Selection Plug-in). User has all rights for activities execution.

- User1 is logged in to ME application.


### 7.1.1   Scenario Specific Settings – All other Configurations defined above have been set up.

**7.1.2** **Scenario Steps** – The following are examples of the steps that a user might perform in SAP ME in order to accomplish this scenario.

**7.1.2.1** **WC POD Selection**

1. Launch new POD Work Center POD Default Values - New POD Work Center POD Default Values with Work Center POD Selection Plug-in is launched

2. Enter USER1 in User ID field and click Retrieve -  Work List updates with records for SFCs containing operations assigned to USER1 and matching filter criteria regardless of work center or end unit number

3. Select any SFC - Operation List displays SFC operations assigned to the user at this work center

4. Select operation in Operation List and perform any subsequent transaction (e.g. Start) against it - Subsequent transaction was executed.

5. SFC Status in Work List changes according to transaction

6. Operation Status in Operation List changes according to transaction

7. Enter USER2 in User ID field and click Retrieve - Work List updates with records for SFCs containing operations assigned to USER2 and matching filter criteria regardless of work center or end unit number

8. Select any SFC - Operation List displays SFC operations assigned to the user at this work center

9. Select operation in Operation List and perform any subsequent transaction (e.g. Start) against it - Subsequent transaction was executed.

10. SFC Status in Work List changes according to transaction

11. Operation Status in Operation List changes according to transaction


**7.1.2.2** **Change Filter criteria**

12. Enter USER1 in User ID field, WC1 in Work Center field and click Retrieve - Work List updates with records for SFCs containing operations assigned to the user for the specified work center and matching filter criteria regardless of end unit number

13. SFCs from Shop Orders USR1WC1EUN1 and USR1WC1EUN2 are shown

14. Select any SFC - Operation List displays SFC operations assigned to the user at this work center

15. Enter USER1 in User ID field, WC1 in Work Center field, EUN1 in End Unit Number field and click Retrieve - Work List updates with records for SFCs containing operations assigned to the user for the specified work center and specified end unit number and matching filter criteria

16. SFCs from Shop Order USR1WC1EUN1 are shown

17. Select any SFC - Operation List displays SFC operations assigned to the user at this work center

18. Click Clear button. Screen is cleared. Work List and Operation List are blank.

19. Enter WC1 in Work Center field and click Retrieve - Work List updates with records for SFCs for the specified work center matching filter criteria regardless of end unit number or user assignment

20. SFCs from following Shop Orders display: USR1WC1EUN1, USR1WC1EUN2

21. Select any SFC - Operation List displays SFC operations assigned to the user at this work center

22. Click Clear button. Screen is cleared. Work List and Operation List displays as blank tables.

23. Enter WC1 in Work Center field, EUN1 in End Unit Number field and click Retrieve - Work List updates with records for SFCs for the specified work center and specified end unit number matching the filter criteria regardless of user assignment

24. SFCs from following Shop Orders display: USR1WC1EUN1

25. Select any SFC - Operation List displays SFC operations assigned to the user at this work center

## 7.2   Operation POD Selection

**Purpose / Goal** – The purpose of this is to describe test scenarios for verification of Operation Selection functionality that serves as the entry point for the user when retrieving data to transact on within the Operation POD.

For this scenario the following preconditions apply:

- New POD of Operation type is configured (with Operation POD Selection Plug-in).

- User has all rights for activities execution.

- User is logged in to ME application.

- Create and Release Demand: Material: MAT1, Qty:1 SFC number: MAT1-0001

**7.2.1 Scenario Specific Settings** – All other Configurations defined above have been set up.

**7.2.2 Scenario Steps** – The following are examples of the steps that a user might perform in SAP ME in order to accomplish this scenario.

### 7.2.2.1 Operation POD Selection

1. Launch new WPMF Operation Default POD –Default Operation Default POD with Operation POD Selection Plug-in is launched

2. The user inputs or browses for an Operation and tabs to the next field. Cursor is in Resource field.

3. The user inputs or browses for a resource and tabs to the next field - Resource Browse is filtered by the Resource Type specified for the Operation in Operation Maintenance.

4. On Tab out event with both Operation and Resource identified the system updates the Work List Plug-in with SFCs that have an Active status at this Operation and Resource

5. The user selects one or more SFCs from the Work List Plug-in. The main input field (SFC) in the Operation POD Selection is updated with:

**The single SFC selected in the Work List Plug-in, or**

**"X –SFC's" Selected for multiple work list selections**

6. The SFC(s) in the Main Input field have focus

7. Perform any transaction (button selection) against selected SFC(s) - Active SFC(s) remain in the main input field and remain selected in the work list

8. Done SFC(s) are cleared from the main input field and is also removed from the Work List plug-in.

## 7.3 Process Lot Selection

The Main Input Field Work List Browse is of type Process Lot and the Work List Plug-in is of type Process Lot.

For this scenario the following preconditions apply:

- User is logged in to ME application.
- Create and Release Demand:
- Material: MAT1, Qty: 2, Add to New Process Lot: TRUE SFC numbers: MAT1-0011 and MAT1-0012 PL-0001
- Material: MAT3, Qty=10, Add to New Process Lot: TRUE SFC numbers: MAT3-0003 (Qty 5) and  MAT3-0004 (Qty 5) PL-0002

1. The user enters or browses for an operation and tabs to the next field.  Resource Browse is filtered by Operation

2. The user enters or browses for a resource and tabs to the next field - On Tab Out event with both Operation and Resource identified the system updates the Work List Plug-in (Process Lot Type) with Process Lots that are Active at this Operation and Resource

3. The user selects one or more Process Lot/s from the Work List.  The main input field (Process Lot) in the Operation POD Selection is updated with:

   **The single Process Lot selected in the Work List Browse, or**

   **["X" SFC's SELECTED] for multiple process lot selections**

4. The Process Lot(s) in the POD Selection Main Input field has focus

5. Perform any transaction (button selection) against selected Process Lot(s) SFCs per the executed activity's rules - After the transaction:

6. Active Process Lot(s) remain in the Main Input field and are added to and selected in the Work List Plug-in

7. Done Process Lot(s) are cleared from the Main Input field and removed from the Work List plug-in

8. Signed off Process Lot(s) are cleared from the Main Input field and removed from the Work List Plug-in.

## 7.4   Touch Operation POD

**Purpose / Goal** – The purpose of this is to describe test scenarios for verification of Touch Operation Selection functionality that serves as the entry point for the user when retrieving data to transact on within the Touch Operation POD.

### 7.4.1   Scenario Specific Settings – All other Configurations defined above have been set up.

**7.4.2 Scenario Steps** – The following are examples of the steps that a user might perform in SAP ME in order to accomplish this scenario.

**7.4.2.1 Operation POD Selection**

1. Launch Operation Touch POD- Operation Touch POD with PS_OPERATION_1ROW POD Selection Plug-in

2. The user touches OPERATION link and touches the row of the desired operation from Browse for Operation window.

3. The user touches the RESOURSE link and touches the row of the desired resource from the Browse for Resource window.

4. With both Operation and Resource identified the system updates the Work List Plug-in with SFCs that have an Active (green square icon), Hold (red circle icon), In Queue (blue circle icon) or New (white diamond icon) status at this Operation and Resource.

   a. The user touches the row of one or more SFCs from the Work List Plug-in. If the desired SFC is on another page, user selects the Forward and Back chevrons of the paginator to navigate to the appropriate page.

   Note: In a table displayed in the touch POD, one touch of a row will select the row. The second touch of the row will deselect the row. To select multiple rows of a table, touch each desired row.

5. The main input field (SFC) in the Operation POD Selection is updated with:

   **The single SFC selected in the Work List Plug-in, or**

   **["#" Selected] for multiple work list selections**

6. The SFC(s) in the Main Input field have focus

7. Perform any transaction (button selection) against selected SFC(s) which remain in the main input field and remain selected in the work list

8. Done SFC(s) are cleared from the main input field and is also removed from the Work List plug-in.'

9. User selects the Home icon located at the right hand side of the top bar of the POD. The POD resets back to the default settings of the POD.

## 7.5 Scenario Best Practice

This is just one of the many flows that may be accomplished.  Additionally from the Operation POD a User may invoke the NC functionality, Message Board, Assembly Point, Data Collection and other activities or plug-in transactions.

- **POD -** The Production Operation Dashboard has been greatly enhanced in SAP ME 6.0 release.  The one thing that is noticeable straight away is the overall look and feel.  This has been enhanced to conform to other SAP standard GUI Concepts.  It provides the enhanced Modular Plug-in layout and is highly configurable without the need for major custom code enhancements.   It comes out of the box with the standard pre-configured POD's that may be used as is or configured according to the customers' needs.  New POD supports the selection models existing in previous releases (i.e. based on operation or work center) and introduces a new Shop Workbench selection model. The latter is implemented as a plug-in providing the ability to view the SFC-related information in a single tree-structured view. This includes Operations, Buyoffs, Components, Data Collection Groups, Tools, and Work Instructions nodes that are interactive and can trigger the corresponding plug-ins for the selected SFC.  When Buyoffs, Work Instructions, Tools, etc. are all attached at the same Operation, Shop Workbench plug-in, groups and organizes them in a convenient structure and allows the user to select from the tree to transact.  Another new feature that is accessible from the new POD is The Visual Test and Repair. It allows the component selection from the visual model of an item. It utilizes graphics to better identify and communicate location of defects through visualization, supports multiple users simultaneously viewing models and creating NCs and enhances the repair process of defective product through visual identification.  The new POD also supports the enhanced presentation of the configurable data fields including the ability to display the fields with the pre-defined list of options for the operator to choose from. The values entered to the data fields are validated on save action. This increases data field data accuracy through a restricted list, enables tighter data integrity through additional validations, and enhances the data collection experience during manufacturing.  As we will see in the operator scenarios later on, all of these enhancements together or separately, provide a convenient and highly configurable environment for logging production activities in an efficient and configurable design.

  - Modular plug-in and layout configuration

  - Highly configurable to meet the disparate needs of the shop floor w/out custom coding

- Transact at both the production unit and operation levels

- Filter work by production unit, operation/resource, or work center/end item number

- Updated design to reflect modern "look and feel"

- **Shop Workbench -** Ability to view the data from an SFC in an all-in-one tree structure.  Display of an SFC's Operations in a Tree structure with applicable child leaf nodes for Buyoffs, Components, Data Collection Groups, Tool Lists, and Work Instructions.  Nodes to be displayed are configurable.  Provide Default OOB plug-in configuration.  Can be configured to take the place of Operation List.  Can transact against the operation.  Ability to expand all nodes or collapse all nodes or select which nodes to expand or collapse manually

  - Shop Work Bench is a POD plug-in that organizes all manufacturing information in a tree structure for easy viewing and access

  - Displays an all-in-one view of the entire SFC

  - Ability to expand and collapse parts or all of the tree

  - **Visual Test and Repair -** Utilizes graphics to better identify and communicate location of defects through visualization.  Supports multiple users simultaneously viewing models and creating NCs.  Enhances the repair process of defective product through visual identification

    - Viewing of ECAD layouts & schematics

    - Supports standard ECAD formats, including IPC-2511 (GenCam), IPC-2581 (Offspring) and ODB++

    - Viewing of 2D & 3D geometry models

    - Interaction with model to log a nonconformance (NC)

  - **NC Highlights** - One of the newest functions/activities added to the NC functionality in the NC Data Tree as is seen here in this example.  The Tree is used to display hierarchical view of primary and secondary nonconformances logged for an SFC at an operation.  The LOG_NC functionality has been enhanced to provide the ability to perform the Close All Open NC's from this view as well as provide the Edit capability and NC Detail Report from the links in the columns.  The As-Built Link was added to the NC Data Entry screen to launch the As-Built Configuration Activity.  The capabilities to enter Primary's and secondary's have also been supported and are evidenced when viewing the NC's logged in the NC Data Tree.

- **Data Field List -** Enables tighter data integrity through additional validations.  Increases data accuracy through a restricted list.  Enhances the data collection experience during manufacturing.  Limits the number of lists to configure as the same data field with the list of restricted values can be used in multiple categories.  Provides an ability to collect SFC related data in POD with all the enhanced data type benefits and historical view.

  - Creates a master data field to be defined and shared across data type categories

  - Offers a restricted list of values option for each data field

  - Provides a pre-save validation for each data field and data type

  - Provides an ability to collect SFC related data in the enhanced SFC Data POD plug-in

- **Touch POD -** The Touch Production Operation Dashboard has been added in the SAP ME 6.1 release.   The POD may be displayed and transacted upon on Touch devices including Touch Monitors and large and medium tablets.  The Graphical User Interfaces (GUIs) of many of the most used POD plug-ins have been created for Touch devices so as to optimize the limited screen space available on most Touch screen devices.  POD Maintenance and other maintenance activities have been enhanced to support the new Touch POD features.  More fields have been added to the Info Line 1 and Info Line 2 fields under the POD Selection tab.

- All PODs must be viewed in Internet Explorer in a version equal to or compatible with IE 8.

- The following activities are available in a Touch GUI in SAP ME 6.1:

  - Work List
  - Operation List
  - Work Instruction List
  - Work Instruction Viewer
  - Component List
  - Assembly Point
  - Data Collection List
  - Data Collection Entry
  - NC Selection
  - Log NC
  - Tool List
  - Log Tool Entry
  - Create Message
  - Change Equipment Status

- The following activities are available in a Touch GUI in SAP ME 15.0:

  - Start

- Complete/Pass
- Signoff
- Labor On
- Labor Off
- UME
- SFC Data Entry
- Serialize SFC
- Change User LCC
- Clock In/Out
- Log Comment
- Log Buyoff
- Supervisor Work Assignment
- Sample Inspection Lot (QM030)

- For all PODs, if more than one message is sent to the message area of POD Selection, the first message will display in the message area and a downward chevron will appear in the right hand side of the message bar along with a number in parenthesis showing the number of messages. The user selects the downward chevron to display all messages. The user can then select the upward chevron to collapse the message area to one row.

## 8.1  SAP ME Activities

The following is a list of some of the activities affected:

**New SAP ME Activities**

Several new Activities were created in support of the Production Operator Dashboard functionality, and for the new default POD configurations as well as the new Plugin Activities that are used by the POD's. Of all of these Activities, each has already been configured and has a default set of data that is used to configure and use the POD's by users of the SAP ME system, based on much of the functional flows of the previous Rich, Integrated, and Standard PODs and associated activities.

- DEF_OPER_POD (POD - Operation)
    - Default Operation POD activity
- DEF_WC_POD (POD – Work Center)
    - Default Work Center POD Activity
- MESSAGE_BOARD (Message Board )
    - Message Board POD Activity
- PS_OPERATION_2ROW (POD Selection Operation)
    - Operation POD selection activity (default selection area for Standard POD)
- PS_WORK_CENTER
    - Work Center POD selection Activity (Default selection area)
- SHOP_WB_Plug-in (Shop Workbench)
    - Shop Work Bench Activity (plug-in)

- DEF_SHOPWB_POD - POD – (Shop Workbench)
    - Default Shop Workbench POD
- COMP_LIST_DISPLAY
    - Component List Data Entry Plug-in
- DEF_VTR_POD - POD (Visual Test and Repair)
    - Default Visual Test and Repair POD
- OPER_LIST_DISPLAY (Operation List)
    - Default Operation List
- DEF_OPER_POD_TOUCH
    - Default Touch Operation POD activity
- DEF_TOUCH_WC_POD
    - Default Touch Work Center POD activity
- PS_OPERATION_1ROW
    - One row Operation POD selection Activity (Default selection area for Touch POD)
- Activity rule *Display Labels*- Yes displays the Operation and Resource

MESSAGE_BOARD_PANEL

- Message_Board_Panel
    - Message Board POD selection Activity
- MESSAGE_BOARD_LIST

    Message Board POD List Area


**Enhancements Made to Existing Activities**

Several Activities were enhanced in support of the Production Operator Dashboard functionality and for associated Activities for Data Field Assignment, Data Field Definition, POD Maintenance and List Maintenance. Of all of these Activities, each has already been configured and has a default set of data that is used to generate the Base POD's as well as their list configurations and plug-ins and data field (collection) requirements for the SAP ME system, based on much of the functional flows of the previous base POD's and associated activities.

- SY130 (Data Field Assignment Maintenance)
    - Data field Assignment Activity
- SY160 (Data Field Definition Maintenance)
    - Data Field Definition Maintenance Activity
- EN090 (POD MAINTENANCE)
    - POD Maintenance Activity
- PR010  (List Maintenance)
    - List Maintenance Activity
- NC_Data_Entry
    - Log NC Plug-in
- NC040 ( NC Client Maintenance)
    - NC Client Maintenance Activity

- NC_SELECTION (NC Selection)
  - NC Selection Plug-in
- NC_TREE ( NC Data Tree)
  - NC Tree Plug-in
- NC_CHART
  - NC Chart Plug-in
- NC540 (Standalone NC Logging)
  - Standalone NC Logging Plug-in
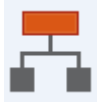
**Removed Activities**

Removed due to reconfig and use of NC Data Entry and NC Selection and NC Tree to perform the LOG NC function.
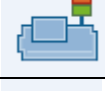
- NC500 (Log NC)

## 8.2 SAP ME Icons

Here is a listing of the icons included in SAP ME

| Activity | Touch Icon | Standard Icon | Icon name |
|---|---|---|---|
| Clear | | | clear.png |
| Logout & Logoff | | | log_off.png |
| | | | logout.png |
| | | | logout_small.png |
| Logoff (6.1 old) | | | logout.png |
| Data Collection | | | data_col.png |
| | | | measuring_point.gif |
| Data Collection (fulfilled) | | | data_col_fulfil.png |
| | | | measuring_point_inactive.gif |
| Assemble | | | assemble.png |
| | | | bill_material.gif |
| Assemble (fulfilled) | | | assemble fulfil.png |
| | | | bill_material_inactive.gif |
| Work Instructions | | | workinst.png |

| Work instruction (inactive) | | | workinst_dsbl.png |
|---|---|---|---|
| Log Tool | | | log_tool.png |
| | | | equipment.gif |
| Log Tool (fulfilled) | | | log_tool_fulfil.png |
| | | | equipment_inactive.gif |
| Start | | | start.png |
| Start (inactive) | | | start_dsbl.png |
| Complete | | | complete.png |
| | | | complete.gif |
| Complete (inactive) | | | complete_dsbl.png |
| | | | complete_inactive.gif |
| Signoff | | | signoff.png |
| Signoff inactive | | | |
| Buyoff | | | buyoff.png |
| Buyoff (fulfilled) | | | buyoff_fulfil.png |
| Create Message | | | message.png |
| Change Equipment Status | | | change_equipment.png |
| Non Conformance | | | nonconformance.png |
| Change Alert | | | change_alert.png |
| | | | alert_msg.gif |

| | | | |
|---|---|---|---|
| Error Message | | | error_message.png |
| | | | rted_msg_error.gif |
| | | | rted_msg_error_small.gif |
| Info | | | information.png |
| | | | rted_msg_info.gif |
| | | | rted_msg_info_small.gif |
| Warning | | | warning.png |
| | | | rted_msg_warning.gif |
| | | | rted_msg_warning_small.gif |
| Stop | | | stop.png |
| Cancel | | | cancel.png |
| Close | | | close.png |
| | | | close.gif |
| help | | | help.png |
| | | | help.gif |
| Activities | | | activities1.png |
| Reports | | | reports.png |
| details | | | details.png |
| | | | TbDetail.gif |
| Status Icons: | | | |
| New | | | new.png |
| In Queue (gray) | | | queue01.png |
| In Queue (blue) | | | queue02.png |

| | In Queue-Rework | | | In QueueRework.png |
|---|---|---|---|---|
| | In Queue-Reject | | | InQueueReject.png |
| | Active (green square) | | | active.png |
| | Active-Reject | | | ActiveReject.png |
| | Active-Rework | | | ActiveRework.png |
| | Hold (red circle) | | | hold.png |
| | Complete (operation) | | | complete_op.png |
| | Complete Pending (operation waiting for buyoff) | | | complete_op_pending.png |
| | Complete Pending Reject | | | CompletePendingReject.png |
| | Complete Pending Rework | | | CompletePendingRework.png |
| | Bypassed | | | bypassed.png |
| | Override | | | Override.png |
| | Override-reject | | | RejectOverride.png |
| | Success | | | success.png |
| | save | | | save.png |

| | | | |
|---|---|---|---|
| home | | | home.png |
| Edit | | | edit.png |
| | | | edit_icon.gif |
| | | | edit_icon_inactive.gif |
| Labor on | | | labor_on.png |
| | | | checked_out_by_me.gif |
| | | | checked_out_by_me_inactive.gif |
| Labor off | | | labor_off.png |
| Collect Parent Serial | | | collect_parent_serial.png |
| | | | change_number.gif |
| Collect Parent Serial fulfilled | | | collect_parent_serial_fullfiled.png |
| | | | change_number_inactive.gif |
| | | | checked_out.gif |
| | | | checked_out_inactive.gif |
| *not in use* | | | parameters.png |
| log_comment.png (6.1 old) | | | log_comment.png |
| Log Comment | | | log_comment.png |
| Log On/ Login | | | login.png |
| Return to POD | | | return_pod.png |
| Change User LCC Change LCC | | | change_user_labor_charge_code_blue.png |
| *Not In use* | | | change_user_labor_charge_code_grey.png |
| Clock In/Out | | | clock_in_clock_out.png |
| | | | in_progress.gif |
| | | | in_progress_inactive.gif |

| | | | |
|---|---|---|---|
| Change SFC LCC Change | | | change_sfc_labor_charge_code_blue.png |
| *Not in use* | | | change_sfc_labor_charge_code-grey.png |
| SFC Data Entry | | | sfc_data_entry.png |
| *Not in use* | | | sfc_data_entry-grey.png |
| History | | | sfc_data_entry_history.png |
| Buyoff | | | buyoff.png |
| Buyoff fulfilled Info column status icon | | | buyoff_fulfil.png |
| Accept (buyoff) | | | accept_buyoff.png |
| | | | approve.gif |
| | | | approve_inactive.gif |
| Reject (buyoff) | | | reject_buyoff.png |
| | | | reject.gif |
| | | | reject_inactive.gif |
| Partial (buyoff) | | | partial_buyoff.png |
| Print (old) | | | print.png |
| Print | | | print.png |
| Supervisor Work Assignment | | | supervisor_work_assignment.png |
| Continue/Select | | | continue_select.png |
| Remove | | | remove.png |
| Remove (old) | | | remove2.png |
| Serialize SFC | | | serialize_sfc.png |

| | Sample Inspection Lot |  | | sample_nspection_lot.png |
|---|---|---|---|---|
| | Skip |  | | skip.png |
| | SAP Logo |  | | sap_logo.png |
| | | |  | logo.gif |
| | | |  | document_list.gif |
| | | |  | document_list_inactive.gif |
| | | |  | recurring.gif |
| | | |  | recurring_inactive.gif |
| | | |  | staffed.gif |
| | | |  | staffed_inactive.gif |
| | | |  | tag00.gif |
| | | |  | tag00_inactive.gif |
| | Previous |  | | previous.png |
| | Next |  | | next.png |
| | Next Step |  | | BtnNextStep.png |
| | Previous Step |  | | BtnPreviousStep.png |
| | Add |  | | add.png |
| | Remove |  | | remove.png |