## **MODULE 8: BROWSE APPLICATION AREAS**

## **Module Overview**

Microsoft Dynamics® NAV 2013 is an ERP product that includes dedicated application features for all typical business activities.

Other than the basic application areas covered, this course introduces all the other supported areas with brief introductions and outlines of the included features. For detailed information on the included areas, refer to the wide selection of special application training offered for Microsoft Dynamics NAV 2013.

Students training to become product specialists of Microsoft Dynamics NAV 2013 have to become familiar with other application areas before they decide on their next step in the training.

## **Objectives**

The objectives are:

- Provide an overview of the most important financial management features.
- Outline financial reporting and analysis.
- Outline marketing features.
- Provide an overview of the most important trade functions.
- Provide an overview of inventory management features.
- Outline features of the warehouse management system.
- Outline manufacturing features.
- Outline features for jobs and resources.
- Explain service management features.
- Review features for human resource management.

# **Financial Management**

With Microsoft Dynamics NAV, you can manage all common finance processes and information, such as posting financial transactions, preparing financial statements, and managing bank accounts, inventory costs, manufacturing costs, and fixed assets.

## **General Ledger**

General Ledger is the central application area of Microsoft Dynamics NAV 2013. In the General Ledger, financial information is posted, summarized, and reported.

Two main components of the General Ledger application area are the chart of accounts and G/L Budgets. The chart of accounts provides quick access to G/L accounts and balances, and the G/L Budgets feature compares actual amounts and budgeted amounts.

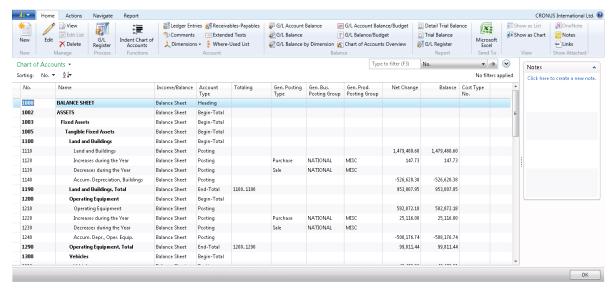


FIGURE 8.1: CHART OF ACCOUNTS WINDOW

## **Cash Management**

Cash management in Microsoft Dynamics NAV 2013 is used to manage the company's bank accounts.

One of the main features of cash management is the Bank Account Card, which contains all company's bank details. On the Bank Account Card, users can do the following:

- Process payments received from customers.
- Process payments to vendors.
- Void posted checks (known as financial voiding).

In addition to these procedures, you can run bank reconciliations to make sure that transactions always are reconciled.

#### **Fixed Assets**

The Fixed Assets functionality in Microsoft Dynamics NAV provides an overview of your fixed assets and guarantees correct periodic depreciation. It also enables you to keep track of your maintenance costs, manage insurance policies related to fixed assets, post fixed asset transactions, and generate various reports and statistics.

For each fixed asset, you must set up a card that contains information about the asset. Buildings or production equipment can be set up as a main asset with a component list. You can set up multiple depreciation books to accommodate various kinds of depreciation. A batch job is used to calculate periodic depreciation.

For each asset, you can record maintenance costs and the next service date. Keeping track of maintenance expenses can be important for budgeting and for making decisions about whether to replace a fixed asset.

Each fixed asset can be attached to one or more insurance policies. You can therefore easily verify that insurance policy amounts comply with the value of the assets that are linked to the policy. This also makes it easy to monitor annual insurance premiums.

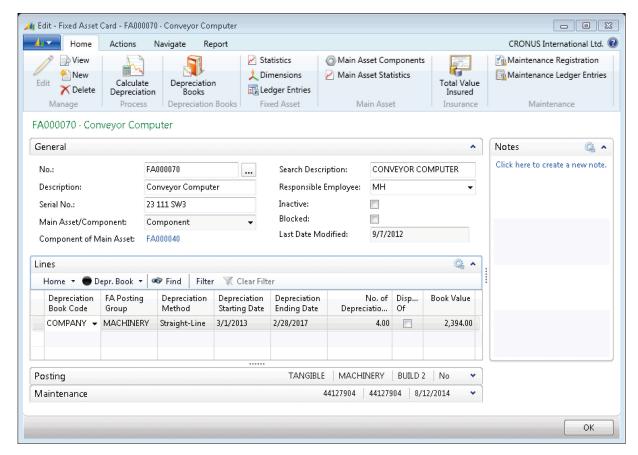


FIGURE 8.2: FIXED ASSET CARD WINDOW

#### Consolidation

Consolidation means combining the financial statements of two or more separate companies (subsidiaries) into a consolidated financial statement.

In Microsoft Dynamics NAV 2013, each company involved in a consolidation is called a business unit. The combined company is called the consolidated company and is usually a company set up only for this purpose, holding no typical business transactions.

To use Consolidation in Microsoft Dynamics NAV 2013, you must set up the consolidated company and subsidiaries. Additionally, before you perform the consolidation, you must perform other consolidation processes, such as exporting and testing data.

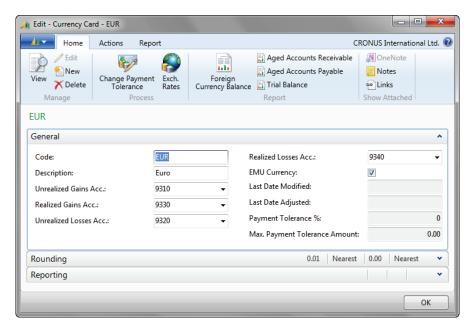
The eliminations process in Microsoft Dynamics NAV 2013 provides a complete consolidation report to help companies determine the total financial situation for the group.

## Multicurrency

You can use Microsoft Dynamics NAV 2013 to set up and work with multiple currencies and perform the following activities:

- Set up foreign currencies.
- Enter currency exchange rates.
- Assign currencies to customers, vendors, and bank accounts.
- Post transactions in foreign currencies.
- Calculate the following currency exchange rate differences:
  - o Unrealized gains and losses.
  - Realized gains and losses.
- Set up an additional reporting currency.

On the **Currency** card, basic parameters for the various currencies used by a company are established. The **Currency Exchange Rate** window is used to set up the exchange rates for a selected currency on specific dates.



**FIGURE 8.3: CURRENCY CARD WINDOW** 

# **Financial Reporting and Analysis**

In Microsoft Dynamics NAV you can easily generate business intelligence data. You can start to generate simple reports from the chart of accounts. However, you can also create more extensive analysis by using account schedules or analysis by dimensions.

To visualize important financial data, you can use the charting functionality in Microsoft Dynamics NAV 2013.

#### **Dimensions**

A dimension is data added to an entry so that entries with similar characteristics can be grouped and easily retrieved for analysis. Dimensions can be used throughout Microsoft Dynamics NAV on entries in journals, documents, and budgets.

When you use multiple dimensions to create an entry, a more complex analysis is possible, such as sales by salesperson, area, and customer group.

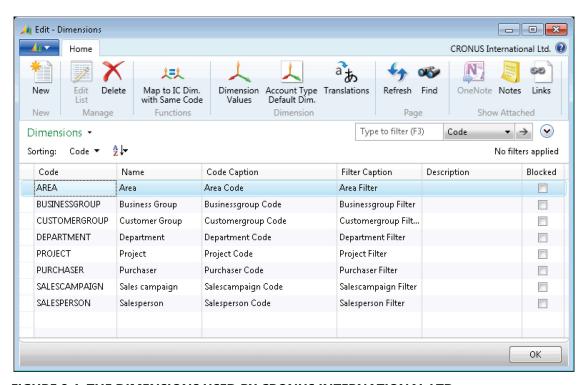


FIGURE 8.4: THE DIMENSIONS USED BY CRONUS INTERNATIONAL LTD.

# Cost Accounting

Cost accounting can help you understand the costs of running a business. Cost accounting information analyzes the following:

- What types of costs occur when you run a business?
- Where do the costs occur?
- Who bears the costs?

In cost accounting, you allocate actual and budgeted costs of operations, departments, products, and projects to analyze the profitability of your company.

Cost accounting has the following main components:

- Cost types, cost centers, and cost objects.
- Cost entries and cost journals.
- Cost allocations.
- Cost budgets.
- · Cost reporting.

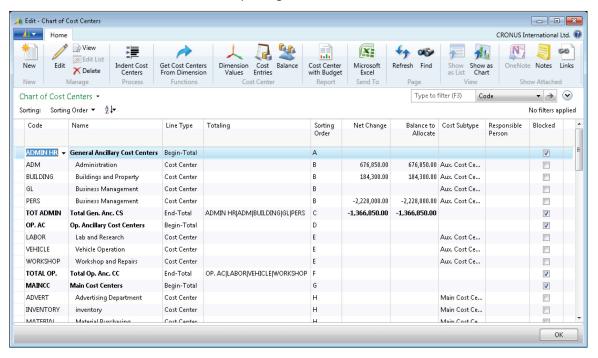


FIGURE 8.5: CHART OF COST CENTER WINDOW

# Cash Flow Forecasting

With the cash flow forecast from Microsoft Dynamics NAV 2013, you can generate predictions of a company's cash flow. The cash flow of a company indicates its financial solvency and reveals whether the company can meet its financial obligations in a timely manner.

You can capture different cash flow plans. For that purpose, you can establish one or more "cash flow forecasts," with which you can create planning from different viewpoints. These plans are organized into accounts that you set up. Typically, the structure of these accounts corresponds to the high-level structure of your general ledger chart of accounts and cash flow plans.

You can use account schedules and cash flow forecast statistics to analyze cash flow forecasts.

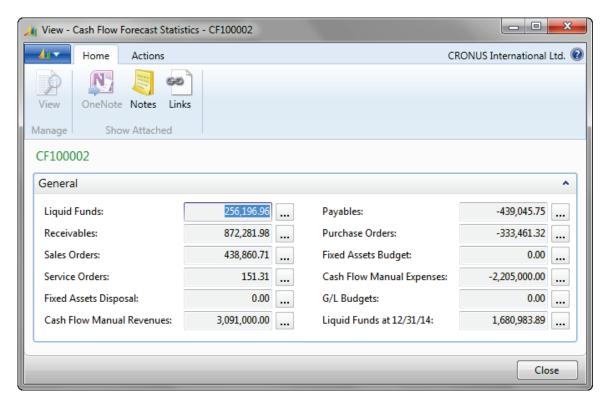


FIGURE 8.6: CASH FLOW FORECAST STATISTICS WINDOW

#### **Account Schedules**

You can use account schedules to arrange accounts that are listed in the chart of accounts to provide information about those accounts. Set up various layouts to define the information that you want to extract from the chart of accounts.

One of the main purposes of account schedules is to provide a place for calculations that cannot be made directly in the chart of accounts.

By using cost types and cash flow entry accounts in the account schedules, users can build cost accounting reports and cash flow reports.

You can print an account schedule and also export it to Excel.

## **Analysis By Dimensions**

If you use dimensions to post entries, the analysis by dimensions is a report that you can use to analyze data with up to four dimensions. An analysis by dimension is based on an analysis view where the following criteria is specified:

- G/L accounts
- Period
- Business units
- Up to four dimensions

You can run an analysis by dimensions directly in Microsoft Dynamics NAV, but you can also export it to Excel. If you export an analysis by dimensions to Excel, Microsoft Dynamics NAV creates a pivot table that offers you the flexibility to additionally customize your financial report.

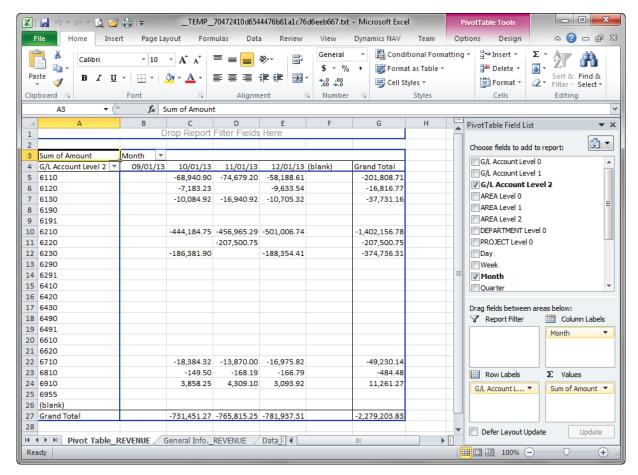


FIGURE 8.7: PIVOT TABLE IN EXCEL



In Microsoft Dynamics NAV 2013, you can use the following two types of charts to graphically display data:

- Generic charts Can be set up for every table.
- **Specific charts** Are based on specific tables, such as the account schedules and analysis reports.

One of the specific chart types available in Microsoft Dynamics NAV 2013 is the finance performance chart.

The finance performance chart shows financial performance indicators based on account schedule values. This enables you to combine financial figures in multiple ways to analyze performance and see trends in different graphical views.

The charts are available in the role center of Microsoft Dynamics NAV 2013.

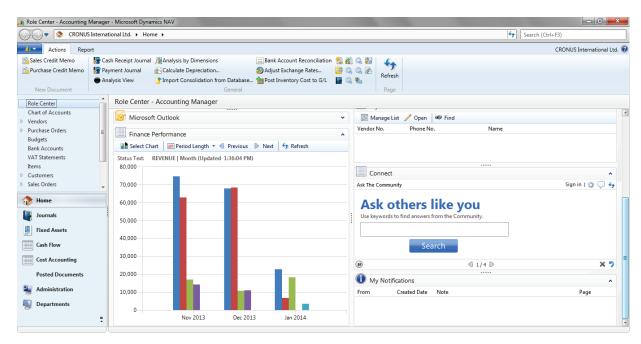


FIGURE 8.8: A CHART IN THE ACCOUNTING MANAGER ROLE CENTER

## Marketing

The marketing features of Microsoft Dynamics NAV help you manage and support your marketing and sales efforts. With these features, you can access complete and accurate information so that you can focus your interactions on preferred customer segments.

You can target potential customers by using different kinds of marketing campaigns. You can group customers based on common characteristics. You can then segment your customers into different mailing groups, for example, according to the data gained from profiling. Examples of marketing campaigns could be advertisements, television commercials, direct mail, or email marketing campaigns.

Good sales and marketing practices are all about how to make the best decisions at the best time. Microsoft Dynamics NAV provides a precise and timely overview of your contact information so that you can serve your prospective customers more efficiently and increase customer satisfaction.

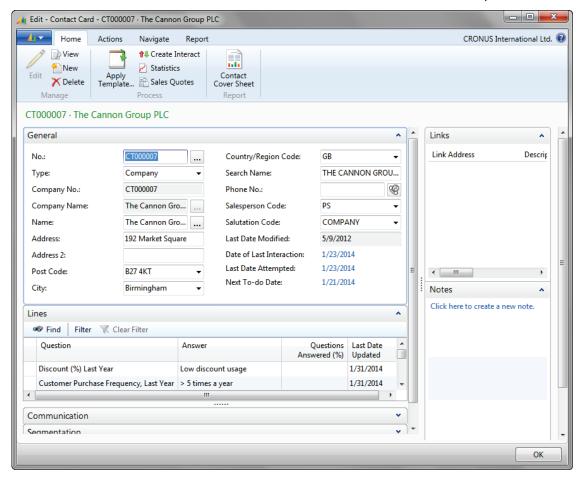
#### **Contacts**

All the external entities with which you have business relationships (for example, customers, prospective customers, vendors, lawyers, and consultants) should be recorded as contacts. You can record information based on a company or a person at that company. You can also create an independent contact person for people who do not work for a particular company, but who work independently or freelance. The system automatically warns users if you enter contact information that already exists. You can categorize contacts based on their own profiling criteria.

With Contact Management, you can personalize your approach to contacts.

To view a contact card, follow these steps:

- 1. In the **Search** box, type "Contacts", and then click the related link.
- 2. From the contact list, double-click a contact to open the contact card.



**FIGURE 8.9: CONTACT CARD WINDOW** 

You use the contact card to record information about contacts. Some fields in the contact card are valid for companies only, whereas other fields are valid for persons only, or for both companies and persons. Therefore, when you enter a new contact, you must specify whether it is a new company or a new person working for a company already recorded as a contact.

Contacts are tightly integrated with the Sales application area. This means that, for example, users can issue quotes to prospects or create sales documents for specific contact persons.

### **Contact Duplicate Search**

Within relationship management, you can search for contact duplicates. The contact duplicate search only applies to contact companies (and not to contact persons).

There are two ways to search for duplicates:

- You can have Microsoft Dynamics NAV automatically search for duplicates every time that you create contacts. To do this, you select the Autosearch for Duplicates check box in the Marketing Setup window.
- You can search for duplicates manually. In this case, you must perform a search periodically, for example, after you have entered a new contact.

When Microsoft Dynamics NAV searches for duplicates, it uses search strings. You can set up search strings in the **Duplicate Search String Setup** window, by combining the first and last characters from several fields in the **Contact** table. This includes the **Name** and **Address** fields, but also **VAT Registration No.** 

#### **Tasks**

With task management, you can organize campaign, marketing, and sales tasks.

You can perform the following functions by using task management:

- Create to-do lists that can be linked to contacts and campaigns.
- Assign tasks, composed of several to-dos, to other users or teams of users recorded in the program.

The **No. of To-dos** window displays existing to-dos in several ways. For example, you can choose to view the number of to-dos or the contact number involved, grouped by campaign, salesperson, team, or contact.

#### **Contact Classification**

Contact classification sorts customers based on criteria that is specified by the user, for example by revenue.

This feature helps users do the following:

- Plan important information for campaigns.
- Target contacts more specifically.
- Streamline sales and marketing messages.

A contact rating system helps users set up specifically customized ratings which reflect, for example, the importance or loyalty of customers, vendors, and partners. Users can have the ratings displayed on the contact card for quick reference and update.

### **Campaigns**

A campaign can be any activity that involves several contacts. You can create a campaign for all the sales and marketing activities involving your contacts, such as a sales promotion campaign.

You can segment contacts based on specific criteria, such as sales, contact profiles, and interactions. Additionally, they you can perform the following:

- Reuse existing segments by specifying whether these segments are to be updated every time new information on the contact is entered.
- Freeze the group for follow-up activities, such as direct mailing.
- Mail-merge the identified segment with a Microsoft® Office Word document or send any other file type to the contacts in the segment.
- Send copies of the same document to people of different nationalities, each of them receiving the document in their native language.

After a campaign is set up and the activities are defined, you can assign large tasks (activities) which are made up of several to-dos to salespeople or teams. Only employees recorded as salespeople can be assigned activities.

## **Interaction Log**

The interaction log is a list in which all interactions with a contact are noted.

With the interaction log, you can do the following:

- Log interactions with a contact.
- Keep track of documents.
- Retrieve documents.

Interactions with contacts might be a telephone call, a meeting, or a letter.

If an interaction contains a document, users can save it under the relevant contact.

Microsoft Dynamics NAV documents that are sent to a contact, such as sales orders or quotes, can be logged and retrieved to be used at a later stage. The **Interaction Log Entries** window shows a list of the interactions that are logged.

## **Opportunities**

With opportunity management, you can keep track of sales opportunities. This provides salespeople with an overview of what is in the pipeline so that they can plan ahead accordingly.

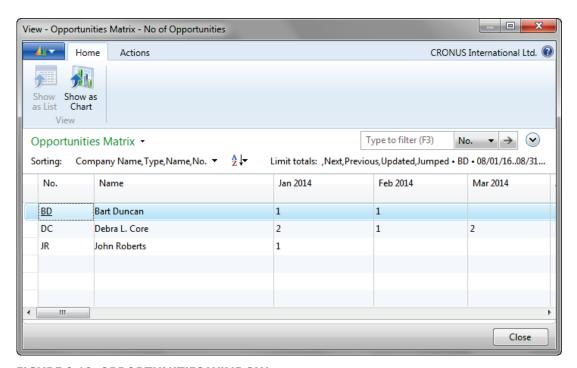


FIGURE 8.10: OPPORTUNITIES WINDOW

## Introduction in Microsoft Dynamics® NAV 2013

Opportunity management helps users divide a sales process into different stages. For example, opportunities can be managed in the **Opportunities** window, which lets users view existing opportunities in several ways, such as by their value (calculated in many ways), or grouped by the following:

- Campaign
- Salesperson
- Contact

## **Outlook Client Integration**

Most employees in sales and marketing build relationships with their contacts by using calendar and task management tools, and much of the external communication occurs through Microsoft® Office Outlook®. Therefore, integration between Microsoft Dynamics NAV 2013 and Outlook is very important to the CRM user's performance.

With the Outlook Client Integration feature, users can do the following:

- Schedule meetings in Outlook.
- View the to-dos in Microsoft Dynamics NAV 2013 before a meeting.
- Log the meeting in the **Interaction Log Entries** window as an interaction.
- Plan and execute assigned to-dos with the scheduling tool.
- Create activities for customers and contact persons.

When information, such as a to-do or a contact, is entered, it is automatically updated in Outlook. You do not have to update the same information two times in two applications.

## **EMail Logging for Microsoft Exchange**

Email logging in Microsoft Dynamics NAV is a service that integrates email between Microsoft Exchange Server and Microsoft Dynamics NAV. This lets you maintain information about current email messages in both systems. It also lets the user, a salesperson, or a purchaser share and publish information that is communicated to Microsoft Dynamics NAV contacts.

Email logging captures interactions between recipients on the **To:** line of email messages. It captures the interactions that are successfully concluded.

The integration with Outlook additionally lets you use the built-in features in Outlook. For example, you can set up rules in Outlook that direct certain types of email messages to specific folders for later, automatic logging in Microsoft Dynamics NAV 2013.

## **Trade**

Microsoft Dynamics NAV 2013 provides many functions to efficiently manage sales, purchase, and return activities.

By including topics such as price and discounts, item charges, and order commitments, Microsoft Dynamics NAV 2013 provides all the tools necessary to reach a high level of customer service. Requisition management will support companies in efficiently managing inventory levels and keeping costs low.

## **Document Approval**

The sales and purchase document approval system in Microsoft Dynamics NAV enables users to submit a document, typically a sales order or purchase order, for approval according to a predefined hierarchy of approval managers with specified approval amount limits.

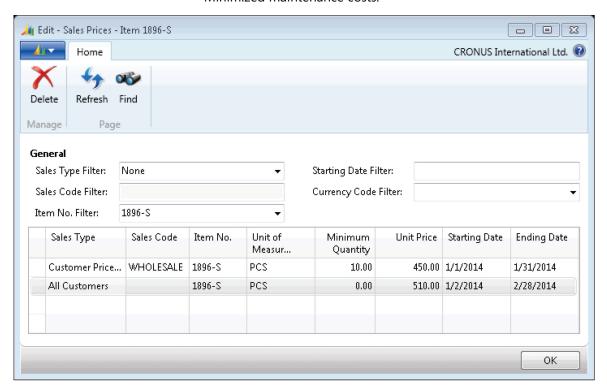
The approvals setup is usually done in close cooperation with the accounting manager or another similar significant role in the company. This role is responsible for the company's sales and purchase departments and can define which documents must be approved and how to place users in the approval hierarchy.

#### **Prices and Discounts**

In Microsoft Dynamics NAV, you can set up different sales and purchase prices for items. The line discounts let you assign discount percentages to items and item groups.

Sales line pricing and sales line discounting offer comprehensive pricing functionality to companies with flexible price structures. Specifically, the application provides a functionality characterized by the following key features:

- Targeted specific customer segments.
- Consistent and transparent pricing.
- Minimized maintenance costs.



**FIGURE 8.11: SALES PRICE WINDOW** 

## **Order Promising**

A company must be able to inform their customers of order delivery dates. The **Order Promising Lines** window enables you to do this from a sales order line.

Based on an item's known and expected availability dates, Microsoft Dynamics NAV instantly calculates shipment and delivery dates, which can then be promised to the customer.

Microsoft Dynamics NAV uses two fundamental concepts:

- Available to promise (ATP)
- Capable to promise (CTP)

# Assembly

You use assembly orders to make end items from components in a simple process that can be performed by one or more basic resources, which are not machine or work centers, or without any resources. For example, an assembly process could be to pick two wine bottles and one coffee sack and then pack them as a gift item.

An assembly bill of materials (BOM) is the master data that defines which component items go into an assembled end item and which resources are used to assemble the assembly item.

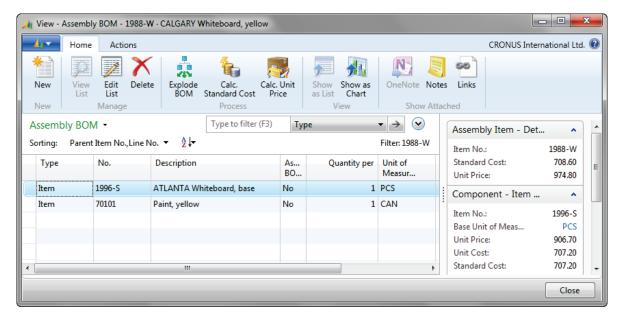


FIGURE 8.12: ASSEMBLY BOM WINDOW

Assembly items can be supplied in the following two processes:

- Assemble to order
- Assemble to stock

#### **Returns Management**

The Sales Return Order Management and the Purchase Return Order Management functionality in Microsoft Dynamics NAV 2013 offers a solution to help companies achieve responsive customer service by implementing cost-efficient customer and vendor return policies.

## Introduction in Microsoft Dynamics® NAV 2013

The program provides full document traceability for an overview of the sales return history. This becomes important for customer inquiries and internal follow-up. If companies manage items with warranties provided by vendors (a sales return with a return-to-vendor process), the program offers functionality that automates the creation of all relevant documents.

Some functions available in returns management are as follows:

- Create return-related documents.
- Return-to-vendor.
- Move negative lines.
- Reverse posted document lines.

# **Inventory Management**

Inventory management is a cornerstone of any company within the distribution or manufacturing business. Inventory reliability at a low cost ensures the smooth functioning of all related operations. Microsoft Dynamics NAV supports companies in achieving their goals of having accurate inventory data and reliable availability figures.

## **Item Availability**

To service customers suitably, you need reliable availability figures when you take orders. You need an overview of inventory levels and expected supplies over time to promise accurate delivery dates. You can define available items as a quantity that the company has at its disposal at a given time. This definition goes beyond the actual inventory quantity and includes factors such as allocations, meaning quantities that are already set aside or reserved for specific purposes, and expected inbound orders representing future supply.

You can retrieve item availability information in Microsoft Dynamics NAV 2013 by using different overviews. These include the following:

- Item Availability by Event
- Item Availability by Period
- Item Availability by Variant

- Item Availability by Location
- Item Availability by BOM Level
- Item Availability by Time Line

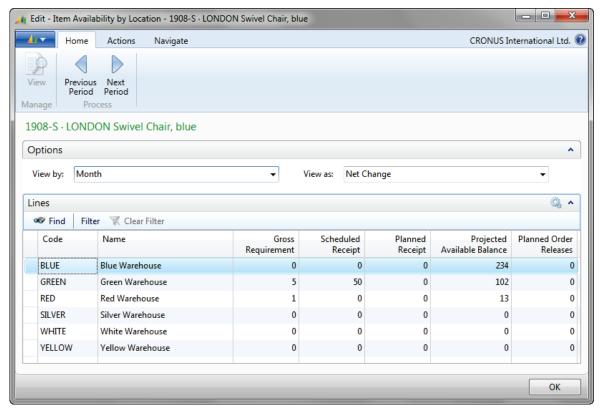


FIGURE 8.13: ITEM AVAILABILITY BY LOCATION WINDOW

#### **Journals**

Sometimes you have to adjust quantities in inventory, such as when items become obsolete and cannot be sold any longer. Inventory journals give you the flexibility to adjust inventory quantities for different reasons.

You can use the following inventory journals in Microsoft Dynamics NAV 2013.

#### **Item Journal**

Use the **Item Journal** page to post item transactions to adjust inventory levels directly without posting a business document, such as purchase or sales orders. You can use the item journal to post the following four types of item entries:

- Purchase
- Sale
- Positive adjustment
- Negative adjustment

#### **Physical Inventory Journal**

Use the **Physical Inventory Journal** page when you take a physical inventory. You can run the **Calculate Inventory** function to calculate the expected inventory. After a manual count of the item quantities, you can enter the counted quantities, and post the differences.

#### **Item Reclassification Journals**

Use the **Item Reclassification Journal** page to specify how you want to adjust inventory when you transfer items between different locations or between bins, or to correct dimension value codes. You can also use the item reclassification journals to change item tracking, such as lot or serial numbers.

#### **Revaluation Journals**

If for any reason the value of inventory items changes, you can use the **Revaluation Journal** page to increase or decrease the inventory value. You can use the **Calculate Inventory Value** function to calculate the inventory value of one or more items. When you then manually enter the revalued unit cost, and you post the revaluation journal, the items are revaluated.

## **Item Tracking**

Item Tracking in Microsoft Dynamics NAV provides a company with an easy-to-use tracking system. This can account for information about each unique piece of merchandise, such as the following:

- When it is received.
- Where it is placed.
- When it expires.
- Which customer bought it, and when.

The functionality is based on serial and lot numbers and lets you receive and ship multiple quantities with serial and lot numbers from a single order line entry. Item-tracking entries, which represent the transaction history of each item with serial or lot numbers, are the records that are used to trace an item as it moves through the supply chain.

If you want to trace serial or lot numbers for items, you can assign an itemtracking code on the item card. Item-tracking codes reflect the different considerations that a company has for the item-tracking parameters and areas where the tracking is applied.

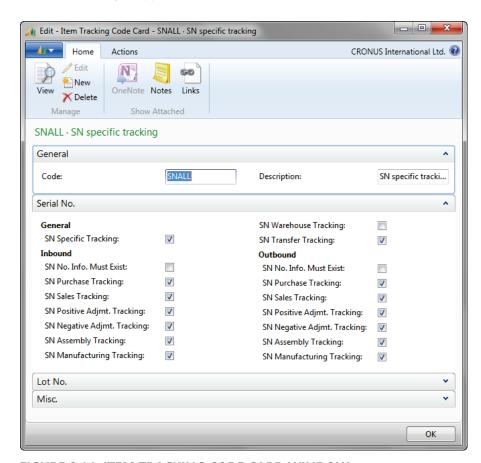


FIGURE 8.14: ITEM TRACKING CODE CARD WINDOW

One of the main reasons to use item tracking is to track items from the vendor to the customer. In Microsoft Dynamics NAV 2013 you can use the **Item Tracing** page to trace items from their origin to their usage or the other way around. In the **Navigate** window, you can see all records of the serial or lot number, both posted entries and open records.

# Item Availability by Timeline

The **Item Availability by Timeline** window provides a graphical view of an item's projected inventory based on future supply and demand events, with or without planning suggestions. The result is a graphical representation of the inventory profile.

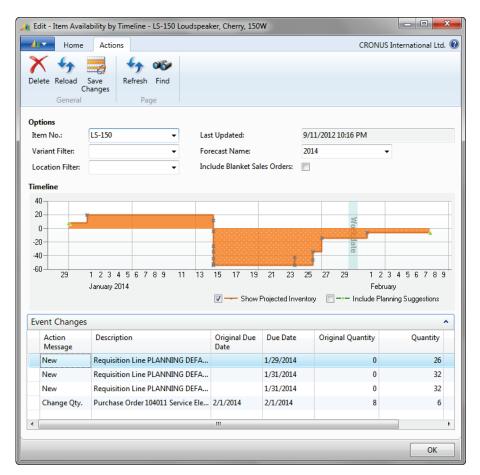


FIGURE 8.15: ITEM AVAILABILITY BY TIMELINE WINDOW

On the **Event Changes** FastTab you can see the planning suggestions that can be changed. If you select **Include Planning Suggestions**, you can modify the planning suggestions by dragging in the graphical view. You can also change the **Due Date** and the **Quantity** fields.

The **Original Due Date** and the **Original Quantity** fields are read-only and do not change because of changes that you make in the **Item Availability by Timeline** window.

## **Multiple Locations**

With Microsoft Dynamics NAV 2013, companies can manage their inventory in multiple locations using one database. Two concepts, location and stock keeping unit, are the cornerstone of this functionality. A location is defined as a place that handles physical placement and quantities of items. The concept is broad enough to include locations such as the following:

- Plants or production facilities
- Distribution centers
- Warehouses
- Showrooms
- Service vehicles

A stock keeping unit is defined as an item or a variant of an item at a specific location. With the stock keeping units, companies with multiple locations can add replenishment information, addresses, and some financial posting information on the location level. As a result, they can replenish variants of the same item for each location and also order items for each location based on location-specific replenishment information.

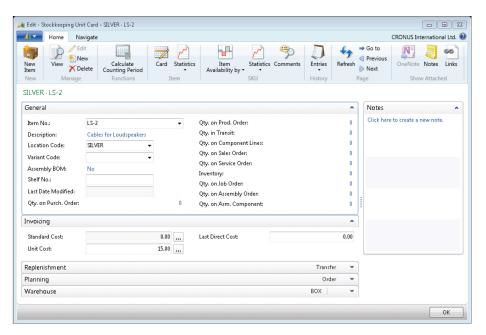


FIGURE 8.16: STOCKKEEPING UNIT CARD WINDOW

You can use transfer orders to accurately track the movement of inventory from one location to another. To transfer items, companies create a transfer order that contains a line for each inventory item being transferred. When the inventory is shipped from the source location, it is considered in transit until received at its destination.

## **Responsibility Centers**

Responsibility centers extend the multiple locations functionality by providing the option of handling administrative centers. A responsibility center can be the following:

- A cost center
- A profit center
- An investment center

Examples of responsibility centers include a sales office, a purchasing department for several locations, and a plant planning office. With this functionality, companies can set up user-specific views to show only sales and purchase documents related to a particular responsibility center.

## **Warehouse Management**

Warehouse Management Systems (WMS) contains a comprehensive set of features to administer workflow-based inbound, internal, and outbound warehouse activities in complex warehouse environments. It includes advanced warehouse functionality, such as calculated picks and moves, bin ranking, cross docking, and cycle counting.

The flow of inventory through the warehouse can be divided into the following three basic processes:

- Receiving items at the warehouse and making them available.
- Handling items for internal distribution/movement/production.
- Picking and shipping items to customers or other locations.

#### **Inbound Items**

Receiving orders with WMS provides options for defining where and how the items are received and expedited additionally in the warehouse process.

When items arrive to the warehouse, and you post the warehouse receipt, the items become part of the inventory. When the receipt document is posted, a putaway document is created. This document is an instruction to the warehouse personnel at the receiving area to take the received item and place it in a designated place suggested by the program.

Microsoft Dynamics NAV supports the cross-docking of items. Cross-docking is a means of saving work by directing items on orders awaiting shipment from the receive zone directly to the ship zone without placing them into storage.

The system supports the following activities for inbound items:

- Receive
- Put away
- Cross-dock
- Handle serial/lot numbers

To view an inventory put-away list, click **Departments > Warehouse > Goods Handling Order by Order > Reports > Inventory Put-away List**. Then click
Preview.

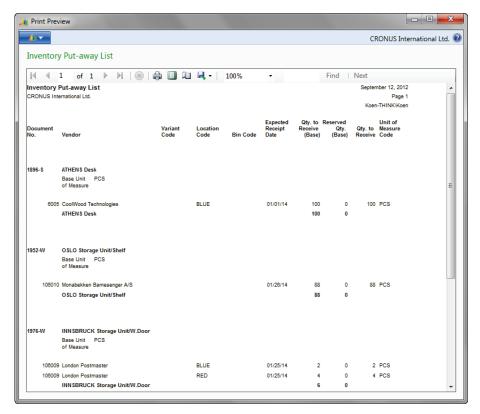


FIGURE 8.17: INVENTORY PUT-AWAY LIST

#### **Internal Activities**

As soon as items are stored in the warehouse, several activities can occur inside the warehouse. For example, an item can be moved from one bin to another, or a damaged item should be removed from the warehouse.

The system supports the following activities for items inside the warehouse:

- Maintain warehouse ledger entries.
- Move items.
- Pick and put away internally.
- Manage shop floor bins.

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- Remove warehouse items.
- Reclassify warehouse items.
- Count warehouse items.
- Set up and use cycle counting.

To register warehouse adjustments, you can use the following warehouse journals:

- Warehouse item journal
- Warehouse reclassification journal
- Warehouse physical inventory journal

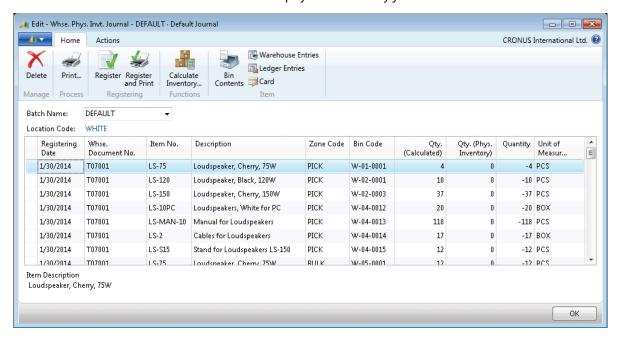


FIGURE 8.18: WAREHOUSE PHYSICAL INVENTORY JOURNAL WINDOW

#### **Outbound Items**

Warehouse Management Systems provides the functionalities for handling items, such as shipping cross-docked items and break bulking items.

Before an outbound document (sales order, purchase return order, and outbound transfer order) can be shipped, the warehouse personnel should first pick the items in the warehouse. You can use a pick document per order, or combine different orders on a pick worksheet and pick multiple orders in one round.

The system supports the following activities for outbound items:

- Ship items.
- Ship cross-docked items.
- Break bulk when shipping.
- Pick items with serial/lot numbers.

## **Manufacturing**

The Manufacturing application area consists of many fully integrated features to manage how companies plan, supply, produce, schedule, track, and report manufactured goods.

Microsoft Dynamics NAV supports world-class manufacturing principles with a solution that enables manufacturers to simplify their processes and implement the operational changes that are needed to focus on delivering what their customers want, when they want it.

#### **Production BOMs**

The production bill of materials (BOM) shows the items used to make the parent item. The end-result of a production BOM can be a subassembly (used in another item) or a finished good (an item ready for sale). An item can be both a subassembly and a finished good, such as a part sold as a spare part for another item. The items on the production BOM are components.

The production BOM of this program exclusively manages the production material needs. Resources are managed in the routings.

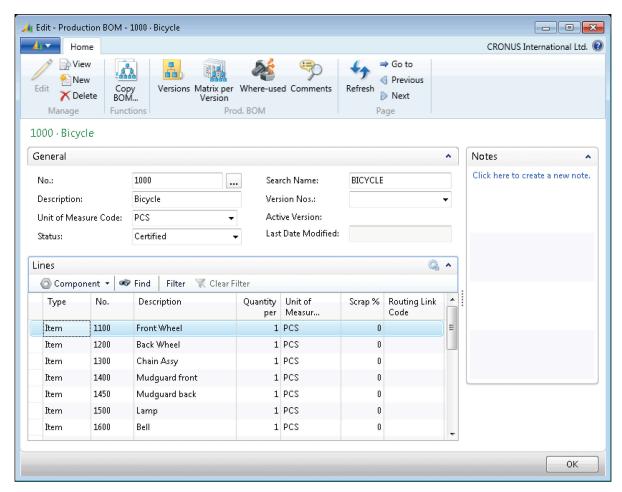


FIGURE 8.19: PRODUCTION BOM WINDOW SHOWING COMPONENTS TO PRODUCE A BICYCLE

## **Routings**

A routing specifies the sequence of operations to manufacture a product. The operations can be performed at a work center or at a machine center. Work centers and machine centers are known as capacities or facilities. Manufacturing companies use routings to manage and show the production process. The routings are the basis for process scheduling, capacity scheduling, and manufacturing documents.

In order to work with routings, the master data of the capacity planning must be set up first.

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The routings are assigned to the articles in the item master data.

FIGURE 8.20: ROUTING SHOWING OPERATIONS TO PRODUCE A BICYCLE

Work centers and machine centers are very important to establishing routings. They are the locations where work is performed, and have their own setup factors that describe the following:

- Capacities
- Number of resources
- Shift lengths

### Scrap

You can predefine scrap for components on the production BOM or for parent items on the routing. Scrap can be defined in the following ways:

- As a percentage on the item.
- As a percentage on the production BOM.
- As a fixed amount or percentage on the routing.

All scrap identified on either the item, production BOM, or routing results in an increase in the components that are needed. Additionally, scrap percentage can be added on the item card.

#### **Production Orders**

Production orders are used to manage the conversion of purchased materials into manufactured items. Production orders (job or work orders) route work through various facilities (work or machine centers) on the shop floor.

Production orders are the central components of the program's manufacturing functionality, and they contain the following information:

- Products that are planned for manufacturing.
- Materials that are required for the planned production orders.
- Products that have just been manufactured.
- Materials that have already been selected.
- Materials that were used in previous manufacturing operations.

Production orders can be created on an order-by-order basis manually from the **Production Order** window, or generated from the **Sales Order Planning** or **Order Planning** window. Multiple orders are created from the **Planning Worksheet** window.

Production orders are created by using information from the following master data:

- Items
- Production bills of material

- Routings
- Machine centers
- Work centers

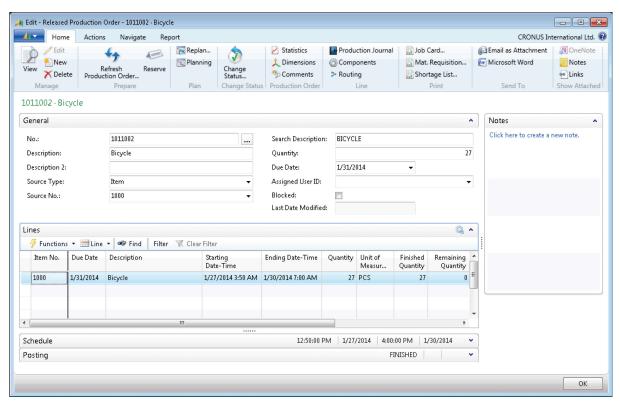


FIGURE 8.21: RELEASED PRODUCTION ORDER FOR 27 BICYCLES

The underlying production BOMs and routing provide the component and time requirements that govern production order ending times in a balanced production schedule of multiple ongoing operations.

Production orders and component purchase orders are frequently generated by the materials requirement planning (MRP) system as the result of a calculated supply plan to fulfill demand such as sales orders.

There are four types of production orders (Planned, Firm Planned, Released, and Finished). Planned and Firm Planned production orders are part of the planning and forecasting process, in other words, the materials, resources, and time that are expected to be consumed and the number of items to be produced in a given production period. Released production orders are approved orders. This means that it is cleared and ready for production. It is at this point that the consumption of materials, resources, and time are recorded and output is posted.

## **Capacities**

Microsoft Dynamics NAV 2013 distinguishes the following three types of capacities:

- Work center groups
- Work centers
- Machine centers

These are arranged hierarchically. Each level contains the subordinate levels.

The top level is the work center group. Work centers are assigned to the work center groups. Every work center can only belong to one work center group. You can assign various machine centers to every work center. A machine center may only belong to one work center.

Planned capacity of a work center consists of the availability of the corresponding machine centers and the additional planned availability of the work center. The planned availability of the work center group is therefore the sum of all corresponding availabilities of the machine centers and work centers. The availability is stored in calendar entries.

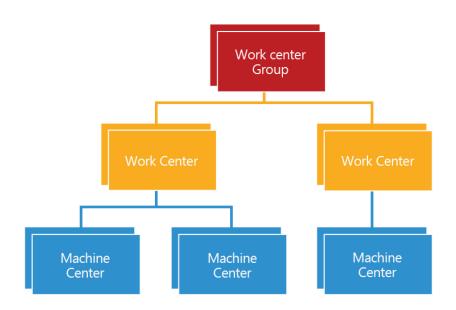


FIGURE 8.22: WORK UNITS HIERARCHY

## **Planning**

The planning system considers all demand and supply data, nets the results, and creates suggestions for balancing the supply to meet the demand. Planning has two elements: demand and supply. These must be held in balance to make sure that the demand is met in a timely and cost-efficient manner.

The planning engine contains the following two components:

- Master Production Scheduling (MPS)
- Material Requirements Planning (MRP)

The MRP calculation makes recommendations to release supply orders for items, by purchase, transfer, or production. Additionally, because it is time phased, it makes recommendations to reschedule open orders when due dates and need dates are out of phase.

The requisition worksheet and the planning worksheet are used for automatic supply order calculations based on planning parameters. The planning worksheet offers supporting planning information, such as tracking to non-order entities and warnings to help the planner obtain an optimal supply plan.

**Note:** A requisition worksheet results in a series of suggestions to create, change, or delete purchase orders and transfer orders. Production orders are not included in the requisition worksheet.

## Introduction in Microsoft Dynamics® NAV 2013

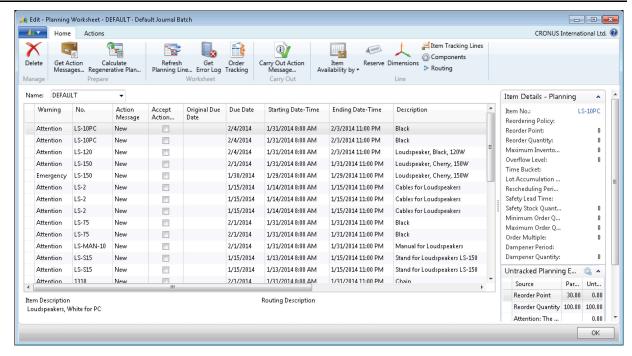


FIGURE 8.23: PLANNING WORKSHEET WINDOW

## **Manufacturing Costing**

Manufacturers sell products that they have converted to a different form from that of the products purchased from suppliers. Because a manufacturing process accounts for work in process and finished goods inventory, the costing of manufacturing products is generally more detailed than the costing of purchased goods. Manufacturers add value to the purchased raw material by changing its physical form into a finished good. They also incur additional costs.

The cost of goods manufactured refers to the cost of goods completed, whether they were started before or during the current accounting period.

Companies value their inventory according to one or a combination of the following valuation bases:

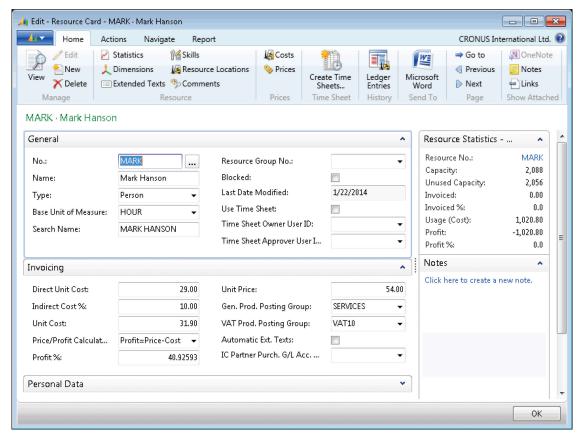
- Acquisition cost
- Standard cost
- Net realizable value
- Replacement costs

Typically, manufacturing companies choose a valuation base of standard cost.

## **Jobs and Resources**

The Jobs area supports common project management tasks, such as configuring a job and scheduling a resource, and also providing the information that you need to manage budgets and monitor progress. With the Jobs feature, you can manage long-term projects that involve man hours, machine hours, inventory items, and other types of usage that you want to keep track of. You can track machine and employee hours on the project by using time sheets. Using the Jobs functionality will provide a good overview, not only of individual jobs, but also of the allocation of employees, machinery, and other resources being used in all projects.

Before you can start selling services and jobs or assigning resources to assembly projects, you must set up information about policy and pricing, which can be used in jobs or resource transactions. All pricing information is adjustable.



**FIGURE 8.24: RESOURCE CARD** 

#### **Jobs**

When you start a new project, you can create a new job card with information about the project, such as the job name and the job customer, and information about job posting.

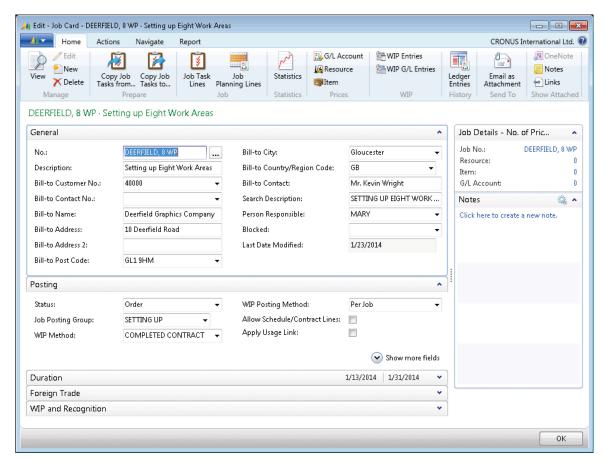


FIGURE 8.25: JOB CARD WINDOW

#### **Task and Planning Lines**

Job planning has the following two layers:

- The first layer consists of job task lines. Job task lines reflect the
  contract elements a company has with a customer who ordered a job.
  You must set up at least one job task because all posting has to refer
  to a job task. With at least one job task in your project, you can set up
  planning lines and post consumption to the job.
- The second layer consists of planning lines, which specify the detailed use of resources, items, and various general ledger expenses. All the planning lines together make up the project plan.

All jobs that you create can be separated into task lines and planning lines. This enables you to divide the job into smaller tasks, and therefore use more specific details in budgeting, quotes, and registration.

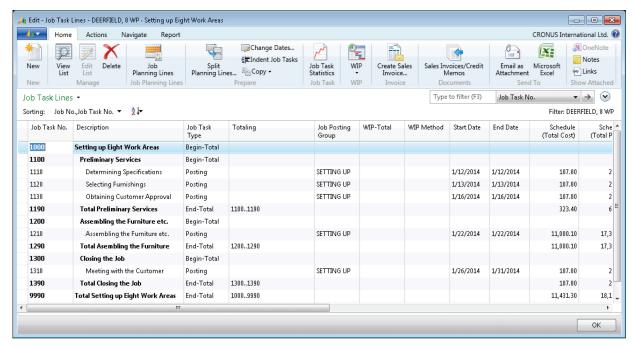


FIGURE 8.26: JOB TASK LINES WINDOW

The integration with the Sales application area lets users invoice jobs as any other sales invoice.

You can also post job-related expenses through purchase invoices and link usage entries from job journals and purchase lines to job planning lines.

## **Work in Process**

With jobs, you can schedule the usage of your company's resources and keep track of the various costs associated with the usage of resources on a specific project. Jobs involve the consumption of employee hours, machine hours, inventory items, and other types of usage that have to be tracked as a job progresses. If a job runs over a long period, you may want to transfer these costs to a Work in Process (WIP) account on the balance sheet while the job is being completed. You can then recognize the costs and sales in your income statement accounts when it is appropriate.

You can create a Job WIP method that reflects the needs of your organization, industry, or country. After you have created it, you can set it as the default Job WIP calculation method that will be used in your organization.

# WIP Cockpit

The Job WIP Cockpit is the central location to track WIP for all projects. Each line contains information about a job, including calculated and posted WIP.

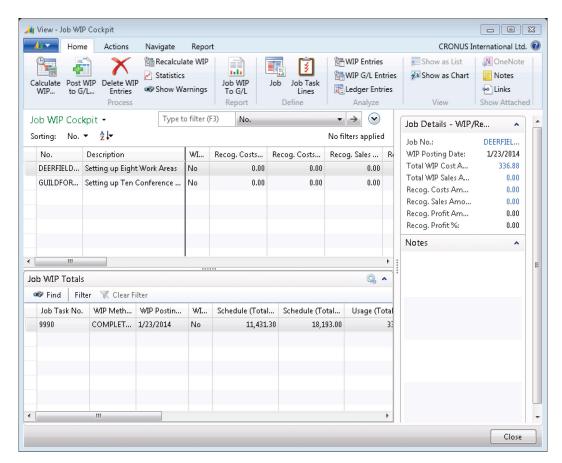


FIGURE 8.27: WIP COCKPIT WINDOW

# Actual to Budget

One of a project manager's important tasks is to control the job budget. In Microsoft Dynamics NAV, you can use the **Job Actual to Budget** window to compare the scheduled and usage amounts for a selected job.

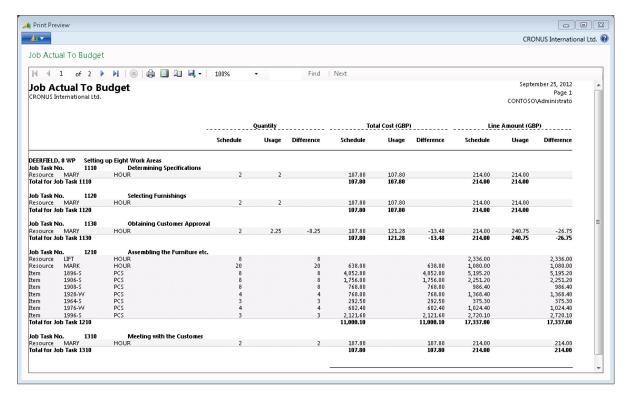
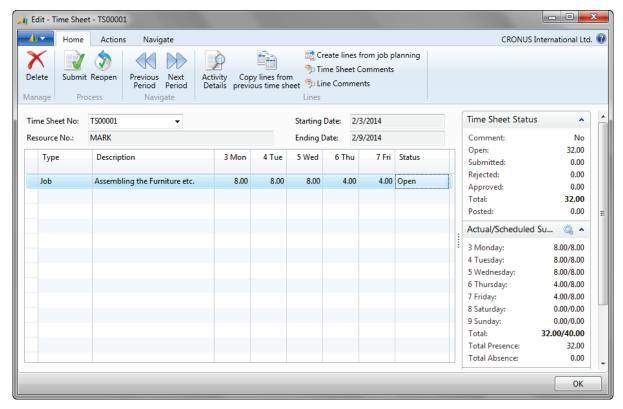


FIGURE 8.28: JOB ACTUAL TO BUDGET REPORT

## Time Sheets

Time management is part of monitoring and understanding resource use and allocation. With time management, you can identify issues early and avoid delays or cost overruns. With time sheets, a resource can easily report time usage for a person or a machine, and a manager can easily review the usage and its allocation.



**FIGURE 8.29: TIME SHEET WINDOW** 

Timesheets that are submitted for review, appear in the **Manager Time Sheet** window. You approve or reject each time sheet, or reopen it for additionally action.

## **Service Management**

Service Management simplifies a user's ability to deliver superior customer service. With Service Management, users can do the following:

- Quickly access customer service history.
- Anticipate customer needs.
- Maintain real-time records for each order, such as the following:
  - o Date
  - Time
  - Assigned technician

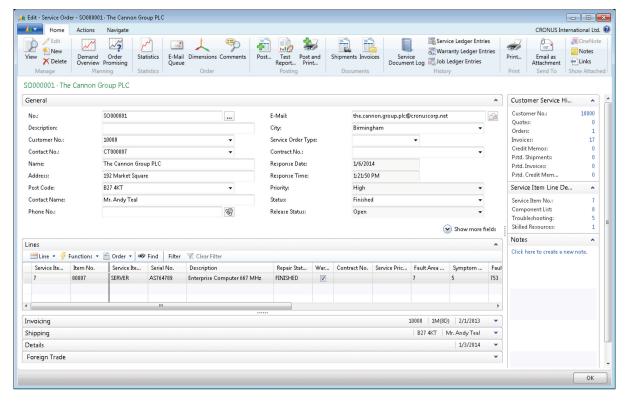
#### **Service Orders**

Users can register after-sales issues, including the following:

- Service requests
- Services due
- Service orders
- Repair requests

Service requests can be initiated, by customers or automatically, according to the terms stipulated in a service contract.

Important data in service order handling can be entered from a call-center or repair shop. Users can register one-off service orders. They can access complete service order history, service order quotes, and loaner management through a service order log.



**FIGURE 8.30: SERVICE ORDER WINDOW** 

Notice that the service order has an information pane like sales documents.

#### **Service Prices**

Having a solid service price strategy is one way companies gain an overview of service and control the costs involved in providing service. This also eventually increases the profitability of their service operations. The service price management feature in Service Management gives companies an effective tool to support their service price strategy, whether it is simple or complex.

With service price management, the service price groups can be set up to consider the following:

- Service item (or service item group).
- Type of fault the service task involves.

Service price groups can be set up for a limited time or for a specific customer or currency. Price calculation structures can be used as templates to assign a price to a service task. This makes it possible to assign specific items included in the service price and the type of work included. It also helps make sure that the correct prices are applied. You can assign fixed, minimum, or maximum prices, depending on agreements with customers. Service price group statistics let users keep track of the profitability of each service price group.

#### **Service Items**

With service items, users can create a database for all service items and parts, including the following:

- Contract information
- Component management
- Reference to the bills of materials
- Warranty information

Users can access the Service Level Agreement for information, such as response times, and can do the following:

- Register all items and spare parts with serial numbers.
- Register and track any replacement equipment technicians might use.
- Link equipment to the service item log.

- Track all spare parts and equipment.
- Access key business indicators on service items.
- Keep track of service item information on the service item card.

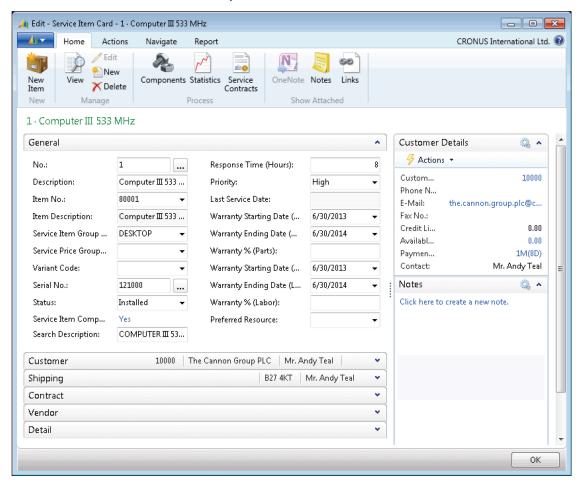


FIGURE 8.31: SERVICE ITEM WINDOW

#### **Service Contracts**

With service contracts, users can set up an agreement with the customer for the service level to be delivered. Users can access information in the following areas:

- Contract history
- Contract renewal
- Contract templates

Service contracts give users the option to record details on the following:

- Service levels
- Response times
- Discount levels
- Service history of each contract, including the following:
  - Used service items
  - Parts
  - Man hours

With service contracts, users can use flexible invoicing, contract profitability measurement, and contract quotes. Set up service contracts in the **Service Contract** window.

To view a service contract, click **Departments > Service > Contract Management > Lists > Service Contracts**. Then double-click a service contract to view its details.

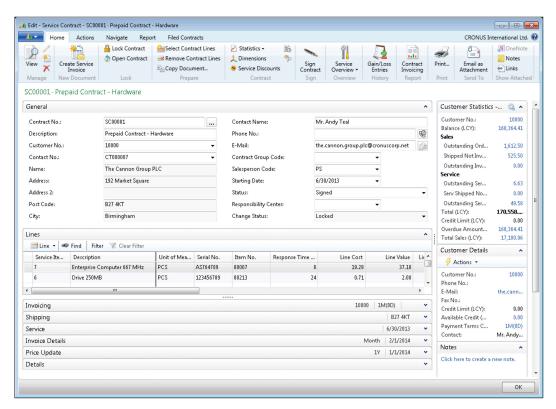


FIGURE 8.32: SERVICE CONTRACT WINDOW

#### **Planning and Dispatching**

Users can assign personnel to work orders with service planning and dispatching features. Planning tools also let users log details such as work order status. Service personnel and field technicians can be filtered according to availability and skills. Users can view an overview of the following:

- Service task prioritization
- Service loads
- Task escalations

#### Job Queue

With the Job Queue feature, users can automate batch jobs, to do the following tasks:

- Generate preventive service orders.
- Service contract renewals.
- Service contract invoicing.

Use the Job Queue to automatically check and start batch jobs set to start at a specific time. To access it, click **Departments > Administration > Application Setup > Job Queue**, and then selecting a function (for example, Job Queue Processes).

### **Human Resources**

Human Resources is a fully integrated application area that enables users to register and update personal information about employees effectively. This application area includes all the features that are used in the human resources department of a company, such as the following:

- Employee cards
- Absence registration
- Grounds for termination
- Employment contracts
- Reports related to employees
- Confidential information

To view an employee card, click **Departments > Human Resources > Lists > Employees**. Then double-click an employee name to view more information.

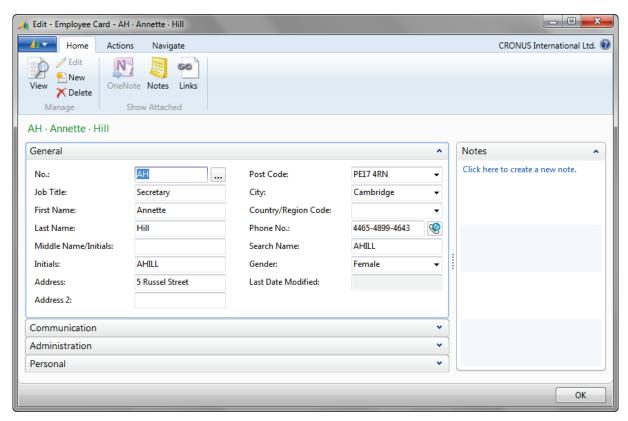


FIGURE 8.33: EMPLOYEE CARD WINDOW

## **Module Review**

#### **Module Review and Takeaways**

Microsoft Dynamics NAV 2013 includes application areas with rich features for all typical ERP processes. Knowing the basics about them helps partners and users decide which courses and application areas best suit their interest.

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#### **Test Your Knowledge**

Test your knowledge with the following questions.

1.	In Microsoft Dynamics NAV 2013, you can set up and use dimensions. What a dimension?		
_			
2.	The <b>Opportunities</b> window, lets users view existing opportunities in several ways. How can you group opportunities in the <b>Opportunities</b> window?		
	( ) By User ID, Salesperson, Contact		
	( ) By Campaign, Salesperson, Customer		
	( ) By Campaign, Salesperson, Contact		
	( ) By Salesperson, Contact, Customer		
3.	Provide a description of the Item Availability by Timeline.		
_			

## Module 8: Browse Application Areas

4.	NAV 2013?
5.	Describe the two layers of job planning in Microsoft Dynamics NAV 2013.

## **Test Your Knowledge Solutions**

#### **Module Review and Takeaways**

1. In Microsoft Dynamics NAV 2013, you can set up and use dimensions. What is a dimension?

#### MODEL ANSWER:

A dimension is data added to an entry so that entries with similar characteristics can be grouped and easily retrieved for analysis.

2.	The <b>Opportunities</b> window, lets users view existing opportunities in several ways. How can you group opportunities in the <b>Opportunities</b> window?
	( ) By User ID, Salesperson, Contact
	( ) By Campaign, Salesperson, Customer
	$(\checkmark)$ By Campaign, Salesperson, Contact
	( ) By Salesperson, Contact, Customer

3. Provide a description of the Item Availability by Timeline.

#### **MODEL ANSWER:**

The **Item Availability by Timeline** window provides a graphical view of an item's projected inventory based on future supply and demand events, with or without planning suggestions. The result is a graphical representation of the inventory profile.

4. What are the three types of capacities, distinguished in Microsoft Dynamics NAV 2013?

#### **MODEL ANSWER:**

Work center groups, Work centers, and Machine centers.

5. Describe the two layers of job planning in Microsoft Dynamics NAV 2013.

#### **MODEL ANSWER:**

The first layer consists of job task lines. Job task lines reflect the contract elements a company has with a customer who ordered a job. You must set up at least one job task because all posting has to refer to a job task. With at least one job task in your project, you can set up planning lines and post consumption to the job.

The second layer consists of planning lines, which specify the detailed use of resources, items, and various general ledger expenses. All the planning lines together make up the project plan.

Introduction in Microsoft Dynamics® NAV 2013					