Contents

Send Us Your Comments

Preface

1 Overview
   Overview of Electronic Kanban................................................................. 1-1

2 Setting Up Electronic Kanban
   Overview of Setting Up Electronic Kanban............................................ 2-1
   Setting Up E-Business Functions............................................................... 2-2
   Related Product Setup Steps...................................................................... 2-4
   Setting Profile Options............................................................................... 2-6

3 Kanban Pull Sequence, Card, and Parameter Setup
   Overview of Kanban Pull Sequence, Card, and Parameter Setup.................. 3-1
   Configuring Kanban Parameters.................................................................. 3-5
   Searching for Pull Sequences and Kanban Cards......................................... 3-9
   Viewing and Editing Pull Sequences and Kanban Cards............................... 3-11
   Viewing the Replenishment Chain............................................................... 3-16
   Viewing and Updating Kanban Cards.......................................................... 3-17

4 Kanban Planning
   Overview of Kanban Planning...................................................................... 4-1
   Searching for Pull Sequence Planning Data.................................................. 4-3
   Viewing and Updating Pull Sequence Planning............................................ 4-5
   Viewing and Updating Kanban Planning Definitions..................................... 4-9
5 Kanban Summary Information

Overview of Kanban Summary Information............................................................ 5-1
Searching for Kanban Cards............................................................................. 5-2
Viewing Kanban Card Summary Information.................................................. 5-6
Viewing and Updating Kanban Card Details..................................................... 5-10

6 Kanban Actions

Overview of Kanban Actions............................................................................. 6-1
Searching for Kanban Cards for Actions......................................................... 6-2
Replenishing Action for Kanban Cards............................................................ 6-4
Receiving Action for Kanban Cards................................................................. 6-5
Transfer Action for Kanban Cards................................................................. 6-7
Changing Status Action for Kanban Cards.................................................... 6-9

7 Electronic Kanban Dashboard

Overview of the Electronic Kanban Dashboard............................................. 7-1
Viewing Notifications.................................................................................... 7-3
Inventory Health.............................................................................................. 7-6
Unmoved Cards............................................................................................... 7-9
Actual Lead Time Versus Planned Lead Time............................................. 7-11
Actual Demand Versus Planned Demand.................................................... 7-15
Creating Custom Dashboard Panels......................................................... 7-17

A Navigation

Navigation Paths.............................................................................................. A-1

B Electronic Kanban Concurrent Programs

Electronic Kanban Concurrent Programs.................................................... B-1

C Electronic Kanban Business Events

Seeded Business Events................................................................................ C-1

D Electronic Kanban Client Extensions

Custom Kanban Programming Logic............................................................ D-1
Determine Unmoved Kanban Cards Program............................................. D-1
Transferring Cards Program...................................................................... D-3
Receiving Cards Program.......................................................................... D-5
Kanban Card Naming................................................................. D-7
Cancel Kanban Cards.............................................................. D-8
Control Kanban Card Supplier Status Changes.......................... D-8
Get Default Supplier Program................................................... D-9
Configure Inventory Health Analytic ........................................ D-9
Calculating Kanban Number or Size ......................................... D-10

Index
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- Are the implementation steps correct and complete?
- Did you understand the context of the procedures?
- Did you find any errors in the information?
- Does the structure of the information help you with your tasks?
- Do you need different information or graphics? If so, where, and in what format?
- Are the examples correct? Do you need more examples?

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Preface

Intended Audience


Oracle Bills of Material User’s Guide

This guide describes how to create various bills of materials to maximize efficiency, improve quality and lower cost for the most sophisticated manufacturing environments. By detailing integrated product structures and processes, flexible product and process definition, and configuration management, this guide enables you to manage product details within and across multiple manufacturing sites.

Oracle E-Business Suite System Administration

This documentation set provides planning and reference information for the Oracle E-Business Suite System Administrator. Oracle E-Business Suite Setup Guide contains information on system configuration steps, including defining concurrent programs and managers, enabling Oracle Applications Manager features, and setting up printers and online help. Oracle E-Business Suite Maintenance Guide provides information for frequent tasks such as monitoring your system with Oracle Applications Manager, administering Oracle E-Business Suite Secure Enterprise Search, managing concurrent managers and reports, using diagnostic utilities including logging, managing profile options, and using alerts. Oracle E-Business Suite Security Guide describes User Management, data security, function security, auditing, and security configurations.

Oracle Flow Manufacturing User’s Guide

This guide describes how to use Oracle’s Flow Manufacturing functionality to support the processes of Flow manufacturing. It describes design features of demand management, line design and balancing, and kanban planning. It also describes production features of line scheduling, production, and kanban execution.
Oracle iSupplier Portal User's Guide

Oracle iSupplier Portal enables secure, self-service business transactions between companies and their suppliers. It provides suppliers with the ability to use a standard Web browser to directly manage business transactions and access secure information. This guide describes the setup and integration with Oracle E-Business Suite products.

Oracle Mobile Supply Chain Applications User's Guide

This guide describes performing shop floor and warehouse transactions using a mobile client device interfaced with a networked computer system. The Mobile Server enables you to perform Oracle Work in Process shop floor transactions, enter Oracle Inventory and Oracle Warehouse Management transactions, and record Oracle Quality collection plan results.

Oracle Inventory User's Guide

This guide describes how to define items and item information, perform receiving and inventory transactions, maintain cost control, plan items, perform cycle counting and physical inventories, and set up Oracle Inventory.

Oracle Purchasing User's Guide

This guide describes how to create and approve purchasing documents, including requisitions, different types of purchase orders, quotations, RFQs, and receipts. This guide also describes how to manage your supply base through agreements, sourcing rules and approved supplier lists. In addition, this guide explains how you can automatically create purchasing documents based on business rules through integration with Oracle Workflow technology, which automates many of the key procurement processes.

Oracle Workflow User's Guide

This guide describes how users can view and respond to workflow notifications and monitor the progress of their workflow processes.

Oracle Work in Process User's Guide

This guide describes how Oracle Work in Process provides a complete production management system. Specifically this guide describes how discrete, repetitive, assemble-to-order, project, flow, and mixed manufacturing environments are supported.

See Related Information Sources on page xi for more Oracle E-Business Suite product information.
Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

Structure

1 Overview
2 Setting Up Electronic Kanban
3 Kanban Pull Sequence, Card, and Parameter Setup
4 Kanban Planning
5 Kanban Summary Information
6 Kanban Actions
7 Electronic Kanban Dashboard
A Navigation
B Electronic Kanban Concurrent Programs
C Electronic Kanban Business Events
D Electronic Kanban Client Extensions

Related Information Sources

Integration Repository

The Oracle Integration Repository is a compilation of information about the service endpoints exposed by the Oracle E-Business Suite of applications. It provides a complete catalog of Oracle E-Business Suite’s business service interfaces. The tool lets users easily discover and deploy the appropriate business service interface for integration with any system, application, or business partner.

The Oracle Integration Repository is shipped as part of the E-Business Suite. As your instance is patched, the repository is automatically updated with content appropriate for the precise revisions of interfaces in your environment.

You can navigate to the Oracle Integration Repository through Oracle E-Business Suite Integrated SOA Gateway.
Do Not Use Database Tools to Modify Oracle E-Business Suite Data

Oracle STRONGLY RECOMMENDS that you never use SQL*Plus, Oracle Data Browser, database triggers, or any other tool to modify Oracle E-Business Suite data unless otherwise instructed.

Oracle provides powerful tools you can use to create, store, change, retrieve, and maintain information in an Oracle database. But if you use Oracle tools such as SQL*Plus to modify Oracle E-Business Suite data, you risk destroying the integrity of your data and you lose the ability to audit changes to your data.

Because Oracle E-Business Suite tables are interrelated, any change you make using an Oracle E-Business Suite form can update many tables at once. But when you modify Oracle E-Business Suite data using anything other than Oracle E-Business Suite, you may change a row in one table without making corresponding changes in related tables. If your tables get out of synchronization with each other, you risk retrieving erroneous information and you risk unpredictable results throughout Oracle E-Business Suite.

When you use Oracle E-Business Suite to modify your data, Oracle E-Business Suite automatically checks that your changes are valid. Oracle E-Business Suite also keeps track of who changes information. If you enter information into database tables using database tools, you may store invalid information. You also lose the ability to track who has changed your information because SQL*Plus and other database tools do not keep a record of changes.
Overview

This chapter covers the following topics:

• Overview of Electronic Kanban

Overview of Electronic Kanban

Oracle Electronic Kanban provides a complete solution for kanban management, a replenishment system supplying parts and inventory in continuous production. Kanban replenishment supports Lean Manufacturing, the elimination of waste or tasks that do not add value in the production process. This includes tasks that affect customer relations, product design, supplier networks, and production floor management.

The Electronic Kanban workbench provides kanban management in tabbed regions on a single page for setup, summary information, execution and transactions, planning—and a dashboard showing graphical data on lead time, demand, card movement, and inventory health. Electronic Kanban uses the existing Oracle kanban infrastructure in Oracle Inventory, Oracle Flow Manufacturing, and Oracle Planning. The features of Oracle Electronic Kanban include the following:

• Extensive search capabilities, see: Searching for Kanban Cards, page 5-2

• Ability to scan and perform kanban cards transactions.

• Ability to simulate, plan and replan kanban cards, see: Overview of Kanban Planning, page 4-1

• Ability to create temporary kanban cards to handle demand fluctuation during replenishment spikes.

• Option to generate additional cards without cancelling existing cards.

• Support for both physical and logical kanban replenishment.

• Support for multiple suppliers for Source Type of Supplier, and the ability to define
the appropriate percentage of sourcing.

- Replenishment order consolidation to generate a single document for replenishment of multiple cards in a pull sequence.

- Support for custom statuses for kanban cards according your business requirements.

- Ability to maintain the number of kanban cards automatically according to planning recommendations and pull sequence setup.

- Integration with Oracle iSupplier Portal where your supplier can view relevant data and be able to change the status for that supplier’s kanban cards, see: Setting Up E-Business Functions, page 2-2

- Configurable notifications and alerts based on the specific business events, see: Seeded Business Events, page C-1

- Ability to create your own code to override default logic through client extensions, see: Custom Kanban Programming Logic, page D-1
Setting Up Electronic Kanban

This chapter covers the following topics:

• Overview of Setting Up Electronic Kanban
• Setting Up E-Business Functions
• Related Product Setup Steps
• Setting Profile Options

Overview of Setting Up Electronic Kanban

The Electronic Kanban Automated Deployment script is required to install Electronic Kanban before completing the other setup steps. This script configures the AppsDataSource, data security, underlying Oracle Applications Technology, and profile options. This script also needs to be executed for each subsequent patch of the application. See: 12.2 Electronic Kanban Deployment Guide on My Oracle Support (support.oracle.com), note number 1517173.1.

The following tasks are required to set up Oracle Electronic Kanban after you execute the Electronic Kanban Automated Deployment script:

<table>
<thead>
<tr>
<th>Task Number</th>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Creating Electronic Kanban responsibilities</td>
<td>The Electronic Kanban application is installed with the seeded responsibility of Super User, but you can create custom responsibilities, see: Setting Up E-Business Functions, page 2-2</td>
</tr>
<tr>
<td>Task Number</td>
<td>Task Description</td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>------------------</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Configuration Electronic Kanban parameters. Parameters govern behavior according to your organization’s requirements for calculations and transactions, see: Configuring Kanban Parameters, page 3-5</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Defining pull sequences and kanban cards Kanbans are the visual replenishment signal corresponding to items needed in production. The pull sequence defines the kanban location, source information, and planning parameters, see: Overview of Kanban Pull Sequence and Kanban Card Setup, page 3-1</td>
<td></td>
</tr>
</tbody>
</table>

**Setting Up E-Business Functions**

The Electronic Kanban application is installed with the seeded responsibility of Electronic Kanban Super User. This responsibility has all the related functions attached to it, and displays all the tabbed regions. The Electronic Kanban Home Page function is required to be added to the responsibility with Prompt, since this is the link to the JSPX page that will run.

The list of other functions in for the Electronic Kanban workbench are:

**Functions**

<table>
<thead>
<tr>
<th>Function</th>
<th>Tabbed Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>eKanban Dashboard Metrics</td>
<td>Home</td>
</tr>
<tr>
<td>eKanban Cards Summary</td>
<td>Summary</td>
</tr>
<tr>
<td>eKanban Actions</td>
<td>Actions</td>
</tr>
<tr>
<td>eKanban Receipt</td>
<td>Receipt tab on Actions page</td>
</tr>
</tbody>
</table>
## Function Tabbed Region

<table>
<thead>
<tr>
<th>Function</th>
<th>Tabbed Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>eKanban Replenishment</td>
<td>Replenish tab on Actions page</td>
</tr>
<tr>
<td>eKanban Generic Status Change</td>
<td>Status Change tab on Actions page</td>
</tr>
<tr>
<td>eKanban Transfer</td>
<td>Transfer tab on Actions page</td>
</tr>
<tr>
<td>eKanban Planning</td>
<td>Planning</td>
</tr>
<tr>
<td>eKanban Setup</td>
<td>Setup</td>
</tr>
<tr>
<td>eKanban Parameter</td>
<td>Parameters</td>
</tr>
</tbody>
</table>

For example, if you create a new responsibility with specific tabbed regions, such as a responsibility named eKanban Operator with Summary and Actions tabs—and a Status Change subtab—choose the following seeded functions:

- eKanban Home Page
- eKanban Cards Summary
- eKanban Actions
- eKanban Generic Status Change

### Integration with iSupplier Portal

If your organization has installed both Electronic Kanban and iSupplier Portal, you can integrate the two products by displaying an Electronic Kanban tabbed region in iSupplier Portal. The tabbed region in iSupplier Portal displays the Summary and Actions tabs of the Electronic Kanban workbench.

You need to add the Electronic Kanban tabbed region to iSupplier Portal manually in order for the tab to appear. In the Menus window, for the iSP HOMEPAGE Menu record, enter:

- Prompt: Kanban
- Submenu: iSP Kanban Tab

Related Product Setup Steps

You may need to perform some or all of the following steps to set up Electronic Kanban. These steps are discussed in detail in the Setting Up sections of the related Oracle product guides.

Oracle Inventory Setup Steps

Set up Inventory as described in the Setup Steps, Oracle Inventory User’s Guide. Ensure that all of the following steps are completed:

<table>
<thead>
<tr>
<th>Step</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create your organizations</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Define your organization parameters</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Define your items and item costs</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Launch your transaction managers</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Define your account aliases (optional)</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Define your transaction reason codes</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Define your units of measure</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Define your subinventories</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Define your stock locators</td>
<td>Common Manufacturing</td>
</tr>
</tbody>
</table>

Oracle Bills of Material

Set up Bills of Material as described in Setup Steps, Oracle Bills of Material User’s Guide. Ensure that all of the following steps have been completed:

<table>
<thead>
<tr>
<th>Step</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create your bills of material</td>
<td>Common Manufacturing</td>
</tr>
</tbody>
</table>
## Setting Up Electronic Kanban

**Step Reference**

<table>
<thead>
<tr>
<th>Step</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define your resources</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Define your departments, department classes, resource shifts, and department resources</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Define your standard operations</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Create your routings (optional)</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Define simulation sets</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Calculate your manufacturing lead times (Optional)</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Create your workday calendar</td>
<td>Common Manufacturing</td>
</tr>
</tbody>
</table>

### Oracle Cost Management (Optional)


<table>
<thead>
<tr>
<th>Step</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define your cost types</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Define your resource activities and activity costs</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Define your default WIP accounting classes for categories (optional)</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Define resources, material sub-elements, overheads, and overhead defaults.</td>
<td>Common Manufacturing</td>
</tr>
</tbody>
</table>

### Oracle iSupplier Portal (Optional)

Set up iSupplier Portal as described in Setup Steps, *Oracle iSupplier Portal Implementation Guide*.
Oracle Planning Products

Set up Oracle planning products.

Oracle Work in Process

Set up Work in Process as described in Setup Steps, see: Setup Steps, Oracle Work in Process User’s Guide

<table>
<thead>
<tr>
<th>Step</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define Work in Process Parameters</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Define Work in Process Accounting Classes</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Set Work in Process Profile Options</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Define resources, material sub-elements, overheads, and overhead defaults.</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Define Schedule Groups (optional)</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Define Employees (optional if using resources)</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Define Labor Rates (optional if using resources)</td>
<td>Common Manufacturing</td>
</tr>
<tr>
<td>Define Shop Floor Statuses (optional if using resources)</td>
<td>Common Manufacturing</td>
</tr>
</tbody>
</table>

Oracle Workflow

In order to initiate workflows that send notifications, or to customize workflows to include your own notification recipients, you must have Oracle Workflow installed. See: Setting Up oracle Workflow, Oracle Workflow Administrator’s Guide

Setting Profile Options

Profile options specify how the application controls access and processes. The Electronic Kanban Automated Deployment script sets the following profile options for your implementation. The levels are set in the columns for User, System Administrator User, System Administrator Responsibility, System Administrator Application, and System Administrator Site.
The following values are used:

- Yes—you can update the profile option
- View Only—you can view the profile option value in the Profiles window, but you cannot change
- No—you cannot view or change the profile option value

### Electronic Kanban Profile Options

<table>
<thead>
<tr>
<th>Profile Option</th>
<th>User</th>
<th>System Admin User</th>
<th>System Admin Resp</th>
<th>System Admin App</th>
<th>System Admin Site</th>
<th>Required ?</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLM: Enable E-Kanban</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>FND: External ADF Application URL</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Null</td>
</tr>
</tbody>
</table>

- **FLM: Enable E-Kanban**
  Enables Electronic Kanban in your system. Values are Yes or No.

- **FND: External ADF Application URL**
  Uniform Resource Locator (URL) used to set the machine where the Electronic Kanban application is operating, for example, http://localhost.us.oracle.com:710.
This chapter covers the following topics:

- Overview of Kanban Pull Sequence, Card, and Parameter Setup
- Configuring Kanban Parameters
- Searching for Pull Sequences and Kanban Cards
- Viewing and Editing Pull Sequences and Kanban Cards
- Viewing the Replenishment Chain
- Viewing and Updating Kanban Cards

Overview of Kanban Pull Sequence, Card, and Parameter Setup

The Parameters and Setup tabbed regions of the Electronic Kanban workbench are used for configuring behavior, calculating data, and setting up pull sequences and kanban cards per organization selected.

The Parameters region is used to configure parameters at either the site or organization level. You can set values for demand and lead time calculations, tolerance for dashboard calculations, inventory health thresholds, and a number of other default values for kanban transactions. See: Configuring Kanban Parameters, page 3-5

The Setup tabbed region enables you to query, view, update, create, and delete pull sequences and kanban cards. This region consists of the following panels:

- Search

  You can conduct a Basic Search using Item Number, or Advanced Search using Item Number and extra fields. See: Searching for Pull Sequences and Cards, page 3-9

- Pull Sequence Details
This panel is a summary list of all the pull sequences according to the search criteria. The data appears in columns for Item, Subinventory, Locator, Source Type, and Number of Columns. You have the ability to:

- Hide some values or display all columns.
- Reorder columns.
- Detach and reattach the panel from the page, enabling you to view more of the search result information in the table at one time.

For each pull sequence record selected, you can view and update information regarding Source, Kanban, and Planning data. See: Viewing and Editing Pull Sequences and Kanban Cards, page 3-11

- Replenishment Chain
  Kanbans represent replenishment signals that are visible, such as a color-coded card or an empty bin, to trigger replenishment. This panel displays graphically the replenishment flow of the item for the selected pull sequence. See: Viewing the Replenishment Chain, page 3-16

- Kanban Card Details
  This panel displays the fields in the kanban cards. You can view details of specific cards, create new cards, and print cards. See: Viewing and Updating Kanban Cards, page 3-17
Kanban Card and Supply Statuses

Kanban supply statuses include the following values:

- **New**: The kanban has just been created and is not yet part of the replenishment chain.

- **Empty**: The kanban is empty and a replenishment signal has been generated.

- **Full**: The kanban has been replenished.

- **Wait**: The kanban is waiting until the minimum order quantity has been met by the aggregation of cards.

- **In-Process**: Cards are changed to this status when the following activities occur for the source types:
  - **Supplier**, the purchase order has been approved.
• Inter-Org, the internal requisition has been approved.

• Production, the job or schedule is created and an approved document is created for replenishment.

• Intra-Org, an approved move order is created and an approved document is created for replenishment.

See: Overview of Kanban Replenishment, Oracle Inventory User’s Guide

Electronic Kanban provides additional statuses:

• Wait for Consolidation
  This supply status supports replenishment order consolidation for cards. This status is automatically created when you replenish kanban cards and consolidation is enabled for the pull sequence. This status cannot be created manually for a kanban card.

• Planned
  This card status supports the creation of new cards, if the planning logic recommends extra new cards effective for a future date.

  **Note:** The Generate Kanban Cards program enables you to update cards from Planned status to Active status through a field in the Parameters window. When you enter Yes in the Update Planned Cards field, cards in the Planned status are changed to Active status when the effectivity date suggested by planning has expired.

Custom Statuses

You can also create custom status values for Electronic Kanban for supply types. Create custom statuses by using the following MTL_KANBAN_SUPPLY_STATUS lookup type in the Inventory Manufacturing Lookups window:

• It is advisable to associate custom statuses with existing seeded statuses.

• Ensure that the seeded status values are not deleted from the lookup. Deletion of seeded status values can have undesirable impacts.

• Custom statuses can be disabled at the organization level in the Card Supply Statuses parameter.

Application Utilities Lookups and Application Object Library Lookups, Oracle E-Business Suite Developer’s Guide
Temporary Kanban Cards
You can create a temporary kanban cards to handle demand fluctuation during replenishment spikes. A check box is available on the kanban card record to create a temporary card. Temporary cards are disabled by data entered in one of the following fields:

- Disable date—Future date when the card is no longer active.
- Maximum cycle number—This value is the maximum number of times a card can be replenished.

Once the kanban card attains the disable date or maximum cycle number, the card is cancelled on the next replenishment cycle. If the card is in the replenishment process, it will not be cancelled until after it is replenished.

Non replenishable kanban cards are not used in Oracle Electronic Kanban, temporary cards replace this functionality.

Note: Temporary cards are not considered by kanban planning or the card generation program.

Logical Kanban Replenishment
Oracle Electronic Kanban provides logical kanban replenishment. This type of replenishment occurs automatically in the background, but the receipt of material is handled physically matched to a kanban card or associated document.

Replenishment is triggered by the Logical Kanban Replenishment Calculation program (eKanban Logical Card Replenishment). The concurrent program checks for logical type pull sequences, which are marked on the Source pane of the Setup tabbed region. When logical pull sequences are identified—Active cards in the status of New, Full, or replenishable custom statuses are considered. The program looks at the number of kanban cards on-hand or Full and calculates inventory based on the size of the cards. See: Logical Kanban Replenishment Calculation, page B-4

Configuring Kanban Parameters
The Parameters tabbed region is used to set the Electronic Kanban parameters governing behavior according to your organization’s requirements for calculations and transactions. Parameters are configured at both specific site and the entire organization levels. Parameters at the Organization level can be inherited from the Site level.

To set or change a parameter value:
1. Navigate to the Parameters page.
2. Select the parameter level, choices are Site or Organization.

3. Select the parameter you want to edit, and then select Update.
   A value dialog box appears with the current value.

4. The Inherit from Site level check box is the default setting, and the value at the site level is inherited at the organization level. Uncheck this box to update the parameter at the organization level.

5. If you are not inheriting a value, enter a value in the Parameter Value field.

6. Select OK to save your work.
Parameter Descriptions and Values

The list of parameters is described in the following table:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual vs Planned Demand - Default Number of Days</td>
<td>The time period for calculating demand between actual lead time and planning days for replenished cards and pull sequences displayed on the Dashboard chart.</td>
<td>Number of days (Default: 30 days)</td>
</tr>
<tr>
<td></td>
<td>Data is considered beyond the value in this parameter. For example, if this value is 30 days, then data is considered in the calculation over 30 days.</td>
<td></td>
</tr>
<tr>
<td>Actual vs Planned Demand - Equality Tolerance</td>
<td>Tolerance or margin in the calculation between actual and planned demand for replenished cards and pull sequences on the Dashboard chart.</td>
<td>Percentage (Default: 10 %)</td>
</tr>
<tr>
<td>Actual vs Planned Lead Time - Default Number of Days</td>
<td>The time period for calculating lead time between actual lead time and planning days for replenished cards and pull sequences displayed on the Dashboard chart.</td>
<td>Number of days (Default: 30)</td>
</tr>
<tr>
<td>Actual vs Planned Lead Time - Equality Tolerance</td>
<td>Tolerance or margin in the calculation between actual and planned demand lead time for the Dashboard chart.</td>
<td>Percentage (Default: 10 %)</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
<td>Values</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>Card Supply Statuses</td>
<td>The length of time each supply status a card is considered unmoved, and displays on the Unmoved Kanban Card Dashboard.</td>
<td>% of Lead Time</td>
</tr>
<tr>
<td></td>
<td>You can also use this parameter to enable or disable custom statuses. The Enable check box at the organization level is used to set status availability.</td>
<td></td>
</tr>
<tr>
<td>Custom Panels</td>
<td>You can create custom dashboard pages in the Home tabbed region. This parameter defines the URL link or locator to those pages.</td>
<td>URL link</td>
</tr>
<tr>
<td>Default Job Status for Production Kanbans</td>
<td>Sets default status for new jobs (discrete jobs or a lot based jobs) created during replenishment.</td>
<td>• Unreleased</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Released (Default)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• On Hold</td>
</tr>
<tr>
<td>Inventory Health Threshold - Bad</td>
<td>The ratio between on-hand inventory and safety stock considered unacceptable for the Inventory Heath to be at the status of Bad.</td>
<td>Percentage</td>
</tr>
<tr>
<td></td>
<td>If on-hand inventory is less than this percentage of the safety stock, inventory health is considered at a Bad status.</td>
<td></td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
<td>Values</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Inventory Health Threshold - Good</td>
<td>The ratio between on-hand inventory and safety stock considered acceptable for the Inventory Health to be at the status of Good.</td>
<td>Percentage</td>
</tr>
<tr>
<td></td>
<td>If on-hand inventory is equal to or greater than this percentage of the safety stock, inventory health is considered to be in Warning status.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>If on-hand inventory is equal to or greater than the Bad Threshold, or less than the Good Threshold—it is considered to be in Good status.</td>
<td></td>
</tr>
<tr>
<td>Tolerance for Full Status</td>
<td>The minimum quantity to change a kanban to Full status depending on the replenishment source type.</td>
<td>For each source type - Inter-Org, Supplier, Intra-Org, Production - enter the percentage of Card Size.</td>
</tr>
<tr>
<td>Transfer Staging Subinventory</td>
<td>The staging subinventory for transfers and shipping.</td>
<td>* Source Subinventory</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Value defined in the Shipping Parameters (Default)</td>
</tr>
<tr>
<td>Transfer Tolerance</td>
<td>Transfer quantity margin or tolerance for the sales order line quantity when shipping Inter-Org kanbans.</td>
<td>* Allow Any Quantity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Allow exact Kanban Card Quantity only</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* As defined in Order Management (Default)</td>
</tr>
</tbody>
</table>

**Searching for Pull Sequences and Kanban Cards**

Use the toggle button to choose either a Basic or Advanced Search method. For a Basic Search, select criteria in the Item number. To filter the criteria, you can use the Advanced Search function by adding extra fields in the search.
Search criteria can be saved and reused. Select a search name in the Saved Search drop-down box to view the previously saved searches.

**To perform a Basic Search for pull sequences and kanban cards:**
1. Navigate to the Setup tabbed region of the Electronic Kanban workbench, and select Basic in the Search region.
2. Enter criteria values or partial values in the Item field.
3. Select Search.
   The results of your search appear in the Pull Sequence Details region. Select Reset to clear the search fields and begin another search, and Save to save this set of criteria for another search.

**To perform an Advanced Search for kanban cards:**
1. Navigate to the Setup tabbed region of the Electronic Kanban workbench, and select Advanced in the Search region.
2. In the Item field, select a value or partial value.
3. Select the Add Fields drop-down box to include other search criteria.
   This can include fields such as Buyer Name, Item, Line Code, Locator, Planner Code, Source Organization among other fields.
4. Select Search.
   The results of your search appear in the Pull Sequence Details region. Select Reset to clear the search fields and begin another search, and Save to save this set of criteria for another search.

**To save search criteria:**
1. See: To Save Search Criteria, page 5-4
Viewing and Editing Pull Sequences and Kanban Cards

You can view specific details about pull sequences in the Source, Kanban, and Planning panels of the Pull Sequence Details region. You can edit details depending on the pull sequence source type.

To view and edit pull sequence setup information:

1. Navigate to the Setup tabbed region of the Electronic Kanban workbench, and select a record in the Pull Sequence Details panel.

2. Select the Source tab.

   Fields display for Item number, Subinventory, Locator, and Source Type. The source type can be one of four values: Supplier, Intra-Org, Inter-Org, or Production.

3. **Supplier:** If the Source Type for the pull sequence is Supplier, supplier information appears. You can edit information in the Supplier fields including:
   - Site
   - Supplier
   - Percentage of sourcing for this supplier

   Number of Cards field is system calculated for the pull sequence for the supplier.

4. Select Add Supplier to add other suppliers for this item.

5. Change the Percentage value for the existing suppliers, or delete the suppliers you are no longer using. The Percentage values for all your suppliers must be equal to 100.
6. For adding new suppliers, enter values in the Site, Supplier, and Percentage fields.

7. Select Apply to save your work.

8. **Intra-Org:** If the Source Type is Intra-Org, you can edit information in the Auto Allocate, Source Subinventory, and Source Locator fields.

   You can optionally select the Auto Allocate check box to automatically allocate the move order.
9. **Inter-Org:** If the Source Type is Inter-Org, you can edit information in the Source Organization, Source Subinventory, and Source Locator fields.

10. **Production:** If the Source Type is Production, you can edit the applicable Line field value.

11. Select Apply to save your work.

12. Select the Kanban tab.

13. You can edit information in the following fields:
   
   - **Auto Request** enables auto requests for the pull sequence. This calls the Replenishment Order Consolidation concurrent request, which picks up the pull sequences and generates temporary kanban cards with one cycle for the pull sequence.
   
   - **Calculate** indicates the method to calculate either size or number of cards, it is used by the Planner Workbench. Choices are Kanban Size, Number of Kanban Cards, or Do Not Calculate.
   
   - **The Logical check box** indicates whether replenishment is done physically or through the logical kanban replenishment program.
   
   - **Size**
• Number of Cards

• Minimum Order Quantity

• Consolidation indicates if document generation is consolidated, or a separate document is created for each replenishment order.

  **Note:** Consolidation is available only for Supplier, Inter-Org, or Intra-Org kanbans.

14. Select Apply to save your work.

15. Select the Planning tab.

16. You can edit some of the fields, others are populated by the planning program:
  
  • Lead Time: The time it takes to supply this item to the pull sequence, expressed in a unit of number of days.
  
  • Allocation %: The percent of independent demand for the kanban item that is to be supplied from this pull sequence.
Note: The allocation percent is the percentage of the item demand allocated for this pull sequence. The kanban card calculation logic is not impacted when multiple suppliers exist. However, the lead time value is used by planning. Therefore, one pull sequence has only one lead time, even if there are multiple suppliers. You need to enter an average lead time for planning purposes if multiple suppliers exist for a pull sequence.

- Lot Multiplier: When kanban planning sizes the containers at the location, it will size in multiples of this quantity.

- Safety Stock Days: The number of days of demand that will be added to the kanban for safety stock.

- Future Card Size: This field is updated by planning calculations for the size of the kanban card.

- Future Number of Cards: This field is updated by planning calculations for the future number of the kanban.

- Effectivity Date: Indicates the date the new kanban size and numbers are active, updated by planning calculations.
17. Select Apply to save your work.

**To generate and print kanban cards in the Setup tabbed region:**

1. Navigate to the Setup tabbed region of the Electronic Kanban workbench, and select a record in the Pull Sequence Details region.

2. In the Source, Kanban, or Planning tabbed regions select Generate Cards.
   
   New cards are generated for this pull sequence using the planning logic by initiating the Generate Cards concurrent request. Kanban card records appear in the Kanban Cards Details panel.

3. Select Generate and Print
   
   New cards are generated and printed for this pull sequence using the planning logic by initiating the Generate Cards concurrent request. Kanban card records appear in the Kanban Cards Details panel.

**Viewing the Replenishment Chain**

Kanbans represent replenishment signals in manufacturing such as a color-coded card (kanban), a light that goes on when material is required, or anything to trigger
replenishment. The Replenishment Chain graphic displays replenishment chain for the pull sequence selected in the Setup tabbed region, or the Summary tabbed region. The visual display shows the Item Number, Organization, and Destination of the material needed in the manufacturing process. You can manipulate the display by zooming in and out, and changing the graphic layout.

Viewing and Updating Kanban Cards

The Kanban Card Details panel displays a list of the kanban cards created for the selected pull sequence in a table view. You can edit fields and print cards from this region.

To view and update kanban card details:
1. In the Setup tabbed region, search and select a record in the Pull Sequence Details panel.

The pull sequence selected appears in the Kanban Card Details panel displaying the following fields:

- Card Number
- Supply Status
- Card Status
- Size
- Replenishment Count indicates the number of times the card has been replenished.
- Temporary Card indicates if the kanban card is temporary or not.
- Source

2. Select View to change the summary view display. The drop-down menu provides the following choices:
   - Columns: Enables you to select specific columns to display.
   - Detach: You can separate or reattach the panel from the page, enabling you to view more of the search result information in the table at one time.
   - Reorder Columns appearing in the table.

3. Choose a specific card and select Update Card to change details on the kanban card record including:
   - Supply Status
   - Card Status
   - Error Code
• Temporary Card
• Source Subinventory
• Locator
• Supplier
• Supplier Site

You can move through the list of kanban cards in this pull sequence by using the First, Previous, Next, and Last navigation buttons.

4. Select Apply to save your work.
Overview of Kanban Planning

Kanban is a pull replenishment system whose aims are zero stockouts, shorter lead times, and reduced inventory with minimal manual supervision. The tasks of kanban planning are determining the optimal number of kanban card, and calculating the kanban size. Kanban planning is performed and updated in the Planning tabbed region of the Electronic Kanban workbench. The Planning region consists of two sub-tabbed regions including:

- Planning Workbench, page 4-2—Used to view the launched plan results, edit, recalculate, and replan. You can also view and edit the horizontal plans.

- Plan Definition, page 4-3—Used to setup a kanban plan and to launch the kanban plan.
Planning Workbench

The Planning Workbench tabbed region is divided into several regions: Search, Pull Sequence Planning, Planning Details, and Horizontal Plan.

- **Search Region** is used to search for pull sequences for items using either kanban plans or item numbers. See: Searching for Pull Sequence Planning Data, page 4-3

- **Pull Sequence Planning Region** displays the details for the results of your pull sequences search.

  All the fields available in the pull sequence definition are displayed here, you can configure the table results format. This region enables you to update data and recalculate the number of cards or size for the selected pull sequences. See: Viewing and Updating Pull Sequence Planning, page 4-5

- **Planning Details and Horizontal Plan Region** consists of two panels: Planning Details displays details of the plan for the selected pull sequence in the table, and
Horizontal Plan displays the horizontal plan for the selected pull sequence for a period of time.

Plan Definition

The Plan Definition tabbed region is used to view, edit, create, and update kanban planning. You can use forecast, Master Demand Schedule, Master Production Schedule, or actual production for planning definitions. See: Viewing and Updating Kanban Planning Definitions, page 4-9

Kanban Planning Recommendations

When planning recommends a decrease in the number of cards, production is updated with the new value. Replenishment calculations consider the number of cards to reduce, and cancel cards in succeeding replenishment cycles until the number of cards to eliminate is reached.

If planning recommends an increase in the number of cards, and production is updated with the new value, additional cards are immediately generated and the number of cards is added.

- Only additional required cards are generated.
- Existing cards are not cancelled.
- For requirements at a future date, additional cards are created in the Planned status.

The Generate Kanban Cards program enables you to update cards from Planned status to Active status through a field in the Parameters window. When you enter Yes in the Update Planned Cards field, cards in the Planned status are changed to Active status when the effectivity date suggested by planning has expired.

Searching for Pull Sequence Planning Data

There are two search regions in the Planning tabbed region of the Electronic Kanban workbench: one in the Planning Workbench tab and one in the Plan Definition regions. Both regions enable you to search for planning records using either a Basic or an Advanced Search. If selecting the Advanced Search, you can add extra search criteria fields.

To perform a Basic Search for pull sequence planning information:
1. Navigate to the Planning Workbench tab of the Planning tabbed region.
2. Select a value in the Planning Basis field indicating a planning measurement. Choices are either Kanban Plan or Item.
3. If the Planning Basis is Kanban Plan, select a value in the Kanban Plan field and a
full or partial value in the Item field.

4. If the Planning Basis is Item, select a full or partial value in the Item field.
   To view all kanban plan records, leave this field null.

5. Select Search.
   The results of your search appear in the Pull Sequence Planning region. Select Reset to clear the search fields and begin another search, and Save to save this set of criteria for another search.
   See: To Save Search Criteria, page 5-4

To perform an Advanced Search for pull sequence planning information:
1. Navigate to the Planning Workbench tab of the Planning tabbed region, and select Advanced Search.

2. In the Planning Basis criteria field, select either Kanban Plan or Item.

3. If you selected a Planning Basis as Item, select a full or partial item value in the Item field.

4. If you selected a Planning Basis of Kanban Plan, you also have the option to select a full or partial item value in the Item field.

5. You can select the Add Fields drop-down box to include other search criteria including the following values:
   - Item
   - Kanban Plan
   - Locator
   - Planning Basis
• Subinventory


The results of your search appear in the Pull Sequence Planning region. Select Reset to clear the search fields and begin another search, and Save to save this set of criteria for another search.

See: To Save Search Criteria, page 5-4

Viewing and Updating Pull Sequence Planning

The Pull Sequence Planning region displays the results of your search for kanban plans. You can view information on item, point of use, lead time, demand, order quantity, and kanban cards. The region also enables you to recalculate and update production.

When you select a record in the table from your search, you can view the Planning Details of the plan for the selected pull sequence in the table, and Horizontal Plan for the selected pull sequence for a period of time.

Select View to change the Pull Sequence Planning summary table display format including selecting specific columns to display, reordering how the columns appear in the table, and detaching or reattaching the panel from the page to view more result information.

To view and edit pull sequence planning information:

1. Navigate to the Planner Workbench tab of the Planning tabbed region of the Electronic Kanban workbench, and search for records.

See: Searching for Pull Sequence Planning Data, page 4-3

The results of your search appear in the Pull Sequence Planning region.
2. You can edit some of the values, and update the data. Planning data for the pull sequences display in the following columns.

- **Item**

- **Point of Use**: Location of the pull sequence material.

- **Lead Time**: Period of time needed to replenish cards for this pull sequence. This field can be updated.

- **Allocation %**: Division of this item used to replenish cards for this pull sequence. This field can be updated.

- **Actual Lead Time**: The true lead time to replenish cards for this pull sequence.

- **Actual Demand**: Requirement for the pull sequence material, from a number of sources such as customer orders.

- **Average Demand**: This field can be updated.

- **Safety Stock Day**: This field can be updated.

- **Minimum Order Quantity**: This field can be updated.

- **Fixed Lot Multiplier**: This field can be updated.

- **Kanban Size**: The values in the Current and Calculated fields are populated by kanban planning calculations.

- **Number of Cards**: The values in the Current, Calculated, and Temporary fields
are populated by kanban planning calculations.

- Future Planned: This field is populated by planning.

3. After updating data for the row, choose Recalculate to see the effects of your changes to the kanban size in the Horizontal Plan region.

4. To save the results of your recalculation work for one record, choose the Update Production icon in the row for the item. To save updates for multiple records or all records appearing in the table, choose the Update Production button.

The Update Production dialog box appears.

5. Enter a date in the Plan Effective Date field, and select Update Production.

The updates from your changes appear for the records selected in the table.

**To view planning details and the horizontal plan for a pull sequence:**

1. Navigate to the Planner Workbench tab of the Planning tabbed region, and search for records.

   The results of your search appear in the Pull Sequence Planning region.

2. Select a pull sequence record in the table from your search to display the Planning Details and Horizontal Plan for the selected pull sequence.

   In the Planning Details panel, you can see values in the following fields:
   - Item
   - Point of Use
   - Calculate: Indicates the method to calculate either size or number of cards.
3. The Horizontal Plan panel displays the kanban plan for the pull sequence item displayed in the Pull Sequence Planning region for a selected period of time. Information is displayed in the following fields:

- Date
- Beginning On Hand
- Expected Receipts
- Daily Demand
- Adjusted Daily Demand
- Available On Hand
- Inventory Value
- Cards On Hand
- Cards Replenished
• Safety Stock Days

• Adjusted Safety Stock Days

• Safety Stock Target

4. You can change the Adjusted Daily Demand and Adjusted Safety Stock Days by entering values in these fields.

5. Select Adjust Values to save your work and calculate the new data. Values will change in the Available On Hand column incrementally for each date listed.

Viewing and Updating Kanban Planning Definitions

The Plan Definition tab of the Planning tabbed region is used to view and update kanban planning. There are two areas in this page: a Search region, and the results of your search appear in the Kanban Plan region.

Select View to change the summary view display. The drop-down menu enables you to select specific columns to display, detach or reattach the panel from the page enabling you to view more of the result, reorder columns, and query to filter the table results.
To search for kanban plans in the Plan Definition region:
1. Navigate to the Plan Definition tab of the Planning tabbed region.

2. To search for records using a Basic Search, select Basic and enter a value in the Kanban Plan field.
   To view all kanban plan records, leave this field null.

3. Select Search.
   The results of your search appear in the Kanban Plan region of this page.

4. To search for records using an Advanced Search, select Advanced and enter a value in the Kanban Plan field.

5. Select Add fields to include other fields to use in your search. A list of available fields appears.

6. Depending on the field value selected, enter a full or partial search value in the field box.

7. Select Search.

8. The results of your search appear in the Kanban Plan region of this page.

To view and update kanban plans:
1. Navigate to the Plan Definition tab of the Planning tabbed region, and search for appropriate kanban plan records.
   The results of your search appear in the Kanban Plan region of this page. Data appears in the following fields:
   - Kanban Plan
   - Description
   - Demand Type
   - Forecast/Schedule
   - Last Run Execution Date
   - Inactive On
   - Request ID
   - Phase
2. Select Demand Type field to change the way demand is calculated. Your choices are:
   - Forecast
   - MDS: Master Demand Schedule
   - MPS: Master Production Schedule
   - Actual Production

3. Select the Forecast/Schedule field to enter the name of the Forecast, MDS, or MPS value. Select the Search icon to search for a value.

This field is not used for Action Production demand. The Search and Select Forecast/Schedule dialog box appears.
4. Perform a Basic Search for a schedule or forecast by selecting values in the following fields:
   - Match: All or Any
   - Forecast Designator
   - Description

   You can also choose Advanced to search using additional other fields in the search criteria.

5. Select Search.

   The results meeting your criteria appear in the dialog box.

6. Select a record, and choose OK to change the value in the Forecast/Schedule field.

7. In the Inactive On field, select a date if you want this record to have a time limit
definition.

8. Select Apply to save your work.

9. Select Launch to display the Launch Kanban Planner dialog window. This window is used to set parameters for launching the Kanban Calculation program.

10. Enter parameters in the following fields:
    • Items From and To
    • Category Sets
    • Categories From and To
    • BOM Effectivity
    • Demand Start Date
    • Demand Cutoff Date
11. Select Launch.

12. Select Show Details to navigate back to the Planning Workbench tab and see the results of your updates from the planning recalculations.
This chapter covers the following topics:

- Overview of Kanban Summary Information
- Searching for Kanban Cards
- Viewing Kanban Card Summary Information
- Viewing and Updating Kanban Card Details

Overview of Kanban Summary Information

The Summary tabbed region of the Electronic Kanban workbench is used to search and view kanban cards for specific items and perform transactions. It contains the following regions:

- Search region with advanced search and save search capabilities, see: Searching for Kanban Cards, page 5-2

- Kanban Cards Summary region listing the pull sequence data and number of cards in each status for the specific record. This region contains configurable columns and can be detached from the workbench. The data can be exported to a spreadsheet, see: Viewing Kanban Card Summary Information, page 5-6

- Kanban Cards region where you can view details of each kanban card for the selected pull sequence with the ability to perform transactions. This region contains configurable columns and can be detached from the workbench. This region also enables you to export data to a spreadsheet and print kanban cards. See: Viewing Kanban Card Summary Information, page 5-6, and Viewing and Updating Kanban Card Details, page 5-10

Note: Only kanban cards with pull sequences are displayed in the Summary tabbed region. Non replenishable kanban cards, which are not supported in Oracle Electronic Kanban, are not shown because they
do not have associated replenishment chain or inventory health data.

**Note:** Cancelled kanban cards are not displayed in the Summary tabbed region. Use the Setup tabbed region to view and perform transactions for cancelled cards.

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**Integration with iSupplier Portal**

If your organization has installed both Electronic Kanban and iSupplier Portal, you can integrate the two products by displaying an Electronic Kanban tabbed region in iSupplier Portal. The tabbed region in iSupplier Portal displays the Summary and Actions tabs of the Electronic Kanban workbench.

In the Summary region, your supplier can only view kanban card summary and detail data relevant only to that supplier. You supplier can update the kanban card supply status to any custom In Process status.

See: Integration with iSupplier Portal, page 2-3

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**Searching for Kanban Cards**

Item and Kanban Card values are the default search criteria for a Basic Search, but you can use the Advanced Search function to locate records using other values. Use the toggle button to choose either a Basic or Advanced Search method. You can also save and reuse the search criteria.

You have the option to use saved search criteria by selecting a search name in the Saved
Search drop-down box. This field displays previously saved searches.

To perform a Basic Search for kanban cards:
1. Navigate to the Summary tabbed region of the Electronic Kanban workbench, and select Basic to toggle to the Basic Search region.
2. Enter criteria values or partial values in the either the Item or Kanban Card fields, or both fields.
3. Select Search.

The results of your search appear in the Kanban Cards Summary region. Select Reset to clear the search fields and begin another search, and Save to save this set of criteria for another search.

To perform an Advanced Search for kanban cards:
1. Navigate to the Summary tabbed region of the Electronic Kanban workbench, and select Advanced to toggle to the Advanced Search region.
2. Enter criteria values or partial values in the either the Item or Kanban Card fields, or both fields.
3. You can select the Add Fields drop-down box to include other search criteria including the following values:
   - Destination Locator
   - Destination Subinventory
   - Document Number
   - Kanban Card
   - Source Locator
   - Source Organization
   - Source Subinventory
   - Supplier
   - Supplier Site
   - Buyer Name
   - Inventory Health
item
planner code
source type

4. Depending on the additional values, select a value or partial value in the criteria field.

5. Select Search.

The results of your search appear in the Kanban Cards Summary region. Select Reset to clear the search fields and begin another search, and Save to save this set of criteria for another search.

To save search criteria:

1. After selecting criteria to perform either a Basic or Advanced Search, select Save.

   The Create Saved Search dialog box appears to save this set of criteria.

2. Enter a value in the Name field. You can set other values for this record by enabling the check boxes for:
   - Set as Default
   - Run Automatically
   - Save Results Layout
3. Select OK to save your work.  
   After a search record has been saved, you can select it from the Saved Searches list for future inquiries.

4. Select Personalize from the Saved Search drop-down box update the saved search record.

5. In the Personalize Saved Searches dialog window, enter a value in the Name field. You can set other values for this record by enabling the check boxes for:
• Set as Default
• Run Automatically
• Save Results Layout

6. Select Apply to save your work, select OK to close the dialog box.

**Viewing Kanban Card Summary Information**

The Kanban Cards Summary region displays the results of your Item and Kanban Card search; this region shows the details of the pull sequences. You can filter the rows in the table view, hide or display columns, export data to a spreadsheet, and detach the table from the page. Select a specific record in the Summary table to view the cards associated with the item in the Kanban Cards panel.

**To view a summary of kanban cards for a specific set of search criteria:**

1. Navigate to the Kanban Cards Summary region, and perform a search. See: Searching for Kanban Cards, page 5-2

Data for the kanban cards appears in the following fields:

• Item

• Destination: Line operation where this material is sent.

• Source Type: Replenishment source, choices are: Inter-Org, Intra-Org, Production, and Supplier.

• Source: This value depends on the Source Type; it is either a stockroom or supplier site.

• Inventory Health: The percentage of inventory level as compared to the safety stock.

• Number of Cards


• Replenishment Chain: Graphical display of the pull sequence.
2. Select Replenishment Chain to view a graphical representation of the replenishment signals for a particular item. This graphic represents the pull sequence between point of use and a point of supply. See: Viewing the Replenishment Chain, page 3-16

3. Select View to change the summary view display. The drop-down menu provides the following choices:
   - Columns: Enables you to select specific columns to display.
   - Detach: You can separate or reattach the panel from the page, enabling you to view more of the search result information in the table at one time.
• Reorder Columns appearing in the table.

• Query By Example to filter the table results.

4. Select Reorder Columns to display the Reorder Columns dialog box. This window enables you to move the visible columns in a particular order.
5. Select a Visible Column name, and use the Arrow tools to move the selection in the order you want it to appear on the table.

6. Select Query By Example to filter the fields displaying in the table. When this menu option is selected, a table of blank fields appears above the Kanban Cards Summary table.

7. Enter criteria values in the blank fields, and then select Enter to display the filtered results.

8. Select the Export to Excel icon to display all of the records in the Kanban Cards Summary table on a spreadsheet. The spreadsheet opens with the records appearing in the rows.
Viewing and Updating Kanban Card Details

The Kanban Cards panel of the Summary tabbed region is used to view details of specific kanban cards, create transactions, and print cards. When you select a record in the Kanban Cards Summary panel, the details of the kanban cards appear in the Kanban Cards panel. Select Switch View to change the display from either a summary table view, or individual kanban card detail and distribution view. You can:

- Filter the rows in the table view
- Hide or display columns
- Export data to a spreadsheet
- Detach the table from the page

To view kanban card summary details in a table view:
1. Select a record in the Kanban Cards Summary region to display it in the Kanban Cards panel.
2. Select Switch View if the display is not in the summary table view.

Kanban card data displays in the following fields:

- Kanban Card number
- Destination
- Source
- Kanban Size quantity
- Unit of Measure
• Card Status: Active, On Hold, or Cancelled

• Supply Status, the following statuses are used:
  • New: The kanban has just been created and is not yet part of the replenishment chain.
  • Full: The kanban has been replenished.
  • Empty: A replenishment signal has been generated. This status is used only for Inter-Org and Supplier source types.
  • Wait: The kanban is waiting until the minimum order quantity has been met by the aggregation of cards.
  • In Process—if the Source Type is:
    Supplier, the purchase order has been approved.
    Inter-Org, the internal requisition has been approved.
    Production, the job has been created and an approved document has been created for replenishment.
    Intra-Org, the move has been performed and an approved document has been created for replenishment.

• Cycle number: The number of times a card has been replenished.

• Temporary Card: Cards created to handle demand fluctuation during replenishment spikes.

• Document Type: The document type for inbound material such as purchase order or internal order.

• Document Number: Number for the inbound document such as purchase order number.

• Last Activity By

• Last Activity Date

• View History

3. Select View History to display the View Kanban History page for a specific kanban number, see: View History, page 5-12

4. Select a kanban record and Transaction Actions to perform transactions for a particular record.
Your transaction choices are Replenish, Receive, Transfer, Change Supply Status, and Card Status Change. See: Performing Transactions in the Summary Region, page 5-10

To view kanban history:
1. On the Kanban Cards panel in the summary table view, select a specific record and select View History.

2. In the Display field, select a cycle option to view the history. Choices include:
   - All Replenishment Cycles
   - Current Replenishment Cycle
   - Last 2 Replenishment Cycles
   - Last 3 Replenishment Cycles
   - Last 4 Replenishment Cycles
   - Last N Replenishment Cycles

3. If you select the Display of Last N Replenishment Cycles, enter a numeric value in the N field. For example, enter the number 10 for ten cycles.

4. Select Go to view the results.

   Information displays for the kanban card in the following fields: Kanban Card Number, Replenishment Cycle, Activity Date, Supply Status, Card Status, Card Size, Document Number, Document Type, and Last Updated By.

To create kanban card transaction actions in the Summary tab:
1.
Select a kanban card record in the Kanban Cards panel.

2. You can select multiple records to perform transactions.
   To select contiguous records:
   - Click the first record in a row to select it.
   - Hold down the Shift key as you select additional contiguous records.
   To select non-contiguous records:
   - Click the first record in a row to select it.
   - Hold down the Control key as you select an additional non-contiguous records.

3. Select an action, available choices include:
   - Replenish
   - Receive
   - Transfer
   - Change Supply Status
   - Card Status Change

4. **Replenish**: For replenishing a kanban, select Replenish and then select Go.
   Only cards in New and Full status can be replenished. If the transaction is successful, a confirmation message appears.

5. **Receive**: For receiving material for a kanban, select Receive and then select Go.
   The Receive dialog box appears.

6. Enter a value in the Receive Quantity field, and select OK.
Kanban material is received in the background if:

- Source Type for the kanban card is either Supplier or Inter-Org.
- Card Status is In Process, In Transit, or Full.
- The item is not lot or serial controlled.

7. **Transfer:** For transferring material across subinventories, select Transfer and then select Go.
   
The Transfer dialog box between shipping networks appears.

8. Enter a value in the Transfer Quantity field, and select OK.
   
   If the transaction is successful, a confirmation message appears. A new value appears in the Supply Status field depending on the quantity transferred.

   **Note:** For Inter-Org kanbans with a transfer type of Intransit; they are required to first be transferred to a staging subinventory and, then received.

9. **Change Supply Status:** For changing the Supply Status of a kanban card, select Change Supply Status, and then select Go.
   
The Change Supply Status dialog box appears.

10. Select a new status, and then select OK.
    
    
    If the transaction is successful, a confirmation message appears and the new value appears in the Supply Status field.

11. **Card Status Change:** For changing the status of a kanban card, select Card Status Change and then select Go.
    
The Card Status Change dialog box appears.

12. Select a new status, and select OK.
    
    Choices include: Active, Canceled, and Hold.
    
    If the transaction is successful, a confirmation message appears and the new value appears in the Card Status field.

   **To print cards from the Summary tabbed region of the Electronic Kanban workbench:**

   1. In the Kanban Cards panel, select a kanban card record.
2. Select Print Cards.

If the transaction is successful, a confirmation message appears stating that the request has been submitted and listing the Request ID number.

**To view specific kanban card details and distribution:**

1. Select a record in the Kanban Cards Summary region to display it in the Kanban Cards panel.

2. Select Switch View if the display is not in the Kanban Card Details and Distribution view.

The Kanban Cards panel displays two sections: Kanban Card Details and Cards Distribution.

- In the Kanban Card Details section, the same fields display as in the table view, but for each individual card for the item number selected. This includes: Kanban Card number, Destination, Kanban Size, Unit of Measure, Cycle Number, Supply Status, Card Status, Card Type, Move Status, Source, Document Type, Document Number, Last Activity by, Last Activity Date.

- In the Card Distribution section, you can view a graphical display of the distribution statuses such as: New, Full, Wait, Empty, In Process, In Transit, Exception, and Wait For Consolidation.

3. Select the horizontal Arrow tools to scroll forward or backward to view all the kanban cards created for this item.
Overview of Kanban Actions

The Actions tabbed region of the Electronic Kanban workbench is used to perform replenishment, receiving, transferring, and status change transactions for your kanban cards. Although kanban transactions can also be performed in the Summary tabbed region, the Actions regions provides the ability to scan kanban card records using a mobile device. This offers a streamlined and simplified user interface for creating transactions.

The Actions tab consists of separate tabbed regions:

- **Replenish**
  You have the ability to replenish your kanban card supply. Cards are scanned or manually entered. This includes kanban card numbers for Active cards in statuses of New, Full and replenishable custom statuses. Cards are listed in the Scanned Kanban Cards region. See: Replenishing Action for Kanban Cards, page 6-4

- **Receive**
  You have the ability to receive material associated with kanban cards. Cards are scanned or manually entered and listed in the Scanned Kanban Cards region. See: Receiving Action for Kanban Cards, page 6-5

- **Transfer**
  You have the ability to create move orders for material for Intra-Org kanbans. You can also ship Inter-Org kanbans either from the source to destination organization. Cards are scanned or manually entered, and listed in the Scanned Kanban Cards region. See: Receiving Action for Kanban Cards, page 6-5

- **Status Change**
  You can change kanban card status from a current status to a target status. Cards are scanned or manually entered, and listed in the Scanned Kanban Cards region.
Integration with iSupplier Portal

If your organization has installed both Electronic Kanban and iSupplier Portal, you can integrate the two products by displaying an Electronic Kanban tabbed region in iSupplier Portal. The tabbed region in iSupplier Portal displays the Summary and Actions tabs of the Electronic Kanban workbench.

In the Actions region, your supplier can only view and create actions for kanban cards relevant to that supplier. Seeded supply statuses cannot be changed. The supplier can change the status to In Process, or a custom status that is attached to the seeded status of In Process. See: Integration with iSupplier Portal, page 2-3

Searching for Kanban Cards for Actions

The Actions tabbed region of the Electronic Kanban workbench consists of four tabbed regions used to create kanban card transactions. Each tab contains a kanban card search region. You can either:

- Scan numbers using a mobile device
- Manually enter the kanban number

Kanban card numbers are moved to the Scanned Kanban Cards region. Select View to
change the format display. The drop-down menu provides the following choices:

- **Columns**: Enables you to select specific columns to display.
- **Detach**: You can separate or reattach the panel from the page, enabling you to view more of the search result information in the table at one time.
- **Reorder Columns** appearing in the table.

**To search for cards for kanban actions:**

1. Navigate to the Actions tabbed region, and select one of the Action tabs. Choices are Replenish, Receive, Transfer, or Status Change.

2. Enter values in the Card Number field using one of the following methods:
   - Scanning with a mobile device
   - Manually entering a card number
   - Using search criteria to find a record.

   If you scanned the kanban card, the record appears in the Scanned Kanban Cards table.

3. If you manually entered a value in the Card Number field, select Add Card to move the record to the Scanned Kanban Cards table.

4. You can also select the Search icon to enter search criteria to find a record. The Search and Select: Card Number dialog page appears.

   This dialog page enables you to perform either a Basic Search by entering a full or partial Card Number value; or an Advanced Search using more than one Card Number value.
5. Select OK to move the card number record to the Card Number field.

6. Select Add Card to move the card number record to the Scanned Kanban Cards table.

Replenishing Action for Kanban Cards

The Replenish tab of the Actions tabbed region is used to search for or scan kanban cards to create a supply for material. Cards are listed in the Scanned Kanban Cards region. Only Active kanban cards in statuses New, Full and other replenishable custom statuses can be replenished. Relevant messages display in the Message column.

To replenish kanban cards:
1. Navigate to the Replenish tab of the Actions tabbed region of the Electronic Kanban workbench.

2. Search for or scan kanban card numbers, see: Searching for Kanban Cards for Actions, page 6-2

![Image of Scanned Kanban Cards table]

The scanned or entered kanban card numbers appear in the Scanned Kanban Cards region. This region shows fields for Card Number, Item Name, Kanban Size, Scan icon, and Message.

The Scan column displays icons representing whether the card can be replenished or if error conditions exist. Icons such as a check mark, garbage container, or change graphic appear. Associated text in the Message column outlines error conditions such as:

- *This kanban card is not active and cannot be replenished.* Indicates the kanban card is not active and the replenishment process is terminated.
• **Kanban cards in Status** [status name] cannot be replenished. Statutes of cards must be New, Full, and replenishable custom statuses.

• *This card has crossed the end date and will be cancelled on next replenishment attempt.*

• *This card has reached the maximum replenishments and will be cancelled on the next replenishment attempt.*

• *This card will be cancelled and will be replaced with a new card.* The available number of cards is less than the required number of cards.

• *The [field name] field has been updated in the pull sequence hence this card will be cancelled on the next replenishment attempt.* The number of available cards is more than the number of cards required for the pull sequence.

3. Select a card record and choose Remove Card to eliminate one of the records from the replenishment list in the Scanned Kanban Cards region. Select Remove All to remove all the card records.

4. Select Apply to replenish the kanban cards appearing in the region that qualify for replenishment.

   The replenished kanban card number records are removed from the Scanned Kanban region.

### Receiving Action for Kanban Cards

The Receive tab of the Actions tabbed region is used to search for or scan kanban cards to receive material associated with the cards. Cards are listed in the Scanned Kanban Cards region. Relevant messages display in the Message column. You can receive material associated with kanban cards if they meet the following criteria:

• Card is Active and in statuses of In Process, In Transit, or in any custom status that can be moved to Full.

• Source Type is Supplier or Inter-Org:
  
  • Supplier kanban cards are associated with an approved purchase order or internal sales order.

  • Inter-Org kanban cards need to have a booked internal shipping order and the shipment documents need to be generated. The shipping network between the two organizations has a transfer type of Intransit.

• The shipment line is open for receiving.

• The item is not lot or serial controlled.
To receive kanban cards:


2. Search for or scan kanban card numbers, see: Searching for Kanban Cards for Actions, page 6-2

The scanned or entered kanban card numbers appear in the Scanned Kanban Cards region. This region shows fields for Card Number, Item Name, Kanban Size, Receive Quantity, and Message. Associated text in the Message column outlines error conditions such as:

- The kanban card is of status [status type]. Receiving can be done only against kanban cards with status Active.

- Receiving can be done only against kanban cards of source type Inter Org or Supplier.

- Kanban cards in Status [status name] cannot be received.

- Receipt cannot be made only for kanbans attached to an approved PO or a booked internal sales order.

- The PO/ISO for this kanban card is closed for receiving. The quantity for receiving against the distribution line or the internal sales order line does not have an open value. Any positive quantity open for receiving is listed.

3. You have the option to change the value in the Receive Quantity field.

   **Note:** The Quantity Received must meet the settings in the Tolerance for Full Status parameter to change a kanban to Full
4. Select a card record and choose Remove Card to eliminate one of the records from the receipt list in the Scanned Kanban Cards region. Select Remove All to remove all the card records.

5. Select Apply to receive the kanban cards appearing in the region that qualify for receipt.

The received kanban card number records are removed from the Scanned Kanban region. The kanban status is updated to Full if the Quantity Received value is equal to the settings in the Tolerance for Full Status parameter.

**Transfer Action for Kanban Cards**

The Transfer tab of the Actions tabbed region is used to search for or scan kanban cards to create move orders associated with Intra-Org kanban cards. You can also ship Inter-Org kanbans either from the source to destination organization, or from the destination to source organization. Card numbers are listed in the Scanned Kanban Cards region. Relevant messages display in the Message column. You can transfer material associated with kanban cards if they meet the following criteria:

- Card is Active and in statuses of In Process, Full, or in any custom status that can be moved to Full.

- Source Type is Intra-Org or Inter-Org.

- Intra-Org kanban cards are associated to an approved move order line with open quantity.

- Inter-Org kanban are associated with a booked internal sales order quantity open for shipping.

**To create move orders for kanban cards:**

1. Navigate to the Transfer tab of the Actions tabbed region of the Electronic Kanban workbench.

2. Search for or scan kanban card numbers, see: Searching for Kanban Cards for Actions, page 6-2
The scanned or entered kanban card numbers appear in the Scanned Kanban Cards region. This region shows fields for Card Number, Kanban Size, Item Name, Transfer Quantity, and Message. Associated text in the Message column outlines error conditions such as:

- *Only kanban cards of Intra-Org or Inter-Org source type can be transacted.* The kanban card is not the correct source type.

- *Kanban cards in Status [status type] cannot be transferred.* The kanban card must be in a status that can be moved to Full status.

- *Lot/Serial controlled items should be transferred from the Move Order.* Kanban card for items that are lot controlled or serial controlled cannot be moved using the Electronic Kanban workbench.

- *The kanban card is not associated with a approved move order line hence cannot be transacted.* Intra-Org kanban cards must be associated to an approved move order line. For Inter-Org kanbans it is a shipping quantity.

- *This kanban card is closed for transfer.* Intra-Org kanban cards must have move order line status of Approved and not Closed. If there is positive quantity open for transfer, the quantity is noted.

3. You have the option to change the Transfer Quantity value.

4. Select a card record and choose Remove Card to eliminate one of the records from the receipt list in the Scanned Kanban Cards region. Select Remove All to remove all the card records.
5. Select Apply to transfer the kanban cards appearing in the region that qualify for move orders.

   The transferred kanban card number records are removed from the Scanned Kanban region.

### Changing Status Action for Kanban Cards

The Status Change tab of the Actions tabbed region is used to search for or scan kanban cards to change the card status. Cards are listed in the Scanned Kanban Cards region. Relevant messages display in the Message column. You can change the status of kanban cards if they meet the following criteria:

- Cards are Active.

- The current status of the card is valid to move to the new status.

  For example, cards in the In Process status cannot be moved to the Empty status.

**To change the status of kanban cards:**

1. Navigate to the Status Change tab of the Actions tabbed region of the Electronic Kanban workbench.

2. Search for or scan kanban card numbers, see: Searching for Kanban Cards for Actions, page 6-2

3. Optionally, select a value in the Target Status field.

   This field enables you to select a default value status to automatically populate the individual records in the Scanned Kanban Cards region. You can also select individual status values for each record.
The scanned or entered kanban card numbers appear in the Scanned Kanban Cards region. This region shows fields for Card Number, Item Name, Kanban Size, Current Status, Target Status, and Message. Associated text in the Message column outlines error conditions.

4. Select a card record and choose Remove Card to eliminate one of the records from the list in the Scanned Kanban Cards region. Select Remove All to remove all the card records.

5. Select Apply to change the status of the kanban cards appearing in the region that qualify for change.

The updated kanban card number records are removed from the Scanned Kanban region.
This chapter covers the following topics:

- Overview of the Electronic Kanban Dashboard
- Viewing Notifications
- Inventory Health
- Unmoved Cards
- Actual Lead Time Versus Planned Lead Time
- Actual Demand Versus Planned Demand
- Creating Custom Dashboard Panels

**Overview of the Electronic Kanban Dashboard**

The Electronic Kanban Home page consists of a Notifications region and graphical dashboard views. These panels enable you to read and acknowledge notification messages regarding kanban transactions; and view kanban card and pull sequence data in a graphical view. In this region you can:

- Change the type of graph to vertical bar, horizontal bar, or pie chart.

- View a detailed region for each dashboard.

- View specific time periods and tolerances for calculating lead times and demand charts.

- View informational text in the graphical panels by moving your cursor over the graph elements.

The data, calculations, time periods, and tolerances viewed on the dashboards are configured in the Electronic Kanban parameters, see: Configuring Kanban Parameters, see: Configuring Kanban Parameters, page 3-5
The dashboard panels in this region include the following:

- **Notifications**: Displays configured notifications based on business events such as pull sequence creation, kanban card creation, and status changes. See: Viewing Notifications, page 7-3

- **Inventory Health**: Displays the inventory levels as compared to the safety stocks. Based on the percentage of actual inventory to safety stock, inventory health can be categorized into Good, Bad, and Warning. See: Inventory Health, page 7-6

- **Unmoved Cards**: Displays cards that have been in a particular supply status for an extended length of time. See: Unmoved Cards, page 7-9

- **Actual Lead Time versus Planned Lead Time**: Displays the calculation of the actual lead time of replenished cards for each pull sequence, and compares it with the planning lead time. Actual lead time is calculated from the time material is requested (the card is replenished) to the time material is received (card is Full). See: Actual Lead Time versus Planned Lead Time, page 7-11

- **Actual Demand versus Planned Demand**: Displays the calculation of the actual demand for each item based on the number of card replenishments, and compares it with demand calculated from the planning logic. See: Actual Demand versus Planned Demand, page 7-11

- **Custom dashboards can be created per your requirements.** See: Creating Custom Panels, page 7-17
The detail view on all of the dashboard charts enable you to reformat the view. Select View, the drop-down menu provides the following choices:

- **Columns**: Enables you to select specific columns to display.
- **Detach**: You can separate or reattach the panel from the page, enabling you to view more of the search result information in the table at one time.
- **Reorder Columns**: appearing in the table.

**Viewing Notifications**

Electronic Kanban enables you to read and acknowledge notification messages based on configured business events related to the following transactions:

- Pull sequence creation
- Pull sequence update
- Kanban card creation
- Kanban supply status change
• Kanban cards status change

See: Seeded Business Events, page C-1

Notifications display on the Home page with regions for New Notification and Read Notification.

**To view and acknowledge notifications:**

1. Navigate to the Electronic Kanban Home page.
   The Notification dashboard contains tabs for new and read notifications.

2. Select New Notification to view all unread notifications.

3. Select the Subject link to view details of this notification in the Notification Details dialog page.

4. Select OK to close the Notification Details page.

5. Select the appropriate check boxes and select Mark as Read to acknowledge notifications.
   The new notification records are moved to the Read Notification view.
6. Select Read Notification to view all notifications that have been read.

7. Select the Subject link to view Notification Details.
   The Notification Details dialog page appears.
8. Select OK to close the Notification Details page.

Inventory Health

The Inventory Health dashboard compares the inventory levels to safety stock; and categorizes the outcome as Good, Bad, and Warning. These categories are defined in two Electronic Kanban parameters:

- **Inventory Health Threshold - Bad**
  
  The ratio between on-hand inventory and safety stock considered unacceptable for the Inventory Heath. A value below this threshold is considered at a Bad status.

- **Inventory Health Threshold - Good**
  
  The ratio between on-hand inventory and safety stock considered acceptable for the Inventory Heath. A value equal to or greater than this threshold is considered a Warning status.

Values that are greater than or equal to the Inventory Health Threshold - Bad, or less than the Inventory Health Threshold - Good, are considered a Good ratio between on-hand inventory and safety stock.

The dashboard displays the number of pull sequences in each inventory health status. You can select the type of chart to view, view details, filter the values displayed, and configure the Pull Sequence Details table.

To generate data for the Inventory Health dashboard, submit a concurrent request for
A custom program is provided to enable you to create your own logic to define values for the Good and Bad health parameters, see: Configure Inventory Health Analytic, page D-9

**To view inventory health levels:**

1. Navigate to the Inventory Health dashboard.

2. Select Choose Graph Type to select the type of graph for displaying the data. Choices include:
   - Pie chart
   - Vertical Cluster Bar
   - Horizontal Cluster Bar

3. Select Show Details to view the Inventory Health Details page.
   This page contains the following regions:
   - Summary displays a table and graphical view. The table shows the number of pull sequences for various Source Types including Inter-Org, Intra-Org, Production, and Supplier. It also shows the inventory health category instances...
of each Source Type. The inventory health categories (Bad, Warning, Good) show in color-coded detail on the graph selected.

The graphical chart displays the number of pull sequences and the inventory health status.

- Pull Sequence Details table displays details of the pull sequences for each selected row in the Summary table. It shows data in the following fields: Item, Subinventories, Locator, Source Type, Source, Health, Number of Cards, and card statuses.

4. Select View to change the format of the data displayed on the Pull Sequence Details table.

5. Select Choose Graph Type to select the type of graph for displaying the data. Choices include:
   - Vertical Cluster Bar
   - Vertical Stack Bar
   - Multiple Pie

6. You have the option to show the data you selected and configured on the Inventory Health dashboard in specific tabbed regions of the Electronic Kanban workbench. In the Pull Sequence Details region, select:
   - Summary to search and view kanban cards for specific items and perform transactions in the Summary tab.
• Planning to see planning details and planning demand definitions in the Planning tab.

• Setup to query, view, update, and create new pull sequences and kanban cards in the Setup tab.

Unmoved Cards

Unmoved cards are the cards that have been in a specific status for an extended length of time. This dashboard displays the number of cards that are in each supply status for the length of time you defined as unmoved. This calculation is defined in the Electronic Kanban parameter Card Supply Statuses. It is the percentage of the lead time at each status. You can also customize the logic for determining the unmoved cards calculation, see: Custom Unmoved Cards Program, page D-1

The Unmoved Card Details page displays a Summary table for cards in an unmoved state for each source type. For each selected row in the Summary table, an Unmoved Cards Details table displays card details.

A graphical view shows the number of unmoved cards in each supply status and source type.

To generate data for the Unmoved Cards dashboard, submit a concurrent request for the eKanban Unmoved Cards Calculation, see: Unmoved Cards Calculation, page B-6 A custom program is provided for the Unmoved Cards Calculation program to create your own logic and code, see: Determine Unmoved Cards, page D-1

To view unmoved cards:

1. Navigate to the Unmoved Cards dashboard.

   A graphical view appears with information on each kanban status and days in each status.

2. Select the Choose Graph Type drop down menu to configure the graphical display. Choices include:
   • Vertical Stack Bar
   • Horizontal Stack Bar
   • Vertical Cluster Bar
   • Horizontal Cluster Bar
   • Multiple Pie

   The number of unmoved kanban card for each source type are outlined in the
graph. The Source Type categories are shown in color-coded details on the graph.

3. Select Show Details to view the Unmoved Cards Details page.

This page contains the following regions:

- Summary displays a table and graphical view. The table shows the number of unmoved cards for each Source Type and kanban Card Status.

  The graphical region displays the number of unmoved cards in each Supply Status and Source Type. Source types are show in color-coded detail on the graph selected.

- Unmoved Card Details table displays details of the cards for each selected row in the Summary table. It shows data in the following fields: Kanban Card number, Destination, Source, Supply Status, Card Status, Kanban Size, Unit of Measure, Cycle Number, Document Type, document Number, Last Activity By, and Last Activity Date.
4. Select View to change the format of the data displayed on the Unmoved Cards Details table.

5. Select Choose Graph Type to select the type of graph for displaying the data. Choices include:
   - Vertical Cluster Bar
   - Vertical Stack Bar
   - Multiple Pie

**Actual Lead Time Versus Planned Lead Time**

The Actual Lead Time versus Planned Lead Time dashboard shows the actual lead time of replenished cards for each pull sequence, and compares it with lead time setup in the Planning tabbed region for the pull sequence. The dashboard displays the number of pull sequences, taking into account the tolerance value, for:

- Actual Lead Time less than Planned Lead Time
- Actual Lead Time greater than Planned Lead Time
- Actual Lead Time equal to Planned Lead Time

Use Electronic Kanban parameters to define the calculation of the pull sequence lead time:
• Actual vs Planned Lead Time - Default Number of Days

The number of days used to calculate the lead time between actual lead time and planning days for replenished cards and pull sequences.

• Actual vs Planned Lead Time - Equality Tolerance

The tolerance or margin percentage in the calculation between actual and planned demand lead time.

You can update the time period for the calculation on the chart. The detailed region also displays the chart and provides details of the pull sequences in a tabular format.

To generate data for the Actual Lead Time versus Planned Lead Time dashboard, submit a concurrent request for the eKanban Actual vs Planned Lead Time Calculation, see: Actual Lead Time Versus Planned Lead Time Calculation, page B-2

To view actual lead time versus planned lead time:

1. Navigate to the Actual Lead Time versus Planned Lead Time dashboard.

2. Select the Choose Graph Type drop down menu to select the type of graph that you wish to view. Choices include:
   • Pie
   • Vertical Cluster Bar
   • Horizontal Cluster Bar

3. Select values in the Start Period and End Period date fields.
4. Select Show Details to view the Actual Lead Time versus Planned Lead Time Details page. The Graph Summary and Lead Time Details regions appear on this page:
   - Graph Summary region displays the number of pull sequences for the actual lead time versus planned lead time statuses. When you hover your cursor over each graphical element, a description appears and displays Lead Time Status and Number of Pull Sequences.
   - Lead Time Details shows the details of the pull sequences included in the graph including a value in the Lead Time Difference field showing actual and planned lead times.

5. Select the Choose Graph Type drop down menu to select the type of graph to view. Choices include:
   - Pie
   - Vertical Cluster Bar
   - Horizontal Cluster Bar
6. The Lead Time Details region displays details of the pull sequences in the following fields including Item, Subinventory, Locator, Source Type, Source, Number of Cards, Planned Lead Time, Actual Average Lead Time, and Lead Time Difference.

7. Select View to change the format of the data displayed on the Lead Time Details table.

8. You have the option to show the data you selected and configured on the Actual Lead Time versus Planned Lead Time dashboard in specific tabbed regions of the Electronic Kanban workbench. In the Lead Time Details region, select:
   - Summary to search and view kanban cards for specific items and perform transactions in the Summary tab.
   - Planning to see planning details and planning demand definitions in the Planning tab.
• Setup to query, view, update, and create new pull sequences and kanban cards in the Setup tab.

**Actual Demand Versus Planned Demand**

The Actual Demand versus Planned Demand dashboard calculates the actual demand for each pull sequence, and compares it with average daily demand as calculated from the planning logic. The dashboard displays the number of pull sequences where actual demand is greater than planned, less than planned, and equal to planned, taking into account the tolerance value. The detailed region also displays the chart and provides details of the pull sequences in a tabular format.

You can define the default time period for the calculation and set the value for tolerance using the Electronic Kanban parameters:

- **Actual vs Planned Demand Default Number of Days**
  The time period for calculating demand between actual lead time and planning days for replenished cards

- **Actual vs Planned Demand - Equality Tolerance**
  Tolerance in the calculation between actual and planned demand for replenished cards.

To generate data for the Actual Demand versus Planned Demand dashboard, submit a concurrent request for the eKanban Actual vs Planned Demand Calculation, see: Actual Demand Versus Planned Demand Calculation, page B-2

**To view actual demand versus planned demand:**

1. Navigate to the Actual Demand vs Planned Demand dashboard.

2. Select the Choose Graph Type drop down menu to select the type of graph that you wish to view. Choices include:
   - Pie
   - Vertical Cluster Bar
   - Horizontal Cluster Bar

3. Select Start and End Period dates.
4. Select Show Details to view the Actual Demand VS Planned Demand Details page. The Graph Summary region displays actual versus planned demand. When you hover your cursor over each graphical element, a description appears and displays:

- Demand Status
- Number of Pull Sequences

5. Select Choose Graph Type to select the type of graph to view. Choices include:

- Pie
- Vertical Cluster Bar
- Horizontal Cluster Bar
6. The Demand Details region displays details of the pull sequences in the following fields including: Item, Subinventory, Locator, Source Type, Source, Number of Cards, Planned Demand, Actual Average Daily Demand, and Demand Difference.

7. Select View to change the format of the data displayed on the Demand Details table.

8. You have the option to show the data you selected and configured on the Actual Demand versus Planned Demand dashboard in specific tabbed regions of the Electronic Kanban workbench. In the Demand Details region, select:
   - Card Summary to search and view kanban cards for specific items and perform transactions in the Summary tab.
   - Planning to see planning details and planning demand definitions in the Planning tab.
   - Setup to query, view, update, and create new pull sequences and kanban cards in the Setup tab.

Creating Custom Dashboard Panels

You can create and populate up to seven custom dashboard panels. The dashboards are setup in the Parameters tabbed region and appear on the Home tabbed region.
To create custom dashboard panels:

1. Navigate to the Electronic Kanban Parameters page. See:

2. Select the Organization level for configuring the parameter, see: Configuring Kanban Parameters, page 3-5

3. Select the Custom Panels parameter, and select Update to display the parameter entry page.

4. Enter values in the URL and a Parameter Name fields. The Parameter Name will be the title of the page displayed as a custom dashboard panel.

5. Select OK to save your work.

6. Select the Home tabbed region to view the custom dashboard.
## Navigation Paths

### Legend

<table>
<thead>
<tr>
<th>Page or Window Name</th>
<th>Navigation Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual Demand vs Planned Demand Dashboard</td>
<td>EK &gt; Home</td>
</tr>
<tr>
<td>Actual Lead Time vs Planned Lead Time Dashboard</td>
<td>EK &gt; Home</td>
</tr>
<tr>
<td>Create Saved Search</td>
<td>EK &gt; Summary tab &gt; [enter criteria and perform Search] &gt; [Save]</td>
</tr>
<tr>
<td></td>
<td>EK &gt; Setup tab &gt; enter criteria and [perform Search] &gt; [Save]</td>
</tr>
</tbody>
</table>

**Navigation Paths**

**Legend**

- **EK**: Electronic Kanban
- **SYSADMIN**: System Administrator
- **UM**: User Management
<table>
<thead>
<tr>
<th>Page or Window Name</th>
<th>Navigation Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontal Plan</td>
<td>EK &gt; Planning tab &gt; Planning Workbench &gt; [search for records] &gt; [select a record]</td>
</tr>
<tr>
<td>Inventory Health Dashboard</td>
<td>EK &gt; Home</td>
</tr>
<tr>
<td>Kanban Cards</td>
<td>EK &gt; Summary tab &gt; [enter criteria and perform search] &gt; [select record]</td>
</tr>
<tr>
<td>Kanban Card Details</td>
<td>EK &gt; Setup tab &gt; [select pull sequence record]</td>
</tr>
<tr>
<td>Kanban Cards Summary</td>
<td>EK &gt; Summary tab &gt; [enter criteria and perform search] &gt; [select record]</td>
</tr>
<tr>
<td>Launch Kanban Planner</td>
<td>EK &gt; Planning tab &gt; Plan Definition &gt; [search for records] &gt; [select record] &gt; Launch</td>
</tr>
<tr>
<td>New Notification</td>
<td>EK &gt; Home &gt; Notification &gt; New Notification</td>
</tr>
<tr>
<td>Notification Dashboard</td>
<td>EK &gt; Home</td>
</tr>
<tr>
<td>Notification Details</td>
<td>EK &gt; Home &gt; Notification &gt; New Notification or Read Notification &gt; [select record]</td>
</tr>
<tr>
<td>Parameters</td>
<td>EK &gt; Parameters tab</td>
</tr>
<tr>
<td>Personalize Saved Searches</td>
<td>EK &gt; Summary tab &gt; Saved Search box &gt; [select Personalize]</td>
</tr>
<tr>
<td></td>
<td>EK &gt; Setup tab &gt; Saved Search box &gt; [select Personalize]</td>
</tr>
<tr>
<td>Plan Definition</td>
<td>EK &gt; Planning tab &gt; Plan Definition</td>
</tr>
<tr>
<td>Planning Details</td>
<td>EK &gt; Planning tab &gt; Planning Workbench &gt; [search for records] &gt; [select a record]</td>
</tr>
<tr>
<td>Planning Workbench</td>
<td>EK &gt; Planning tab &gt; Planning Workbench</td>
</tr>
<tr>
<td>Pull Sequence Details</td>
<td>EK &gt; Setup tab</td>
</tr>
<tr>
<td>Page or Window Name</td>
<td>Navigation Path</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Pull Sequence Planning</td>
<td>EK &gt; Planning tab &gt; Planning Workbench &gt; [search for records]</td>
</tr>
<tr>
<td>Read Notification</td>
<td>EK &gt; Home &gt; Notification &gt; Read Notification</td>
</tr>
<tr>
<td>Replenishment Chain</td>
<td>EK &gt; Summary tab &gt; [enter criteria and perform search] &gt; Kanban Cards Summary &gt; [Replenishment Chain]</td>
</tr>
<tr>
<td></td>
<td>EK &gt; Setup tab &gt; [select record]</td>
</tr>
<tr>
<td>Roles and Role Inheritance</td>
<td>UM &gt; Roles and Role Inheritance</td>
</tr>
<tr>
<td>Search</td>
<td>EK &gt; Summary tab</td>
</tr>
<tr>
<td></td>
<td>EK &gt; Setup tab</td>
</tr>
<tr>
<td>Search and Select Forecast/Schedule</td>
<td>EK &gt; Planning tab &gt; Plan Definition &gt; [search for records] &gt; [select record] &gt; select Forecast/Schedule field</td>
</tr>
<tr>
<td>Unmoved Cards Dashboard</td>
<td>EK &gt; Home</td>
</tr>
<tr>
<td>Update User</td>
<td>UM &gt; Users &gt; [Update]</td>
</tr>
<tr>
<td>User Maintenance</td>
<td>UM &gt; Users</td>
</tr>
<tr>
<td>Users</td>
<td>SYSADMIN &gt; Security &gt; User &gt; Define</td>
</tr>
<tr>
<td>View Kanban History</td>
<td>EK &gt; Summary tab &gt; [enter criteria and perform search] &gt; [select record] &gt; Kanban Cards &gt; [select record] &gt; [View History]</td>
</tr>
</tbody>
</table>
Electronic Kanban Concurrent Programs

Electronic Kanban Concurrent Programs

Concurrent requests update the display on the Home tabbed region dashboards, replenish kanban cards, and generate new cards. The Electronic Kanban concurrent programs are:

- Actual Demand Versus Planned Demand Calculation, page B-2
  Actual Lead Time Versus Planned Lead Time Calculation, page B-2

- Generate Kanban Cards, page B-3

- Inventory Health Calculation, page B-4

- Logical Kanban Replenishment Calculation, page B-4

- Replenishment Order Consolidation, page B-5

- Unmoved Cards Calculation, page B-6

Request Sets and Request Groups

When submitting requests, you can run at a fixed scheduled frequency. If an organization is not specified when submitting the concurrent requests, the programs will run for all organizations in the system. See: Submitting a Request, Oracle E-Business Suite User’s Guide

- Actual Demand Versus Planned Demand and Actual Lead Time Versus Planned Lead Time calculation programs are included in the concurrent Request Set: eKanban Actual Demand and Lead Time Metrics Calculations. These concurrent programs are executed successively.

- The Request Group FLM_EKB_REQ_GRP includes:
• The request set eKanban Actual Demand and Lead Time Metrics Calculations

• eKanban Inventory Health Calculation

• eKanban Unmoved Cards Calculation

You need to assign to an appropriate responsibility in Oracle Flow Manufacturing application in order to submit this Request Group and Request Set.

**Actual Demand Versus Planned Demand Calculation**

The Actual Demand Versus Planned Demand panel shows the calculation comparing actual demand and planned demand based on the date range specified. The following tables and parameters are used in the calculation in the concurrent program eKanban Actual vs Planned Demand Calculation (FLMKBADB):

- Planned demand and actual demand are calculated from the data in two tables:
  - FLM_EKB_ACT_SNAPSHOT
    Stores the actual demand and actual lead time activity data for a pull sequence.
  - MTL_KANBAN_PULL_SEQUENCES
    Stores pull sequence data including organization, inventory item, subinventory, locator, and source type.

- Demand calculations are set in the following Electronic Kanban parameters. See: Configuring Kanban Parameters, page 3-5
  - Actual vs Planned Demand - Default Number of Days: Default period for calculating demand for replenished cards and pull sequences.
  - Actual vs Planned Demand - Equality Tolerance: Margin in the calculation between actual and planned demand for replenished cards and pull sequences.

- PL/SQL Packages:
  - FLMKBADS.pls: Specification of actual demand
  - FLMKBADB.pl: Body of actual demand

See: Actual Demand Versus Planned Demand, page 7-15

**Actual Lead Time Versus Planned Lead Time Calculation**

The Actual Lead Time Versus Planned Lead Time panel shows the calculation between the actual lead time of replenished cards for each pull sequence, compared with the planned lead time. The program calculates the number of pull sequences where actual lead time is greater than planned, less than planned, and equal to planned based on the
date range specified. The following tables and parameters are used in the calculation in
the concurrent program eKanban Actual vs Planned Lead Time Calculation (FLMKBLTB):

- Lead time is calculated from the data in two tables:
  - FLM_EKB_ACT_SNAPSHOT
    Stores the actual lead time and planned lead time activity data for a pull
    sequence.
  - MTL_KANBAN_PULL_SEQUENCES
    Stores pull sequence data including organization, inventory item, subinventory,
    locator, and source type.

- Lead time calculations are set in the following Electronic Kanban parameters. See: Configuring Kanban Parameters, page 3-5
  - Actual vs Planned Lead Time - Default Number of Days: Default days used for
    the demand lead time calculation.
  - Actual vs Planned Lead Time - Equality Tolerance: Margin in the calculation
    between actual and planned demand lead time.

- PL/SQL Packages
  - FLMKBLTS.pls: Specification of lead time
  - FLMKBLTB.pls: Body of lead time

See: Actual Lead Time Versus Planned Lead Time, page 7-11

**Generate Kanban Cards Calculation**

The Generate Kanban Cards program has been configured for Electronic Kanban to
enable you to generate new kanban cards, support cards for multiple suppliers, and
generate cards without cancelling existing cards. Electronic Kanban card generation
features include:

- Multiple suppliers are supported for the Source Type of Supplier when the
  Generate Kanban Cards calculation is submitted for items through the Electronic
  Kanban workbench. If the pull sequence has multiple suppliers defined, and you
  generate cards from the Electronic Kanban workbench, cards are created for
  suppliers in the order and ratio of the setup.

- Existing cards are not cancelled even if they have passed effective dates, or
  planning has recommended fewer kanban cards. Cancellation is handled at the time
  of replenishment.
• Temporary cards are not considered in the card generation, only permanent cards in Planned Card status are considered in the count.

• The program enables you to update cards from Planned status to Active status. When you generate cards from the Generate Kanban Cards request window, enter Yes in the Update Planned Cards field in the Parameters window.

Cards in the Planned status are changed to Active status if you enter Yes in this field, and the effectivity date suggested by planning has expired.

See: Generating Kanban Cards, Oracle Inventory User’s Guide, and Viewing and Editing Pull Sequences and Kanban Cards, page 3-11

Inventory Health Calculation

The Inventory Health panel shows the calculation comparing actual inventory levels with safety stock. Inventory health can be categorized as Good, Bad, and Warning. The following parameters and programs are used in the calculation in the concurrent program eKanban Inventory Health Calculation (FLMKBADB):

• Calculations are set in the following Electronic Kanban parameters. See: Configuring Kanban Parameters, page 3-5

  • Inventory Health Threshold - Bad: The percentage of safety stock inventory considered unacceptable for the Inventory Heath to be at the status of Bad.

  • Inventory Health Threshold - Good: The percentage of safety stock inventory considered suitable for the Inventory Heath to be at the status of Good.

• PL/SQL Packages

  • FLMKBHSS.pls: Specification of health status

  • FLMKBHSB.pls: Body of health status

A custom program is provided to enable you to further define bad and good inventory health thresholds levels, see: Configure Inventory Health Analytic, page D-9

See: Inventory Health, page 7-6

Logical Kanban Replenishment Calculation

Logical kanban replenishment occurs automatically in the background, but the receipt of material is handled physically matched to a kanban card or associated document. The Logical Kanban Replenishment Calculation program (eKanban Logical Card Replenishment) checks for logical type pull sequences for replenishment. The program checks the number of kanban cards on-hand or full for the item in a specific subinventory, and considers the target amount and the received quantities in the following order:
• The required number of pull sequences with replenishment type Logical is identified.
  This includes Active cards ready to be replenished - and kanbans in Empty, Wait, Consolidation, and In Process statuses.

• Target inventory is calculated for the item at the destination subinventory.

• On-hand quantity at the subinventory is identified.

• Partial receipts (In Process or custom statuses that can be moved to Full) are subtracted from the on hand quantity are identified.

• Quantity replenished is identified and calculated. This calculation equals:
  • Target inventory quantity
  • - On hand quantity
  • - Partial receipts at the destination subinventory
  • = Quantity replenished

If the pull sequence has multiple suppliers associated, then the required number of cards are divided into various suppliers as per the sourcing percentage. The cards identified for replenishment are in the status of New or Full or in a custom status that can be replenished:

• Cards in New status will have higher priority over other statuses and will be replenished first. Cards are picked in the order of statuses New and Full, and then in the order of card numbers.

• Successful replenishment of a card changes the card status to Empty, Wait, or Consolidation.

Replenishment Order Consolidation
Replenishment order consolidation is a feature creating a single replenishment document for multiple cards attached to the same pull sequence. The option for consolidation is available in pull sequences for source type Supplier, Intra-Org, and Inter-Org. The Replenishment Order Consolidation concurrent program (eKanban Consolidate Replenishment Orders) uses one organization as a mandatory parameter. The actual consolidation occurs during requisition import or AutoCreate. Features of consolidation include the following:

• **Consolidation Check Box**
  The Consolidation check box on the Kanban tab of the Pull Sequences Details page is used to enable consolidated document generation. If Consolidation is not
selected, then separate documents are created for replenishment. When this check box is enabled, the kanban card is put in the Wait for Consolidation status when the material is required.

- **Wait for Consolidation Status**
  The Wait for Consolidation is a seeded status in Electronic Kanban which is automatically created when you select Replenish in the Summary and Actions tabbed regions, for kanban cards in the statuses of New or Full. This status cannot be created manually for a kanban card.

- You can use a Consolidation Group value to run the program for a group of cards. Otherwise, the program consolidates all kanban cards in the Wait for Consolidation status into a single document for the same pull sequence.

- Consolidation generates single purchase requisition with multiple shipment lines using the other parameters set up in Purchasing.

- There will be one line of receipt for each shipment line, which can be divided into distribution lines. There is a one-to-one relationship between the kanban numbers and the distribution lines. When partial receipts are made, you can receive against the appropriate kanbans.

**Unmoved Cards Calculation Program**

The Unmoved Cards Calculation program calculates the number of cards that are in each supply status for a period of time configured by you. The program:

- Selects all pull sequences for an organization - for every pull sequence, all kanban cards are selected.

- Finds the percentage of lead time for the valid statuses.

- Gets the planned lead time for the pull sequence.

- For every card, gets the Last Activity Date, Status, and Creation Date.

You can also override the program logic and create your own logic; a custom program is provided to add your own logic.

The following tables and parameters are used in the calculation in the concurrent program eKanban Unmoved Cards Calculation (FLMBUCB):

- Unmoved cards are calculated from the data in the following tables:
  - **FLM_EKB_ACT_SNAPSHOT**
    Stores the activity data for pull sequences and kanban cards.
  - **MTL_KANBAN_CARDS**
Stores kanban card data including organization, inventory item, subinventory, locator, and source type.

- The length of time each supply status a card is considered unmoved is set in the following Electronic Kanban parameter. See: Configuring Kanban Parameters, page 3-5
  - Card Supply Statuses
    Enter the percentage of lead time to show the length of time each supply status a card is considered unmoved

- PL/SQL Packages:
  - FLMKBUCS.pls: Specification of unmoved cards
  - FLMKBUCB.pls: Body of Unmoved cards

A custom program is provided for the Unmoved Cards Calculation to create your own logic and code. See: Determine Unmoved Kanban Cards Program, page D-1
Electronic Kanban Business Events

Seeded Business Events

You can automatically trigger actions based on the following seeded Electronic Kanban business events using Oracle Workflow. Examples of actions you can trigger include issuing notifications and launching a workflow.

You can write code to subscribe to the event to trigger a workflow customized to your organizational requirements.

<table>
<thead>
<tr>
<th>Event Name</th>
<th>Parameter Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>oracle.apps.flm.ekanban.pullSeqCreation</td>
<td>Pull Sequence Creation Event</td>
<td>Pull Sequence Creation Event is raised after pull sequence is created</td>
</tr>
<tr>
<td>oracle.apps.flm.ekanban.pullSeqUpdation</td>
<td>Pull Sequence Updation Event</td>
<td>Pull Sequence Updation Event is raised after pull sequence is updated</td>
</tr>
<tr>
<td>oracle.apps.flm.ekanban.kanCardCreation</td>
<td>Kanban Card Creation Event</td>
<td>Kanban Card Creation Event is raised after kanban card is created</td>
</tr>
<tr>
<td>oracle.apps.flm.ekanban.kanCardUpdation</td>
<td>Kanban Card Updation Event</td>
<td>Kanban Card Updation Event is raised after kanban card is updated</td>
</tr>
</tbody>
</table>

Related Topics

Defining a Workflow Process, Oracle Workflow Developer’s Guide

Defining Procedures and Functions for Oracle Workflow, *Oracle Workflow Developer’s Guide*
Electronic Kanban Client Extensions

Custom Kanban Programming Logic

The following client extensions are provided to create custom programs. These programs enable you to create your own logic and code to override the default logic provided in Oracle Electronic Kanban:

- Determine Unmoved Cards, page D-1
- Transferring Kanban Cards, page D-3
- Receiving Kanban Cards, page D-5
- Kanban Card Naming, page D-7
- Cancel Kanban Cards, page D-8
- Control Kanban Card Supplier Status Changes, page D-8
- Get Default Supplier, page D-9
- Configure Inventory Health Analytic, page D-9
- Calculating Kanban Number or Size, page D-10

Determine Unmoved Kanban Cards Program

A custom program is provided for the Unmoved Cards Calculation program to create your own logic and code. This enables you to override the default logic to identify unmoved cards. This is accomplished by adding logic in FLM_KANBAN_CUSTOM_PKG.UNMOVED_CARDS_HOOK.
### IN Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_org_id</td>
<td>Number</td>
<td>Organization identifier passed as a parameter.</td>
</tr>
<tr>
<td>p_pull_sequence_id</td>
<td>Number</td>
<td>Pull sequence identifier passed as a parameter.</td>
</tr>
</tbody>
</table>

### Out Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>x_return_status</td>
<td>Varchar2</td>
<td>Return Status from the custom program. The Error Code is populated if it exists.</td>
</tr>
<tr>
<td>x_error_code</td>
<td>Varchar2</td>
<td>Error code if it occurs during processing the logic in the custom program.</td>
</tr>
</tbody>
</table>

### In/Out Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>x_uc_setup_from_custom</td>
<td>flm_custom_uc_table</td>
<td>A collection returning the lead time for a specific status. This calculates whether a card is marked as unmoved or moved.</td>
</tr>
<tr>
<td>x_uc_from_custom</td>
<td>flm_custom_uc_setup_table</td>
<td>A collection returning which kanban card identifier should be marked as unmoved. This logic is user determined.</td>
</tr>
<tr>
<td>x_pull_sequence_id</td>
<td>Number</td>
<td>Pull sequence identifier passed back from the custom program.</td>
</tr>
</tbody>
</table>
There are two collections in the IN/OUT parameters. You populate only one collection. If both collections are populated, only the data from collection x_uc_setup_from_custom is used.

<table>
<thead>
<tr>
<th>Element Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>kanban_card_id</td>
<td>Unique kanban card identifier for a pull sequence.</td>
</tr>
<tr>
<td>unmoved_flag</td>
<td>Kanban card values for move status are:</td>
</tr>
<tr>
<td></td>
<td>• 1- unmoved</td>
</tr>
<tr>
<td></td>
<td>• Null- moved</td>
</tr>
<tr>
<td>last_activity_date</td>
<td>Date last activity in this status.</td>
</tr>
</tbody>
</table>

The x_uc_setup_from_custom collection contains the following elements:

<table>
<thead>
<tr>
<th>Element Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>status</td>
<td>Supply status of cards tracked for unmoved cards for a pull sequence.</td>
</tr>
<tr>
<td>leadtime_days</td>
<td>Number of lead time days in an unmoved status.</td>
</tr>
</tbody>
</table>

See: Unmoved Cards, page 7-9

**Transferring Cards Program**

Custom programs are provided to enable you to enter your own logic when transferring either an Intra-Org kanban card or an Inter-Org kanban card. For example, you can configure when a card is considered to be in Full status for a particular item, rather than just per card type. For Intra-Org kanban cards you enter your logic in the program FLM_KANBAN_CUSTOM_PKG.INTRAORG_TRANSFER_HOOK.
### IN Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_kanban_card_id</td>
<td>Number</td>
<td>The unique kanban card Identifier.</td>
</tr>
<tr>
<td>p_intra_order_id</td>
<td>Number</td>
<td>Reference to the Header Id of the move order for Intra-Org transfer.</td>
</tr>
<tr>
<td>p_intra_line_id</td>
<td>Number</td>
<td>Reference to the Line identifier of the move order for Intra Org transfer.</td>
</tr>
<tr>
<td>p_transfer_quantity</td>
<td>Number</td>
<td>Quantity transferred in the current transaction.</td>
</tr>
<tr>
<td>p_kanban_size</td>
<td>Number</td>
<td>The quantity of items in the kanban.</td>
</tr>
</tbody>
</table>

### Out Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>x_retcode</td>
<td>Varchar2</td>
<td>Return status from the custom program.</td>
</tr>
<tr>
<td>x_errmsg</td>
<td>Varchar2</td>
<td>Error message if it occurs during processing of the custom program.</td>
</tr>
</tbody>
</table>

For Inter-Org kanban cards, you enter your logic in the FLM_KANBAN_CUSTOM_PKG.INTERORG_TRANSFER_HOOK program:
### IN Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_kanbancard_id</td>
<td>Number</td>
<td>The unique kanban card Identifier.</td>
</tr>
<tr>
<td>p_inter_order_id</td>
<td>Number</td>
<td>Reference to the Header Id of the internal requisition for Inter-Org transfer.</td>
</tr>
<tr>
<td>p_inter_line_id</td>
<td>Number</td>
<td>Reference to the Line Id of the internal requisition for Inter-Org transfer.</td>
</tr>
<tr>
<td>p_transfer_quantity</td>
<td>Number</td>
<td>Quantity transferred in the current transaction.</td>
</tr>
<tr>
<td>p_kanban_size</td>
<td>Number</td>
<td>The quantity of items in the kanban.</td>
</tr>
</tbody>
</table>

### Out Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>x_retcode</td>
<td>Varchar2</td>
<td>Return status from the custom program.</td>
</tr>
<tr>
<td>x_errmsg</td>
<td>Varchar2</td>
<td>Error message if it occurs during processing of the custom program.</td>
</tr>
</tbody>
</table>

### Receiving Cards Program

A custom program is provided to enable you to enter your own logic when receiving either an Inter-Org or Supplier kanban card. For example, you can customize the receiving cards functionality to accommodate canceling the backordered quantity during the shipping process.

For Inter-Org kanban cards, enter your logic in FLM_KANBAN_CUSTOM_PKG.RECEIVE_INTERORG_HOOK.
### IN Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_kanban_card_id</td>
<td>Number</td>
<td>The unique kanban card Identifier.</td>
</tr>
<tr>
<td>p_shipment_header_id</td>
<td>Number</td>
<td>Reference to the Header Id of the Inter-Org shipment.</td>
</tr>
<tr>
<td>p_shipment_line_id</td>
<td>Number</td>
<td>Reference to the Line Id of the internal requisition for Inter-Org shipment.</td>
</tr>
<tr>
<td>p_receipt_quantity</td>
<td>Number</td>
<td>Quantity received in the shipment.</td>
</tr>
</tbody>
</table>

### Out Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>x_return_status</td>
<td>Varchar2</td>
<td>Return status from the custom program.</td>
</tr>
<tr>
<td>x_msg_data</td>
<td>Varchar2</td>
<td>Error message if it occurs during processing of the custom program.</td>
</tr>
</tbody>
</table>

For Supplier kanban cards, you enter your logic in FLM_KANBAN_CUSTOM_PKG.RECEIVE_SUPPLIER_HOOK.

### IN Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_kanban_card_id</td>
<td>Number</td>
<td>The unique kanban card Identifier.</td>
</tr>
</tbody>
</table>
### In Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_po_header_id</td>
<td>Number</td>
<td>The Purchase Order Header Identifier the kanban is associated with.</td>
</tr>
<tr>
<td>p_po_distribution_id</td>
<td>Number</td>
<td>The Purchase Order distribution Line Identifier that the kanban is associated with.</td>
</tr>
<tr>
<td>p_receipt_quantity</td>
<td>Number</td>
<td>Quantity received on the purchase order.</td>
</tr>
</tbody>
</table>

### Out Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>x_return_status</td>
<td>Varchar2</td>
<td>Return status from the custom program.</td>
</tr>
<tr>
<td>x_msg_data</td>
<td>Varchar2</td>
<td>Error message if it occurs during processing of the custom program.</td>
</tr>
</tbody>
</table>

### Kanban Card Naming

A custom program is provided to enable you to define kanban card names. For example, you can define an alphanumeric prefix for kanban card numbers. You enter your card naming logic in the hook FLM_KANBAN_CUSTOM_PKG.CUSTOM_KANBAN_NUMBER.

### IN Parameter

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_pull_sequence_id</td>
<td>Number</td>
<td>The unique pull sequence identifier.</td>
</tr>
</tbody>
</table>

The function will return the following data type: Kanban card name or number.
Varchar2.

**Cancel Kanban Cards**

A custom program is provided to enable you to define logic to for cancelling a kanban cards. For example, you can cancel associated documents while cancelling the kanban cards. You enter your custom logic in FLM_KANBAN_CUSTOM_PKG.CANCEL_KANBAN_CARD_HOOK.

**IN Parameter**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_kanban_card_id</td>
<td>Number</td>
<td>The unique kanban card identifier.</td>
</tr>
</tbody>
</table>

**Control Kanban Card Supplier Status Changes**

A custom program is provided to enable you to define status transitions using custom logic. You enter your custom logic in FLM_KANBAN_CUSTOM_PKG.STATUS_CHANGE_HOOK.

**IN Parameter**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_kanban_card_id</td>
<td>Number</td>
<td>The unique kanban card identifier.</td>
</tr>
<tr>
<td>from_supply_status</td>
<td>Number</td>
<td>Current kanban card supply status.</td>
</tr>
<tr>
<td>to_supply_status</td>
<td>Number</td>
<td>Supply status that the card is moving to.</td>
</tr>
</tbody>
</table>

The function will return the data type of Number

- 1 is valid
- All other values are invalid
Get Default Supplier Program

A custom program is provided to enable you to define logic for assigning suppliers to kanban cards for pull sequences with multiple suppliers. You enter your custom logic in the hook FLM_KANBAN_CUSTOM_PKG.GET_DEFAULT_SUPPLIER.

**IN Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_pull_sequence_id</td>
<td>Number</td>
<td>Pull sequence identifier.</td>
</tr>
</tbody>
</table>

**Out Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>x_supplier_id</td>
<td>Number</td>
<td>Assigned supplier for the kanban card.</td>
</tr>
<tr>
<td>x_supplier_site_id</td>
<td>Number</td>
<td>Supplier site identifier.</td>
</tr>
<tr>
<td>x_retcode</td>
<td>Varchar2</td>
<td>Return status from the custom program.</td>
</tr>
<tr>
<td>x_errmsg</td>
<td>Varchar2</td>
<td>Error message if it occurs during processing of the custom program.</td>
</tr>
</tbody>
</table>

Configure Inventory Health Analytic

A custom program is provided to enable you to further define bad and good inventory health thresholds levels at more precise levels than the organization. You enter your custom logic in FLM_KANBAN_CUSTOM_PKG.HEALTH_FOR_PS.

**IN Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_pull_sequence_id</td>
<td>Number</td>
<td>Pull sequence identifier.</td>
</tr>
</tbody>
</table>
### Out Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>x_return_status</td>
<td>Varchar2</td>
<td>Return status from the program.</td>
</tr>
<tr>
<td>x_error_code</td>
<td>Varchar2</td>
<td>Error message if it occurs during processing of the custom program.</td>
</tr>
<tr>
<td>x_good_health</td>
<td>Number</td>
<td>The number at or above that the inventory health is considered to be at a Warning status.</td>
</tr>
<tr>
<td>x_bad_health</td>
<td>Number</td>
<td>The number that the inventory health is considered at a Bad status.</td>
</tr>
</tbody>
</table>

**Note:** The inventory health is considered at a Good status if it is at or above the levels defined in the x_bad_health parameter, and and below the x_good_health parameter.

### Calculating Kanban Number or Size

A Custom hook is provided to allow you to enter a custom formula for calculating the number of the size of kanban cards. You enter your custom logic in the hook MRP_PUB_KANBAN_QTY_CALC.Calculate_Kanban_Quantity.

### In Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_version_number</td>
<td>Number</td>
<td>Version number of the program.</td>
</tr>
<tr>
<td>p_pull_sequence_id</td>
<td>Number</td>
<td>Pull sequence identifier.</td>
</tr>
<tr>
<td>p_average_demand</td>
<td>Number</td>
<td>Average demand for the pull sequence</td>
</tr>
</tbody>
</table>
### Parameter Data Type Description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_allocation_percent</td>
<td>Number</td>
<td>Allocated percent fulfilled by this pull sequence.</td>
</tr>
<tr>
<td>p_minimum_order_quantity</td>
<td>Number</td>
<td>Minimum order quantity.</td>
</tr>
<tr>
<td>p_fixed_lot_multiplier</td>
<td>Number</td>
<td>Fixed lot multiplier.</td>
</tr>
<tr>
<td>p_safety_stock_days</td>
<td>Number</td>
<td>The number of safety stock days.</td>
</tr>
<tr>
<td>p_replenishment_lead_time</td>
<td>Number</td>
<td>The lead time required for replenishment</td>
</tr>
<tr>
<td>p_kanban_flag</td>
<td>Number</td>
<td>Identifies which attribute is to be calculated:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 1- Kanban size</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 2- Number of kanban cards</td>
</tr>
</tbody>
</table>

#### Out Parameter

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_return_status</td>
<td>Varchar2</td>
<td>Return status from the custom planning program.</td>
</tr>
</tbody>
</table>

#### IN/Out Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_kanban_size</td>
<td>Number</td>
<td>The size of the kanban card.</td>
</tr>
<tr>
<td>p_kanban_number</td>
<td>Number</td>
<td>The number of kanban cards.</td>
</tr>
</tbody>
</table>
Index

A
Actions tabbed region, 6-1

B
Business events
  seeded for Electronic Kanban, C-1

C
Calculating Kanban Number or Size program, D-10
Cancel Kanban Cards program, D-8
Concurrent programs
  Actual Demand Versus Planned Demand
    Calculation, B-2
  Actual Lead Time Versus Planned Lead Time
    Calculation, B-2
  Generate Kanban Cards Calculation, B-3
  Inventory Health Calculation, B-4
  Logical Kanban Replenishment Calculation, B-4
    overview, B-1
  Replenishment Order Consolidation
    Calculation, B-5
  Unmoved Cards Calculation, B-6
Configure Inventory Health Analytic program, D-9
Control Kanban Card Supplier Status Changes, D-8
Determine Unmoved Cards, D-1
Get Default Supplier, D-9
Kanban Card Naming, D-7
Receiving Cards, D-5
Transferring Cards, D-3
Custom dashboards, 7-17

D
Dashboard region, 7-1
Determine Unmoved Cards program, D-1

E
Electronic Kanban Dashboards
  Actual Demand vs Planned Demand, 7-15
  Actual lead Time versus Planned Lead Time,
    7-11
  custom panels, 7-17
  Inventory Health, 7-6
  Notifications, 7-3
  Unmoved Cards, 7-9

G
Generate and print kanban cards, 3-16
Generate Kanban Cards Calculation program, B-3
Get Default Supplier program, D-9

H
Home tabbed region, 7-1

I

Inventory Health dashboard, 7-6
iSupplier Portal
  integration with Actions tabbed region, 6-2
  integration with Summary tabbed region, 5-2
  setting up functions, 2-3

K

Kanban Card Naming program, D-7
Kanban cards
  custom statuses, 3-3
  generate and print cards, 3-16
  graphical distribution view, 5-15
  move orders, 6-7
  planning definitions, 4-9
  planning recommendations, 4-3
  receiving, 6-5
  replenishing, 6-4
  setting up kanban cards, 3-1
  status change, 6-9
  temporary, 3-4
  transaction actions, 5-12
  viewing and updating, 3-17
  viewing card details, 5-10
  viewing card summary information, 5-6
  viewing history, 5-10
  viewing kanban summary information, 5-1
Kanban summary information, 5-1

L

Logical kanban replenishment, 3-5
  calculation program, B-4
  check box, 3-13

N

Navigation paths, A-1
Notifications panel, 7-3

O

Overview of
  concurrent programs, B-1
  Electronic Kanban application, 1-1
  Electronic Kanban Dashboards, 7-1
  kanban actions, 6-1
  Planning region, 4-1
  setting up, 2-1
  Setup region, 3-1
  Summary region, 5-1

P

Parameters
  descriptions and values, 3-7
  setting up, 3-5
Planning definitions, 4-9
Planning Recommendations
  for kanban cards, 4-3
Planning tabbed region, 4-1
Profile options, 2-6
Pull sequences
  planning, 4-2
  searching for, 3-9
  viewing and editing, 3-11
  viewing and updating planning, 4-5
  viewing in the replenishment chain, 3-16

R

Receiving Cards program, D-5
Receiving kanban cards, 6-5
Related product setup steps
  Oracle Bills of Material setup, 2-4
  Oracle Cost Management setup, 2-5
  Oracle Inventory setup, 2-4
  Oracle iSupplier setup, 2-5
  Oracle Workflow, 2-6
  Oracle Work in Process, 2-6
Replenishing kanban cards, 5-10, 6-4
Replenishment chain
  diagram, 3-16, 5-7

S

Searching
  Advanced, 4-4, 5-3
  Basic, 4-3, 5-3
  for kanban cards, 3-9, 5-2, 6-2
  kanban plans, 4-3
  pull sequences, 3-9
  saving search criteria, 5-3
Setting up
E-Business functions, 2-2
kanban cards, 3-1
parameters, 3-5
profile options, 2-6
pull sequences, 3-1
Status change for kanban cards, 6-9

T
Temporary kanban cards, 3-4
Transaction actions, 5-12
Transferring Cards program, D-3
Transferring kanban cards, 6-7

U
Unmoved cards
 calculation program, B-6
Unmoved Cards dashboard, 7-9