

HCL



HCL iSAM Maintenance Foundation

Feature Scope Document

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Document History

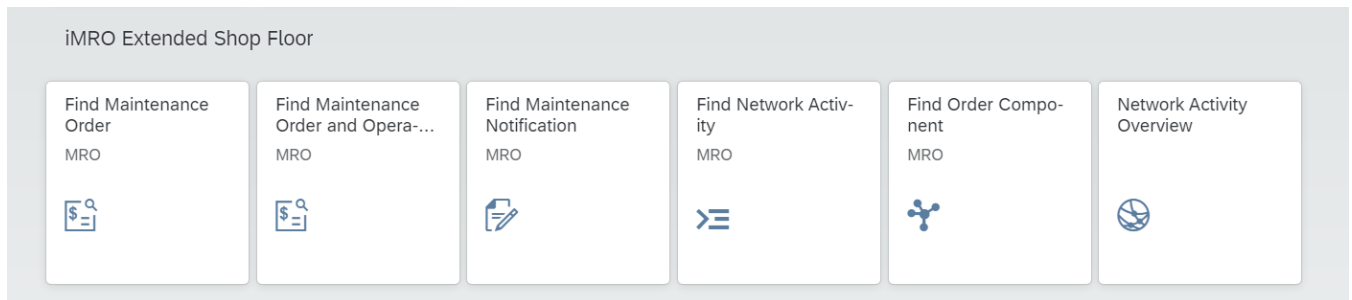
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1. Overview

HCL iSAM Maintenance Foundation applications are designed for maintenance technicians to perform key shopfloor tasks based on Maintenance Orders, Operations, Notifications, Components and Network/Activities and perform various actions wherever required.

All these applications are fully capable of standalone execution as well as these apps provide seamless integration and navigation from other HCL iSAM Suite i.e. HCL iSAM Maintenance Operation Insights and HCL iSAM Maintenance Operation Planning.



2. Pre-requisites:

There are pre-requisites required to be maintained in the implementing system before the execution of HCL iSAM Maintenance Foundation Suite of applications.

- Maintain customization setting for integration of Employee HRMS record with partner function for Personnel responsible value help to work correctly under “Change responsibility” action in Find Maintenance Order.
- Priority type field should be visible in order list for priority type to be populated by default in Priority value help under Change scheduling action in Find Maintenance Order.
- In standard application “Monitor Material Coverage – Net and Individual Segment”, maintain “Area of responsibility” under MRP settings.

3. Find Maintenance Order

This application is designed to be used by a Maintenance Technician. With this app, user can view the list of maintenance orders in the system. This can be done either by filtering the list according to various available filters or by using a free-text search. User can drill down for a more detailed view, and can also perform actions as described below:

- **Change Responsibility:** To update the planner group, Work Center or Person responsible
- **Change Scheduling:** To update start/end dates, revision, and priority.

- **Set or Unset Status:** To update order system status.
- **Assign Network:** To assign network/activity to orders.
- **Update Task List:** To assign task list to an order.

All the applicable actions on order list for an order can also be performed from the detail page.

Navigation is also supported from Revision Detail overview app of HCL iSAM Maintenance Operation Insights.

Below are the cards that support navigation.

- **Planned Start:** Display orders which are due starts.
- **Planned Finish:** Display orders which are due finish.
- **Late Completion:** Display orders which got closed post order completion date.
- **Actual Cost greater than Planned Cost:** Display orders where Actual Cost greater than Planned Cost.
- **Orders without Network:** Display orders which are not assigned to any network.
- **Start/End date alerts:** Display orders with Start/End date alerts.

Below navigations are provided from Find Maintenance Order App to other HCL iSAM Maintenance Foundation Suite of applications:

- **Find Maintenance Order and Operation:** User can navigate to Find Maintenance Order and Operation to display Operation list for the selected order.

4. Find Maintenance Order and Operation

This application is designed to be used by a Maintenance Technician through Fiori launchpad. With this application, users can list the orders and their operations in the system and can find the one needed by filtering the list according to various properties or by using a free-text search. Users can also perform remediation actions as described below.

- **Change assignment:** To update the Work Center or Person Responsible for maintenance order operation.
- **Update User Status:** To add or modify the user status for Order-Operation.
- **Time confirmations:** To add and display time confirmations against an operation.

Note: Use the date format as dd/mm/yyyy in upload template for performing mass confirmation using “Upload time confirmation” action.

- **Change:** To update operation details, e.g. Performing Work Center, Start date/time constraint.

User can drill down to the detail page to view order operation details. All the applicable actions on order operation list can also be performed from the detail page.

Find Maintenance Order and Operation application supports navigation from the below Maintenance Revision Detail Overview cards to display a list of order operations as required:

- **Work progress:** Display order operation list based on work progress.
- **Forecast effort greater than planned effort:** Display list of order operations where forecast effort is greater than planned effort.

5. Find Maintenance Notification

This application is designed to be used by a Maintenance Technician through Fiori launchpad. With this app, users can list all types of notifications in the system and can find the one needed. Notification list can be filtered according to various filters and properties. User can perform predefined quick actions on one or more notifications or can display a single notification to view its properties, its assigned technical object and maintenance order.

Summary of related orders grouped by system status can be seen on notification list as well as on the notification header on the detail page.

Below actions have been provided on the notification list.

- **Change Scheduling:** To update notification priority, revision, and start/end dates.
- **Change Responsibility:** To update notification work center, planner group, planning plant and person responsible.
- **Set/Unset Status:** To update notification system status.
 - Complete notification functionality will check for all open related orders against a notification including MEB orders before marking the notification as complete.
- **Assign Order:** To assign an existing order to a notification.
- **Update Task List:** To assign/update task list in a notification.
- **Update User Status:** To set/update user status for a notification.

User can drill down to the detail page to view notification details. All the applicable actions on notifications list for a notification can also be performed from the detail page.

In notification detail page 'Order' tab has been provided to display all the related orders (MEB) for that notification. All the order related actions are also provided on this list. User can navigate to order app clicking on order number to view order details.

App supports navigation from below Maintenance Revision Detail Overview cards:

- **Notifications without order:** To display list of notifications with no order linkage.

Below navigations are provided from Find Maintenance Notification App to other HCL iSAM Maintenance Foundation Suite of applications:

- **Find Maintenance Order:** User can navigate to Find Maintenance Order to display order list for the selected notification.
- **Find Maintenance Order and Operation:** User can navigate to Find Maintenance Order and Operation to display Operation list for the selected order.

6. Find Network Activity

A network activity is used to represent a task within the flow of a network. It forms the basis for further logistics planning and execution processes within a project.

Find Network Activity application is designed to be used by a Project Logistics Controller. This app can be used to serve the below objective:

- Display the master data details of a network activity.
- Display Network – Subnetwork hierarchy for a parent revision
 - Revision directly linked to the network is displayed. If there is no direct linkage, then revision of the parent network is displayed.

Summary of related orders grouped by system status can be seen on Network Activity list as well as on the Network Activity header on the detail page.

Following actions can be performed from the Network Activity list:

Update Network Activity: To update performing work center, planned hours and start date/time constraint.

Confirm: To confirm network activity.

Overview: To navigate to Network Activity Overview app.

Order Date Conflicts: Order with Start Date and End Date Conflict with the Network-Activity will be shown in Find Maintenance Order app.

Change Long Text: Option to edit long text is provided.

Change status: To update network activity system status.

User can drill down to the detail page to view Network Activity details. All the applicable actions on Network Activity list can also be performed from the detail page.

Below mentioned are the other features provided at the detail page:

- In Network Activity detail page 'Order' tab has been provided to display all the related orders for the network activity combination. All the order related actions are present on this list and can be performed directly without navigating to order app. User can navigate to order app clicking on order number to view order details.
- Maintain relationship between network activities:
 - Create relationship
 - Update relationship
 - Delete relationship

App supports navigation from:

- **Maintenance Event Scheduling Board** To display list of network activities for a network and revision combination.

Below navigations are provided from Find Network Activity application to other HCL iSAM Maintenance Foundation Suite of Applications:

- **Find Maintenance Order:** User can navigate to Find Maintenance Order application to display order list based on:
 - Selected network/activity combination.
 - Start/End date conflict counts.
- **Find Maintenance Order and Operation:** User can navigate to Find Maintenance Order and Operation to display Operation list for the selected network/activity combination.

7. Find Order Component

Parts/spares are added to repair order to support and fulfill maintenance activities. Addition of a part creates a reservation for that part in the system. All these parts can be found under the Component tab of the repair order.

Find Order Component Application provides below features to the user:

- Display list of all Order components and its corresponding details for an event, e.g. Revision, Network/Activity etc.
- View material coverage status of a component
 - In coverage: Component is available as per MRP based coverage results. This is shown with green color.
 - Out of coverage: Component is not available as per MRP based coverage results. This is shown with red color.
 - Out of Horizon: Component requirement date is outside the 42 days' time window from current date. This is shown with amber color.
 - Not applicable: Component not applicable for coverage determination as per the MRP settings. This is shown with grey color.
- Coverage as per the current date will be shown for the components with requirement date in the past.

Following actions can be performed from the component list:

- **Manage Material Coverage:** To display current material stock and the demands and supplies existing in the system for a material.

User can drill down to the detail page to view component details

Find Order Component supports navigation from the below Maintenance Revision Detail Overview card to display a list of order components based on coverage:

- **Component Coverage:** Display order components based on material coverage.

Below navigations are provided from Find Order Component App to other HCL iSAM Maintenance Foundation Apps:

Find Maintenance Order (MRO): User can navigate to Find Maintenance Order (MRO) to display order details.

8. Network-Activity Detail Overview

This Network-Activity Detail Overview App shows the high-level non deleted order measures for single Network-Activity combination for which orders has been assigned in the form of analytical Pie chart, bar chart and line chart in the single screen.

The 'Network-Activity Detail Overview' app comprises the following capabilities:

- Provide filter criteria to choose a single Network-Activity.
- Provide key data for the specific Network (Header) along with its calendar progress and work progress.
- Visualize the orders based on system status, user status, order type and maintenance activity type.
- Visualize the orders for planning

Network-Activity Filter

Network-Activity Filter is available so that the combination of a Network-Activity is entered to display the underlying orders assigned to the Network Activity.

Network Details

This card displays the key parameters of the Network along with the Calendar progress and Work Progress of the Orders that are assigned to a Network-Activity.

Overall Order Status

- Orders without deletion indicator that are assigned to a Network-Activity are shown in a donut chart. The donut chart is grouped by the User status, Order Type, Maintenance Activity Type and System Status. If the grouping is based on System Status, the order is categorized into following categories:
 - Outstanding – having system status CRTD
 - Released – having system status REL
 - Technically Completed – having system status TECO
 - Completed for business – having system status CLSD
 - Navigation to custom Find Maintenance Order is enabled so that relevant orders are listed on click of selected pie.

Orders for Planning

- Count of orders in the selected Network-Activity which are outstanding (System Status: CRTD) are displayed in a donut chart.
- On click of the analytical chart, drill down is enabled to custom Find Maintenance Order app.

Late Completed Orders

- Number of orders in the Network-Activity which are technically completed late is displayed in a donut chart. These orders are grouped by Order Type, User Status and Maintenance Activity type.
- Navigation to custom Find Maintenance Order app is enabled so that relevant orders are listed.

Actual Vs Planned Effort for completed orders

- Actual Vs Planned efforts for technically completed orders in the selected Network-Activity is displayed as a line chart and is grouped by Order Type, Operation Work Center, Control Key, Activity Type, User Status and Maintenance Activity Type. It shows the following details:
 - Progress bar based on grouping criteria.
If the Actual Effort is greater than Planned effort, then the bar is shown as red, else green.
 - Percentage of Actual Effort to Planned effort
 - Deviation between Actual and Planned Efforts (in hours)
 - If the Actual effort is greater the Planned effort, then the deviation is shown in positive value, else negative.
 - On click of the analytical chart, drill down is enabled to custom Find Maintenance Order and Operation app.

Forecast Effort greater than Planned Effort for orders in progress

- Forecast Effort Vs Planned efforts for orders with system status as Released for the Network-Activity having forecast effort greater than planned effort is shown in the form of a bar graph. These orders are grouped by Order Type, Operation Work Center, Control Key, Activity Type, User Status and Maintenance Activity Type. It shows the following details:
 - Progress bar based on grouping criteria.
If the Forecast effort is greater than Planned effort, then the bar is shown as red.
 - Percentage of Forecast Effort to Planned effort
 - Deviation between Forecast and Planned Efforts (in hours). If the Forecast effort is greater the Planned effort then the deviation is shown in positive value, else negative.
 - Navigation to custom Find Maintenance Order and Operation app is enabled so that relevant orders are listed with MRO Forecast work and MRO remaining work.

Actual Vs Planned Cost for completed orders

- Actual Vs Planned Cost for technically completed orders assigned to a Network-Activity are displayed as a bar chart and is grouped by Order Type, Operation Work Center, Control Key, Activity Type, User Status and Maintenance Activity Type. It shows the following details:
 - Progress bar based on grouping criteria.
 - If the Actual Cost is greater than Planned Cost, then the bar is shown as red, else green.
 - Percentage of Actual Cost to Planned Cost
 - Deviation between Actual and Planned Cost
 - If the Actual Cost is greater the Planned Cost, then the deviation is shown in positive value, else negative.
 - On click of the analytical chart, drill down is enabled to custom Find Maintenance Order app.

Order with Actual Cost greater than Planned Cost for Orders in a Revision

- Actual Vs Planned Cost for all orders assigned to Network-Activity where actual cost greater than planned cost is displayed as a bar chart and is grouped by Order Type, Operation Work Center, Control Key, Activity Type, User Status and Maintenance Activity Type. It shows the following details:
 - Progress bar based on grouping criteria.
If the Actual Cost is greater than Planned Cost, then the bar is shown as red.
 - Percentage of Actual Cost to Planned Cost

- Deviation between Actual and Planned Cost
- If the Actual Cost is greater the Planned Cost, then the deviation is shown in positive value.
- Navigation to custom Find Maintenance Order app is enabled so that relevant orders are listed.

Work Progress for all orders

- Actual Effort Vs Forecast efforts for all orders assigned to a Network-Activity are represented in form of a bar graph. These orders are grouped by Order Type, Operation Work Center, Control Key, Activity Type, User Status and Maintenance Activity Type. The bar chart shows the following details:
 - Progress bar based on grouping criteria.
If the Forecast effort is greater than Actual effort, then the bar is shown as red, else green.
 - Percentage of Actual Effort to Forecast effort
 - Deviation between Forecast and Actual Efforts (in hours)
If the Forecast effort is greater the Actual effort, then the deviation is shown in positive value, else negative.
 - Navigation to custom Find Maintenance Order and Operation app is enabled so that relevant orders are listed with MRO Forecast work and MRO remaining work.

Component Coverage

- Display the count of Materials and their respective coverage status in a stack chart for the Orders that are assigned to a Network-Activity.
- The chart has three switches – Order Type, Network Activity and Operational Work Center and the data is displayed accordingly for the selected switch.
- On click of any stack bar, the navigation is enabled to Order Component app with the Revision, Planning Plant, Operation Work Center and Network-Activity.

Schedule Start Date Conflict

- The count of orders for a network activity where Schedule Start date & time of Order is less than the Earliest Start date and time of the assigned Network/Activity is shown in a separate donut chart.
- Navigation should be enabled so that these orders are listed in custom Find Maintenance Order app.

Schedule Start End Conflict

- The count of orders where Schedule Finish Date of Order > Latest Finish Date of Network Activity should be group in a donut in a separate pie and shown as critical alert. Navigation should be enable to see those orders in custom Find Maintenance Order list.
- The count of orders where Schedule Finish Date of Order > Earliest Finish Date of Network Activity should be group in a donut in a separate pie and shown as non-critical alert. Navigation should be enable to see those orders in custom Find Maintenance Order list.
- If the Earliest Finish Date of Network Activity and Latest Finish Date of Network Activity are one and the same, then the order will be grouped and listed in Critical Alert pie.
- Navigation should be enabled so that these orders are listed in custom Find Maintenance Order app.

Planned Start for Orders

Count of order which are overdue start or due start this week or next four weeks for the Network-Activity are listed in a donut chart.

- **Overdue start:** Order Basic Start date is less than Current date and Order System Status is Released.
- **Due start:** Order Basic Start date is within this week and Order Basic Start date is greater than or equal to current date and Order System Status is Released.
- **Next 4 weeks:** Order Basic Start date in next week (starting immediate future Sunday) and Order Basic Start date is lesser than or equal to next 4 weeks starting immediate future Sunday and Order System Status is Released.
- Navigation to custom Find Maintenance Order app is enabled so that relevant orders are listed on click of selected pie.

Planned Finish for Orders

Count of order which are overdue finish or due finish this week or next four weeks for the Network-Activity are listed in a donut chart.

- **Overdue Finish:** Order Basic Finish Date is less than Current date and Status of the Order is Released, and confirmation not done.
- **Due Finish:** Order Basic Finish date is within this week and Order Basic Finish date is greater than or equal to current date, system status is Released, and confirmation not done.
- **Next 4 weeks:** Order Basic Finish date in next week (starting immediate future Sunday) and Order Basic Finish date is lesser than or equal to next 4 weeks starting immediate future Sunday and Order System Status is Released.
- Navigation to custom Find Maintenance Order app is enabled so that relevant orders are listed on click of selected pie.

'This week' date range includes data from latest past Sunday to the immediate future Saturday.


'Next 4 weeks' date range includes data from the immediate future Sunday to the next 4 weeks ending on Saturday.

Orders for Completion

- Count of orders in assigned to Network-Activity which are in progress with completion confirmation (System Status: REL+CNF) is displayed in a donut chart.
- On click of the analytical chart, drill down is enabled as per standard.

9. Limitations

HCL iSAM Maintenance Foundation Apps is released with limitations as specified in the document "HCL iSAM Maintenance Foundation Limitation Document"

Document Name	File
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